

# QE-POWER-T



**PATENTED**



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## SAFETY WARNINGS AND CAUTIONS

The following warnings and cautions must be observed to ensure personal safety and prevent damage.



**Death** or **serious injury** may result from failure to heed this warning.



It is necessary to comply with national regulations when installing and picking materials for power lines.



**Material damage** or **serious personal injury** may result from failure to heed this warning.



Repairs and modifications must be carried out only by the manufacturer. It is forbidden to open the case and make any changes to the device. Tampering with the device will invalidate the warranty.



The manufacturer **declines all responsibility** for electrical safety in the event of improper use of the equipment.



ATTENTION: Class II object, in accordance with the standard 'EN 61140:2004-05 "Protection against electrical contacts - Common aspects for installations and equipment - Equipotential bonding", **grounding of the instrument is prohibited** as this would damage the device and reduce the safety of the installation.



The product described in this document may only be used for the specified application. The maximum performance data and environmental conditions specified in the product data sheet must be observed. Proper transport and storage, as well as professional assembly, installation, handling and maintenance are required for the correct and safe operation of the device.



It is essential to read the entire contents of this manual before carrying out any work.

Use under ambient conditions other than those specified, application of signals or voltages other than those specified, may cause significant deviations from the specified measurement tolerances, which may be irreversible.

Installation and commissioning must be carried out by qualified personnel only.



Before commissioning, make sure that:

- the maximum values for all connections are not exceeded; refer to the product data sheet;
- the connection cables are not damaged or live during wiring;
- the direction of current flow and phase rotation are correct.

During installation, ensure that a switch or circuit-breaker is near the product and easily accessible.

The unit must be uninstalled if safe operation can no longer be guaranteed (e.g. visible damage). Disconnect all connections in this case. The unit should be returned to the manufacturer or to an authorised service centre for repair.



Although the contents of this document have been checked for accuracy, it may contain errors or inconsistencies and we cannot guarantee its completeness or accuracy.



This document is subject to periodic revision and updating. QEED reserves the right to make changes to the product and/or its technical documentation at any time in the interests of continuous quality improvement. Always consult the latest version of the documentation available on the website:

[www.qeed.it](http://www.qeed.it)

If you find any errors or missing information in this document, please notify us by e-mail to:

[technical@qeed.it](mailto:technical@qeed.it)



**WARNING:** High-intensity magnetic fields may alter the values measured by the transformer. Avoid installation near: permanent magnets, electromagnets, or iron masses. If irregularities are detected, reposition or move the unit to a more suitable location.



Disposal of waste electrical and electronic equipment (applicable in the European Union and other countries with separate collection). The symbol on the product or its packaging indicates that the product should not be treated as household waste. Instead, it will be handed over to an authorised collection point for the recycling of electrical and electronic waste. Ensuring that the product is disposed of properly will prevent potential negative effects on the environment and human health, which could otherwise be caused by inappropriate waste management of the product. Recycling materials helps to conserve natural resources. For further information, please contact your local authority, waste disposal service or the retailer from whom you purchased the product.



Failure to observe the warnings may result in damage to the equipment or failure to operate as intended.



Please note that the information on the nameplate must be observed.



## PRODUCT OVERVIEW

The QE-POWER-T is a three-phase AC power analyser (1 DIN case) with a universal input for current transformers that can accept any type of current sensor (with voltage output 0÷333mV or current 1A/5A and Rogowski probes), available in 3 versions with different measurements.

It complies with class 0.5S (kWh) of EN62053-22 and class 0.5S (kVARh) of EN62053-24 and has an accuracy of  $\pm 0.5\%$  RDG. The QE-POWER-T is capable of TRMS (voltage/current) measurements.

A digital contact (MOSFET), configurable as a pulse or alarm output, is available as an alternative to the RS485 terminal.

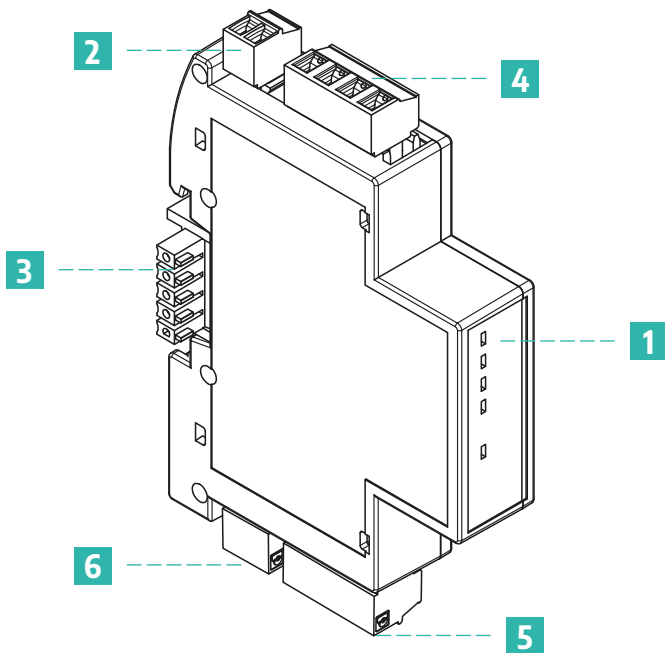
Power/error/communication/output status LEDs are on the front of the case.

RS485 serial interface for communication with Modbus RTU protocol, either from the **Q-WIZARD configuration tool**, or with third party Modbus masters by acting on register map registers.

Ready for DIN rail mounting with T-BUS terminal (optional) for fast connection with hot insertion/removal option.

## Product specifications

- Bidirectional energy measurement
- Complies with class 0.5S (kWh) of EN62053-22
- Complies with class 0.5S (kVARh) of EN62053-24
- Accuracy  $\pm 0.5\%$  RDG
- Current meter inputs for transformers with secondary (1A/5A, 0...333mV, Rogowski probes)
- TRMS measurement (voltage/current)
- One pulse output (MOSFET) for alarms (alternative to RS485 output on terminals)
- RS485 serial interface to terminals or T-BUS
- Alarm indication via front LED
- Available in 3 versions: STD, PLUS and PRO



- 1 Status LEDs
- 2 Power supply terminals
- 3 T-BUS terminal for both power supply and Modbus RTU communication (optional)
- 4 Voltage inputs
- 5 Current inputs
- 6 Modbus RTU terminals



## TECHNICAL SPECIFICATIONS

### Electrical characteristics

|  |   |
|--|---|
| Power supply                               | 10÷40 V <sub>DC</sub> or 20÷28 V <sub>AC</sub> @ 50/60Hz  |
| Current consumption                        | 1,2 W max   |
| Isolation                                  | 4 kV <sub>RMS</sub> between power supply and measurement inputs<br>4 kV <sub>RMS</sub> between RS485 and measurement inputs<br>1,5 kV <sub>RMS</sub> between power supply and RS485 |
| Voltage inputs                             | Direct connection up to 500 V <sub>RMS</sub> maximum (40÷70 Hz)<br>Transformation ratio for voltage and current transformers (configurable from <b>Q-WIZARD</b> or registers)       |
| Current inputs                             | 1 A / 5 A<br>0÷ 333 mV  |
| Output                                     | SPST MOSFET dry digital contact (<40V, <100mA)  |
| Communication interface                    | RS485 Modbus RTU  |
| Visual interface                           | Status LEDs   |
| Measurement type                           | TRMS  |
| Measurement frequency                      | 1÷70 Hz   |
| Sampling time                              | 6400 samples/s @ 50 Hz<br>7280 samples/s @ 60 Hz  |
| Measurement update                         | Programmable<br>Default: every 50 cycles (AC), max: 65535 cycles  |
| Transformation ratio                       | CT and VT default 1,0; Programmable   |
| Transformer phase-shift angle              | Default 0,0° @50Hz; Programmable  |
| Minimum display threshold                  | Adjustable on voltage, current and power  |
| <b>Voltage input</b>                       |   |
| Input impedance                            | 400 kΩ  |
| Rated capacity U <sub>n</sub>              | 300 V <sub>LN</sub> - 500 V <sub>LL</sub>   |
| Continuous overload fault U <sub>MAX</sub> | 1,2 U <sub>n</sub>  |
| Overload for 500 ms                        | 2 U <sub>n</sub>  |
| <b>Current input</b>                       | Non-isolated (CT required)  |
| <b>CT with current output</b>              |   |
| Rated capacity I <sub>n</sub>              | 5A <sub>AC</sub>  |
| Crest factor                               | <4 (20 A <sub>PK</sub> MAX)   |
| Impedance                                  | < 0,5 Ω   |
| Continuous overload I <sub>MAX</sub>       | 6 A <sub>AC</sub>   |
| Overload for 500 ms                        | 40 A <sub>AC</sub>  |
| <b>CT with voltage output</b>              |   |
| Rated capacity V <sub>n</sub>              | 333 mV <sub>AC</sub>  |
| Crest factor                               | <3 (1 V <sub>PK</sub> MAX)  |
| Impedance                                  | 220 kΩ  |
| Continuous overload I <sub>MAX</sub>       | 2,1 V <sub>PK</sub>   |
| Overload for 500 ms                        | 13 V <sub>PK</sub>  |
| <b>Precision (@25°C, 50Hz)</b>             |   |
| Voltage (U <sub>n</sub> : 230/400 V)       | ±0,5% RDG (10÷100% U <sub>n</sub> )   |
| Current (I <sub>n</sub> = 5 A)             | ±0,5% RDG (5÷100% I <sub>n</sub> )  |
| Frequency (40÷70 Hz)                       | ±0,1 Hz   |
| Power                                      | ACTIVE: ±0,5% RDG<br>REACTIVE: ±0,5% RDG  |



|                         |  |
|-------------------------|--|
| Energy                  | <b>ACTIVE:</b> Class C according to EN50470-1/3 or Class 0.5S according to EN62053-22<br><b>REACTIVE:</b> Class 0.5S according to EN62053-24 |
| Power factor            | $\pm (0,001 + 1\% (1,00-PF))$  |
| Passaband (-3dB)        | >2 kHz   |
| Temperature coefficient | <100 ppm/°C  |

### Available measurements

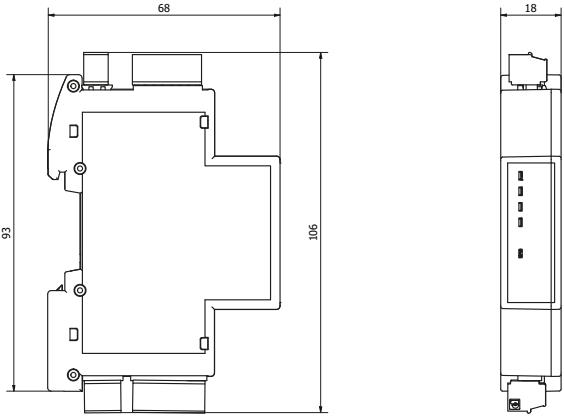

|  | Model    |      |     |
|--|----------|------|-----|
|  | STANDARD | PLUS | PRO |
| I <sub>rms</sub> - V <sub>rms</sub> - I <sub>pk</sub> - V <sub>pk</sub> each phase                       | ✓        | ✓    | ✓   |
| Active Power (W), Reactive Power (VAR), Apparent Power (VA) per phase                                    | ✓        | ✓    | ✓   |
| Bidirectional energy (kWh), positive and negative, per phase and total                                   | ✓        | ✓    | ✓   |
| Active and reactive energy (kVARh), inductive/capacitive, per phase and total                            | ✓        | ✓    | ✓   |
| Power factor (inductive/capacitive) per phase and total  | ✓        | ✓    | ✓   |
| Crest factor per phase and total   | ✓        | ✓    | ✓   |
| Frequency  | ✓        | ✓    | ✓   |
| Step sequence control  | ✓        | ✓    | ✓   |
| Cosφ per phase and average   | ✓        | ✓    | ✓   |
| Tanφ for phase and average   |          | ✓    | ✓   |
| Min, med and max power factor for phase and medium   |          | ✓    | ✓   |
| Power factor distortion (inductive/capacitive) per phase and medium                                      |          | ✓    | ✓   |
| THD (V, I), TDD  |          | ✓    | ✓   |
| Min, med and max Powers  |          | ✓    | ✓   |
| Peak power demand, per phase and total   |          | ✓    | ✓   |
| Recording (monthly) of reaching the maximum power demand (month, day, hour, minute), per phase and total |          | ✓    | ✓   |
| Adjustable time above threshold, per phase and total   |          | ✓    | ✓   |
| K-factor (according to IEEE Standard 1100-1992)  |          | ✓    | ✓   |
| Internal temperature [°C]  |          | ✓    | ✓   |
| Harmonic analysis up to 63rd   |          |      | ✓   |
| Interharmonic analysis up to 63rd  |          |      | ✓   |
| SAG, SWELL, Voltage gaps   |          |      | ✓   |

### Communication characteristics

|                       |  |   |
|-----------------------|--|---|
| <b>RS485</b>          | Protocol   | Modbus RTU  |
|                       | Baudrate   | 1200 ÷ 115200 bps (default 9600)                                |
|                       | Addresses  | 1÷ 247 (default 1)  |
|                       | Data format  | 1 start bit, 8-bit data, NO/ODD/EVEN parity (default NO parity) |
|                       | Response delay   | 1÷ 1000ms   |
|                       | Connection   | Via removable terminal, T-BUS or microUSB                       |
| <b>Digital output</b> | Can be activated by software as an alternative to the RS485 terminal |   |
|                       | Usage  | Alarm or pulse counter  |
|                       | Type   | Solid State (MOSFET)  |
|                       | Limit values   | <40V, <100mA  |



## General data

|                              |   |
|------------------------------|---|
| Working temperature          | -15÷60° C   |
| Storage temperature          | -40÷85° C   |
| Relative humidity            | 10÷90% not condensing   |
| Elevation                    | Up to 2000m a.s.l.  |
| Protection degree            | IP20  |
| Measurements                 | 106x68x18 mm<br>             |
| Weight                       | 60 g  |
| Terminal cable cross-section | 0.05÷1.5 mm <sup>2</sup> (30÷14 AWG)  |
| Energy values storage        | Flash, min. 1000k writings  |
| Appliance class              | Cat. III (IEC 60664, EN60664)   |
| Approvals and certifications | EN61000-6-3; EN61010-1<br> |
| Installation                 | DIN rail mounting   |

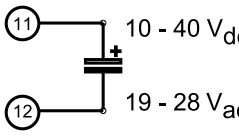
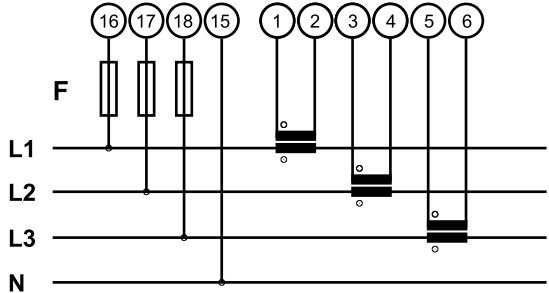
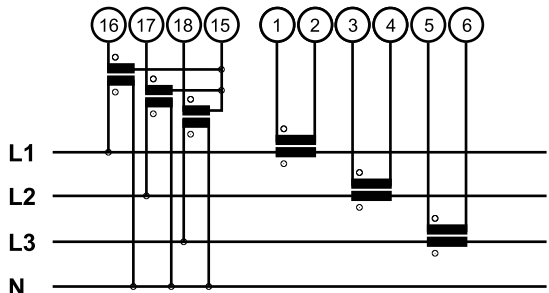
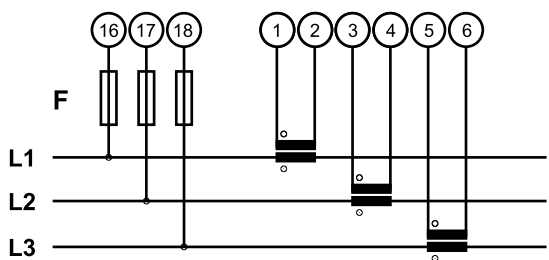
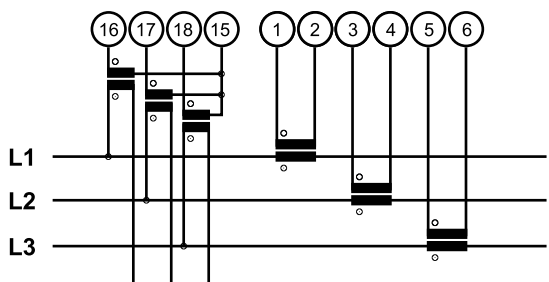
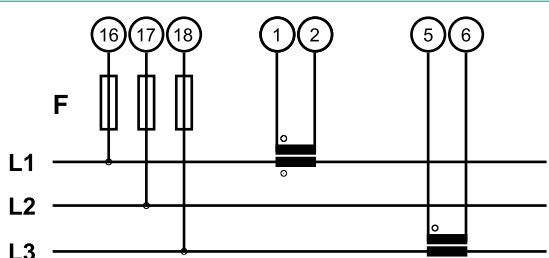
## Order codes

|                  |                 |
|------------------|-----------------|
| Standard version | QE-POWER-T-STD  |
| PLUS version     | QE-POWER-T-PLUS |
| PRO version      | QE-POWER-T-PRO  |
| T-BUS            | QA-TBUS-22      |



## CONNECTION AND INSTALLATION

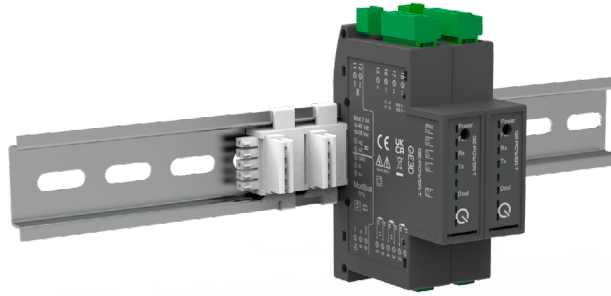
For the connection of several instruments with reduced wiring, the unit is designed for DIN rail mounting, with or without T-BUS connector. The functionality of the terminals is described below:

|   |   |
|---|---|
|    | <p>Device power supply<br/><b>PLEASE NOTE:</b> Wiring must be protected against short circuits and/or accidental faults</p> |
|    | <p>3-phase, 4-wire, 3 CT connection</p>   |
|   | <p>3-phase, 4-wire, 3 CT and 3 TV connection</p>  |
|  | <p>3-phase, 3-wire, 3 CT connection</p>   |
|  | <p>3-phase, 3-wire, 3 CT and 3 TV connection</p>  |
|  | <p>3-phase, 3-wire, 2 CT connection (Aron)</p>  |



|  |   |
|--|---|
|  | <p>3-phase, 3-wire, connection with 2 CTs and 3 TVs (Aron)</p>  |
|  | <p>Single-phase, 2-wire, 1 CT connection</p>  |
|  | <p>Single-phase, 2-wire, connection with 1 CT and 1 TV</p>  |
|  | <p>Digital output on withdrawable terminal 8-9-10 configured in digital output mode</p>   |
| <p><b>ModBus RTU</b></p> <p>GND 8</p> <p>B- 9</p> <p>A+ 10</p> | <p>RS485 Modbus RTU connection: terminals 8, 9 (B-), 10 (A+)</p>  |
|  | <p>T-BUS connection (requires optional T-BUS accessory):<br/>the T-BUS accessory can be fitted to the module base to provide both power supply and serial communication (see figure below).<br/>The number of modules supported by the bus depends on the power supply used (please check the power consumption of the modules)</p> |



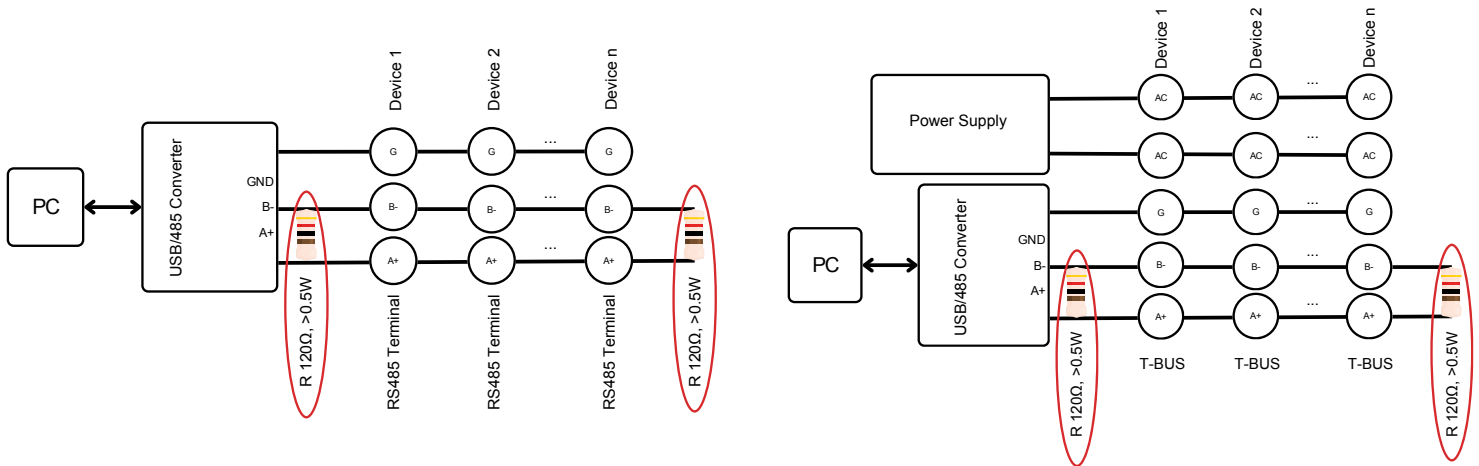


**Figure 1:** DIN-rail installation with T-BUS

**RS485 bus termination**

To avoid unbalances on the transmission bus, it is advisable to insert a termination resistor at the beginning of the RS-485 bus (typically on the USB-RS485 adapter) and at the end (typically on the last slave - which can also be activated by dip-switch). It is advisable to use 120Ω resistors with 1% tolerance, which corresponds to the typical impedance of RS485 cables.

The following images are for illustrative purposes only:



**Figure 2:** RS485 dynamic bus termination

**STATUS LEDs**

| Function          | Status  | Meaning                                     |   |   |
|-------------------|---|---|---|---|
| Power (green)     | ON  | Powered device                              |   |   |
| Fail (yellow)     | ON  | Flashing                                    | Active bootloader: can be triggered by a Modbus RTU command or as a result of corruption of the program flash memory                              |   |
|                   |   | ON  | At least one of the following module states is present (configurable from <b>Q-WIZARD</b> or by accessing the dedicated registers - see page 16 ) |   |
|                   |   |   | EEPROM fail   | Settings, calibration or energy storing problems              |
|                   |   |   | Phase reversal  | The order of phases L1, L2 and L3 is not correct.             |
|                   |   |   | I o V over-range  | phase i of current or voltage has a value above the threshold |
| I o V under-range | phase i of current or voltage has a value below the threshold |   |   |   |
| RX (red)          | Flashing  | The system is receiving data from the RS485 |   |   |
| TX (red)          | Flashing  | The system is transmitting data on RS485    |   |   |
| Dout (green)      | ON  | Active digital output                       |   |   |



**DIGITAL OUTPUT ALARM**

To enable alarms via digital output, the RS485 terminal must be configured as a digital output. Communication is only possible via T-BUS.

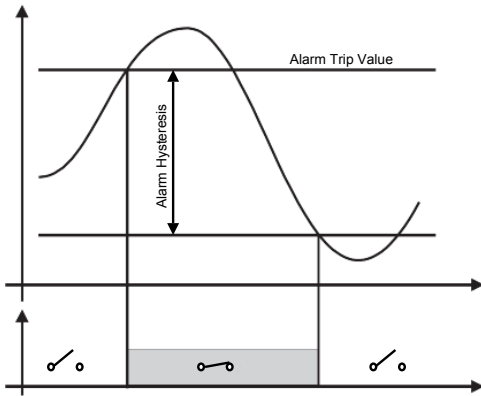


Figure 3: Upward: normally open contact

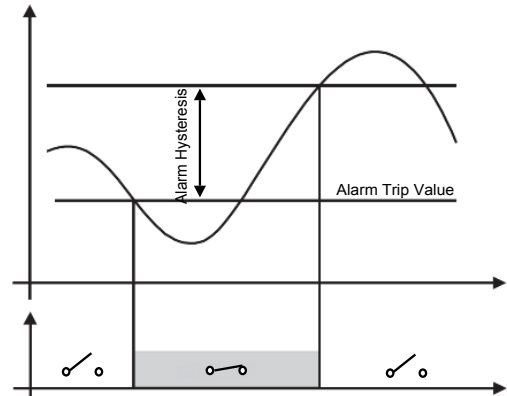


Figure 4: Downward: normally closed contact

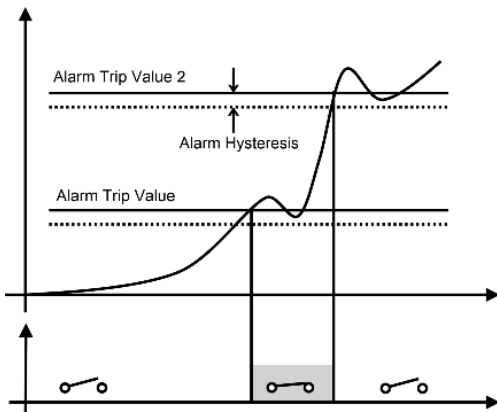


Figure 5: Windowed: closed contact between thresholds

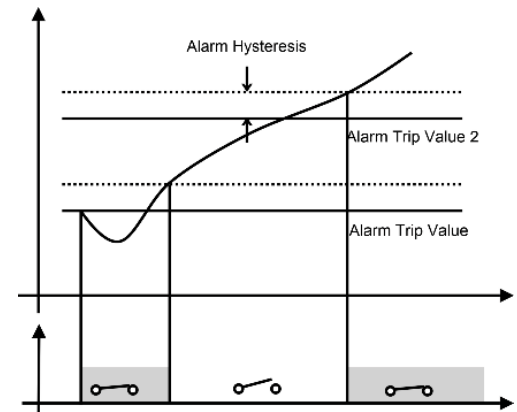


Figure 6: Windowed: closed contact outside the thresholds

**ACCURACY (ACC. TO EN50470-3 AND EN62053-24)**

The accuracy of the reactive power is guaranteed if the instrument is set to calculate Q using the Budeanu formula (configurable from Q-WIZARD or by accessing the dedicated registers - see page 16).

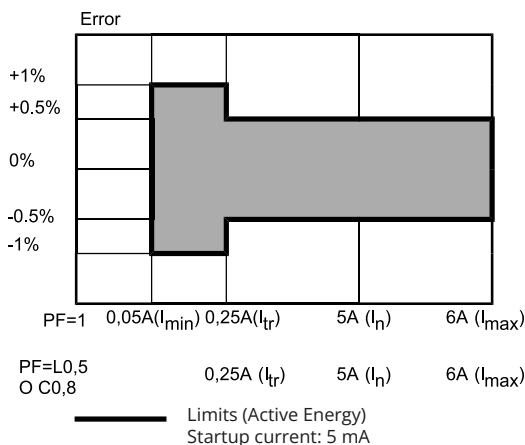


Figure 7: Wh, load-dependent accuracy (CT with current output)

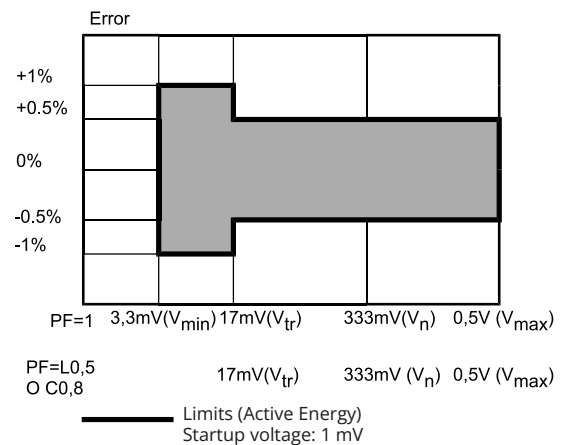


Figure 8: Wh, load-dependent accuracy (CT with voltage output)

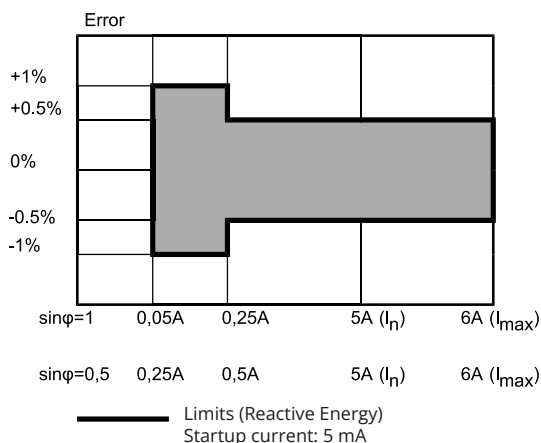


Figure 9: VARh, load-dependent accuracy (CT with current output)

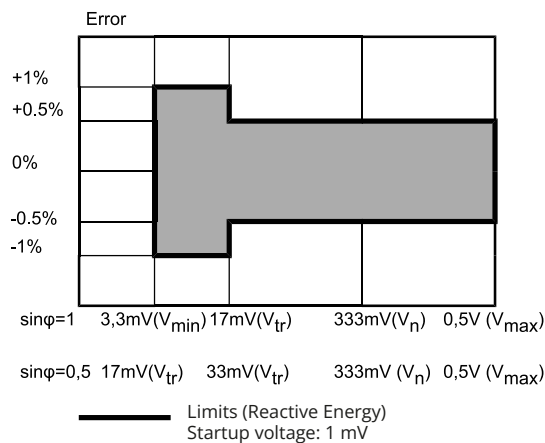


Figure 10: VARh, load-dependent accuracy (CT with voltage output)

## PRODUCT FEATURES

Using the configuration software or acting on the dedicated registers, the following functions can be configured:

### Modbus

Address, baud rate, parity and response delay can be set.

### RTC (only PLUS and PRO versions)

#### Inputs/outputs

- Enabling of energy flash storage [Reg. 40007]
- Energy display unit of measure [Reg. 40030]
- Energy Filtering [Reg. 40007]
- Time period for calculation of max., average and min. RMS values [Reg. 40027 - 40029]. [Reg. 40027 - 40029] (if set to 0, the value is not averaged and absolute values are taken for max. and min. values) (PLUS and PRO only)
- Window for max. demand and its threshold [Reg. 40025, 40043] (PLUS and PRO only)
- Filter on measurement [Reg. 40023 - 40024]
- Power calculation method [Reg. 40007]
- Current input type selection used [Reg. 40007] and related settings (transformer ratio [Reg. 40009], connection type [Reg.], FFT on absolute value or first harmonic [Reg. 40007])
- Voltage input type [Reg. 40007]
- Frequency calculation channel [Reg. 40007]
- Voltage input transformation ratio [Reg. 40013]
- Enable digital output instead of RS485 serial [Reg. 40007] (If DIP1 is set to 1, it will force serial 485 as RS-485 and not switch)

### Status LEDs

By adjusting register [40008], it is possible to set a fault signal to be displayed via the Fail LED on the front of the device.

### Digital alarm

Acting on register [40026] it is possible to select the type of alarm (single or multiple). In the case of a single alarm from register [40035 - 40041], it is possible to set the threshold and hysteresis of the quantity that determines the activation of the alarm associated with the digital output. It is also possible to enter a delay on alarm signalling.

### Energy quality (only PRO version)

By acting on registers [Reg. 40045 - 40053], threshold values for 'interruption, under-voltage and over-voltage' (Interruption, SAG and SWELL) can be set.



## DEVICE CONFIGURATION

### Dip-switch Modbus RTU address and baud rate setting

The baud rate can be changed using the DIP switch on one of the two sides of the module. If DIP1 is set to zero, the module adopts the configuration from the EEPROM, otherwise it adopts the configuration set by the DIP switch according to the table:

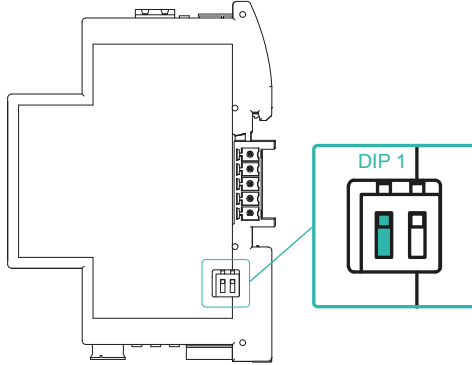


Figure 11: Baud rate configuration dip-switch

| DIP1 | DIP2 | Address | Baudrate |
|------|------|---------|----------|
| 0    | x    | EEPROM  | EEPROM   |
| 1    | 0    | 1       | 9600     |
| 1    | 1    | 1       | 38400    |

Addresses other than 1 (default) or baud rates other than those shown in the table can be configured using the **Q-WIZARD** configuration software or the Modbus RTU functions below by acting on the dedicated registers - see page 16.

### Functionality configuration

It is possible to connect to the product via an RS485 serial device, such as our Q-USB485, or via the microUSB port.

The configuration of the module can be done with **Q-WIZARD** configuration software or the Modbus RTU functions below by acting on the dedicated registers - see page 16.

### Q-WIZARD

Using the **Q-WIZARD interface tool** all device parameters can be configured by following the simple, intuitive steps.

In addition to the configuration of various parameters, inputs and outputs, the **Q-WIZARD** also allows real-time monitoring of device variables.

### Third-party Modbus Master

Alternatively, the product can communicate directly with a third-party Modbus RTU Master using the communication settings according to the DIP switch configuration (when using microUSB the DIP switch settings are irrelevant).

The communication protocol supported is Modbus RTU Slave:

- Modbus RTU connections: A+ and B- according to Modbus RTU standards
- Supported Modbus RTU functions: 03 hexadecimal (read multiple registers, max 100), 06 hexadecimal (write single), 10 hexadecimal (write multiple registers)
- Modbus RTU address numbering is by convention '1 BASED' (standard), but the physical register is base 0; the logical address, e.g. 40010, corresponds to the physical address #9, as required by Modbus RTU standards

**PLEASE NOTE:** All setting changes of calibration and configuration parameters must be followed by the flash save command 0xC1C0 = Flash settings save command in register 40244; changes of device communication parameters in addition must also be followed by the command 0xC1A0 = Reboot command in register 40244.

In this case, all device configurations are performed by accessing the Modbus RTU register map available in the last chapter of this document using the functions:

- Read holding registers (function 03 hexadecimal)
- Write single holding register (function 06 hexadecimal)
- Write multiple registers (function 10 hexadecimal)



### Function 03 Hexadecimal (Read Holding Registers)

This function is used to read the contents of a contiguous block of holding registers (words). The request frame specifies the source register address and the number of registers to read. A maximum of 120 registers (words) can be read with a single request, unless otherwise specified. The register data in the response message is packaged as two bytes per register (word), with the binary contents right-justified within each byte. For each register, the first byte contains the most significant bits (MSB) and the second byte contains the least significant bits (LSB).

| Request Frame                |         |                        |                       |
|------------------------------|---------|------------------------|-----------------------|
| Description                  | Lenght  | Value                  | Comments              |
| Physical address             | 1 byte  | 1 to F7 HEX (1 to 247) |                       |
| Function code                | 1 byte  | 03 HEX                 |                       |
| Starting address             | 2 bytes | 0000 to FFFF HEX       | Bytes order: MSB, LSB |
| Number of registers (N word) | 2 bytes | 1 to 10 HEX (1 to 16)  | Bytes order: MSB, LSB |
| CRC                          | 2 bytes |                        |                       |

| Response frame (right action) |           |                        |                       |
|-------------------------------|-----------|------------------------|-----------------------|
| Description                   | Lenght    | Value                  | Comments              |
| Physical address              | 1 byte    | 1 to F7 HEX (1 to 247) |                       |
| Function code                 | 1 byte    | 03 HEX                 |                       |
| Required Number of bytes      | 1 byte    | N word * 2             |                       |
| Register value                | N*2 bytes |                        | Bytes order: MSB, LSB |
| CRC                           | 2 bytes   |                        |                       |

| Response frame (wrong action) |         |                           |   |
|-------------------------------|---------|---------------------------|---|
| Description                   | Lenght  | Value                     | Comments  |
| Physical address              | 1 byte  | 1 to F7 HEX (1 to 247)    | Possible exception:<br>01: illegal function<br>02: illegal data address<br>03: Illegal data value<br>04: Slave device failure |
| Function code                 | 1 byte  | 83 HEX                    |   |
| Exception code                | 1 byte  | 01, 02, 03, 04 (see note) |   |
| CRC                           | 2 bytes |                           |   |

### Function 06 Hexadecimal (Write Single Holding Register)

This function is used to write a single holding register. The request frame specifies the address of the register (word) to be written and its contents. The correct response is an echo of the request, returned after the contents of the register have been written.

| Request frame    |         |                        |                       |
|------------------|---------|------------------------|-----------------------|
| Description      | Lenght  | Value                  | Comments              |
| Physical address | 1 byte  | 1 to F7 HEX (1 to 247) |                       |
| Function code    | 1 byte  | 06 HEX                 |                       |
| Starting address | 2 bytes | 0000h to FFFF HEX      | Bytes order: MSB, LSB |
| Register value   | 2 bytes | 0000h to FFFF HEX      | Bytes order: MSB, LSB |
| CRC              | 2 bytes |                        |                       |



## Response frame (right action)

| Description      | Lenght  | Value                  | Comments              |
|------------------|---------|------------------------|-----------------------|
| Physical address | 1 byte  | 1 to F7 HEX (1 to 247) |                       |
| Function code    | 1 byte  | 06 HEX                 |                       |
| Starting address | 2 bytes | 0000h to FFFF HEX      | Bytes order: MSB, LSB |
| Register value   | 2 bytes | 0000h to FFFF HEX      | Bytes order: MSB, LSB |
| CRC              | 2 bytes |                        |                       |

## Response frame (wrong action)

| Description      | Lenght  | Value                     | Comments   |
|------------------|---------|---------------------------|--|
| Physical address | 1 byte  | 1 to F7 HEX (1 to 247)    | Possible exception:                                |
| Function code    | 1 byte  | 86 HEX                    | 01: illegal function                               |
| Exception code   | 1 byte  | 01, 02, 03, 04 (see note) | 02: illegal data address                           |
| CRC              | 2 bytes |                           | 03: Illegal data value<br>04: Slave device failure |

**Function 10 Hexadecimal** (Write Multiple Registers)

This function is used to write a block of contiguous registers (maximum of 2). The required values to be written are specified in the data field of the request. The data is packed as two bytes per register.

A correct response returns the function code, the starting address and the number of registers written.

## Request frame

| Description                  | Lenght      | Value                  | Comments              |
|------------------------------|-------------|------------------------|-----------------------|
| Physical address             | 1 byte      | 1 to F7 HEX (1 to 247) |                       |
| Function code                | 1 byte      | 10 HEX                 |                       |
| Starting address             | 2 bytes     | 0000 to FFFF HEX       | Bytes order: MSB, LSB |
| Number of registers (N word) | 2 bytes     | 0001 to 0078 HEX       | Bytes order: MSB, LSB |
| Byte counting                | 1 byte      | N word * 2             |                       |
| Register value               | N * 2 bytes | value                  | Bytes order: MSB, LSB |
| CRC                          | 2 bytes     |                        |                       |

## Response frame (right action)

| Description                  | Lenght  | Value                  | Comments              |
|------------------------------|---------|------------------------|-----------------------|
| Physical address             | 1 byte  | 1 to F7 HEX (1 to 247) |                       |
| Function code                | 1 byte  | 10 HEX                 |                       |
| Starting address             | 2 bytes | 0000 to FFFF HEX       | Bytes order: MSB, LSB |
| Number of registers (N word) | 2 bytes | 0001 to 0078 HEX       | Bytes order: MSB, LSB |
| CRC                          | 2 bytes |                        |                       |

## Response frame (wrong action)

| Description      | Lenght  | Value                     | Comments   |
|------------------|---------|---------------------------|--|
| Physical address | 1 byte  | 1 to F7 HEX (1 to 247)    | Possible exception:                                |
| Function code    | 1 byte  | 90 HEX                    | 01: illegal function                               |
| Exception code   | 1 byte  | 01, 02, 03, 04 (see note) | 02: illegal data address                           |
| CRC              | 2 bytes |                           | 03: Illegal data value<br>04: Slave device failure |



## CONFIGURATION REGISTER 40007

This 16-bit register regulates the card's main operating settings. Below in detail:

| Settings                               | Value               | Detail   |
|--|---------------------|--|
| Input CT                               | xxxx xxxx xxxx xxx0 | Current input (e.g. TA 5A)   |
|  | xxxx xxxx xxxx xxx1 | Voltage input (e.g. TA 333 mV, Rogowski)   |
| Calculation method for reactive power  | xxxx xxxx xx0x xxxx | Triangular method: This method does not measure reactive power, but calculates it. It is the most commonly used method in energy meters. |
|  | xxxx xxxx xx1x xxxx | Phase-shift method (Budeanu). This method measures reactive power. The accuracy values given are relative to this method.                |
| Three-pole terminal 8-9-10 mode of use | xxxx xxxx x0xx xxxx | Used as RS485: 8 = GND, 9 = B-, 10 = A   |
|  | xxxx xxxx x1xx xxxx | Used as digital output between terminals 8 and 10. RS485 communication is still present on the T-Bus connector.                          |
| Frequency reading channel              | xxxx xxxx 0xxx xxxx | Voltage channel  |
|  | xxxx xxxx 1xxx xxxx | Current channel  |
| Voltage input type                     | xxxx xxx0 xxxx xxxx | Standard load  |
|  | xxxx xxx1 xxxx xxxx | PWM type input voltage   |
| Energy data storage                    | xxxx xx0x xxxx xxxx | Storage disabled   |
|  | xxxx xx1x xxxx xxxx | Storage enabled  |
| Dynamic data visualisation             | xxx0 0xxx xxxx xxxx | Float  |
|  | xxx0 1xxx xxxx xxxx | Inverted Float   |
|  | xxx1 0xxx xxxx xxxx | Float hundredths   |
|  | xxx1 1xxx xxxx xxxx | Inverted Float hundredths  |
| Integrator                             | xx0x xxxx xxxx xxxx | Integrator disabled  |
|  | xx1x xxxx xxxx xxxx | Integrator enabled for Rogowski input  |
| Digital output behaviour               | x0xx x0xx xxxx xxxx | Upward direction: contact normally open  |
|  | x1xx x0xx xxxx xxxx | Downward: contact normally closed  |
|  | x0xx x1xx xxxx xxxx | Window: contact closed between thresholds  |
|  | x1xx x1xx xxxx xxxx | Window: contact closed outside thresholds  |
| Measurement filtering                  | 0xxx xxxx xxxx xxxx | Disabled filtering: less stable measurements, but faster update  |
|  | 1xxx xxxx xxxx xxxx | Enabled filtering: more stable measurements, but less rapid updating   |



## REGISTER MAP

Default values are in **bold**.

|                      |
|----------------------|
| STANDARD VERSION     |
| PLUS AND PRO VERSION |
| ONLY PRO VERSION     |

| Register Name      | Description  | Register Type | R/W | Default | Address Modbus |
|--------------------|--|---------------|-----|---------|----------------|
| Machine_Id         | 23 = QE-POWER-T-STD<br>28 = QE-POWER-T-PLUS<br>32 = QE-POWER-T-PRO   | UShort [16b]  | R   |         | 40001          |
| HW_FW_version      | Hardware (MSB) and Firmware (LSB) Revision   | UShort [16b]  | R   |         | 40002          |
| address            | modbus address   | UShort [16b]  | R/W | 1       | 40003          |
| delay              | answer delay expressed as cycles   | UShort [16b]  | R/W | 1       | 40004          |
| Baudrate           | 0 → 1200<br>1 → 2400<br>2 → 4800<br><b>3 → 9600</b><br>4 → 19200<br>5 → 38400<br>6 → 57600<br>7 → 115200   | UShort [16b]  | R/W | 3       | 40005          |
| Parity             | <b>0 → NONE</b><br>1 → ODD<br>2 → EVEN   | UShort [16b]  | R/W | 0       | 40006          |
| Configuration_Flag | Bit[0]: Current Measurement type<br><b>0 → Input 1A/5A</b><br>1 → Input 333 mV/ Rogowski<br>Bit [1..2]: Connection<br>0 → Single phase<br>1 → Three phase: 3 wires, 2 CT (Aron)<br>2 → Three phase: 3 wires, 3 CT<br><b>3 → Three phase: 4 wires, 3 CT (with neutral)</b><br>Bit [3]: FFT representation<br><b>0 → Absolute</b><br>1 → Relative to the I1 value<br>Bit[5]: Reactive power calculation method<br>0 → Triangle method<br><b>1 → Budeanu</b><br>Bit[6]: RS485 as Switch (If DIP1 is ON the value will be forced to be 0 - RS485)<br><b>0 → RS485</b><br>1 → Switch<br>Bit[7]: Frequency detection Channel<br><b>0 → Voltage</b><br>1 → Current<br>Bit[8]: Voltage input type<br><b>0 → Normal load</b><br>1 → PWM modulated input (Inverter Load)<br>Bit[9]: Energy saving<br>0 → Disabled<br><b>1 → Enabled</b><br>Bit[11..12]: Measurement type<br><b>0 → Float</b><br>1 → Float Swapped<br>2 → Hundredth (Float * 100)<br>3 → Hundredth swapped (Float * 100 SW)<br>Bit[13]: Integrator condition<br><b>0 → Integrator disabled</b><br>1 → Integrator enabled (Rogowski input)<br>Bit[10, 14]: Output switch initial condition<br>0 → Closed initial condition<br>1 → Windowed: closed contact between thresholds<br><b>2 → Open initial condition</b><br>3 → Windowed: closed contact outside thresholds<br>Bit[15]: Filtered measurement<br><b>0 → Filtering disabled</b><br>1 → Filtering enabled | UShort [16b]  | R/W | 16934   | 40007          |





| Register Name              | Description   | Register Type   | R/W | Default | Address Modbus |
|----------------------------|---|-----------------|-----|---------|----------------|
| Led_settings               | Set Fail LED<br>Bit:<br><b>0 → Fail Eeprom (settings, calibration or Energy)</b><br>1 → Phase reversal (not available in STD version)<br>2 → I1 Over-range<br>3 → I1 Under-range<br>4 → I2 Over-range<br>5 → I2 Under-range<br>6 → I3 Over-range<br>7 → I3 Under-range<br>8 → V1 Over-range<br>9 → V1 Under-range<br>10 → V2 Over-range<br>11 → V2 Under-range<br>12 → V3 Over-range<br>13 → V3 Under-range | UShort [16b]    | R/W | 1       | 40008          |
| CT_Transducer_ratio        | If Input 1A/5A → Current transformer ratio M/N (Ex: 600:5 → transducer_ratio = 120)<br>If Input Rogowski / 333mV → (1 / Sensitivity) [A/V] (Ex: 100mV/1KA → transducer_ratio = 10000,<br>333mV/5A → transducer_ratio = 15)  | Float [32b-LSW] | R/W | 1       | 40009          |
| CT_Transducer_delay        | Current transformer delay in [°] @ 50 Hz for accurate power calculation   | Float [32b-LSW] | R/W | 0       | 40011          |
| VT_Transducer_ratio        | Voltage transformer ratio M/N - Default 1.0 (Ex: 1000:100 → transducer_ratio = 10)  | Float [32b-LSW] | R/W | 1       | 40013          |
| VT_Transducer_delay        | Voltage transformer delay in [°] @ 50 Hz for accurate power calculation   | Float [32b-LSW] | R/W | 0       | 40015          |
| minimum_voltage_ripple     | Minimum threshold under which the instrument reads 0 independent from the input value   | Float [32b-LSW] | R/W | 0       | 40017          |
| minimum_current_ripple     | Minimum threshold under which the instrument reads 0 independent from the input value   | Float [32b-LSW] | R/W | 0       | 40019          |
| minimum_power_ripple       | Minimum threshold under which the instrument reads 0 independent from the input value (P, Q, and S)   | Float [32b-LSW] | R/W | 0       | 40021          |
| DC_Filter                  | Number of tenth seconds for I RMS value in DC   | UShort [16b]    | R/W | 10      | 40023          |
| AC_Filter                  | Number of zero crossings for I RMS value in AC  | UShort [16b]    | R/W | 50      | 40024          |
| minute_for_Max_demand      | Minute for Max demand calculation (0..45)   | UShort [16b]    | R/W | 15      | 40025          |
| Or_settings                | Register to enable for multiple alarms settings<br>Bit:<br><b>0 → Over/under value phase 1</b><br>1 → Over/under value phase 2<br>2 → Over/under value phase 3<br>3 → missing phase 1<br>4 → missing phase 2<br>5 → missing phase 3<br>6 → Asymmetry<br>7 → Phase sequence<br>15 → Or_Alarm_enable  | UShort [16b]    | R/W | 0       | 40026          |
| seconds_for_mean_RMS       | Register in seconds (0..30) for RMS average   | UShort [16b]    | R/W | 0       | 40027          |
| seconds_for_MAX_RMS        | Seconds 1..30 for MAX RMS value. If the register is 0, then the absolute MAX RMS is given   | UShort [16b]    | R/W | 0       | 40028          |
| seconds_for_min_RMS        | Seconds 1..30 for min RMS value. If the register is 0, then the absolute min RMS is given   | UShort [16b]    | R/W | 0       | 40029          |
| Energy_unit_factor         | Variable for changing Energy measurement unit:<br><b>0 → [Wh/10]</b><br>1 → [Wh]<br>4 → [kWh]   | UShort [16b]    | R/W | 0       | 40030          |
| Voltage_unbalance_setpoint | Setpoint for Voltage Unbalance Alarm  | Float [32b-LSW] | R/W | 0       | 40031          |



| Register Name                  | Description   | Register Type   | R/W | Default | Address Modbus |
|--------------------------------|---|-----------------|-----|---------|----------------|
| Phase_custom_configuration     | <p>Configuration for customizing the Current and Voltage Terminal</p> <ul style="list-style-type: none"> <li>* Bit 0..2: Voltage terminal settings</li> <li>* Terminal 16 17 18</li> <li>* <b>000 -&gt; L1 L2 L3</b></li> <li>* 001 -&gt; L3 L1 L2</li> <li>* 010 -&gt; L2 L3 L1</li> <li>* 011 -&gt; L1 L3 L2</li> <li>* 100 -&gt; L3 L2 L1</li> <li>* 101 -&gt; L2 L1 L3</li> <li>*</li> <li>* Bit 3..5: Current terminal settings</li> <li>* Terminal 1-2 3-4 5-6</li> <li>* <b>000 -&gt; I1 I2 I3</b></li> <li>* 001 -&gt; I3 I1 I2</li> <li>* 010 -&gt; I2 I3 I1</li> <li>* 011 -&gt; I1 I3 I2</li> <li>* 100 -&gt; I3 I2 I1</li> <li>* 101 -&gt; I2 I1 I3</li> <li>*</li> <li>* Bit 6,7,8: Current direction I1, I2, I3</li> <li>* <b>0 -&gt; Normal</b></li> <li>* 1 -&gt; Inverse</li> <li>*</li> <li>* Bit 15: Phase custom configuration</li> <li>* <b>0 -&gt; Disable</b></li> <li>* 1 -&gt; Enable</li> </ul>   | UShort [16b]    | R/W | 0       | 40033          |
| Alarm_delay                    | Delay in ms for Alarm trigger   | UShort [16b]    | R/W | 0       | 40035          |
| Alarm_Register_start_address   | Float [32b-LSW] value Starting address for alarm (40361 V_L1_N, 40363 V_L2_N, 40365 V_L3_N, ecc)  | UShort [16b]    | R/W | 40361   | 40036          |
| Alarm_trip_value               | Alarm Threshold for "closed" and "open" condition OR first alarm threshold for "within threshold" and "Outside threshold" condition   | Float [32b-LSW] | R/W | 0       | 40037          |
| Alarm_hysteresis               | Alarm Hysteresis  | Float [32b-LSW] | R/W | 1       | 40039          |
| Alarm_trip_value_2             | Second alarm Threshold for "within threshold" and "Outside threshold" condition   | Float [32b-LSW] | R/W |         | 40041          |
| Power_Threshold_for_exceedings | Threshold for Power exceedings monitoring   | Float [32b-LSW] | R/W | 0       | 40043          |
| Nominal_Star_Voltage           | Nominal Star Voltage for Sag, Swell, Interruption monitoring [V]  | Float [32b-LSW] | R/W | 230     | 40045          |
| Sag_percentage_level           | Percentage over Nominal_Star_Voltage under which a Sag event is generated (default 0.9 = 90 %); must be over Interruption_percentage_level  | Float [32b-LSW] | R/W | 0,9     | 40047          |
| Swell_percentage_level         | Percentage over Nominal_Star_Voltage over which a Swell event is generated (default 1.1 = 110 %)  | Float [32b-LSW] | R/W | 1,1     | 40049          |
| Interruption_percentage_level  | Percentage over Nominal_Star_Voltage under which an Interruption event is generated (default 0.1 = 10 %)  | Float [32b-LSW] | R/W | 0,1     | 40051          |
| Minimum_duration_cutoff        | Sag, Swell or Interruption events must be above this cutoff to be displayed and saved [ms]  | UShort [16b]    | R/W | 0       | 40053          |
| Status_1                       | <ul style="list-style-type: none"> <li>bit 0: flash settings error;</li> <li>bit 1: flash calibration error;</li> <li>bit 2: Current I1 Over Range;</li> <li>bit 3: Current I1 Under Range;</li> <li>bit 4: Current I2 Over Range;</li> <li>bit 5: Current I2 Under Range;</li> <li>bit 6: Current I3 Over Range;</li> <li>bit 7: Current I3 Under Range;</li> <li>bit 8: Current V1 Over Range;</li> <li>bit 9: Current V1 Under Range;</li> <li>bit 10: Current V2 Over Range;</li> <li>bit 11: Current V2 Under Range;</li> <li>bit 12: Current V3 Over Range;</li> <li>bit 13: Current V3 Under Range;</li> <li>bit 14: Zero crossing detecting;</li> <li>bit 15: Switch open;</li> <li>bit 16: Wh storing error;</li> <li>bit 17..18: don't care;</li> <li>bit 19: Alarm detection;</li> <li>bit 20..27: don't care;</li> <li>bit 28: Leading Power factor PF1;</li> <li>bit 29: Leading Power factor PF2;</li> <li>bit 30: Leading Power factor PF3;</li> </ul> | ULong [32b-LSW] | R   |         | 40239          |



| Register Name        | Description   | Register Type   | R/W | Default | Address Modbus |
|----------------------|---|-----------------|-----|---------|----------------|
| Command              | 0xC1C0 = Flash settings save command<br>0xC1A0 = Reboot command<br>0xBABA = Save energy command<br>0xDAAA = Close Switch command (only if Digital Output is enabled)<br>0xDAAB = Open Switch command (only if Digital Output is enabled)<br>0xB000 = Enter Bootloader command<br>0xE000 = Read previous SAG event in EEprom<br>0xE001 = Read previous SWELL event in EEprom<br>0xE002 = Read previous INTERRUPTION event in EEprom<br>0xE100 = Reset SAG events in EEprom<br>0xE101 = Reset SWELL events in EEprom<br>0xE102 = Reset INTERRUPTION events in EEprom<br>0xF000 = Reset MAX Demand registers command | UShort [16b]    | R/W |         | 40244          |
| KWh1                 | Active energy line 1 [Wh tenth]   | Int [64b-LSW]   | R/W |         | 40245          |
| KWh2                 | Active energy line 2 [Wh tenth]   | Int [64b-LSW]   | R/W |         | 40249          |
| KWh3                 | Active energy line 3 [Wh tenth]   | Int [64b-LSW]   | R/W |         | 40253          |
| KWh_SUM              | Active energy three phase [Wh tenth]  | Int [64b-LSW]   | R   |         | 40257          |
| KWh1_Plus            | Positive Active energy line 1 [Wh tenth]  | Int [64b-LSW]   | R/W |         | 40261          |
| KWh2_Plus            | Positive Active energy line 2 [Wh tenth]  | Int [64b-LSW]   | R/W |         | 40265          |
| KWh3_Plus            | Positive Active energy line 3 [Wh tenth]  | Int [64b-LSW]   | R/W |         | 40269          |
| KWh_SUM_Plus         | Positive Active energy three phase [Wh tenth]   | Int [64b-LSW]   | R   |         | 40273          |
| KWh1_Neg             | Negative Active energy line 1 [Wh tenth]  | Int [64b-LSW]   | R/W |         | 40277          |
| KWh2_Neg             | Negative Active energy line 2 [Wh tenth]  | Int [64b-LSW]   | R/W |         | 40281          |
| KWh3_Neg             | Negative Active energy line 3 [Wh tenth]  | Int [64b-LSW]   | R/W |         | 40285          |
| KWh_SUM_Neg          | Negative Active energy three phase [Wh tenth]   | Int [64b-LSW]   | R   |         | 40289          |
| KVARh1               | Reactive energy line 1 [VARh tenth]   | Int [64b-LSW]   | R/W |         | 40293          |
| KVARh2               | Reactive energy line 2 [VARh tenth]   | Int [64b-LSW]   | R/W |         | 40297          |
| KVARh3               | Reactive energy line 3 [VARh tenth]   | Int [64b-LSW]   | R/W |         | 40301          |
| KVARh_SUM            | Reactive energy three phase [VARh tenth]  | Int [64b-LSW]   | R   |         | 40305          |
| KVARh1_Inductive     | Inductive Reactive energy line 1 [VARh tenth]   | Int [64b-LSW]   | R/W |         | 40309          |
| KVARh2_Inductive     | Inductive Reactive energy line 2 [VARh tenth]   | Int [64b-LSW]   | R/W |         | 40313          |
| KVARh3_Inductive     | Inductive Reactive energy line 3 [VARh tenth]   | Int [64b-LSW]   | R/W |         | 40317          |
| KVARh_SUM_Inductive  | Inductive Reactive energy three phase [VARh tenth]  | Int [64b-LSW]   | R   |         | 40321          |
| KVARh1_Capacitive    | Capacitive Reactive energy line 1 [VARh tenth]  | Int [64b-LSW]   | R/W |         | 40325          |
| KVARh2_Capacitive    | Capacitive Reactive energy line 2 [VARh tenth]  | Int [64b-LSW]   | R/W |         | 40329          |
| KVARh3_Capacitive    | Capacitive Reactive energy line 3 [VARh tenth]  | Int [64b-LSW]   | R/W |         | 40333          |
| KVARh_SUM_Capacitive | Capacitive Reactive energy three phase [VARh tenth]   | Int [64b-LSW]   | R   |         | 40337          |
| KVAh1                | Apparent energy line 1 [VAh tenth]  | Int [64b-LSW]   | R/W |         | 40341          |
| KVAh2                | Apparent energy line 2 [VAh tenth]  | Int [64b-LSW]   | R/W |         | 40345          |
| KVAh3                | Apparent energy line 3 [VAh tenth]  | Int [64b-LSW]   | R/W |         | 40349          |
| KVAh_SUM             | Apparent energy three phase [VAh tenth]   | Int [64b-LSW]   | R   |         | 40353          |
| Wh_storage_count     | Number of Wh flash savings (every 20 seconds)   | ULong [32b-LSW] | R   |         | 40357          |
| V_L1_N               | RMS star voltage L1-N [V]   | Float [32b-LSW] | R   |         | 40359          |
| V_L2_N               | RMS star voltage L2-N [V]   | Float [32b-LSW] | R   |         | 40361          |
| V_L3_N               | RMS star voltage L3-N [V]   | Float [32b-LSW] | R   |         | 40363          |
| V_STAR_AVG           | RMS star avg value voltage [V]  | Float [32b-LSW] | R   |         | 40365          |
| V_L1_L2              | RMS line voltage L1-L2 [V]  | Float [32b-LSW] | R   |         | 40367          |
| V_L2_L3              | RMS line voltage L2-L3 [V]  | Float [32b-LSW] | R   |         | 40369          |
| V_L3_L1              | RMS line voltage L3-L1 [V]  | Float [32b-LSW] | R   |         | 40371          |
| V_LINE_AVG           | RMS line avg value voltage [V]  | Float [32b-LSW] | R   |         | 40373          |
| I_L1                 | RMS line current L1 [A]   | Float [32b-LSW] | R   |         | 40375          |
| I_L2                 | RMS line current L2 [A]   | Float [32b-LSW] | R   |         | 40377          |
| I_L3                 | RMS line current L3 [A]   | Float [32b-LSW] | R   |         | 40379          |
| I_N                  | RMS line current N [A] (if 1 or 2 TA connection, I_N = 0)   | Float [32b-LSW] | R   |         | 40381          |
| I_AVG                | RMS avg value current [A] (excluding neutral current I_N)   | Float [32b-LSW] | R   |         | 40383          |
| P1                   | RMS active power line 1 [W]   | Float [32b-LSW] | R   |         | 40385          |
| P2                   | RMS active power line 2 [W]   | Float [32b-LSW] | R   |         | 40387          |
| P3                   | RMS active power line 3 [W]   | Float [32b-LSW] | R   |         | 40389          |
| P_SUM                | RMS sum active power [W]  | Float [32b-LSW] | R   |         | 40391          |
| Q1                   | RMS reactive power line 1 [VAR]   | Float [32b-LSW] | R   |         | 40393          |
| Q2                   | RMS reactive power line 2 [VAR]   | Float [32b-LSW] | R   |         | 40395          |
| Q3                   | RMS reactive power line 3 [VAR]   | Float [32b-LSW] | R   |         | 40397          |
| Q_SUM                | RMS sum reactive power [VAR]  | Float [32b-LSW] | R   |         | 40399          |
| S1                   | RMS apparent power line 1 [VA]  | Float [32b-LSW] | R   |         | 40401          |
| S2                   | RMS apparent power line 2 [VA]  | Float [32b-LSW] | R   |         | 40403          |



| Register Name        | Description  | Register Type   | R/W | Default | Address Modbus |
|----------------------|--|-----------------|-----|---------|----------------|
| S3                   | RMS apparent power line 3 [VA]                                 | Float [32b-LSW] | R   |         | 40405          |
| S_SUM                | RMS sum apparent power [VA]                                    | Float [32b-LSW] | R   |         | 40407          |
| PF1                  | Power Factor line 1  | Float [32b-LSW] | R   |         | 40409          |
| PF2                  | Power Factor line 2  | Float [32b-LSW] | R   |         | 40411          |
| PF3                  | Power Factor line 3  | Float [32b-LSW] | R   |         | 40413          |
| PF_3PH               | Three Phase Power Factor                                       | Float [32b-LSW] | R   |         | 40415          |
| CF1                  | Crest Factor line 1  | Float [32b-LSW] | R   |         | 40417          |
| CF2                  | Crest Factor line 2  | Float [32b-LSW] | R   |         | 40419          |
| CF3                  | Crest Factor line 3  | Float [32b-LSW] | R   |         | 40421          |
| CF_N                 | Crest Factor Neutral   | Float [32b-LSW] | R   |         | 40423          |
| Frequency            | Frequency [Hz]   | Float [32b-LSW] | R   |         | 40425          |
| V_L1_N_peak          | Star voltage L1-N peak [V]                                     | Float [32b-LSW] | R/W |         | 40427          |
| V_L2_N_peak          | Star voltage L2-N peak [V]                                     | Float [32b-LSW] | R/W |         | 40429          |
| V_L3_N_peak          | Star voltage L3-N peak [V]                                     | Float [32b-LSW] | R/W |         | 40431          |
| V_L1_L2_peak         | Line voltage L1-L2 peak [V]                                    | Float [32b-LSW] | R/W |         | 40433          |
| V_L2_L3_peak         | Line voltage L2-L3 peak [V]                                    | Float [32b-LSW] | R/W |         | 40435          |
| V_L3_L1_peak         | Line voltage L3-L1 peak [V]                                    | Float [32b-LSW] | R/W |         | 40437          |
| I_L1_peak            | L1 current peak [A]  | Float [32b-LSW] | R/W |         | 40439          |
| I_L2_peak            | L2 current peak [A]  | Float [32b-LSW] | R/W |         | 40441          |
| I_L3_peak            | L3 current peak [A]  | Float [32b-LSW] | R/W |         | 40443          |
| I_N_peak             | N current peak [A]   | Float [32b-LSW] | R/W |         | 40445          |
| DPF1                 | Distortion Power Factor line 1 (+ inductive, - capacitive)     | Float [32b-LSW] | R   |         | 40467          |
| DPF2                 | Distortion Power Factor line 2 (+ inductive, - capacitive)     | Float [32b-LSW] | R   |         | 40469          |
| DPF3                 | Distortion Power Factor line 3 (+ inductive, - capacitive)     | Float [32b-LSW] | R   |         | 40471          |
| DPF_N                | Neutral Distortion Power Factor (+ inductive, - capacitive)    | Float [32b-LSW] | R   |         | 40473          |
| TAN_FI_1             | Tangentθline 1 (+ inductive, - capacitive)                     | Float [32b-LSW] | R   |         | 40475          |
| TAN_FI_2             | Tangentθline 2 (+ inductive, - capacitive)                     | Float [32b-LSW] | R   |         | 40477          |
| TAN_FI_3             | Tangentθline 3 (+ inductive, - capacitive)                     | Float [32b-LSW] | R   |         | 40479          |
| TAN_FI_AVG           | Average Tangentθ(+ inductive, - capacitive)                    | Float [32b-LSW] | R   |         | 40481          |
| Phase_Order          | L1, L2, L3 = 0; L1, L3, L2 = 1                                 | Float [32b-LSW] | R   |         | 40483          |
| Internal_temperature | Internal Temperature [°C]                                      | Float [32b-LSW] | R   |         | 40485          |
| V_L1_N_RMS_AVG       | Star voltage L1_N RMS average [V] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40487          |
| V_L1_N_RMS_MAX       | Star voltage L1_N MAX RMS [V] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40489          |
| V_L1_N_RMS_min       | Star voltage L1_N Min RMS [V] over last "seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40491          |
| V_L2_N_RMS_AVG       | Star voltage L2_N RMS average [V] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40493          |
| V_L2_N_RMS_MAX       | Star voltage L2_N MAX RMS [V] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40495          |
| V_L2_N_RMS_min       | Star voltage L2_N Min RMS [V] over last "seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40497          |
| V_L3_N_RMS_AVG       | Star voltage L3_N RMS average [V] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40499          |
| V_L3_N_RMS_MAX       | Star voltage L3_N MAX RMS [V] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40501          |
| V_L3_N_RMS_min       | Star voltage L3_N Min RMS [V] over last "seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40503          |
| V_STAR_AVG_RMS_AVG   | Star voltage AVG RMS average [V] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40505          |
| V_STAR_AVG_RMS_MAX   | Star voltage AVG MAX RMS [V] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40507          |
| V_STAR_AVG_RMS_min   | Star voltage AVG Min RMS [V] over last "seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40509          |
| V_L1_L2_RMS_AVG      | Line voltage L1-L2 RMS average [V] over "seconds_for_mean_RMS" | Float [32b-LSW] | R   |         | 40511          |
| V_L1_L2_RMS_MAX      | Line voltage L1-L2 MAX RMS [V] over last "seconds_for_MAX_RMS" | Float [32b-LSW] | R   |         | 40513          |
| V_L1_L2_RMS_min      | Line voltage L1-L2 Min RMS [V] over last "seconds_for_min_RMS" | Float [32b-LSW] | R   |         | 40515          |
| V_L2_L3_RMS_AVG      | Line voltage L2-L3 RMS average [V] over "seconds_for_mean_RMS" | Float [32b-LSW] | R   |         | 40517          |
| V_L2_L3_RMS_MAX      | Line voltage L2-L3 MAX RMS [V] over last "seconds_for_MAX_RMS" | Float [32b-LSW] | R   |         | 40519          |
| V_L2_L3_RMS_min      | Line voltage L2-L3 Min RMS [V] over last "seconds_for_min_RMS" | Float [32b-LSW] | R   |         | 40521          |
| V_L3_L1_RMS_AVG      | Line voltage L3-L1 RMS average [V] over "seconds_for_mean_RMS" | Float [32b-LSW] | R   |         | 40523          |
| V_L3_L1_RMS_MAX      | Line voltage L3-L1 MAX RMS [V] over last "seconds_for_MAX_RMS" | Float [32b-LSW] | R   |         | 40525          |
| V_L3_L1_RMS_min      | Line voltage L3-L1 Min RMS [V] over last "seconds_for_min_RMS" | Float [32b-LSW] | R   |         | 40527          |
| V_LINE_AVG_RMS_AVG   | Line voltage AVG RMS average [V] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40529          |
| V_LINE_AVG_RMS_MAX   | Line voltage AVG MAX RMS [V] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40531          |
| V_LINE_AVG_RMS_min   | Line voltage AVG Min RMS [V] over last "seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40533          |
| I_L1_RMS_AVG         | L1 RMS average [A] over "seconds_for_mean_RMS"                 | Float [32b-LSW] | R   |         | 40535          |
| I_L1_RMS_MAX         | L1 MAX RMS [A] over last "seconds_for_MAX_RMS"                 | Float [32b-LSW] | R   |         | 40537          |
| I_L1_RMS_min         | L1 Min RMS [A] over last "seconds_for_min_RMS"                 | Float [32b-LSW] | R   |         | 40539          |
| I_L2_RMS_AVG         | L2 RMS average [A] over "seconds_for_mean_RMS"                 | Float [32b-LSW] | R   |         | 40541          |



| Register Name          | Description  | Register Type   | R/W | Default | Address Modbus |
|------------------------|--|-----------------|-----|---------|----------------|
| L2_RMS_MAX             | L2 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40543          |
| L2_RMS_min             | L2 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40545          |
| L3_RMS_AVG             | L3 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40547          |
| L3_RMS_MAX             | L3 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40549          |
| L3_RMS_min             | L3 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40551          |
| L_N_RMS_AVG            | N RMS average [A] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40553          |
| L_N_RMS_MAX            | N MAX RMS [A] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40555          |
| L_N_RMS_min            | N Min RMS [A] over last"seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40557          |
| L_AVG_RMS_AVG          | L_AVG RMS average [A] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40559          |
| L_AVG_RMS_MAX          | L_AVG MAX RMS [A] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40561          |
| L_AVG_RMS_min          | L_AVG Min RMS [A] over last"seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40563          |
| P1_RMS_AVG             | P1 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40565          |
| P1_RMS_MAX             | P1 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40567          |
| P1_RMS_min             | P1 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40569          |
| P2_RMS_AVG             | P2 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40571          |
| P2_RMS_MAX             | P2 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40573          |
| P2_RMS_min             | P2 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40575          |
| P3_RMS_AVG             | P3 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40577          |
| P3_RMS_MAX             | P3 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40579          |
| P3_RMS_min             | P3 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40581          |
| P_SUM_RMS_AVG          | P_SUM RMS average [A] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40583          |
| P_SUM_RMS_MAX          | P_SUM MAX RMS [A] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40585          |
| P_SUM_RMS_min          | P_SUM Min RMS [A] over last"seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40587          |
| Q1_RMS_AVG             | Q1 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40589          |
| Q1_RMS_MAX             | Q1 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40591          |
| Q1_RMS_min             | Q1 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40593          |
| Q2_RMS_AVG             | Q2 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40595          |
| Q2_RMS_MAX             | Q2 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40597          |
| Q2_RMS_min             | Q2 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40599          |
| Q3_RMS_AVG             | Q3 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40601          |
| Q3_RMS_MAX             | Q3 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40603          |
| Q3_RMS_min             | Q3 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40605          |
| Q_SUM_RMS_AVG          | Q_SUM RMS average [A] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40607          |
| Q_SUM_RMS_MAX          | Q_SUM MAX RMS [A] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40609          |
| Q_SUM_RMS_min          | Q_SUM Min RMS [A] over last"seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40611          |
| S1_RMS_AVG             | S1 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40613          |
| S1_RMS_MAX             | S1 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40615          |
| S1_RMS_min             | S1 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40617          |
| S2_RMS_AVG             | S2 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40619          |
| S2_RMS_MAX             | S2 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40621          |
| S2_RMS_min             | S2 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40623          |
| S3_RMS_AVG             | S3 RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40625          |
| S3_RMS_MAX             | S3 MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40627          |
| S3_RMS_min             | S3 Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40629          |
| S_SUM_RMS_AVG          | S_SUM RMS average [A] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40631          |
| S_SUM_RMS_MAX          | S_SUM MAX RMS [A] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40633          |
| S_SUM_RMS_min          | S_SUM Min RMS [A] over last"seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40635          |
| PF1_RMS_AVG            | PF1 RMS average [A] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40637          |
| PF1_RMS_MAX            | PF1 MAX RMS [A] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40639          |
| PF1_RMS_min            | PF1 Min RMS [A] over last"seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40641          |
| PF2_RMS_AVG            | PF2 RMS average [A] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40643          |
| PF2_RMS_MAX            | PF2 MAX RMS [A] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40645          |
| PF2_RMS_min            | PF2 Min RMS [A] over last"seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40647          |
| PF3_RMS_AVG            | PF3 RMS average [A] over "seconds_for_mean_RMS"  | Float [32b-LSW] | R   |         | 40649          |
| PF3_RMS_MAX            | PF3 MAX RMS [A] over last "seconds_for_MAX_RMS"  | Float [32b-LSW] | R   |         | 40651          |
| PF3_RMS_min            | PF3 Min RMS [A] over last"seconds_for_min_RMS"   | Float [32b-LSW] | R   |         | 40653          |
| PF_SUM_RMS_AVG         | PF_SUM RMS average [A] over "seconds_for_mean_RMS"   | Float [32b-LSW] | R   |         | 40655          |
| PF_SUM_RMS_MAX         | PF_SUM MAX RMS [A] over last "seconds_for_MAX_RMS"   | Float [32b-LSW] | R   |         | 40657          |
| PF_SUM_RMS_min         | PF_SUM Min RMS [A] over last"seconds_for_min_RMS"  | Float [32b-LSW] | R   |         | 40659          |
| P1_Time_over_threshold | Time above threshold specified in "Power_Threshold_for_exceedings" for Active Power P1 [min] | Float [32b-LSW] | R   |         | 40661          |
| P2_Time_over_threshold | Time above threshold specified in "Power_Threshold_for_exceedings" for Active Power P2 [min] | Float [32b-LSW] | R   |         | 40663          |





| Register Name             | Description  | Register Type   | R/W | Default | Address Modbus |
|---------------------------|--|-----------------|-----|---------|----------------|
| P3_Time_over_threshold    | Time above threshold specified in "Power_Threshold_for_exceedings" for Active Power P3 [min]                       | Float [32b-LSW] | R   |         | 40665          |
| P_SUM_Time_over_threshold | Time above threshold specified in "Power_Threshold_for_exceedings" for Active Power P_SUM [min]                    | Float [32b-LSW] | R   |         | 40667          |
| P1_MaxDemand              | Max Demand over 15 minutes for P1 for current month  | Float [32b-LSW] | R   |         | 40669          |
| P2_MaxDemand              | Max Demand over 15 minutes for P2 for current month  | Float [32b-LSW] | R   |         | 40671          |
| P3_MaxDemand              | Max Demand over 15 minutes for P3 for current month  | Float [32b-LSW] | R   |         | 40673          |
| P_SUM_MaxDemand           | Max Demand over 15 minutes for P three phase for current month   | Float [32b-LSW] | R   |         | 40675          |
| Time_of_P1_MaxDemand      | Time at which arises Max Demand over 15 minutes for P1 for current month (month   day   hour   minutes)            | ULong [32b-LSW] | R   |         | 40677          |
| Time_of_P2_MaxDemand      | Time at which arises Max Demand over 15 minutes for P2 for current month (month   day   hour   minutes)            | ULong [32b-LSW] | R   |         | 40679          |
| Time_of_P3_MaxDemand      | Time at which arises Max Demand over 15 minutes for P3 for current month (month   day   hour   minutes)            | ULong [32b-LSW] | R   |         | 40681          |
| Time_of_P_SUM_MaxDemand   | Time at which arises Max Demand over 15 minutes for P three phase for current month (month   day   hour   minutes) | ULong [32b-LSW] | R   |         | 40683          |
| K_factor_I1               | K-factor for I1, see IEEE Standard 1100-1992   | Float [32b-LSW] | R   |         | 40685          |
| K_factor_I2               | K-factor for I2, see IEEE Standard 1100-1992   | Float [32b-LSW] | R   |         | 40687          |
| K_factor_I3               | K-factor for I3, see IEEE Standard 1100-1992   | Float [32b-LSW] | R   |         | 40689          |
| Year                      | RTC: year (2000-2099)  | UShort [16b]    | R/W |         | 40691          |
| Month                     | RTC : month (1-12)   | UShort [16b]    | R/W |         | 40692          |
| Day                       | RTC : day month (1-31)   | UShort [16b]    | R/W |         | 40693          |
| Hour                      | RTC : hour (0-23)  | UShort [16b]    | R/W |         | 40694          |
| Minute                    | RTC : minute (0-59)  | UShort [16b]    | R/W |         | 40695          |
| Seconds                   | RTC : second (0-59)  | UShort [16b]    | R/W |         | 40696          |
| THD_V_L1                  | THD Star Voltage L1  | Float [32b-LSW] | R   |         | 40697          |
| THD_V_L2                  | THD Star Voltage L2  | Float [32b-LSW] | R   |         | 40699          |
| THD_V_L3                  | THD Star Voltage L3  | Float [32b-LSW] | R   |         | 40701          |
| THD_V_L12                 | THD Line Voltage L1-L2   | Float [32b-LSW] | R   |         | 40703          |
| THD_V_L23                 | THD Line Voltage L2-L3   | Float [32b-LSW] | R   |         | 40705          |
| THD_V_L31                 | THD Line Voltage L3-L1   | Float [32b-LSW] | R   |         | 40707          |
| THD_I_L1                  | THD Line Current L1  | Float [32b-LSW] | R   |         | 40709          |
| THD_I_L2                  | THD Line Current L2  | Float [32b-LSW] | R   |         | 40711          |
| THD_I_L3                  | THD Line Current L3  | Float [32b-LSW] | R   |         | 40713          |
| THD_I_N                   | THD Neutral Current  | Float [32b-LSW] | R   |         | 40715          |
| TDD_I_L1                  | TDD Line Current L1  | Float [32b-LSW] | R   |         | 40717          |
| TDD_I_L2                  | TDD Line Current L2  | Float [32b-LSW] | R   |         | 40719          |
| TDD_I_L3                  | TDD Line Current L3  | Float [32b-LSW] | R   |         | 40721          |
| Voltage_unbalance         | Voltage Unbalance of the three phase system  | Float [32b-LSW] | R   |         | 40723          |
| V_L1N_H_0                 | Star Voltage L1-N Harmonic #0  | Float [32b-LSW] | R   |         | 40737          |
| V_L1N_H_1                 | Star Voltage L1-N Harmonic #1  | Float [32b-LSW] | R   |         | 40739          |
| V_L1N_H_2                 | Star Voltage L1-N Harmonic #2  | Float [32b-LSW] | R   |         | 40741          |
| V_L1N_H_3                 | Star Voltage L1-N Harmonic #3  | Float [32b-LSW] | R   |         | 40743          |
| V_L1N_H_4                 | Star Voltage L1-N Harmonic #4  | Float [32b-LSW] | R   |         | 40745          |
| V_L1N_H_5                 | Star Voltage L1-N Harmonic #5  | Float [32b-LSW] | R   |         | 40747          |
| V_L1N_H_6                 | Star Voltage L1-N Harmonic #6  | Float [32b-LSW] | R   |         | 40749          |
| V_L1N_H_7                 | Star Voltage L1-N Harmonic #7  | Float [32b-LSW] | R   |         | 40751          |
| V_L1N_H_8                 | Star Voltage L1-N Harmonic #8  | Float [32b-LSW] | R   |         | 40753          |
| V_L1N_H_9                 | Star Voltage L1-N Harmonic #9  | Float [32b-LSW] | R   |         | 40755          |
| V_L1N_H_10                | Star Voltage L1-N Harmonic #10   | Float [32b-LSW] | R   |         | 40757          |
| V_L1N_H_11                | Star Voltage L1-N Harmonic #11   | Float [32b-LSW] | R   |         | 40759          |
| V_L1N_H_12                | Star Voltage L1-N Harmonic #12   | Float [32b-LSW] | R   |         | 40761          |
| V_L1N_H_13                | Star Voltage L1-N Harmonic #13   | Float [32b-LSW] | R   |         | 40763          |
| V_L1N_H_14                | Star Voltage L1-N Harmonic #14   | Float [32b-LSW] | R   |         | 40765          |
| V_L1N_H_15                | Star Voltage L1-N Harmonic #15   | Float [32b-LSW] | R   |         | 40767          |
| V_L1N_H_16                | Star Voltage L1-N Harmonic #16   | Float [32b-LSW] | R   |         | 40769          |
| V_L1N_H_17                | Star Voltage L1-N Harmonic #17   | Float [32b-LSW] | R   |         | 40771          |
| V_L1N_H_18                | Star Voltage L1-N Harmonic #18   | Float [32b-LSW] | R   |         | 40773          |
| V_L1N_H_19                | Star Voltage L1-N Harmonic #19   | Float [32b-LSW] | R   |         | 40775          |
| V_L1N_H_20                | Star Voltage L1-N Harmonic #20   | Float [32b-LSW] | R   |         | 40777          |
| V_L1N_H_21                | Star Voltage L1-N Harmonic #21   | Float [32b-LSW] | R   |         | 40779          |
| V_L1N_H_22                | Star Voltage L1-N Harmonic #22   | Float [32b-LSW] | R   |         | 40781          |
| V_L1N_H_23                | Star Voltage L1-N Harmonic #23   | Float [32b-LSW] | R   |         | 40783          |
| V_L1N_H_24                | Star Voltage L1-N Harmonic #24   | Float [32b-LSW] | R   |         | 40785          |



| Register Name | Description                    | Register Type   | R/W | Default | Address Modbus |
|---------------|--------------------------------|-----------------|-----|---------|----------------|
| V_L1N_H_25    | Star Voltage L1-N Harmonic #25 | Float [32b-LSW] | R   |         | 40787          |
| V_L1N_H_26    | Star Voltage L1-N Harmonic #26 | Float [32b-LSW] | R   |         | 40789          |
| V_L1N_H_27    | Star Voltage L1-N Harmonic #27 | Float [32b-LSW] | R   |         | 40791          |
| V_L1N_H_28    | Star Voltage L1-N Harmonic #28 | Float [32b-LSW] | R   |         | 40793          |
| V_L1N_H_29    | Star Voltage L1-N Harmonic #29 | Float [32b-LSW] | R   |         | 40795          |
| V_L1N_H_30    | Star Voltage L1-N Harmonic #30 | Float [32b-LSW] | R   |         | 40797          |
| V_L1N_H_31    | Star Voltage L1-N Harmonic #31 | Float [32b-LSW] | R   |         | 40799          |
| V_L1N_H_32    | Star Voltage L1-N Harmonic #32 | Float [32b-LSW] | R   |         | 40801          |
| V_L1N_H_33    | Star Voltage L1-N Harmonic #33 | Float [32b-LSW] | R   |         | 40803          |
| V_L1N_H_34    | Star Voltage L1-N Harmonic #34 | Float [32b-LSW] | R   |         | 40805          |
| V_L1N_H_35    | Star Voltage L1-N Harmonic #35 | Float [32b-LSW] | R   |         | 40807          |
| V_L1N_H_36    | Star Voltage L1-N Harmonic #36 | Float [32b-LSW] | R   |         | 40809          |
| V_L1N_H_37    | Star Voltage L1-N Harmonic #37 | Float [32b-LSW] | R   |         | 40811          |
| V_L1N_H_38    | Star Voltage L1-N Harmonic #38 | Float [32b-LSW] | R   |         | 40813          |
| V_L1N_H_39    | Star Voltage L1-N Harmonic #39 | Float [32b-LSW] | R   |         | 40815          |
| V_L1N_H_40    | Star Voltage L1-N Harmonic #40 | Float [32b-LSW] | R   |         | 40817          |
| V_L1N_H_41    | Star Voltage L1-N Harmonic #41 | Float [32b-LSW] | R   |         | 40819          |
| V_L1N_H_42    | Star Voltage L1-N Harmonic #42 | Float [32b-LSW] | R   |         | 40821          |
| V_L1N_H_43    | Star Voltage L1-N Harmonic #43 | Float [32b-LSW] | R   |         | 40823          |
| V_L1N_H_44    | Star Voltage L1-N Harmonic #44 | Float [32b-LSW] | R   |         | 40825          |
| V_L1N_H_45    | Star Voltage L1-N Harmonic #45 | Float [32b-LSW] | R   |         | 40827          |
| V_L1N_H_46    | Star Voltage L1-N Harmonic #46 | Float [32b-LSW] | R   |         | 40829          |
| V_L1N_H_47    | Star Voltage L1-N Harmonic #47 | Float [32b-LSW] | R   |         | 40831          |
| V_L1N_H_48    | Star Voltage L1-N Harmonic #48 | Float [32b-LSW] | R   |         | 40833          |
| V_L1N_H_49    | Star Voltage L1-N Harmonic #49 | Float [32b-LSW] | R   |         | 40835          |
| V_L1N_H_50    | Star Voltage L1-N Harmonic #50 | Float [32b-LSW] | R   |         | 40837          |
| V_L1N_H_51    | Star Voltage L1-N Harmonic #51 | Float [32b-LSW] | R   |         | 40839          |
| V_L1N_H_52    | Star Voltage L1-N Harmonic #52 | Float [32b-LSW] | R   |         | 40841          |
| V_L1N_H_53    | Star Voltage L1-N Harmonic #53 | Float [32b-LSW] | R   |         | 40843          |
| V_L1N_H_54    | Star Voltage L1-N Harmonic #54 | Float [32b-LSW] | R   |         | 40845          |
| V_L1N_H_55    | Star Voltage L1-N Harmonic #55 | Float [32b-LSW] | R   |         | 40847          |
| V_L1N_H_56    | Star Voltage L1-N Harmonic #56 | Float [32b-LSW] | R   |         | 40849          |
| V_L1N_H_57    | Star Voltage L1-N Harmonic #57 | Float [32b-LSW] | R   |         | 40851          |
| V_L1N_H_58    | Star Voltage L1-N Harmonic #58 | Float [32b-LSW] | R   |         | 40853          |
| V_L1N_H_59    | Star Voltage L1-N Harmonic #59 | Float [32b-LSW] | R   |         | 40855          |
| V_L1N_H_60    | Star Voltage L1-N Harmonic #60 | Float [32b-LSW] | R   |         | 40857          |
| V_L1N_H_61    | Star Voltage L1-N Harmonic #61 | Float [32b-LSW] | R   |         | 40859          |
| V_L1N_H_62    | Star Voltage L1-N Harmonic #62 | Float [32b-LSW] | R   |         | 40861          |
| V_L1N_H_63    | Star Voltage L1-N Harmonic #63 | Float [32b-LSW] | R   |         | 40863          |
| V_L2N_H_0     | Star Voltage L2-N Harmonic #0  | Float [32b-LSW] | R   |         | 40865          |
| V_L2N_H_1     | Star Voltage L2-N Harmonic #1  | Float [32b-LSW] | R   |         | 40867          |
| V_L2N_H_2     | Star Voltage L2-N Harmonic #2  | Float [32b-LSW] | R   |         | 40869          |
| V_L2N_H_3     | Star Voltage L2-N Harmonic #3  | Float [32b-LSW] | R   |         | 40871          |
| V_L2N_H_4     | Star Voltage L2-N Harmonic #4  | Float [32b-LSW] | R   |         | 40873          |
| V_L2N_H_5     | Star Voltage L2-N Harmonic #5  | Float [32b-LSW] | R   |         | 40875          |
| V_L2N_H_6     | Star Voltage L2-N Harmonic #6  | Float [32b-LSW] | R   |         | 40877          |
| V_L2N_H_7     | Star Voltage L2-N Harmonic #7  | Float [32b-LSW] | R   |         | 40879          |
| V_L2N_H_8     | Star Voltage L2-N Harmonic #8  | Float [32b-LSW] | R   |         | 40881          |
| V_L2N_H_9     | Star Voltage L2-N Harmonic #9  | Float [32b-LSW] | R   |         | 40883          |
| V_L2N_H_10    | Star Voltage L2-N Harmonic #10 | Float [32b-LSW] | R   |         | 40885          |
| V_L2N_H_11    | Star Voltage L2-N Harmonic #11 | Float [32b-LSW] | R   |         | 40887          |
| V_L2N_H_12    | Star Voltage L2-N Harmonic #12 | Float [32b-LSW] | R   |         | 40889          |
| V_L2N_H_13    | Star Voltage L2-N Harmonic #13 | Float [32b-LSW] | R   |         | 40891          |
| V_L2N_H_14    | Star Voltage L2-N Harmonic #14 | Float [32b-LSW] | R   |         | 40893          |
| V_L2N_H_15    | Star Voltage L2-N Harmonic #15 | Float [32b-LSW] | R   |         | 40895          |
| V_L2N_H_16    | Star Voltage L2-N Harmonic #16 | Float [32b-LSW] | R   |         | 40897          |
| V_L2N_H_17    | Star Voltage L2-N Harmonic #17 | Float [32b-LSW] | R   |         | 40899          |
| V_L2N_H_18    | Star Voltage L2-N Harmonic #18 | Float [32b-LSW] | R   |         | 40901          |
| V_L2N_H_19    | Star Voltage L2-N Harmonic #19 | Float [32b-LSW] | R   |         | 40903          |
| V_L2N_H_20    | Star Voltage L2-N Harmonic #20 | Float [32b-LSW] | R   |         | 40905          |
| V_L2N_H_21    | Star Voltage L2-N Harmonic #21 | Float [32b-LSW] | R   |         | 40907          |
| V_L2N_H_22    | Star Voltage L2-N Harmonic #22 | Float [32b-LSW] | R   |         | 40909          |
| V_L2N_H_23    | Star Voltage L2-N Harmonic #23 | Float [32b-LSW] | R   |         | 40911          |



| Register Name | Description                    | Register Type   | R/W | Default | Address Modbus |
|---------------|--------------------------------|-----------------|-----|---------|----------------|
| V_L2N_H_24    | Star Voltage L2-N Harmonic #24 | Float [32b-LSW] | R   |         | 40913          |
| V_L2N_H_25    | Star Voltage L2-N Harmonic #25 | Float [32b-LSW] | R   |         | 40915          |
| V_L2N_H_26    | Star Voltage L2-N Harmonic #26 | Float [32b-LSW] | R   |         | 40917          |
| V_L2N_H_27    | Star Voltage L2-N Harmonic #27 | Float [32b-LSW] | R   |         | 40919          |
| V_L2N_H_28    | Star Voltage L2-N Harmonic #28 | Float [32b-LSW] | R   |         | 40921          |
| V_L2N_H_29    | Star Voltage L2-N Harmonic #29 | Float [32b-LSW] | R   |         | 40923          |
| V_L2N_H_30    | Star Voltage L2-N Harmonic #30 | Float [32b-LSW] | R   |         | 40925          |
| V_L2N_H_31    | Star Voltage L2-N Harmonic #31 | Float [32b-LSW] | R   |         | 40927          |
| V_L2N_H_32    | Star Voltage L2-N Harmonic #32 | Float [32b-LSW] | R   |         | 40929          |
| V_L2N_H_33    | Star Voltage L2-N Harmonic #33 | Float [32b-LSW] | R   |         | 40931          |
| V_L2N_H_34    | Star Voltage L2-N Harmonic #34 | Float [32b-LSW] | R   |         | 40933          |
| V_L2N_H_35    | Star Voltage L2-N Harmonic #35 | Float [32b-LSW] | R   |         | 40935          |
| V_L2N_H_36    | Star Voltage L2-N Harmonic #36 | Float [32b-LSW] | R   |         | 40937          |
| V_L2N_H_37    | Star Voltage L2-N Harmonic #37 | Float [32b-LSW] | R   |         | 40939          |
| V_L2N_H_38    | Star Voltage L2-N Harmonic #38 | Float [32b-LSW] | R   |         | 40941          |
| V_L2N_H_39    | Star Voltage L2-N Harmonic #39 | Float [32b-LSW] | R   |         | 40943          |
| V_L2N_H_40    | Star Voltage L2-N Harmonic #40 | Float [32b-LSW] | R   |         | 40945          |
| V_L2N_H_41    | Star Voltage L2-N Harmonic #41 | Float [32b-LSW] | R   |         | 40947          |
| V_L2N_H_42    | Star Voltage L2-N Harmonic #42 | Float [32b-LSW] | R   |         | 40949          |
| V_L2N_H_43    | Star Voltage L2-N Harmonic #43 | Float [32b-LSW] | R   |         | 40951          |
| V_L2N_H_44    | Star Voltage L2-N Harmonic #44 | Float [32b-LSW] | R   |         | 40953          |
| V_L2N_H_45    | Star Voltage L2-N Harmonic #45 | Float [32b-LSW] | R   |         | 40955          |
| V_L2N_H_46    | Star Voltage L2-N Harmonic #46 | Float [32b-LSW] | R   |         | 40957          |
| V_L2N_H_47    | Star Voltage L2-N Harmonic #47 | Float [32b-LSW] | R   |         | 40959          |
| V_L2N_H_48    | Star Voltage L2-N Harmonic #48 | Float [32b-LSW] | R   |         | 40961          |
| V_L2N_H_49    | Star Voltage L2-N Harmonic #49 | Float [32b-LSW] | R   |         | 40963          |
| V_L2N_H_50    | Star Voltage L2-N Harmonic #50 | Float [32b-LSW] | R   |         | 40965          |
| V_L2N_H_51    | Star Voltage L2-N Harmonic #51 | Float [32b-LSW] | R   |         | 40967          |
| V_L2N_H_52    | Star Voltage L2-N Harmonic #52 | Float [32b-LSW] | R   |         | 40969          |
| V_L2N_H_53    | Star Voltage L2-N Harmonic #53 | Float [32b-LSW] | R   |         | 40971          |
| V_L2N_H_54    | Star Voltage L2-N Harmonic #54 | Float [32b-LSW] | R   |         | 40973          |
| V_L2N_H_55    | Star Voltage L2-N Harmonic #55 | Float [32b-LSW] | R   |         | 40975          |
| V_L2N_H_56    | Star Voltage L2-N Harmonic #56 | Float [32b-LSW] | R   |         | 40977          |
| V_L2N_H_57    | Star Voltage L2-N Harmonic #57 | Float [32b-LSW] | R   |         | 40979          |
| V_L2N_H_58    | Star Voltage L2-N Harmonic #58 | Float [32b-LSW] | R   |         | 40981          |
| V_L2N_H_59    | Star Voltage L2-N Harmonic #59 | Float [32b-LSW] | R   |         | 40983          |
| V_L2N_H_60    | Star Voltage L2-N Harmonic #60 | Float [32b-LSW] | R   |         | 40985          |
| V_L2N_H_61    | Star Voltage L2-N Harmonic #61 | Float [32b-LSW] | R   |         | 40987          |
| V_L2N_H_62    | Star Voltage L2-N Harmonic #62 | Float [32b-LSW] | R   |         | 40989          |
| V_L2N_H_63    | Star Voltage L2-N Harmonic #63 | Float [32b-LSW] | R   |         | 40991          |
| V_L3N_H_0     | Star Voltage L3-N Harmonic #0  | Float [32b-LSW] | R   |         | 40993          |
| V_L3N_H_1     | Star Voltage L3-N Harmonic #1  | Float [32b-LSW] | R   |         | 40995          |
| V_L3N_H_2     | Star Voltage L3-N Harmonic #2  | Float [32b-LSW] | R   |         | 40997          |
| V_L3N_H_3     | Star Voltage L3-N Harmonic #3  | Float [32b-LSW] | R   |         | 40999          |
| V_L3N_H_4     | Star Voltage L3-N Harmonic #4  | Float [32b-LSW] | R   |         | 41001          |
| V_L3N_H_5     | Star Voltage L3-N Harmonic #5  | Float [32b-LSW] | R   |         | 41003          |
| V_L3N_H_6     | Star Voltage L3-N Harmonic #6  | Float [32b-LSW] | R   |         | 41005          |
| V_L3N_H_7     | Star Voltage L3-N Harmonic #7  | Float [32b-LSW] | R   |         | 41007          |
| V_L3N_H_8     | Star Voltage L3-N Harmonic #8  | Float [32b-LSW] | R   |         | 41009          |
| V_L3N_H_9     | Star Voltage L3-N Harmonic #9  | Float [32b-LSW] | R   |         | 41011          |
| V_L3N_H_10    | Star Voltage L3-N Harmonic #10 | Float [32b-LSW] | R   |         | 41013          |
| V_L3N_H_11    | Star Voltage L3-N Harmonic #11 | Float [32b-LSW] | R   |         | 41015          |
| V_L3N_H_12    | Star Voltage L3-N Harmonic #12 | Float [32b-LSW] | R   |         | 41017          |
| V_L3N_H_13    | Star Voltage L3-N Harmonic #13 | Float [32b-LSW] | R   |         | 41019          |
| V_L3N_H_14    | Star Voltage L3-N Harmonic #14 | Float [32b-LSW] | R   |         | 41021          |
| V_L3N_H_15    | Star Voltage L3-N Harmonic #15 | Float [32b-LSW] | R   |         | 41023          |
| V_L3N_H_16    | Star Voltage L3-N Harmonic #16 | Float [32b-LSW] | R   |         | 41025          |
| V_L3N_H_17    | Star Voltage L3-N Harmonic #17 | Float [32b-LSW] | R   |         | 41027          |
| V_L3N_H_18    | Star Voltage L3-N Harmonic #18 | Float [32b-LSW] | R   |         | 41029          |
| V_L3N_H_19    | Star Voltage L3-N Harmonic #19 | Float [32b-LSW] | R   |         | 41031          |
| V_L3N_H_20    | Star Voltage L3-N Harmonic #20 | Float [32b-LSW] | R   |         | 41033          |
| V_L3N_H_21    | Star Voltage L3-N Harmonic #21 | Float [32b-LSW] | R   |         | 41035          |
| V_L3N_H_22    | Star Voltage L3-N Harmonic #22 | Float [32b-LSW] | R   |         | 41037          |





| Register Name | Description                     | Register Type   | R/W | Default | Address Modbus |
|---------------|---------------------------------|-----------------|-----|---------|----------------|
| V_L3N_H_23    | Star Voltage L3-N Harmonic #23  | Float [32b-LSW] | R   |         | 41039          |
| V_L3N_H_24    | Star Voltage L3-N Harmonic #24  | Float [32b-LSW] | R   |         | 41041          |
| V_L3N_H_25    | Star Voltage L3-N Harmonic #25  | Float [32b-LSW] | R   |         | 41043          |
| V_L3N_H_26    | Star Voltage L3-N Harmonic #26  | Float [32b-LSW] | R   |         | 41045          |
| V_L3N_H_27    | Star Voltage L3-N Harmonic #27  | Float [32b-LSW] | R   |         | 41047          |
| V_L3N_H_28    | Star Voltage L3-N Harmonic #28  | Float [32b-LSW] | R   |         | 41049          |
| V_L3N_H_29    | Star Voltage L3-N Harmonic #29  | Float [32b-LSW] | R   |         | 41051          |
| V_L3N_H_30    | Star Voltage L3-N Harmonic #30  | Float [32b-LSW] | R   |         | 41053          |
| V_L3N_H_31    | Star Voltage L3-N Harmonic #31  | Float [32b-LSW] | R   |         | 41055          |
| V_L3N_H_32    | Star Voltage L3-N Harmonic #32  | Float [32b-LSW] | R   |         | 41057          |
| V_L3N_H_33    | Star Voltage L3-N Harmonic #33  | Float [32b-LSW] | R   |         | 41059          |
| V_L3N_H_34    | Star Voltage L3-N Harmonic #34  | Float [32b-LSW] | R   |         | 41061          |
| V_L3N_H_35    | Star Voltage L3-N Harmonic #35  | Float [32b-LSW] | R   |         | 41063          |
| V_L3N_H_36    | Star Voltage L3-N Harmonic #36  | Float [32b-LSW] | R   |         | 41065          |
| V_L3N_H_37    | Star Voltage L3-N Harmonic #37  | Float [32b-LSW] | R   |         | 41067          |
| V_L3N_H_38    | Star Voltage L3-N Harmonic #38  | Float [32b-LSW] | R   |         | 41069          |
| V_L3N_H_39    | Star Voltage L3-N Harmonic #39  | Float [32b-LSW] | R   |         | 41071          |
| V_L3N_H_40    | Star Voltage L3-N Harmonic #40  | Float [32b-LSW] | R   |         | 41073          |
| V_L3N_H_41    | Star Voltage L3-N Harmonic #41  | Float [32b-LSW] | R   |         | 41075          |
| V_L3N_H_42    | Star Voltage L3-N Harmonic #42  | Float [32b-LSW] | R   |         | 41077          |
| V_L3N_H_43    | Star Voltage L3-N Harmonic #43  | Float [32b-LSW] | R   |         | 41079          |
| V_L3N_H_44    | Star Voltage L3-N Harmonic #44  | Float [32b-LSW] | R   |         | 41081          |
| V_L3N_H_45    | Star Voltage L3-N Harmonic #45  | Float [32b-LSW] | R   |         | 41083          |
| V_L3N_H_46    | Star Voltage L3-N Harmonic #46  | Float [32b-LSW] | R   |         | 41085          |
| V_L3N_H_47    | Star Voltage L3-N Harmonic #47  | Float [32b-LSW] | R   |         | 41087          |
| V_L3N_H_48    | Star Voltage L3-N Harmonic #48  | Float [32b-LSW] | R   |         | 41089          |
| V_L3N_H_49    | Star Voltage L3-N Harmonic #49  | Float [32b-LSW] | R   |         | 41091          |
| V_L3N_H_50    | Star Voltage L3-N Harmonic #50  | Float [32b-LSW] | R   |         | 41093          |
| V_L3N_H_51    | Star Voltage L3-N Harmonic #51  | Float [32b-LSW] | R   |         | 41095          |
| V_L3N_H_52    | Star Voltage L3-N Harmonic #52  | Float [32b-LSW] | R   |         | 41097          |
| V_L3N_H_53    | Star Voltage L3-N Harmonic #53  | Float [32b-LSW] | R   |         | 41099          |
| V_L3N_H_54    | Star Voltage L3-N Harmonic #54  | Float [32b-LSW] | R   |         | 41101          |
| V_L3N_H_55    | Star Voltage L3-N Harmonic #55  | Float [32b-LSW] | R   |         | 41103          |
| V_L3N_H_56    | Star Voltage L3-N Harmonic #56  | Float [32b-LSW] | R   |         | 41105          |
| V_L3N_H_57    | Star Voltage L3-N Harmonic #57  | Float [32b-LSW] | R   |         | 41107          |
| V_L3N_H_58    | Star Voltage L3-N Harmonic #58  | Float [32b-LSW] | R   |         | 41109          |
| V_L3N_H_59    | Star Voltage L3-N Harmonic #59  | Float [32b-LSW] | R   |         | 41111          |
| V_L3N_H_60    | Star Voltage L3-N Harmonic #60  | Float [32b-LSW] | R   |         | 41113          |
| V_L3N_H_61    | Star Voltage L3-N Harmonic #61  | Float [32b-LSW] | R   |         | 41115          |
| V_L3N_H_62    | Star Voltage L3-N Harmonic #62  | Float [32b-LSW] | R   |         | 41117          |
| V_L3N_H_63    | Star Voltage L3-N Harmonic #63  | Float [32b-LSW] | R   |         | 41119          |
| V_L12_H_0     | Line Voltage L1-L2 Harmonic #0  | Float [32b-LSW] | R   |         | 41121          |
| V_L12_H_1     | Line Voltage L1-L2 Harmonic #1  | Float [32b-LSW] | R   |         | 41123          |
| V_L12_H_2     | Line Voltage L1-L2 Harmonic #2  | Float [32b-LSW] | R   |         | 41125          |
| V_L12_H_3     | Line Voltage L1-L2 Harmonic #3  | Float [32b-LSW] | R   |         | 41127          |
| V_L12_H_4     | Line Voltage L1-L2 Harmonic #4  | Float [32b-LSW] | R   |         | 41129          |
| V_L12_H_5     | Line Voltage L1-L2 Harmonic #5  | Float [32b-LSW] | R   |         | 41131          |
| V_L12_H_6     | Line Voltage L1-L2 Harmonic #6  | Float [32b-LSW] | R   |         | 41133          |
| V_L12_H_7     | Line Voltage L1-L2 Harmonic #7  | Float [32b-LSW] | R   |         | 41135          |
| V_L12_H_8     | Line Voltage L1-L2 Harmonic #8  | Float [32b-LSW] | R   |         | 41137          |
| V_L12_H_9     | Line Voltage L1-L2 Harmonic #9  | Float [32b-LSW] | R   |         | 41139          |
| V_L12_H_10    | Line Voltage L1-L2 Harmonic #10 | Float [32b-LSW] | R   |         | 41141          |
| V_L12_H_11    | Line Voltage L1-L2 Harmonic #11 | Float [32b-LSW] | R   |         | 41143          |
| V_L12_H_12    | Line Voltage L1-L2 Harmonic #12 | Float [32b-LSW] | R   |         | 41145          |
| V_L12_H_13    | Line Voltage L1-L2 Harmonic #13 | Float [32b-LSW] | R   |         | 41147          |
| V_L12_H_14    | Line Voltage L1-L2 Harmonic #14 | Float [32b-LSW] | R   |         | 41149          |
| V_L12_H_15    | Line Voltage L1-L2 Harmonic #15 | Float [32b-LSW] | R   |         | 41151          |
| V_L12_H_16    | Line Voltage L1-L2 Harmonic #16 | Float [32b-LSW] | R   |         | 41153          |
| V_L12_H_17    | Line Voltage L1-L2 Harmonic #17 | Float [32b-LSW] | R   |         | 41155          |
| V_L12_H_18    | Line Voltage L1-L2 Harmonic #18 | Float [32b-LSW] | R   |         | 41157          |
| V_L12_H_19    | Line Voltage L1-L2 Harmonic #19 | Float [32b-LSW] | R   |         | 41159          |
| V_L12_H_20    | Line Voltage L1-L2 Harmonic #20 | Float [32b-LSW] | R   |         | 41161          |
| V_L12_H_21    | Line Voltage L1-L2 Harmonic #21 | Float [32b-LSW] | R   |         | 41163          |



| Register Name | Description                     | Register Type   | R/W | Default | Address Modbus |
|---------------|---------------------------------|-----------------|-----|---------|----------------|
| V_L12_H_22    | Line Voltage L1-L2 Harmonic #22 | Float [32b-LSW] | R   |         | 41165          |
| V_L12_H_23    | Line Voltage L1-L2 Harmonic #23 | Float [32b-LSW] | R   |         | 41167          |
| V_L12_H_24    | Line Voltage L1-L2 Harmonic #24 | Float [32b-LSW] | R   |         | 41169          |
| V_L12_H_25    | Line Voltage L1-L2 Harmonic #25 | Float [32b-LSW] | R   |         | 41171          |
| V_L12_H_26    | Line Voltage L1-L2 Harmonic #26 | Float [32b-LSW] | R   |         | 41173          |
| V_L12_H_27    | Line Voltage L1-L2 Harmonic #27 | Float [32b-LSW] | R   |         | 41175          |
| V_L12_H_28    | Line Voltage L1-L2 Harmonic #28 | Float [32b-LSW] | R   |         | 41177          |
| V_L12_H_29    | Line Voltage L1-L2 Harmonic #29 | Float [32b-LSW] | R   |         | 41179          |
| V_L12_H_30    | Line Voltage L1-L2 Harmonic #30 | Float [32b-LSW] | R   |         | 41181          |
| V_L12_H_31    | Line Voltage L1-L2 Harmonic #31 | Float [32b-LSW] | R   |         | 41183          |
| V_L12_H_32    | Line Voltage L1-L2 Harmonic #32 | Float [32b-LSW] | R   |         | 41185          |
| V_L12_H_33    | Line Voltage L1-L2 Harmonic #33 | Float [32b-LSW] | R   |         | 41187          |
| V_L12_H_34    | Line Voltage L1-L2 Harmonic #34 | Float [32b-LSW] | R   |         | 41189          |
| V_L12_H_35    | Line Voltage L1-L2 Harmonic #35 | Float [32b-LSW] | R   |         | 41191          |
| V_L12_H_36    | Line Voltage L1-L2 Harmonic #36 | Float [32b-LSW] | R   |         | 41193          |
| V_L12_H_37    | Line Voltage L1-L2 Harmonic #37 | Float [32b-LSW] | R   |         | 41195          |
| V_L12_H_38    | Line Voltage L1-L2 Harmonic #38 | Float [32b-LSW] | R   |         | 41197          |
| V_L12_H_39    | Line Voltage L1-L2 Harmonic #39 | Float [32b-LSW] | R   |         | 41199          |
| V_L12_H_40    | Line Voltage L1-L2 Harmonic #40 | Float [32b-LSW] | R   |         | 41201          |
| V_L12_H_41    | Line Voltage L1-L2 Harmonic #41 | Float [32b-LSW] | R   |         | 41203          |
| V_L12_H_42    | Line Voltage L1-L2 Harmonic #42 | Float [32b-LSW] | R   |         | 41205          |
| V_L12_H_43    | Line Voltage L1-L2 Harmonic #43 | Float [32b-LSW] | R   |         | 41207          |
| V_L12_H_44    | Line Voltage L1-L2 Harmonic #44 | Float [32b-LSW] | R   |         | 41209          |
| V_L12_H_45    | Line Voltage L1-L2 Harmonic #45 | Float [32b-LSW] | R   |         | 41211          |
| V_L12_H_46    | Line Voltage L1-L2 Harmonic #46 | Float [32b-LSW] | R   |         | 41213          |
| V_L12_H_47    | Line Voltage L1-L2 Harmonic #47 | Float [32b-LSW] | R   |         | 41215          |
| V_L12_H_48    | Line Voltage L1-L2 Harmonic #48 | Float [32b-LSW] | R   |         | 41217          |
| V_L12_H_49    | Line Voltage L1-L2 Harmonic #49 | Float [32b-LSW] | R   |         | 41219          |
| V_L12_H_50    | Line Voltage L1-L2 Harmonic #50 | Float [32b-LSW] | R   |         | 41221          |
| V_L12_H_51    | Line Voltage L1-L2 Harmonic #51 | Float [32b-LSW] | R   |         | 41223          |
| V_L12_H_52    | Line Voltage L1-L2 Harmonic #52 | Float [32b-LSW] | R   |         | 41225          |
| V_L12_H_53    | Line Voltage L1-L2 Harmonic #53 | Float [32b-LSW] | R   |         | 41227          |
| V_L12_H_54    | Line Voltage L1-L2 Harmonic #54 | Float [32b-LSW] | R   |         | 41229          |
| V_L12_H_55    | Line Voltage L1-L2 Harmonic #55 | Float [32b-LSW] | R   |         | 41231          |
| V_L12_H_56    | Line Voltage L1-L2 Harmonic #56 | Float [32b-LSW] | R   |         | 41233          |
| V_L12_H_57    | Line Voltage L1-L2 Harmonic #57 | Float [32b-LSW] | R   |         | 41235          |
| V_L12_H_58    | Line Voltage L1-L2 Harmonic #58 | Float [32b-LSW] | R   |         | 41237          |
| V_L12_H_59    | Line Voltage L1-L2 Harmonic #59 | Float [32b-LSW] | R   |         | 41239          |
| V_L12_H_60    | Line Voltage L1-L2 Harmonic #60 | Float [32b-LSW] | R   |         | 41241          |
| V_L12_H_61    | Line Voltage L1-L2 Harmonic #61 | Float [32b-LSW] | R   |         | 41243          |
| V_L12_H_62    | Line Voltage L1-L2 Harmonic #62 | Float [32b-LSW] | R   |         | 41245          |
| V_L12_H_63    | Line Voltage L1-L2 Harmonic #63 | Float [32b-LSW] | R   |         | 41247          |
| V_L23_H_0     | Line Voltage L2-L3 Harmonic #0  | Float [32b-LSW] | R   |         | 41249          |
| V_L23_H_1     | Line Voltage L2-L3 Harmonic #1  | Float [32b-LSW] | R   |         | 41251          |
| V_L23_H_2     | Line Voltage L2-L3 Harmonic #2  | Float [32b-LSW] | R   |         | 41253          |
| V_L23_H_3     | Line Voltage L2-L3 Harmonic #3  | Float [32b-LSW] | R   |         | 41255          |
| V_L23_H_4     | Line Voltage L2-L3 Harmonic #4  | Float [32b-LSW] | R   |         | 41257          |
| V_L23_H_5     | Line Voltage L2-L3 Harmonic #5  | Float [32b-LSW] | R   |         | 41259          |
| V_L23_H_6     | Line Voltage L2-L3 Harmonic #6  | Float [32b-LSW] | R   |         | 41261          |
| V_L23_H_7     | Line Voltage L2-L3 Harmonic #7  | Float [32b-LSW] | R   |         | 41263          |
| V_L23_H_8     | Line Voltage L2-L3 Harmonic #8  | Float [32b-LSW] | R   |         | 41265          |
| V_L23_H_9     | Line Voltage L2-L3 Harmonic #9  | Float [32b-LSW] | R   |         | 41267          |
| V_L23_H_10    | Line Voltage L2-L3 Harmonic #10 | Float [32b-LSW] | R   |         | 41269          |
| V_L23_H_11    | Line Voltage L2-L3 Harmonic #11 | Float [32b-LSW] | R   |         | 41271          |
| V_L23_H_12    | Line Voltage L2-L3 Harmonic #12 | Float [32b-LSW] | R   |         | 41273          |
| V_L23_H_13    | Line Voltage L2-L3 Harmonic #13 | Float [32b-LSW] | R   |         | 41275          |
| V_L23_H_14    | Line Voltage L2-L3 Harmonic #14 | Float [32b-LSW] | R   |         | 41277          |
| V_L23_H_15    | Line Voltage L2-L3 Harmonic #15 | Float [32b-LSW] | R   |         | 41279          |
| V_L23_H_16    | Line Voltage L2-L3 Harmonic #16 | Float [32b-LSW] | R   |         | 41281          |
| V_L23_H_17    | Line Voltage L2-L3 Harmonic #17 | Float [32b-LSW] | R   |         | 41283          |
| V_L23_H_18    | Line Voltage L2-L3 Harmonic #18 | Float [32b-LSW] | R   |         | 41285          |
| V_L23_H_19    | Line Voltage L2-L3 Harmonic #19 | Float [32b-LSW] | R   |         | 41287          |
| V_L23_H_20    | Line Voltage L2-L3 Harmonic #20 | Float [32b-LSW] | R   |         | 41289          |



| Register Name | Description                     | Register Type   | R/W | Default | Address Modbus |
|---------------|---------------------------------|-----------------|-----|---------|----------------|
| V_L23_H_21    | Line Voltage L2-L3 Harmonic #21 | Float [32b-LSW] | R   |         | 41291          |
| V_L23_H_22    | Line Voltage L2-L3 Harmonic #22 | Float [32b-LSW] | R   |         | 41293          |
| V_L23_H_23    | Line Voltage L2-L3 Harmonic #23 | Float [32b-LSW] | R   |         | 41295          |
| V_L23_H_24    | Line Voltage L2-L3 Harmonic #24 | Float [32b-LSW] | R   |         | 41297          |
| V_L23_H_25    | Line Voltage L2-L3 Harmonic #25 | Float [32b-LSW] | R   |         | 41299          |
| V_L23_H_26    | Line Voltage L2-L3 Harmonic #26 | Float [32b-LSW] | R   |         | 41301          |
| V_L23_H_27    | Line Voltage L2-L3 Harmonic #27 | Float [32b-LSW] | R   |         | 41303          |
| V_L23_H_28    | Line Voltage L2-L3 Harmonic #28 | Float [32b-LSW] | R   |         | 41305          |
| V_L23_H_29    | Line Voltage L2-L3 Harmonic #29 | Float [32b-LSW] | R   |         | 41307          |
| V_L23_H_30    | Line Voltage L2-L3 Harmonic #30 | Float [32b-LSW] | R   |         | 41309          |
| V_L23_H_31    | Line Voltage L2-L3 Harmonic #31 | Float [32b-LSW] | R   |         | 41311          |
| V_L23_H_32    | Line Voltage L2-L3 Harmonic #32 | Float [32b-LSW] | R   |         | 41313          |
| V_L23_H_33    | Line Voltage L2-L3 Harmonic #33 | Float [32b-LSW] | R   |         | 41315          |
| V_L23_H_34    | Line Voltage L2-L3 Harmonic #34 | Float [32b-LSW] | R   |         | 41317          |
| V_L23_H_35    | Line Voltage L2-L3 Harmonic #35 | Float [32b-LSW] | R   |         | 41319          |
| V_L23_H_36    | Line Voltage L2-L3 Harmonic #36 | Float [32b-LSW] | R   |         | 41321          |
| V_L23_H_37    | Line Voltage L2-L3 Harmonic #37 | Float [32b-LSW] | R   |         | 41323          |
| V_L23_H_38    | Line Voltage L2-L3 Harmonic #38 | Float [32b-LSW] | R   |         | 41325          |
| V_L23_H_39    | Line Voltage L2-L3 Harmonic #39 | Float [32b-LSW] | R   |         | 41327          |
| V_L23_H_40    | Line Voltage L2-L3 Harmonic #40 | Float [32b-LSW] | R   |         | 41329          |
| V_L23_H_41    | Line Voltage L2-L3 Harmonic #41 | Float [32b-LSW] | R   |         | 41331          |
| V_L23_H_42    | Line Voltage L2-L3 Harmonic #42 | Float [32b-LSW] | R   |         | 41333          |
| V_L23_H_43    | Line Voltage L2-L3 Harmonic #43 | Float [32b-LSW] | R   |         | 41335          |
| V_L23_H_44    | Line Voltage L2-L3 Harmonic #44 | Float [32b-LSW] | R   |         | 41337          |
| V_L23_H_45    | Line Voltage L2-L3 Harmonic #45 | Float [32b-LSW] | R   |         | 41339          |
| V_L23_H_46    | Line Voltage L2-L3 Harmonic #46 | Float [32b-LSW] | R   |         | 41341          |
| V_L23_H_47    | Line Voltage L2-L3 Harmonic #47 | Float [32b-LSW] | R   |         | 41343          |
| V_L23_H_48    | Line Voltage L2-L3 Harmonic #48 | Float [32b-LSW] | R   |         | 41345          |
| V_L23_H_49    | Line Voltage L2-L3 Harmonic #49 | Float [32b-LSW] | R   |         | 41347          |
| V_L23_H_50    | Line Voltage L2-L3 Harmonic #50 | Float [32b-LSW] | R   |         | 41349          |
| V_L23_H_51    | Line Voltage L2-L3 Harmonic #51 | Float [32b-LSW] | R   |         | 41351          |
| V_L23_H_52    | Line Voltage L2-L3 Harmonic #52 | Float [32b-LSW] | R   |         | 41353          |
| V_L23_H_53    | Line Voltage L2-L3 Harmonic #53 | Float [32b-LSW] | R   |         | 41355          |
| V_L23_H_54    | Line Voltage L2-L3 Harmonic #54 | Float [32b-LSW] | R   |         | 41357          |
| V_L23_H_55    | Line Voltage L2-L3 Harmonic #55 | Float [32b-LSW] | R   |         | 41359          |
| V_L23_H_56    | Line Voltage L2-L3 Harmonic #56 | Float [32b-LSW] | R   |         | 41361          |
| V_L23_H_57    | Line Voltage L2-L3 Harmonic #57 | Float [32b-LSW] | R   |         | 41363          |
| V_L23_H_58    | Line Voltage L2-L3 Harmonic #58 | Float [32b-LSW] | R   |         | 41365          |
| V_L23_H_59    | Line Voltage L2-L3 Harmonic #59 | Float [32b-LSW] | R   |         | 41367          |
| V_L23_H_60    | Line Voltage L2-L3 Harmonic #60 | Float [32b-LSW] | R   |         | 41369          |
| V_L23_H_61    | Line Voltage L2-L3 Harmonic #61 | Float [32b-LSW] | R   |         | 41371          |
| V_L23_H_62    | Line Voltage L2-L3 Harmonic #62 | Float [32b-LSW] | R   |         | 41373          |
| V_L23_H_63    | Line Voltage L2-L3 Harmonic #63 | Float [32b-LSW] | R   |         | 41375          |
| V_L31_H_0     | Line Voltage L3-L1 Harmonic #0  | Float [32b-LSW] | R   |         | 41377          |
| V_L31_H_1     | Line Voltage L3-L1 Harmonic #1  | Float [32b-LSW] | R   |         | 41379          |
| V_L31_H_2     | Line Voltage L3-L1 Harmonic #2  | Float [32b-LSW] | R   |         | 41381          |
| V_L31_H_3     | Line Voltage L3-L1 Harmonic #3  | Float [32b-LSW] | R   |         | 41383          |
| V_L31_H_4     | Line Voltage L3-L1 Harmonic #4  | Float [32b-LSW] | R   |         | 41385          |
| V_L31_H_5     | Line Voltage L3-L1 Harmonic #5  | Float [32b-LSW] | R   |         | 41387          |
| V_L31_H_6     | Line Voltage L3-L1 Harmonic #6  | Float [32b-LSW] | R   |         | 41389          |
| V_L31_H_7     | Line Voltage L3-L1 Harmonic #7  | Float [32b-LSW] | R   |         | 41391          |
| V_L31_H_8     | Line Voltage L3-L1 Harmonic #8  | Float [32b-LSW] | R   |         | 41393          |
| V_L31_H_9     | Line Voltage L3-L1 Harmonic #9  | Float [32b-LSW] | R   |         | 41395          |
| V_L31_H_10    | Line Voltage L3-L1 Harmonic #10 | Float [32b-LSW] | R   |         | 41397          |
| V_L31_H_11    | Line Voltage L3-L1 Harmonic #11 | Float [32b-LSW] | R   |         | 41399          |
| V_L31_H_12    | Line Voltage L3-L1 Harmonic #12 | Float [32b-LSW] | R   |         | 41401          |
| V_L31_H_13    | Line Voltage L3-L1 Harmonic #13 | Float [32b-LSW] | R   |         | 41403          |
| V_L31_H_14    | Line Voltage L3-L1 Harmonic #14 | Float [32b-LSW] | R   |         | 41405          |
| V_L31_H_15    | Line Voltage L3-L1 Harmonic #15 | Float [32b-LSW] | R   |         | 41407          |
| V_L31_H_16    | Line Voltage L3-L1 Harmonic #16 | Float [32b-LSW] | R   |         | 41409          |
| V_L31_H_17    | Line Voltage L3-L1 Harmonic #17 | Float [32b-LSW] | R   |         | 41411          |
| V_L31_H_18    | Line Voltage L3-L1 Harmonic #18 | Float [32b-LSW] | R   |         | 41413          |
| V_L31_H_19    | Line Voltage L3-L1 Harmonic #19 | Float [32b-LSW] | R   |         | 41415          |



| Register Name | Description                     | Register Type   | R/W | Default | Address Modbus |
|---------------|---------------------------------|-----------------|-----|---------|----------------|
| V_L31_H_20    | Line Voltage L3-L1 Harmonic #20 | Float [32b-LSW] | R   |         | 41417          |
| V_L31_H_21    | Line Voltage L3-L1 Harmonic #21 | Float [32b-LSW] | R   |         | 41419          |
| V_L31_H_22    | Line Voltage L3-L1 Harmonic #22 | Float [32b-LSW] | R   |         | 41421          |
| V_L31_H_23    | Line Voltage L3-L1 Harmonic #23 | Float [32b-LSW] | R   |         | 41423          |
| V_L31_H_24    | Line Voltage L3-L1 Harmonic #24 | Float [32b-LSW] | R   |         | 41425          |
| V_L31_H_25    | Line Voltage L3-L1 Harmonic #25 | Float [32b-LSW] | R   |         | 41427          |
| V_L31_H_26    | Line Voltage L3-L1 Harmonic #26 | Float [32b-LSW] | R   |         | 41429          |
| V_L31_H_27    | Line Voltage L3-L1 Harmonic #27 | Float [32b-LSW] | R   |         | 41431          |
| V_L31_H_28    | Line Voltage L3-L1 Harmonic #28 | Float [32b-LSW] | R   |         | 41433          |
| V_L31_H_29    | Line Voltage L3-L1 Harmonic #29 | Float [32b-LSW] | R   |         | 41435          |
| V_L31_H_30    | Line Voltage L3-L1 Harmonic #30 | Float [32b-LSW] | R   |         | 41437          |
| V_L31_H_31    | Line Voltage L3-L1 Harmonic #31 | Float [32b-LSW] | R   |         | 41439          |
| V_L31_H_32    | Line Voltage L3-L1 Harmonic #32 | Float [32b-LSW] | R   |         | 41441          |
| V_L31_H_33    | Line Voltage L3-L1 Harmonic #33 | Float [32b-LSW] | R   |         | 41443          |
| V_L31_H_34    | Line Voltage L3-L1 Harmonic #34 | Float [32b-LSW] | R   |         | 41445          |
| V_L31_H_35    | Line Voltage L3-L1 Harmonic #35 | Float [32b-LSW] | R   |         | 41447          |
| V_L31_H_36    | Line Voltage L3-L1 Harmonic #36 | Float [32b-LSW] | R   |         | 41449          |
| V_L31_H_37    | Line Voltage L3-L1 Harmonic #37 | Float [32b-LSW] | R   |         | 41451          |
| V_L31_H_38    | Line Voltage L3-L1 Harmonic #38 | Float [32b-LSW] | R   |         | 41453          |
| V_L31_H_39    | Line Voltage L3-L1 Harmonic #39 | Float [32b-LSW] | R   |         | 41455          |
| V_L31_H_40    | Line Voltage L3-L1 Harmonic #40 | Float [32b-LSW] | R   |         | 41457          |
| V_L31_H_41    | Line Voltage L3-L1 Harmonic #41 | Float [32b-LSW] | R   |         | 41459          |
| V_L31_H_42    | Line Voltage L3-L1 Harmonic #42 | Float [32b-LSW] | R   |         | 41461          |
| V_L31_H_43    | Line Voltage L3-L1 Harmonic #43 | Float [32b-LSW] | R   |         | 41463          |
| V_L31_H_44    | Line Voltage L3-L1 Harmonic #44 | Float [32b-LSW] | R   |         | 41465          |
| V_L31_H_45    | Line Voltage L3-L1 Harmonic #45 | Float [32b-LSW] | R   |         | 41467          |
| V_L31_H_46    | Line Voltage L3-L1 Harmonic #46 | Float [32b-LSW] | R   |         | 41469          |
| V_L31_H_47    | Line Voltage L3-L1 Harmonic #47 | Float [32b-LSW] | R   |         | 41471          |
| V_L31_H_48    | Line Voltage L3-L1 Harmonic #48 | Float [32b-LSW] | R   |         | 41473          |
| V_L31_H_49    | Line Voltage L3-L1 Harmonic #49 | Float [32b-LSW] | R   |         | 41475          |
| V_L31_H_50    | Line Voltage L3-L1 Harmonic #50 | Float [32b-LSW] | R   |         | 41477          |
| V_L31_H_51    | Line Voltage L3-L1 Harmonic #51 | Float [32b-LSW] | R   |         | 41479          |
| V_L31_H_52    | Line Voltage L3-L1 Harmonic #52 | Float [32b-LSW] | R   |         | 41481          |
| V_L31_H_53    | Line Voltage L3-L1 Harmonic #53 | Float [32b-LSW] | R   |         | 41483          |
| V_L31_H_54    | Line Voltage L3-L1 Harmonic #54 | Float [32b-LSW] | R   |         | 41485          |
| V_L31_H_55    | Line Voltage L3-L1 Harmonic #55 | Float [32b-LSW] | R   |         | 41487          |
| V_L31_H_56    | Line Voltage L3-L1 Harmonic #56 | Float [32b-LSW] | R   |         | 41489          |
| V_L31_H_57    | Line Voltage L3-L1 Harmonic #57 | Float [32b-LSW] | R   |         | 41491          |
| V_L31_H_58    | Line Voltage L3-L1 Harmonic #58 | Float [32b-LSW] | R   |         | 41493          |
| V_L31_H_59    | Line Voltage L3-L1 Harmonic #59 | Float [32b-LSW] | R   |         | 41495          |
| V_L31_H_60    | Line Voltage L3-L1 Harmonic #60 | Float [32b-LSW] | R   |         | 41497          |
| V_L31_H_61    | Line Voltage L3-L1 Harmonic #61 | Float [32b-LSW] | R   |         | 41499          |
| V_L31_H_62    | Line Voltage L3-L1 Harmonic #62 | Float [32b-LSW] | R   |         | 41501          |
| V_L31_H_63    | Line Voltage L3-L1 Harmonic #63 | Float [32b-LSW] | R   |         | 41503          |
| I_L1_H_0      | Line Current L1 Harmonic #0     | Float [32b-LSW] | R   |         | 41505          |
| I_L1_H_1      | Line Current L1 Harmonic #1     | Float [32b-LSW] | R   |         | 41507          |
| I_L1_H_2      | Line Current L1 Harmonic #2     | Float [32b-LSW] | R   |         | 41509          |
| I_L1_H_3      | Line Current L1 Harmonic #3     | Float [32b-LSW] | R   |         | 41511          |
| I_L1_H_4      | Line Current L1 Harmonic #4     | Float [32b-LSW] | R   |         | 41513          |
| I_L1_H_5      | Line Current L1 Harmonic #5     | Float [32b-LSW] | R   |         | 41515          |
| I_L1_H_6      | Line Current L1 Harmonic #6     | Float [32b-LSW] | R   |         | 41517          |
| I_L1_H_7      | Line Current L1 Harmonic #7     | Float [32b-LSW] | R   |         | 41519          |
| I_L1_H_8      | Line Current L1 Harmonic #8     | Float [32b-LSW] | R   |         | 41521          |
| I_L1_H_9      | Line Current L1 Harmonic #9     | Float [32b-LSW] | R   |         | 41523          |
| I_L1_H_10     | Line Current L1 Harmonic #10    | Float [32b-LSW] | R   |         | 41525          |
| I_L1_H_11     | Line Current L1 Harmonic #11    | Float [32b-LSW] | R   |         | 41527          |
| I_L1_H_12     | Line Current L1 Harmonic #12    | Float [32b-LSW] | R   |         | 41529          |
| I_L1_H_13     | Line Current L1 Harmonic #13    | Float [32b-LSW] | R   |         | 41531          |
| I_L1_H_14     | Line Current L1 Harmonic #14    | Float [32b-LSW] | R   |         | 41533          |
| I_L1_H_15     | Line Current L1 Harmonic #15    | Float [32b-LSW] | R   |         | 41535          |
| I_L1_H_16     | Line Current L1 Harmonic #16    | Float [32b-LSW] | R   |         | 41537          |
| I_L1_H_17     | Line Current L1 Harmonic #17    | Float [32b-LSW] | R   |         | 41539          |
| I_L1_H_18     | Line Current L1 Harmonic #18    | Float [32b-LSW] | R   |         | 41541          |



| Register Name | Description                  | Register Type   | R/W | Default | Address Modbus |
|---------------|------------------------------|-----------------|-----|---------|----------------|
| I_L1_H_19     | Line Current L1 Harmonic #19 | Float [32b-LSW] | R   |         | 41543          |
| I_L1_H_20     | Line Current L1 Harmonic #20 | Float [32b-LSW] | R   |         | 41545          |
| I_L1_H_21     | Line Current L1 Harmonic #21 | Float [32b-LSW] | R   |         | 41547          |
| I_L1_H_22     | Line Current L1 Harmonic #22 | Float [32b-LSW] | R   |         | 41549          |
| I_L1_H_23     | Line Current L1 Harmonic #23 | Float [32b-LSW] | R   |         | 41551          |
| I_L1_H_24     | Line Current L1 Harmonic #24 | Float [32b-LSW] | R   |         | 41553          |
| I_L1_H_25     | Line Current L1 Harmonic #25 | Float [32b-LSW] | R   |         | 41555          |
| I_L1_H_26     | Line Current L1 Harmonic #26 | Float [32b-LSW] | R   |         | 41557          |
| I_L1_H_27     | Line Current L1 Harmonic #27 | Float [32b-LSW] | R   |         | 41559          |
| I_L1_H_28     | Line Current L1 Harmonic #28 | Float [32b-LSW] | R   |         | 41561          |
| I_L1_H_29     | Line Current L1 Harmonic #29 | Float [32b-LSW] | R   |         | 41563          |
| I_L1_H_30     | Line Current L1 Harmonic #30 | Float [32b-LSW] | R   |         | 41565          |
| I_L1_H_31     | Line Current L1 Harmonic #31 | Float [32b-LSW] | R   |         | 41567          |
| I_L1_H_32     | Line Current L1 Harmonic #32 | Float [32b-LSW] | R   |         | 41569          |
| I_L1_H_33     | Line Current L1 Harmonic #33 | Float [32b-LSW] | R   |         | 41571          |
| I_L1_H_34     | Line Current L1 Harmonic #34 | Float [32b-LSW] | R   |         | 41573          |
| I_L1_H_35     | Line Current L1 Harmonic #35 | Float [32b-LSW] | R   |         | 41575          |
| I_L1_H_36     | Line Current L1 Harmonic #36 | Float [32b-LSW] | R   |         | 41577          |
| I_L1_H_37     | Line Current L1 Harmonic #37 | Float [32b-LSW] | R   |         | 41579          |
| I_L1_H_38     | Line Current L1 Harmonic #38 | Float [32b-LSW] | R   |         | 41581          |
| I_L1_H_39     | Line Current L1 Harmonic #39 | Float [32b-LSW] | R   |         | 41583          |
| I_L1_H_40     | Line Current L1 Harmonic #40 | Float [32b-LSW] | R   |         | 41585          |
| I_L1_H_41     | Line Current L1 Harmonic #41 | Float [32b-LSW] | R   |         | 41587          |
| I_L1_H_42     | Line Current L1 Harmonic #42 | Float [32b-LSW] | R   |         | 41589          |
| I_L1_H_43     | Line Current L1 Harmonic #43 | Float [32b-LSW] | R   |         | 41591          |
| I_L1_H_44     | Line Current L1 Harmonic #44 | Float [32b-LSW] | R   |         | 41593          |
| I_L1_H_45     | Line Current L1 Harmonic #45 | Float [32b-LSW] | R   |         | 41595          |
| I_L1_H_46     | Line Current L1 Harmonic #46 | Float [32b-LSW] | R   |         | 41597          |
| I_L1_H_47     | Line Current L1 Harmonic #47 | Float [32b-LSW] | R   |         | 41599          |
| I_L1_H_48     | Line Current L1 Harmonic #48 | Float [32b-LSW] | R   |         | 41601          |
| I_L1_H_49     | Line Current L1 Harmonic #49 | Float [32b-LSW] | R   |         | 41603          |
| I_L1_H_50     | Line Current L1 Harmonic #50 | Float [32b-LSW] | R   |         | 41605          |
| I_L1_H_51     | Line Current L1 Harmonic #51 | Float [32b-LSW] | R   |         | 41607          |
| I_L1_H_52     | Line Current L1 Harmonic #52 | Float [32b-LSW] | R   |         | 41609          |
| I_L1_H_53     | Line Current L1 Harmonic #53 | Float [32b-LSW] | R   |         | 41611          |
| I_L1_H_54     | Line Current L1 Harmonic #54 | Float [32b-LSW] | R   |         | 41613          |
| I_L1_H_55     | Line Current L1 Harmonic #55 | Float [32b-LSW] | R   |         | 41615          |
| I_L1_H_56     | Line Current L1 Harmonic #56 | Float [32b-LSW] | R   |         | 41617          |
| I_L1_H_57     | Line Current L1 Harmonic #57 | Float [32b-LSW] | R   |         | 41619          |
| I_L1_H_58     | Line Current L1 Harmonic #58 | Float [32b-LSW] | R   |         | 41621          |
| I_L1_H_59     | Line Current L1 Harmonic #59 | Float [32b-LSW] | R   |         | 41623          |
| I_L1_H_60     | Line Current L1 Harmonic #60 | Float [32b-LSW] | R   |         | 41625          |
| I_L1_H_61     | Line Current L1 Harmonic #61 | Float [32b-LSW] | R   |         | 41627          |
| I_L1_H_62     | Line Current L1 Harmonic #62 | Float [32b-LSW] | R   |         | 41629          |
| I_L1_H_63     | Line Current L1 Harmonic #63 | Float [32b-LSW] | R   |         | 41631          |
| I_L2_H_0      | Line Current L2 Harmonic #0  | Float [32b-LSW] | R   |         | 41633          |
| I_L2_H_1      | Line Current L2 Harmonic #1  | Float [32b-LSW] | R   |         | 41635          |
| I_L2_H_2      | Line Current L2 Harmonic #2  | Float [32b-LSW] | R   |         | 41637          |
| I_L2_H_3      | Line Current L2 Harmonic #3  | Float [32b-LSW] | R   |         | 41639          |
| I_L2_H_4      | Line Current L2 Harmonic #4  | Float [32b-LSW] | R   |         | 41641          |
| I_L2_H_5      | Line Current L2 Harmonic #5  | Float [32b-LSW] | R   |         | 41643          |
| I_L2_H_6      | Line Current L2 Harmonic #6  | Float [32b-LSW] | R   |         | 41645          |
| I_L2_H_7      | Line Current L2 Harmonic #7  | Float [32b-LSW] | R   |         | 41647          |
| I_L2_H_8      | Line Current L2 Harmonic #8  | Float [32b-LSW] | R   |         | 41649          |
| I_L2_H_9      | Line Current L2 Harmonic #9  | Float [32b-LSW] | R   |         | 41651          |
| I_L2_H_10     | Line Current L2 Harmonic #10 | Float [32b-LSW] | R   |         | 41653          |
| I_L2_H_11     | Line Current L2 Harmonic #11 | Float [32b-LSW] | R   |         | 41655          |
| I_L2_H_12     | Line Current L2 Harmonic #12 | Float [32b-LSW] | R   |         | 41657          |
| I_L2_H_13     | Line Current L2 Harmonic #13 | Float [32b-LSW] | R   |         | 41659          |
| I_L2_H_14     | Line Current L2 Harmonic #14 | Float [32b-LSW] | R   |         | 41661          |
| I_L2_H_15     | Line Current L2 Harmonic #15 | Float [32b-LSW] | R   |         | 41663          |
| I_L2_H_16     | Line Current L2 Harmonic #16 | Float [32b-LSW] | R   |         | 41665          |
| I_L2_H_17     | Line Current L2 Harmonic #17 | Float [32b-LSW] | R   |         | 41667          |





| Register Name | Description                  | Register Type   | R/W | Default | Address Modbus |
|---------------|------------------------------|-----------------|-----|---------|----------------|
| I_L2_H_18     | Line Current L2 Harmonic #18 | Float [32b-LSW] | R   |         | 41669          |
| I_L2_H_19     | Line Current L2 Harmonic #19 | Float [32b-LSW] | R   |         | 41671          |
| I_L2_H_20     | Line Current L2 Harmonic #20 | Float [32b-LSW] | R   |         | 41673          |
| I_L2_H_21     | Line Current L2 Harmonic #21 | Float [32b-LSW] | R   |         | 41675          |
| I_L2_H_22     | Line Current L2 Harmonic #22 | Float [32b-LSW] | R   |         | 41677          |
| I_L2_H_23     | Line Current L2 Harmonic #23 | Float [32b-LSW] | R   |         | 41679          |
| I_L2_H_24     | Line Current L2 Harmonic #24 | Float [32b-LSW] | R   |         | 41681          |
| I_L2_H_25     | Line Current L2 Harmonic #25 | Float [32b-LSW] | R   |         | 41683          |
| I_L2_H_26     | Line Current L2 Harmonic #26 | Float [32b-LSW] | R   |         | 41685          |
| I_L2_H_27     | Line Current L2 Harmonic #27 | Float [32b-LSW] | R   |         | 41687          |
| I_L2_H_28     | Line Current L2 Harmonic #28 | Float [32b-LSW] | R   |         | 41689          |
| I_L2_H_29     | Line Current L2 Harmonic #29 | Float [32b-LSW] | R   |         | 41691          |
| I_L2_H_30     | Line Current L2 Harmonic #30 | Float [32b-LSW] | R   |         | 41693          |
| I_L2_H_31     | Line Current L2 Harmonic #31 | Float [32b-LSW] | R   |         | 41695          |
| I_L2_H_32     | Line Current L2 Harmonic #32 | Float [32b-LSW] | R   |         | 41697          |
| I_L2_H_33     | Line Current L2 Harmonic #33 | Float [32b-LSW] | R   |         | 41699          |
| I_L2_H_34     | Line Current L2 Harmonic #34 | Float [32b-LSW] | R   |         | 41701          |
| I_L2_H_35     | Line Current L2 Harmonic #35 | Float [32b-LSW] | R   |         | 41703          |
| I_L2_H_36     | Line Current L2 Harmonic #36 | Float [32b-LSW] | R   |         | 41705          |
| I_L2_H_37     | Line Current L2 Harmonic #37 | Float [32b-LSW] | R   |         | 41707          |
| I_L2_H_38     | Line Current L2 Harmonic #38 | Float [32b-LSW] | R   |         | 41709          |
| I_L2_H_39     | Line Current L2 Harmonic #39 | Float [32b-LSW] | R   |         | 41711          |
| I_L2_H_40     | Line Current L2 Harmonic #40 | Float [32b-LSW] | R   |         | 41713          |
| I_L2_H_41     | Line Current L2 Harmonic #41 | Float [32b-LSW] | R   |         | 41715          |
| I_L2_H_42     | Line Current L2 Harmonic #42 | Float [32b-LSW] | R   |         | 41717          |
| I_L2_H_43     | Line Current L2 Harmonic #43 | Float [32b-LSW] | R   |         | 41719          |
| I_L2_H_44     | Line Current L2 Harmonic #44 | Float [32b-LSW] | R   |         | 41721          |
| I_L2_H_45     | Line Current L2 Harmonic #45 | Float [32b-LSW] | R   |         | 41723          |
| I_L2_H_46     | Line Current L2 Harmonic #46 | Float [32b-LSW] | R   |         | 41725          |
| I_L2_H_47     | Line Current L2 Harmonic #47 | Float [32b-LSW] | R   |         | 41727          |
| I_L2_H_48     | Line Current L2 Harmonic #48 | Float [32b-LSW] | R   |         | 41729          |
| I_L2_H_49     | Line Current L2 Harmonic #49 | Float [32b-LSW] | R   |         | 41731          |
| I_L2_H_50     | Line Current L2 Harmonic #50 | Float [32b-LSW] | R   |         | 41733          |
| I_L2_H_51     | Line Current L2 Harmonic #51 | Float [32b-LSW] | R   |         | 41735          |
| I_L2_H_52     | Line Current L2 Harmonic #52 | Float [32b-LSW] | R   |         | 41737          |
| I_L2_H_53     | Line Current L2 Harmonic #53 | Float [32b-LSW] | R   |         | 41739          |
| I_L2_H_54     | Line Current L2 Harmonic #54 | Float [32b-LSW] | R   |         | 41741          |
| I_L2_H_55     | Line Current L2 Harmonic #55 | Float [32b-LSW] | R   |         | 41743          |
| I_L2_H_56     | Line Current L2 Harmonic #56 | Float [32b-LSW] | R   |         | 41745          |
| I_L2_H_57     | Line Current L2 Harmonic #57 | Float [32b-LSW] | R   |         | 41747          |
| I_L2_H_58     | Line Current L2 Harmonic #58 | Float [32b-LSW] | R   |         | 41749          |
| I_L2_H_59     | Line Current L2 Harmonic #59 | Float [32b-LSW] | R   |         | 41751          |
| I_L2_H_60     | Line Current L2 Harmonic #60 | Float [32b-LSW] | R   |         | 41753          |
| I_L2_H_61     | Line Current L2 Harmonic #61 | Float [32b-LSW] | R   |         | 41755          |
| I_L2_H_62     | Line Current L2 Harmonic #62 | Float [32b-LSW] | R   |         | 41757          |
| I_L2_H_63     | Line Current L2 Harmonic #63 | Float [32b-LSW] | R   |         | 41759          |
| I_L3_H_0      | Line Current L3 Harmonic #0  | Float [32b-LSW] | R   |         | 41761          |
| I_L3_H_1      | Line Current L3 Harmonic #1  | Float [32b-LSW] | R   |         | 41763          |
| I_L3_H_2      | Line Current L3 Harmonic #2  | Float [32b-LSW] | R   |         | 41765          |
| I_L3_H_3      | Line Current L3 Harmonic #3  | Float [32b-LSW] | R   |         | 41767          |
| I_L3_H_4      | Line Current L3 Harmonic #4  | Float [32b-LSW] | R   |         | 41769          |
| I_L3_H_5      | Line Current L3 Harmonic #5  | Float [32b-LSW] | R   |         | 41771          |
| I_L3_H_6      | Line Current L3 Harmonic #6  | Float [32b-LSW] | R   |         | 41773          |
| I_L3_H_7      | Line Current L3 Harmonic #7  | Float [32b-LSW] | R   |         | 41775          |
| I_L3_H_8      | Line Current L3 Harmonic #8  | Float [32b-LSW] | R   |         | 41777          |
| I_L3_H_9      | Line Current L3 Harmonic #9  | Float [32b-LSW] | R   |         | 41779          |
| I_L3_H_10     | Line Current L3 Harmonic #10 | Float [32b-LSW] | R   |         | 41781          |
| I_L3_H_11     | Line Current L3 Harmonic #11 | Float [32b-LSW] | R   |         | 41783          |
| I_L3_H_12     | Line Current L3 Harmonic #12 | Float [32b-LSW] | R   |         | 41785          |
| I_L3_H_13     | Line Current L3 Harmonic #13 | Float [32b-LSW] | R   |         | 41787          |
| I_L3_H_14     | Line Current L3 Harmonic #14 | Float [32b-LSW] | R   |         | 41789          |
| I_L3_H_15     | Line Current L3 Harmonic #15 | Float [32b-LSW] | R   |         | 41791          |
| I_L3_H_16     | Line Current L3 Harmonic #16 | Float [32b-LSW] | R   |         | 41793          |



| Register Name | Description                  | Register Type   | R/W | Default | Address Modbus |
|---------------|------------------------------|-----------------|-----|---------|----------------|
| I_L3_H_17     | Line Current L3 Harmonic #17 | Float [32b-LSW] | R   |         | 41795          |
| I_L3_H_18     | Line Current L3 Harmonic #18 | Float [32b-LSW] | R   |         | 41797          |
| I_L3_H_19     | Line Current L3 Harmonic #19 | Float [32b-LSW] | R   |         | 41799          |
| I_L3_H_20     | Line Current L3 Harmonic #20 | Float [32b-LSW] | R   |         | 41801          |
| I_L3_H_21     | Line Current L3 Harmonic #21 | Float [32b-LSW] | R   |         | 41803          |
| I_L3_H_22     | Line Current L3 Harmonic #22 | Float [32b-LSW] | R   |         | 41805          |
| I_L3_H_23     | Line Current L3 Harmonic #23 | Float [32b-LSW] | R   |         | 41807          |
| I_L3_H_24     | Line Current L3 Harmonic #24 | Float [32b-LSW] | R   |         | 41809          |
| I_L3_H_25     | Line Current L3 Harmonic #25 | Float [32b-LSW] | R   |         | 41811          |
| I_L3_H_26     | Line Current L3 Harmonic #26 | Float [32b-LSW] | R   |         | 41813          |
| I_L3_H_27     | Line Current L3 Harmonic #27 | Float [32b-LSW] | R   |         | 41815          |
| I_L3_H_28     | Line Current L3 Harmonic #28 | Float [32b-LSW] | R   |         | 41817          |
| I_L3_H_29     | Line Current L3 Harmonic #29 | Float [32b-LSW] | R   |         | 41819          |
| I_L3_H_30     | Line Current L3 Harmonic #30 | Float [32b-LSW] | R   |         | 41821          |
| I_L3_H_31     | Line Current L3 Harmonic #31 | Float [32b-LSW] | R   |         | 41823          |
| I_L3_H_32     | Line Current L3 Harmonic #32 | Float [32b-LSW] | R   |         | 41825          |
| I_L3_H_33     | Line Current L3 Harmonic #33 | Float [32b-LSW] | R   |         | 41827          |
| I_L3_H_34     | Line Current L3 Harmonic #34 | Float [32b-LSW] | R   |         | 41829          |
| I_L3_H_35     | Line Current L3 Harmonic #35 | Float [32b-LSW] | R   |         | 41831          |
| I_L3_H_36     | Line Current L3 Harmonic #36 | Float [32b-LSW] | R   |         | 41833          |
| I_L3_H_37     | Line Current L3 Harmonic #37 | Float [32b-LSW] | R   |         | 41835          |
| I_L3_H_38     | Line Current L3 Harmonic #38 | Float [32b-LSW] | R   |         | 41837          |
| I_L3_H_39     | Line Current L3 Harmonic #39 | Float [32b-LSW] | R   |         | 41839          |
| I_L3_H_40     | Line Current L3 Harmonic #40 | Float [32b-LSW] | R   |         | 41841          |
| I_L3_H_41     | Line Current L3 Harmonic #41 | Float [32b-LSW] | R   |         | 41843          |
| I_L3_H_42     | Line Current L3 Harmonic #42 | Float [32b-LSW] | R   |         | 41845          |
| I_L3_H_43     | Line Current L3 Harmonic #43 | Float [32b-LSW] | R   |         | 41847          |
| I_L3_H_44     | Line Current L3 Harmonic #44 | Float [32b-LSW] | R   |         | 41849          |
| I_L3_H_45     | Line Current L3 Harmonic #45 | Float [32b-LSW] | R   |         | 41851          |
| I_L3_H_46     | Line Current L3 Harmonic #46 | Float [32b-LSW] | R   |         | 41853          |
| I_L3_H_47     | Line Current L3 Harmonic #47 | Float [32b-LSW] | R   |         | 41855          |
| I_L3_H_48     | Line Current L3 Harmonic #48 | Float [32b-LSW] | R   |         | 41857          |
| I_L3_H_49     | Line Current L3 Harmonic #49 | Float [32b-LSW] | R   |         | 41859          |
| I_L3_H_50     | Line Current L3 Harmonic #50 | Float [32b-LSW] | R   |         | 41861          |
| I_L3_H_51     | Line Current L3 Harmonic #51 | Float [32b-LSW] | R   |         | 41863          |
| I_L3_H_52     | Line Current L3 Harmonic #52 | Float [32b-LSW] | R   |         | 41865          |
| I_L3_H_53     | Line Current L3 Harmonic #53 | Float [32b-LSW] | R   |         | 41867          |
| I_L3_H_54     | Line Current L3 Harmonic #54 | Float [32b-LSW] | R   |         | 41869          |
| I_L3_H_55     | Line Current L3 Harmonic #55 | Float [32b-LSW] | R   |         | 41871          |
| I_L3_H_56     | Line Current L3 Harmonic #56 | Float [32b-LSW] | R   |         | 41873          |
| I_L3_H_57     | Line Current L3 Harmonic #57 | Float [32b-LSW] | R   |         | 41875          |
| I_L3_H_58     | Line Current L3 Harmonic #58 | Float [32b-LSW] | R   |         | 41877          |
| I_L3_H_59     | Line Current L3 Harmonic #59 | Float [32b-LSW] | R   |         | 41879          |
| I_L3_H_60     | Line Current L3 Harmonic #60 | Float [32b-LSW] | R   |         | 41881          |
| I_L3_H_61     | Line Current L3 Harmonic #61 | Float [32b-LSW] | R   |         | 41883          |
| I_L3_H_62     | Line Current L3 Harmonic #62 | Float [32b-LSW] | R   |         | 41885          |
| I_L3_H_63     | Line Current L3 Harmonic #63 | Float [32b-LSW] | R   |         | 41887          |
| I_N_H_0       | Line Current N Harmonic #0   | Float [32b-LSW] | R   |         | 41889          |
| I_N_H_1       | Line Current N Harmonic #1   | Float [32b-LSW] | R   |         | 41891          |
| I_N_H_2       | Line Current N Harmonic #2   | Float [32b-LSW] | R   |         | 41893          |
| I_N_H_3       | Line Current N Harmonic #3   | Float [32b-LSW] | R   |         | 41895          |
| I_N_H_4       | Line Current N Harmonic #4   | Float [32b-LSW] | R   |         | 41897          |
| I_N_H_5       | Line Current N Harmonic #5   | Float [32b-LSW] | R   |         | 41899          |
| I_N_H_6       | Line Current N Harmonic #6   | Float [32b-LSW] | R   |         | 41901          |
| I_N_H_7       | Line Current N Harmonic #7   | Float [32b-LSW] | R   |         | 41903          |
| I_N_H_8       | Line Current N Harmonic #8   | Float [32b-LSW] | R   |         | 41905          |
| I_N_H_9       | Line Current N Harmonic #9   | Float [32b-LSW] | R   |         | 41907          |
| I_N_H_10      | Line Current N Harmonic #10  | Float [32b-LSW] | R   |         | 41909          |
| I_N_H_11      | Line Current N Harmonic #11  | Float [32b-LSW] | R   |         | 41911          |
| I_N_H_12      | Line Current N Harmonic #12  | Float [32b-LSW] | R   |         | 41913          |
| I_N_H_13      | Line Current N Harmonic #13  | Float [32b-LSW] | R   |         | 41915          |
| I_N_H_14      | Line Current N Harmonic #14  | Float [32b-LSW] | R   |         | 41917          |
| I_N_H_15      | Line Current N Harmonic #15  | Float [32b-LSW] | R   |         | 41919          |



| Register Name | Description                         | Register Type   | R/W | Default | Address Modbus |
|---------------|-------------------------------------|-----------------|-----|---------|----------------|
| I_N_H_16      | Line Current N Harmonic #16         | Float [32b-LSW] | R   |         | 41921          |
| I_N_H_17      | Line Current N Harmonic #17         | Float [32b-LSW] | R   |         | 41923          |
| I_N_H_18      | Line Current N Harmonic #18         | Float [32b-LSW] | R   |         | 41925          |
| I_N_H_19      | Line Current N Harmonic #19         | Float [32b-LSW] | R   |         | 41927          |
| I_N_H_20      | Line Current N Harmonic #20         | Float [32b-LSW] | R   |         | 41929          |
| I_N_H_21      | Line Current N Harmonic #21         | Float [32b-LSW] | R   |         | 41931          |
| I_N_H_22      | Line Current N Harmonic #22         | Float [32b-LSW] | R   |         | 41933          |
| I_N_H_23      | Line Current N Harmonic #23         | Float [32b-LSW] | R   |         | 41935          |
| I_N_H_24      | Line Current N Harmonic #24         | Float [32b-LSW] | R   |         | 41937          |
| I_N_H_25      | Line Current N Harmonic #25         | Float [32b-LSW] | R   |         | 41939          |
| I_N_H_26      | Line Current N Harmonic #26         | Float [32b-LSW] | R   |         | 41941          |
| I_N_H_27      | Line Current N Harmonic #27         | Float [32b-LSW] | R   |         | 41943          |
| I_N_H_28      | Line Current N Harmonic #28         | Float [32b-LSW] | R   |         | 41945          |
| I_N_H_29      | Line Current N Harmonic #29         | Float [32b-LSW] | R   |         | 41947          |
| I_N_H_30      | Line Current N Harmonic #30         | Float [32b-LSW] | R   |         | 41949          |
| I_N_H_31      | Line Current N Harmonic #31         | Float [32b-LSW] | R   |         | 41951          |
| I_N_H_32      | Line Current N Harmonic #32         | Float [32b-LSW] | R   |         | 41953          |
| I_N_H_33      | Line Current N Harmonic #33         | Float [32b-LSW] | R   |         | 41955          |
| I_N_H_34      | Line Current N Harmonic #34         | Float [32b-LSW] | R   |         | 41957          |
| I_N_H_35      | Line Current N Harmonic #35         | Float [32b-LSW] | R   |         | 41959          |
| I_N_H_36      | Line Current N Harmonic #36         | Float [32b-LSW] | R   |         | 41961          |
| I_N_H_37      | Line Current N Harmonic #37         | Float [32b-LSW] | R   |         | 41963          |
| I_N_H_38      | Line Current N Harmonic #38         | Float [32b-LSW] | R   |         | 41965          |
| I_N_H_39      | Line Current N Harmonic #39         | Float [32b-LSW] | R   |         | 41967          |
| I_N_H_40      | Line Current N Harmonic #40         | Float [32b-LSW] | R   |         | 41969          |
| I_N_H_41      | Line Current N Harmonic #41         | Float [32b-LSW] | R   |         | 41971          |
| I_N_H_42      | Line Current N Harmonic #42         | Float [32b-LSW] | R   |         | 41973          |
| I_N_H_43      | Line Current N Harmonic #43         | Float [32b-LSW] | R   |         | 41975          |
| I_N_H_44      | Line Current N Harmonic #44         | Float [32b-LSW] | R   |         | 41977          |
| I_N_H_45      | Line Current N Harmonic #45         | Float [32b-LSW] | R   |         | 41979          |
| I_N_H_46      | Line Current N Harmonic #46         | Float [32b-LSW] | R   |         | 41981          |
| I_N_H_47      | Line Current N Harmonic #47         | Float [32b-LSW] | R   |         | 41983          |
| I_N_H_48      | Line Current N Harmonic #48         | Float [32b-LSW] | R   |         | 41985          |
| I_N_H_49      | Line Current N Harmonic #49         | Float [32b-LSW] | R   |         | 41987          |
| I_N_H_50      | Line Current N Harmonic #50         | Float [32b-LSW] | R   |         | 41989          |
| I_N_H_51      | Line Current N Harmonic #51         | Float [32b-LSW] | R   |         | 41991          |
| I_N_H_52      | Line Current N Harmonic #52         | Float [32b-LSW] | R   |         | 41993          |
| I_N_H_53      | Line Current N Harmonic #53         | Float [32b-LSW] | R   |         | 41995          |
| I_N_H_54      | Line Current N Harmonic #54         | Float [32b-LSW] | R   |         | 41997          |
| I_N_H_55      | Line Current N Harmonic #55         | Float [32b-LSW] | R   |         | 41999          |
| I_N_H_56      | Line Current N Harmonic #56         | Float [32b-LSW] | R   |         | 42001          |
| I_N_H_57      | Line Current N Harmonic #57         | Float [32b-LSW] | R   |         | 42003          |
| I_N_H_58      | Line Current N Harmonic #58         | Float [32b-LSW] | R   |         | 42005          |
| I_N_H_59      | Line Current N Harmonic #59         | Float [32b-LSW] | R   |         | 42007          |
| I_N_H_60      | Line Current N Harmonic #60         | Float [32b-LSW] | R   |         | 42009          |
| I_N_H_61      | Line Current N Harmonic #61         | Float [32b-LSW] | R   |         | 42011          |
| I_N_H_62      | Line Current N Harmonic #62         | Float [32b-LSW] | R   |         | 42013          |
| I_N_H_63      | Line Current N Harmonic #63         | Float [32b-LSW] | R   |         | 42015          |
| V_L1N_IH_0    | Star Voltage L1-N InterHarmonic #0  | Float [32b-LSW] | R   |         | 42017          |
| V_L1N_IH_1    | Star Voltage L1-N InterHarmonic #1  | Float [32b-LSW] | R   |         | 42019          |
| V_L1N_IH_2    | Star Voltage L1-N InterHarmonic #2  | Float [32b-LSW] | R   |         | 42021          |
| V_L1N_IH_3    | Star Voltage L1-N InterHarmonic #3  | Float [32b-LSW] | R   |         | 42023          |
| V_L1N_IH_4    | Star Voltage L1-N InterHarmonic #4  | Float [32b-LSW] | R   |         | 42025          |
| V_L1N_IH_5    | Star Voltage L1-N InterHarmonic #5  | Float [32b-LSW] | R   |         | 42027          |
| V_L1N_IH_6    | Star Voltage L1-N InterHarmonic #6  | Float [32b-LSW] | R   |         | 42029          |
| V_L1N_IH_7    | Star Voltage L1-N InterHarmonic #7  | Float [32b-LSW] | R   |         | 42031          |
| V_L1N_IH_8    | Star Voltage L1-N InterHarmonic #8  | Float [32b-LSW] | R   |         | 42033          |
| V_L1N_IH_9    | Star Voltage L1-N InterHarmonic #9  | Float [32b-LSW] | R   |         | 42035          |
| V_L1N_IH_10   | Star Voltage L1-N InterHarmonic #10 | Float [32b-LSW] | R   |         | 42037          |
| V_L1N_IH_11   | Star Voltage L1-N InterHarmonic #11 | Float [32b-LSW] | R   |         | 42039          |
| V_L1N_IH_12   | Star Voltage L1-N InterHarmonic #12 | Float [32b-LSW] | R   |         | 42041          |
| V_L1N_IH_13   | Star Voltage L1-N InterHarmonic #13 | Float [32b-LSW] | R   |         | 42043          |
| V_L1N_IH_14   | Star Voltage L1-N InterHarmonic #14 | Float [32b-LSW] | R   |         | 42045          |





| Register Name | Description                         | Register Type   | R/W | Default | Address Modbus |
|---------------|-------------------------------------|-----------------|-----|---------|----------------|
| V_L1N_IH_15   | Star Voltage L1-N InterHarmonic #15 | Float [32b-LSW] | R   |         | 42047          |
| V_L1N_IH_16   | Star Voltage L1-N InterHarmonic #16 | Float [32b-LSW] | R   |         | 42049          |
| V_L1N_IH_17   | Star Voltage L1-N InterHarmonic #17 | Float [32b-LSW] | R   |         | 42051          |
| V_L1N_IH_18   | Star Voltage L1-N InterHarmonic #18 | Float [32b-LSW] | R   |         | 42053          |
| V_L1N_IH_19   | Star Voltage L1-N InterHarmonic #19 | Float [32b-LSW] | R   |         | 42055          |
| V_L1N_IH_20   | Star Voltage L1-N InterHarmonic #20 | Float [32b-LSW] | R   |         | 42057          |
| V_L1N_IH_21   | Star Voltage L1-N InterHarmonic #21 | Float [32b-LSW] | R   |         | 42059          |
| V_L1N_IH_22   | Star Voltage L1-N InterHarmonic #22 | Float [32b-LSW] | R   |         | 42061          |
| V_L1N_IH_23   | Star Voltage L1-N InterHarmonic #23 | Float [32b-LSW] | R   |         | 42063          |
| V_L1N_IH_24   | Star Voltage L1-N InterHarmonic #24 | Float [32b-LSW] | R   |         | 42065          |
| V_L1N_IH_25   | Star Voltage L1-N InterHarmonic #25 | Float [32b-LSW] | R   |         | 42067          |
| V_L1N_IH_26   | Star Voltage L1-N InterHarmonic #26 | Float [32b-LSW] | R   |         | 42069          |
| V_L1N_IH_27   | Star Voltage L1-N InterHarmonic #27 | Float [32b-LSW] | R   |         | 42071          |
| V_L1N_IH_28   | Star Voltage L1-N InterHarmonic #28 | Float [32b-LSW] | R   |         | 42073          |
| V_L1N_IH_29   | Star Voltage L1-N InterHarmonic #29 | Float [32b-LSW] | R   |         | 42075          |
| V_L1N_IH_30   | Star Voltage L1-N InterHarmonic #30 | Float [32b-LSW] | R   |         | 42077          |
| V_L1N_IH_31   | Star Voltage L1-N InterHarmonic #31 | Float [32b-LSW] | R   |         | 42079          |
| V_L1N_IH_32   | Star Voltage L1-N InterHarmonic #32 | Float [32b-LSW] | R   |         | 42081          |
| V_L1N_IH_33   | Star Voltage L1-N InterHarmonic #33 | Float [32b-LSW] | R   |         | 42083          |
| V_L1N_IH_34   | Star Voltage L1-N InterHarmonic #34 | Float [32b-LSW] | R   |         | 42085          |
| V_L1N_IH_35   | Star Voltage L1-N InterHarmonic #35 | Float [32b-LSW] | R   |         | 42087          |
| V_L1N_IH_36   | Star Voltage L1-N InterHarmonic #36 | Float [32b-LSW] | R   |         | 42089          |
| V_L1N_IH_37   | Star Voltage L1-N InterHarmonic #37 | Float [32b-LSW] | R   |         | 42091          |
| V_L1N_IH_38   | Star Voltage L1-N InterHarmonic #38 | Float [32b-LSW] | R   |         | 42093          |
| V_L1N_IH_39   | Star Voltage L1-N InterHarmonic #39 | Float [32b-LSW] | R   |         | 42095          |
| V_L1N_IH_40   | Star Voltage L1-N InterHarmonic #40 | Float [32b-LSW] | R   |         | 42097          |
| V_L1N_IH_41   | Star Voltage L1-N InterHarmonic #41 | Float [32b-LSW] | R   |         | 42099          |
| V_L1N_IH_42   | Star Voltage L1-N InterHarmonic #42 | Float [32b-LSW] | R   |         | 42101          |
| V_L1N_IH_43   | Star Voltage L1-N InterHarmonic #43 | Float [32b-LSW] | R   |         | 42103          |
| V_L1N_IH_44   | Star Voltage L1-N InterHarmonic #44 | Float [32b-LSW] | R   |         | 42105          |
| V_L1N_IH_45   | Star Voltage L1-N InterHarmonic #45 | Float [32b-LSW] | R   |         | 42107          |
| V_L1N_IH_46   | Star Voltage L1-N InterHarmonic #46 | Float [32b-LSW] | R   |         | 42109          |
| V_L1N_IH_47   | Star Voltage L1-N InterHarmonic #47 | Float [32b-LSW] | R   |         | 42111          |
| V_L1N_IH_48   | Star Voltage L1-N InterHarmonic #48 | Float [32b-LSW] | R   |         | 42113          |
| V_L1N_IH_49   | Star Voltage L1-N InterHarmonic #49 | Float [32b-LSW] | R   |         | 42115          |
| V_L1N_IH_50   | Star Voltage L1-N InterHarmonic #50 | Float [32b-LSW] | R   |         | 42117          |
| V_L1N_IH_51   | Star Voltage L1-N InterHarmonic #51 | Float [32b-LSW] | R   |         | 42119          |
| V_L1N_IH_52   | Star Voltage L1-N InterHarmonic #52 | Float [32b-LSW] | R   |         | 42121          |
| V_L1N_IH_53   | Star Voltage L1-N InterHarmonic #53 | Float [32b-LSW] | R   |         | 42123          |
| V_L1N_IH_54   | Star Voltage L1-N InterHarmonic #54 | Float [32b-LSW] | R   |         | 42125          |
| V_L1N_IH_55   | Star Voltage L1-N InterHarmonic #55 | Float [32b-LSW] | R   |         | 42127          |
| V_L1N_IH_56   | Star Voltage L1-N InterHarmonic #56 | Float [32b-LSW] | R   |         | 42129          |
| V_L1N_IH_57   | Star Voltage L1-N InterHarmonic #57 | Float [32b-LSW] | R   |         | 42131          |
| V_L1N_IH_58   | Star Voltage L1-N InterHarmonic #58 | Float [32b-LSW] | R   |         | 42133          |
| V_L1N_IH_59   | Star Voltage L1-N InterHarmonic #59 | Float [32b-LSW] | R   |         | 42135          |
| V_L1N_IH_60   | Star Voltage L1-N InterHarmonic #60 | Float [32b-LSW] | R   |         | 42137          |
| V_L1N_IH_61   | Star Voltage L1-N InterHarmonic #61 | Float [32b-LSW] | R   |         | 42139          |
| V_L1N_IH_62   | Star Voltage L1-N InterHarmonic #62 | Float [32b-LSW] | R   |         | 42141          |
| V_L1N_IH_63   | Star Voltage L1-N InterHarmonic #63 | Float [32b-LSW] | R   |         | 42143          |
| V_L2N_IH_0    | Star Voltage L2-N InterHarmonic #0  | Float [32b-LSW] | R   |         | 42145          |
| V_L2N_IH_1    | Star Voltage L2-N InterHarmonic #1  | Float [32b-LSW] | R   |         | 42147          |
| V_L2N_IH_2    | Star Voltage L2-N InterHarmonic #2  | Float [32b-LSW] | R   |         | 42149          |
| V_L2N_IH_3    | Star Voltage L2-N InterHarmonic #3  | Float [32b-LSW] | R   |         | 42151          |
| V_L2N_IH_4    | Star Voltage L2-N InterHarmonic #4  | Float [32b-LSW] | R   |         | 42153          |
| V_L2N_IH_5    | Star Voltage L2-N InterHarmonic #5  | Float [32b-LSW] | R   |         | 42155          |
| V_L2N_IH_6    | Star Voltage L2-N InterHarmonic #6  | Float [32b-LSW] | R   |         | 42157          |
| V_L2N_IH_7    | Star Voltage L2-N InterHarmonic #7  | Float [32b-LSW] | R   |         | 42159          |
| V_L2N_IH_8    | Star Voltage L2-N InterHarmonic #8  | Float [32b-LSW] | R   |         | 42161          |
| V_L2N_IH_9    | Star Voltage L2-N InterHarmonic #9  | Float [32b-LSW] | R   |         | 42163          |
| V_L2N_IH_10   | Star Voltage L2-N InterHarmonic #10 | Float [32b-LSW] | R   |         | 42165          |
| V_L2N_IH_11   | Star Voltage L2-N InterHarmonic #11 | Float [32b-LSW] | R   |         | 42167          |
| V_L2N_IH_12   | Star Voltage L2-N InterHarmonic #12 | Float [32b-LSW] | R   |         | 42169          |
| V_L2N_IH_13   | Star Voltage L2-N InterHarmonic #13 | Float [32b-LSW] | R   |         | 42171          |



| Register Name | Description                         | Register Type   | R/W | Default | Address Modbus |
|---------------|-------------------------------------|-----------------|-----|---------|----------------|
| V_L2N_IH_14   | Star Voltage L2-N InterHarmonic #14 | Float [32b-LSW] | R   |         | 42173          |
| V_L2N_IH_15   | Star Voltage L2-N InterHarmonic #15 | Float [32b-LSW] | R   |         | 42175          |
| V_L2N_IH_16   | Star Voltage L2-N InterHarmonic #16 | Float [32b-LSW] | R   |         | 42177          |
| V_L2N_IH_17   | Star Voltage L2-N InterHarmonic #17 | Float [32b-LSW] | R   |         | 42179          |
| V_L2N_IH_18   | Star Voltage L2-N InterHarmonic #18 | Float [32b-LSW] | R   |         | 42181          |
| V_L2N_IH_19   | Star Voltage L2-N InterHarmonic #19 | Float [32b-LSW] | R   |         | 42183          |
| V_L2N_IH_20   | Star Voltage L2-N InterHarmonic #20 | Float [32b-LSW] | R   |         | 42185          |
| V_L2N_IH_21   | Star Voltage L2-N InterHarmonic #21 | Float [32b-LSW] | R   |         | 42187          |
| V_L2N_IH_22   | Star Voltage L2-N InterHarmonic #22 | Float [32b-LSW] | R   |         | 42189          |
| V_L2N_IH_23   | Star Voltage L2-N InterHarmonic #23 | Float [32b-LSW] | R   |         | 42191          |
| V_L2N_IH_24   | Star Voltage L2-N InterHarmonic #24 | Float [32b-LSW] | R   |         | 42193          |
| V_L2N_IH_25   | Star Voltage L2-N InterHarmonic #25 | Float [32b-LSW] | R   |         | 42195          |
| V_L2N_IH_26   | Star Voltage L2-N InterHarmonic #26 | Float [32b-LSW] | R   |         | 42197          |
| V_L2N_IH_27   | Star Voltage L2-N InterHarmonic #27 | Float [32b-LSW] | R   |         | 42199          |
| V_L2N_IH_28   | Star Voltage L2-N InterHarmonic #28 | Float [32b-LSW] | R   |         | 42201          |
| V_L2N_IH_29   | Star Voltage L2-N InterHarmonic #29 | Float [32b-LSW] | R   |         | 42203          |
| V_L2N_IH_30   | Star Voltage L2-N InterHarmonic #30 | Float [32b-LSW] | R   |         | 42205          |
| V_L2N_IH_31   | Star Voltage L2-N InterHarmonic #31 | Float [32b-LSW] | R   |         | 42207          |
| V_L2N_IH_32   | Star Voltage L2-N InterHarmonic #32 | Float [32b-LSW] | R   |         | 42209          |
| V_L2N_IH_33   | Star Voltage L2-N InterHarmonic #33 | Float [32b-LSW] | R   |         | 42211          |
| V_L2N_IH_34   | Star Voltage L2-N InterHarmonic #34 | Float [32b-LSW] | R   |         | 42213          |
| V_L2N_IH_35   | Star Voltage L2-N InterHarmonic #35 | Float [32b-LSW] | R   |         | 42215          |
| V_L2N_IH_36   | Star Voltage L2-N InterHarmonic #36 | Float [32b-LSW] | R   |         | 42217          |
| V_L2N_IH_37   | Star Voltage L2-N InterHarmonic #37 | Float [32b-LSW] | R   |         | 42219          |
| V_L2N_IH_38   | Star Voltage L2-N InterHarmonic #38 | Float [32b-LSW] | R   |         | 42221          |
| V_L2N_IH_39   | Star Voltage L2-N InterHarmonic #39 | Float [32b-LSW] | R   |         | 42223          |
| V_L2N_IH_40   | Star Voltage L2-N InterHarmonic #40 | Float [32b-LSW] | R   |         | 42225          |
| V_L2N_IH_41   | Star Voltage L2-N InterHarmonic #41 | Float [32b-LSW] | R   |         | 42227          |
| V_L2N_IH_42   | Star Voltage L2-N InterHarmonic #42 | Float [32b-LSW] | R   |         | 42229          |
| V_L2N_IH_43   | Star Voltage L2-N InterHarmonic #43 | Float [32b-LSW] | R   |         | 42231          |
| V_L2N_IH_44   | Star Voltage L2-N InterHarmonic #44 | Float [32b-LSW] | R   |         | 42233          |
| V_L2N_IH_45   | Star Voltage L2-N InterHarmonic #45 | Float [32b-LSW] | R   |         | 42235          |
| V_L2N_IH_46   | Star Voltage L2-N InterHarmonic #46 | Float [32b-LSW] | R   |         | 42237          |
| V_L2N_IH_47   | Star Voltage L2-N InterHarmonic #47 | Float [32b-LSW] | R   |         | 42239          |
| V_L2N_IH_48   | Star Voltage L2-N InterHarmonic #48 | Float [32b-LSW] | R   |         | 42241          |
| V_L2N_IH_49   | Star Voltage L2-N InterHarmonic #49 | Float [32b-LSW] | R   |         | 42243          |
| V_L2N_IH_50   | Star Voltage L2-N InterHarmonic #50 | Float [32b-LSW] | R   |         | 42245          |
| V_L2N_IH_51   | Star Voltage L2-N InterHarmonic #51 | Float [32b-LSW] | R   |         | 42247          |
| V_L2N_IH_52   | Star Voltage L2-N InterHarmonic #52 | Float [32b-LSW] | R   |         | 42249          |
| V_L2N_IH_53   | Star Voltage L2-N InterHarmonic #53 | Float [32b-LSW] | R   |         | 42251          |
| V_L2N_IH_54   | Star Voltage L2-N InterHarmonic #54 | Float [32b-LSW] | R   |         | 42253          |
| V_L2N_IH_55   | Star Voltage L2-N InterHarmonic #55 | Float [32b-LSW] | R   |         | 42255          |
| V_L2N_IH_56   | Star Voltage L2-N InterHarmonic #56 | Float [32b-LSW] | R   |         | 42257          |
| V_L2N_IH_57   | Star Voltage L2-N InterHarmonic #57 | Float [32b-LSW] | R   |         | 42259          |
| V_L2N_IH_58   | Star Voltage L2-N InterHarmonic #58 | Float [32b-LSW] | R   |         | 42261          |
| V_L2N_IH_59   | Star Voltage L2-N InterHarmonic #59 | Float [32b-LSW] | R   |         | 42263          |
| V_L2N_IH_60   | Star Voltage L2-N InterHarmonic #60 | Float [32b-LSW] | R   |         | 42265          |
| V_L2N_IH_61   | Star Voltage L2-N InterHarmonic #61 | Float [32b-LSW] | R   |         | 42267          |
| V_L2N_IH_62   | Star Voltage L2-N InterHarmonic #62 | Float [32b-LSW] | R   |         | 42269          |
| V_L2N_IH_63   | Star Voltage L2-N InterHarmonic #63 | Float [32b-LSW] | R   |         | 42271          |
| V_L3N_IH_0    | Star Voltage L3-N InterHarmonic #0  | Float [32b-LSW] | R   |         | 42273          |
| V_L3N_IH_1    | Star Voltage L3-N InterHarmonic #1  | Float [32b-LSW] | R   |         | 42275          |
| V_L3N_IH_2    | Star Voltage L3-N InterHarmonic #2  | Float [32b-LSW] | R   |         | 42277          |
| V_L3N_IH_3    | Star Voltage L3-N InterHarmonic #3  | Float [32b-LSW] | R   |         | 42279          |
| V_L3N_IH_4    | Star Voltage L3-N InterHarmonic #4  | Float [32b-LSW] | R   |         | 42281          |
| V_L3N_IH_5    | Star Voltage L3-N InterHarmonic #5  | Float [32b-LSW] | R   |         | 42283          |
| V_L3N_IH_6    | Star Voltage L3-N InterHarmonic #6  | Float [32b-LSW] | R   |         | 42285          |
| V_L3N_IH_7    | Star Voltage L3-N InterHarmonic #7  | Float [32b-LSW] | R   |         | 42287          |
| V_L3N_IH_8    | Star Voltage L3-N InterHarmonic #8  | Float [32b-LSW] | R   |         | 42289          |
| V_L3N_IH_9    | Star Voltage L3-N InterHarmonic #9  | Float [32b-LSW] | R   |         | 42291          |
| V_L3N_IH_10   | Star Voltage L3-N InterHarmonic #10 | Float [32b-LSW] | R   |         | 42293          |
| V_L3N_IH_11   | Star Voltage L3-N InterHarmonic #11 | Float [32b-LSW] | R   |         | 42295          |
| V_L3N_IH_12   | Star Voltage L3-N InterHarmonic #12 | Float [32b-LSW] | R   |         | 42297          |



| Register Name | Description                          | Register Type   | R/W | Default | Address Modbus |
|---------------|--------------------------------------|-----------------|-----|---------|----------------|
| V_L3N_IH_13   | Star Voltage L3-N InterHarmonic #13  | Float [32b-LSW] | R   |         | 42299          |
| V_L3N_IH_14   | Star Voltage L3-N InterHarmonic #14  | Float [32b-LSW] | R   |         | 42301          |
| V_L3N_IH_15   | Star Voltage L3-N InterHarmonic #15  | Float [32b-LSW] | R   |         | 42303          |
| V_L3N_IH_16   | Star Voltage L3-N InterHarmonic #16  | Float [32b-LSW] | R   |         | 42305          |
| V_L3N_IH_17   | Star Voltage L3-N InterHarmonic #17  | Float [32b-LSW] | R   |         | 42307          |
| V_L3N_IH_18   | Star Voltage L3-N InterHarmonic #18  | Float [32b-LSW] | R   |         | 42309          |
| V_L3N_IH_19   | Star Voltage L3-N InterHarmonic #19  | Float [32b-LSW] | R   |         | 42311          |
| V_L3N_IH_20   | Star Voltage L3-N InterHarmonic #20  | Float [32b-LSW] | R   |         | 42313          |
| V_L3N_IH_21   | Star Voltage L3-N InterHarmonic #21  | Float [32b-LSW] | R   |         | 42315          |
| V_L3N_IH_22   | Star Voltage L3-N InterHarmonic #22  | Float [32b-LSW] | R   |         | 42317          |
| V_L3N_IH_23   | Star Voltage L3-N InterHarmonic #23  | Float [32b-LSW] | R   |         | 42319          |
| V_L3N_IH_24   | Star Voltage L3-N InterHarmonic #24  | Float [32b-LSW] | R   |         | 42321          |
| V_L3N_IH_25   | Star Voltage L3-N InterHarmonic #25  | Float [32b-LSW] | R   |         | 42323          |
| V_L3N_IH_26   | Star Voltage L3-N InterHarmonic #26  | Float [32b-LSW] | R   |         | 42325          |
| V_L3N_IH_27   | Star Voltage L3-N InterHarmonic #27  | Float [32b-LSW] | R   |         | 42327          |
| V_L3N_IH_28   | Star Voltage L3-N InterHarmonic #28  | Float [32b-LSW] | R   |         | 42329          |
| V_L3N_IH_29   | Star Voltage L3-N InterHarmonic #29  | Float [32b-LSW] | R   |         | 42331          |
| V_L3N_IH_30   | Star Voltage L3-N InterHarmonic #30  | Float [32b-LSW] | R   |         | 42333          |
| V_L3N_IH_31   | Star Voltage L3-N InterHarmonic #31  | Float [32b-LSW] | R   |         | 42335          |
| V_L3N_IH_32   | Star Voltage L3-N InterHarmonic #32  | Float [32b-LSW] | R   |         | 42337          |
| V_L3N_IH_33   | Star Voltage L3-N InterHarmonic #33  | Float [32b-LSW] | R   |         | 42339          |
| V_L3N_IH_34   | Star Voltage L3-N InterHarmonic #34  | Float [32b-LSW] | R   |         | 42341          |
| V_L3N_IH_35   | Star Voltage L3-N InterHarmonic #35  | Float [32b-LSW] | R   |         | 42343          |
| V_L3N_IH_36   | Star Voltage L3-N InterHarmonic #36  | Float [32b-LSW] | R   |         | 42345          |
| V_L3N_IH_37   | Star Voltage L3-N InterHarmonic #37  | Float [32b-LSW] | R   |         | 42347          |
| V_L3N_IH_38   | Star Voltage L3-N InterHarmonic #38  | Float [32b-LSW] | R   |         | 42349          |
| V_L3N_IH_39   | Star Voltage L3-N InterHarmonic #39  | Float [32b-LSW] | R   |         | 42351          |
| V_L3N_IH_40   | Star Voltage L3-N InterHarmonic #40  | Float [32b-LSW] | R   |         | 42353          |
| V_L3N_IH_41   | Star Voltage L3-N InterHarmonic #41  | Float [32b-LSW] | R   |         | 42355          |
| V_L3N_IH_42   | Star Voltage L3-N InterHarmonic #42  | Float [32b-LSW] | R   |         | 42357          |
| V_L3N_IH_43   | Star Voltage L3-N InterHarmonic #43  | Float [32b-LSW] | R   |         | 42359          |
| V_L3N_IH_44   | Star Voltage L3-N InterHarmonic #44  | Float [32b-LSW] | R   |         | 42361          |
| V_L3N_IH_45   | Star Voltage L3-N InterHarmonic #45  | Float [32b-LSW] | R   |         | 42363          |
| V_L3N_IH_46   | Star Voltage L3-N InterHarmonic #46  | Float [32b-LSW] | R   |         | 42365          |
| V_L3N_IH_47   | Star Voltage L3-N InterHarmonic #47  | Float [32b-LSW] | R   |         | 42367          |
| V_L3N_IH_48   | Star Voltage L3-N InterHarmonic #48  | Float [32b-LSW] | R   |         | 42369          |
| V_L3N_IH_49   | Star Voltage L3-N InterHarmonic #49  | Float [32b-LSW] | R   |         | 42371          |
| V_L3N_IH_50   | Star Voltage L3-N InterHarmonic #50  | Float [32b-LSW] | R   |         | 42373          |
| V_L3N_IH_51   | Star Voltage L3-N InterHarmonic #51  | Float [32b-LSW] | R   |         | 42375          |
| V_L3N_IH_52   | Star Voltage L3-N InterHarmonic #52  | Float [32b-LSW] | R   |         | 42377          |
| V_L3N_IH_53   | Star Voltage L3-N InterHarmonic #53  | Float [32b-LSW] | R   |         | 42379          |
| V_L3N_IH_54   | Star Voltage L3-N InterHarmonic #54  | Float [32b-LSW] | R   |         | 42381          |
| V_L3N_IH_55   | Star Voltage L3-N InterHarmonic #55  | Float [32b-LSW] | R   |         | 42383          |
| V_L3N_IH_56   | Star Voltage L3-N InterHarmonic #56  | Float [32b-LSW] | R   |         | 42385          |
| V_L3N_IH_57   | Star Voltage L3-N InterHarmonic #57  | Float [32b-LSW] | R   |         | 42387          |
| V_L3N_IH_58   | Star Voltage L3-N InterHarmonic #58  | Float [32b-LSW] | R   |         | 42389          |
| V_L3N_IH_59   | Star Voltage L3-N InterHarmonic #59  | Float [32b-LSW] | R   |         | 42391          |
| V_L3N_IH_60   | Star Voltage L3-N InterHarmonic #60  | Float [32b-LSW] | R   |         | 42393          |
| V_L3N_IH_61   | Star Voltage L3-N InterHarmonic #61  | Float [32b-LSW] | R   |         | 42395          |
| V_L3N_IH_62   | Star Voltage L3-N InterHarmonic #62  | Float [32b-LSW] | R   |         | 42397          |
| V_L3N_IH_63   | Star Voltage L3-N InterHarmonic #63  | Float [32b-LSW] | R   |         | 42399          |
| V_L12_IH_0    | Line Voltage L1-L2 InterHarmonic #0  | Float [32b-LSW] | R   |         | 42401          |
| V_L12_IH_1    | Line Voltage L1-L2 InterHarmonic #1  | Float [32b-LSW] | R   |         | 42403          |
| V_L12_IH_2    | Line Voltage L1-L2 InterHarmonic #2  | Float [32b-LSW] | R   |         | 42405          |
| V_L12_IH_3    | Line Voltage L1-L2 InterHarmonic #3  | Float [32b-LSW] | R   |         | 42407          |
| V_L12_IH_4    | Line Voltage L1-L2 InterHarmonic #4  | Float [32b-LSW] | R   |         | 42409          |
| V_L12_IH_5    | Line Voltage L1-L2 InterHarmonic #5  | Float [32b-LSW] | R   |         | 42411          |
| V_L12_IH_6    | Line Voltage L1-L2 InterHarmonic #6  | Float [32b-LSW] | R   |         | 42413          |
| V_L12_IH_7    | Line Voltage L1-L2 InterHarmonic #7  | Float [32b-LSW] | R   |         | 42415          |
| V_L12_IH_8    | Line Voltage L1-L2 InterHarmonic #8  | Float [32b-LSW] | R   |         | 42417          |
| V_L12_IH_9    | Line Voltage L1-L2 InterHarmonic #9  | Float [32b-LSW] | R   |         | 42419          |
| V_L12_IH_10   | Line Voltage L1-L2 InterHarmonic #10 | Float [32b-LSW] | R   |         | 42421          |
| V_L12_IH_11   | Line Voltage L1-L2 InterHarmonic #11 | Float [32b-LSW] | R   |         | 42423          |



| Register Name | Description                          | Register Type   | R/W | Default | Address Modbus |
|---------------|--------------------------------------|-----------------|-----|---------|----------------|
| V_L12_IH_12   | Line Voltage L1-L2 InterHarmonic #12 | Float [32b-LSW] | R   |         | 42425          |
| V_L12_IH_13   | Line Voltage L1-L2 InterHarmonic #13 | Float [32b-LSW] | R   |         | 42427          |
| V_L12_IH_14   | Line Voltage L1-L2 InterHarmonic #14 | Float [32b-LSW] | R   |         | 42429          |
| V_L12_IH_15   | Line Voltage L1-L2 InterHarmonic #15 | Float [32b-LSW] | R   |         | 42431          |
| V_L12_IH_16   | Line Voltage L1-L2 InterHarmonic #16 | Float [32b-LSW] | R   |         | 42433          |
| V_L12_IH_17   | Line Voltage L1-L2 InterHarmonic #17 | Float [32b-LSW] | R   |         | 42435          |
| V_L12_IH_18   | Line Voltage L1-L2 InterHarmonic #18 | Float [32b-LSW] | R   |         | 42437          |
| V_L12_IH_19   | Line Voltage L1-L2 InterHarmonic #19 | Float [32b-LSW] | R   |         | 42439          |
| V_L12_IH_20   | Line Voltage L1-L2 InterHarmonic #20 | Float [32b-LSW] | R   |         | 42441          |
| V_L12_IH_21   | Line Voltage L1-L2 InterHarmonic #21 | Float [32b-LSW] | R   |         | 42443          |
| V_L12_IH_22   | Line Voltage L1-L2 InterHarmonic #22 | Float [32b-LSW] | R   |         | 42445          |
| V_L12_IH_23   | Line Voltage L1-L2 InterHarmonic #23 | Float [32b-LSW] | R   |         | 42447          |
| V_L12_IH_24   | Line Voltage L1-L2 InterHarmonic #24 | Float [32b-LSW] | R   |         | 42449          |
| V_L12_IH_25   | Line Voltage L1-L2 InterHarmonic #25 | Float [32b-LSW] | R   |         | 42451          |
| V_L12_IH_26   | Line Voltage L1-L2 InterHarmonic #26 | Float [32b-LSW] | R   |         | 42453          |
| V_L12_IH_27   | Line Voltage L1-L2 InterHarmonic #27 | Float [32b-LSW] | R   |         | 42455          |
| V_L12_IH_28   | Line Voltage L1-L2 InterHarmonic #28 | Float [32b-LSW] | R   |         | 42457          |
| V_L12_IH_29   | Line Voltage L1-L2 InterHarmonic #29 | Float [32b-LSW] | R   |         | 42459          |
| V_L12_IH_30   | Line Voltage L1-L2 InterHarmonic #30 | Float [32b-LSW] | R   |         | 42461          |
| V_L12_IH_31   | Line Voltage L1-L2 InterHarmonic #31 | Float [32b-LSW] | R   |         | 42463          |
| V_L12_IH_32   | Line Voltage L1-L2 InterHarmonic #32 | Float [32b-LSW] | R   |         | 42465          |
| V_L12_IH_33   | Line Voltage L1-L2 InterHarmonic #33 | Float [32b-LSW] | R   |         | 42467          |
| V_L12_IH_34   | Line Voltage L1-L2 InterHarmonic #34 | Float [32b-LSW] | R   |         | 42469          |
| V_L12_IH_35   | Line Voltage L1-L2 InterHarmonic #35 | Float [32b-LSW] | R   |         | 42471          |
| V_L12_IH_36   | Line Voltage L1-L2 InterHarmonic #36 | Float [32b-LSW] | R   |         | 42473          |
| V_L12_IH_37   | Line Voltage L1-L2 InterHarmonic #37 | Float [32b-LSW] | R   |         | 42475          |
| V_L12_IH_38   | Line Voltage L1-L2 InterHarmonic #38 | Float [32b-LSW] | R   |         | 42477          |
| V_L12_IH_39   | Line Voltage L1-L2 InterHarmonic #39 | Float [32b-LSW] | R   |         | 42479          |
| V_L12_IH_40   | Line Voltage L1-L2 InterHarmonic #40 | Float [32b-LSW] | R   |         | 42481          |
| V_L12_IH_41   | Line Voltage L1-L2 InterHarmonic #41 | Float [32b-LSW] | R   |         | 42483          |
| V_L12_IH_42   | Line Voltage L1-L2 InterHarmonic #42 | Float [32b-LSW] | R   |         | 42485          |
| V_L12_IH_43   | Line Voltage L1-L2 InterHarmonic #43 | Float [32b-LSW] | R   |         | 42487          |
| V_L12_IH_44   | Line Voltage L1-L2 InterHarmonic #44 | Float [32b-LSW] | R   |         | 42489          |
| V_L12_IH_45   | Line Voltage L1-L2 InterHarmonic #45 | Float [32b-LSW] | R   |         | 42491          |
| V_L12_IH_46   | Line Voltage L1-L2 InterHarmonic #46 | Float [32b-LSW] | R   |         | 42493          |
| V_L12_IH_47   | Line Voltage L1-L2 InterHarmonic #47 | Float [32b-LSW] | R   |         | 42495          |
| V_L12_IH_48   | Line Voltage L1-L2 InterHarmonic #48 | Float [32b-LSW] | R   |         | 42497          |
| V_L12_IH_49   | Line Voltage L1-L2 InterHarmonic #49 | Float [32b-LSW] | R   |         | 42499          |
| V_L12_IH_50   | Line Voltage L1-L2 InterHarmonic #50 | Float [32b-LSW] | R   |         | 42501          |
| V_L12_IH_51   | Line Voltage L1-L2 InterHarmonic #51 | Float [32b-LSW] | R   |         | 42503          |
| V_L12_IH_52   | Line Voltage L1-L2 InterHarmonic #52 | Float [32b-LSW] | R   |         | 42505          |
| V_L12_IH_53   | Line Voltage L1-L2 InterHarmonic #53 | Float [32b-LSW] | R   |         | 42507          |
| V_L12_IH_54   | Line Voltage L1-L2 InterHarmonic #54 | Float [32b-LSW] | R   |         | 42509          |
| V_L12_IH_55   | Line Voltage L1-L2 InterHarmonic #55 | Float [32b-LSW] | R   |         | 42511          |
| V_L12_IH_56   | Line Voltage L1-L2 InterHarmonic #56 | Float [32b-LSW] | R   |         | 42513          |
| V_L12_IH_57   | Line Voltage L1-L2 InterHarmonic #57 | Float [32b-LSW] | R   |         | 42515          |
| V_L12_IH_58   | Line Voltage L1-L2 InterHarmonic #58 | Float [32b-LSW] | R   |         | 42517          |
| V_L12_IH_59   | Line Voltage L1-L2 InterHarmonic #59 | Float [32b-LSW] | R   |         | 42519          |
| V_L12_IH_60   | Line Voltage L1-L2 InterHarmonic #60 | Float [32b-LSW] | R   |         | 42521          |
| V_L12_IH_61   | Line Voltage L1-L2 InterHarmonic #61 | Float [32b-LSW] | R   |         | 42523          |
| V_L12_IH_62   | Line Voltage L1-L2 InterHarmonic #62 | Float [32b-LSW] | R   |         | 42525          |
| V_L12_IH_63   | Line Voltage L1-L2 InterHarmonic #63 | Float [32b-LSW] | R   |         | 42527          |
| V_L23_IH_0    | Line Voltage L2-L3 InterHarmonic #0  | Float [32b-LSW] | R   |         | 42529          |
| V_L23_IH_1    | Line Voltage L2-L3 InterHarmonic #1  | Float [32b-LSW] | R   |         | 42531          |
| V_L23_IH_2    | Line Voltage L2-L3 InterHarmonic #2  | Float [32b-LSW] | R   |         | 42533          |
| V_L23_IH_3    | Line Voltage L2-L3 InterHarmonic #3  | Float [32b-LSW] | R   |         | 42535          |
| V_L23_IH_4    | Line Voltage L2-L3 InterHarmonic #4  | Float [32b-LSW] | R   |         | 42537          |
| V_L23_IH_5    | Line Voltage L2-L3 InterHarmonic #5  | Float [32b-LSW] | R   |         | 42539          |
| V_L23_IH_6    | Line Voltage L2-L3 InterHarmonic #6  | Float [32b-LSW] | R   |         | 42541          |
| V_L23_IH_7    | Line Voltage L2-L3 InterHarmonic #7  | Float [32b-LSW] | R   |         | 42543          |
| V_L23_IH_8    | Line Voltage L2-L3 InterHarmonic #8  | Float [32b-LSW] | R   |         | 42545          |
| V_L23_IH_9    | Line Voltage L2-L3 InterHarmonic #9  | Float [32b-LSW] | R   |         | 42547          |
| V_L23_IH_10   | Line Voltage L2-L3 InterHarmonic #10 | Float [32b-LSW] | R   |         | 42549          |



| Register Name | Description                          | Register Type   | R/W | Default | Address Modbus |
|---------------|--------------------------------------|-----------------|-----|---------|----------------|
| V_L23_IH_11   | Line Voltage L2-L3 InterHarmonic #11 | Float [32b-LSW] | R   |         | 42551          |
| V_L23_IH_12   | Line Voltage L2-L3 InterHarmonic #12 | Float [32b-LSW] | R   |         | 42553          |
| V_L23_IH_13   | Line Voltage L2-L3 InterHarmonic #13 | Float [32b-LSW] | R   |         | 42555          |
| V_L23_IH_14   | Line Voltage L2-L3 InterHarmonic #14 | Float [32b-LSW] | R   |         | 42557          |
| V_L23_IH_15   | Line Voltage L2-L3 InterHarmonic #15 | Float [32b-LSW] | R   |         | 42559          |
| V_L23_IH_16   | Line Voltage L2-L3 InterHarmonic #16 | Float [32b-LSW] | R   |         | 42561          |
| V_L23_IH_17   | Line Voltage L2-L3 InterHarmonic #17 | Float [32b-LSW] | R   |         | 42563          |
| V_L23_IH_18   | Line Voltage L2-L3 InterHarmonic #18 | Float [32b-LSW] | R   |         | 42565          |
| V_L23_IH_19   | Line Voltage L2-L3 InterHarmonic #19 | Float [32b-LSW] | R   |         | 42567          |
| V_L23_IH_20   | Line Voltage L2-L3 InterHarmonic #20 | Float [32b-LSW] | R   |         | 42569          |
| V_L23_IH_21   | Line Voltage L2-L3 InterHarmonic #21 | Float [32b-LSW] | R   |         | 42571          |
| V_L23_IH_22   | Line Voltage L2-L3 InterHarmonic #22 | Float [32b-LSW] | R   |         | 42573          |
| V_L23_IH_23   | Line Voltage L2-L3 InterHarmonic #23 | Float [32b-LSW] | R   |         | 42575          |
| V_L23_IH_24   | Line Voltage L2-L3 InterHarmonic #24 | Float [32b-LSW] | R   |         | 42577          |
| V_L23_IH_25   | Line Voltage L2-L3 InterHarmonic #25 | Float [32b-LSW] | R   |         | 42579          |
| V_L23_IH_26   | Line Voltage L2-L3 InterHarmonic #26 | Float [32b-LSW] | R   |         | 42581          |
| V_L23_IH_27   | Line Voltage L2-L3 InterHarmonic #27 | Float [32b-LSW] | R   |         | 42583          |
| V_L23_IH_28   | Line Voltage L2-L3 InterHarmonic #28 | Float [32b-LSW] | R   |         | 42585          |
| V_L23_IH_29   | Line Voltage L2-L3 InterHarmonic #29 | Float [32b-LSW] | R   |         | 42587          |
| V_L23_IH_30   | Line Voltage L2-L3 InterHarmonic #30 | Float [32b-LSW] | R   |         | 42589          |
| V_L23_IH_31   | Line Voltage L2-L3 InterHarmonic #31 | Float [32b-LSW] | R   |         | 42591          |
| V_L23_IH_32   | Line Voltage L2-L3 InterHarmonic #32 | Float [32b-LSW] | R   |         | 42593          |
| V_L23_IH_33   | Line Voltage L2-L3 InterHarmonic #33 | Float [32b-LSW] | R   |         | 42595          |
| V_L23_IH_34   | Line Voltage L2-L3 InterHarmonic #34 | Float [32b-LSW] | R   |         | 42597          |
| V_L23_IH_35   | Line Voltage L2-L3 InterHarmonic #35 | Float [32b-LSW] | R   |         | 42599          |
| V_L23_IH_36   | Line Voltage L2-L3 InterHarmonic #36 | Float [32b-LSW] | R   |         | 42601          |
| V_L23_IH_37   | Line Voltage L2-L3 InterHarmonic #37 | Float [32b-LSW] | R   |         | 42603          |
| V_L23_IH_38   | Line Voltage L2-L3 InterHarmonic #38 | Float [32b-LSW] | R   |         | 42605          |
| V_L23_IH_39   | Line Voltage L2-L3 InterHarmonic #39 | Float [32b-LSW] | R   |         | 42607          |
| V_L23_IH_40   | Line Voltage L2-L3 InterHarmonic #40 | Float [32b-LSW] | R   |         | 42609          |
| V_L23_IH_41   | Line Voltage L2-L3 InterHarmonic #41 | Float [32b-LSW] | R   |         | 42611          |
| V_L23_IH_42   | Line Voltage L2-L3 InterHarmonic #42 | Float [32b-LSW] | R   |         | 42613          |
| V_L23_IH_43   | Line Voltage L2-L3 InterHarmonic #43 | Float [32b-LSW] | R   |         | 42615          |
| V_L23_IH_44   | Line Voltage L2-L3 InterHarmonic #44 | Float [32b-LSW] | R   |         | 42617          |
| V_L23_IH_45   | Line Voltage L2-L3 InterHarmonic #45 | Float [32b-LSW] | R   |         | 42619          |
| V_L23_IH_46   | Line Voltage L2-L3 InterHarmonic #46 | Float [32b-LSW] | R   |         | 42621          |
| V_L23_IH_47   | Line Voltage L2-L3 InterHarmonic #47 | Float [32b-LSW] | R   |         | 42623          |
| V_L23_IH_48   | Line Voltage L2-L3 InterHarmonic #48 | Float [32b-LSW] | R   |         | 42625          |
| V_L23_IH_49   | Line Voltage L2-L3 InterHarmonic #49 | Float [32b-LSW] | R   |         | 42627          |
| V_L23_IH_50   | Line Voltage L2-L3 InterHarmonic #50 | Float [32b-LSW] | R   |         | 42629          |
| V_L23_IH_51   | Line Voltage L2-L3 InterHarmonic #51 | Float [32b-LSW] | R   |         | 42631          |
| V_L23_IH_52   | Line Voltage L2-L3 InterHarmonic #52 | Float [32b-LSW] | R   |         | 42633          |
| V_L23_IH_53   | Line Voltage L2-L3 InterHarmonic #53 | Float [32b-LSW] | R   |         | 42635          |
| V_L23_IH_54   | Line Voltage L2-L3 InterHarmonic #54 | Float [32b-LSW] | R   |         | 42637          |
| V_L23_IH_55   | Line Voltage L2-L3 InterHarmonic #55 | Float [32b-LSW] | R   |         | 42639          |
| V_L23_IH_56   | Line Voltage L2-L3 InterHarmonic #56 | Float [32b-LSW] | R   |         | 42641          |
| V_L23_IH_57   | Line Voltage L2-L3 InterHarmonic #57 | Float [32b-LSW] | R   |         | 42643          |
| V_L23_IH_58   | Line Voltage L2-L3 InterHarmonic #58 | Float [32b-LSW] | R   |         | 42645          |
| V_L23_IH_59   | Line Voltage L2-L3 InterHarmonic #59 | Float [32b-LSW] | R   |         | 42647          |
| V_L23_IH_60   | Line Voltage L2-L3 InterHarmonic #60 | Float [32b-LSW] | R   |         | 42649          |
| V_L23_IH_61   | Line Voltage L2-L3 InterHarmonic #61 | Float [32b-LSW] | R   |         | 42651          |
| V_L23_IH_62   | Line Voltage L2-L3 InterHarmonic #62 | Float [32b-LSW] | R   |         | 42653          |
| V_L23_IH_63   | Line Voltage L2-L3 InterHarmonic #63 | Float [32b-LSW] | R   |         | 42655          |
| V_L31_IH_0    | Line Voltage L3-L1 InterHarmonic #0  | Float [32b-LSW] | R   |         | 42657          |
| V_L31_IH_1    | Line Voltage L3-L1 InterHarmonic #1  | Float [32b-LSW] | R   |         | 42659          |
| V_L31_IH_2    | Line Voltage L3-L1 InterHarmonic #2  | Float [32b-LSW] | R   |         | 42661          |
| V_L31_IH_3    | Line Voltage L3-L1 InterHarmonic #3  | Float [32b-LSW] | R   |         | 42663          |
| V_L31_IH_4    | Line Voltage L3-L1 InterHarmonic #4  | Float [32b-LSW] | R   |         | 42665          |
| V_L31_IH_5    | Line Voltage L3-L1 InterHarmonic #5  | Float [32b-LSW] | R   |         | 42667          |
| V_L31_IH_6    | Line Voltage L3-L1 InterHarmonic #6  | Float [32b-LSW] | R   |         | 42669          |
| V_L31_IH_7    | Line Voltage L3-L1 InterHarmonic #7  | Float [32b-LSW] | R   |         | 42671          |
| V_L31_IH_8    | Line Voltage L3-L1 InterHarmonic #8  | Float [32b-LSW] | R   |         | 42673          |
| V_L31_IH_9    | Line Voltage L3-L1 InterHarmonic #9  | Float [32b-LSW] | R   |         | 42675          |





| Register Name | Description                          | Register Type   | R/W | Default | Address Modbus |
|---------------|--------------------------------------|-----------------|-----|---------|----------------|
| V_L31_IH_10   | Line Voltage L3-L1 InterHarmonic #10 | Float [32b-LSW] | R   |         | 42677          |
| V_L31_IH_11   | Line Voltage L3-L1 InterHarmonic #11 | Float [32b-LSW] | R   |         | 42679          |
| V_L31_IH_12   | Line Voltage L3-L1 InterHarmonic #12 | Float [32b-LSW] | R   |         | 42681          |
| V_L31_IH_13   | Line Voltage L3-L1 InterHarmonic #13 | Float [32b-LSW] | R   |         | 42683          |
| V_L31_IH_14   | Line Voltage L3-L1 InterHarmonic #14 | Float [32b-LSW] | R   |         | 42685          |
| V_L31_IH_15   | Line Voltage L3-L1 InterHarmonic #15 | Float [32b-LSW] | R   |         | 42687          |
| V_L31_IH_16   | Line Voltage L3-L1 InterHarmonic #16 | Float [32b-LSW] | R   |         | 42689          |
| V_L31_IH_17   | Line Voltage L3-L1 InterHarmonic #17 | Float [32b-LSW] | R   |         | 42691          |
| V_L31_IH_18   | Line Voltage L3-L1 InterHarmonic #18 | Float [32b-LSW] | R   |         | 42693          |
| V_L31_IH_19   | Line Voltage L3-L1 InterHarmonic #19 | Float [32b-LSW] | R   |         | 42695          |
| V_L31_IH_20   | Line Voltage L3-L1 InterHarmonic #20 | Float [32b-LSW] | R   |         | 42697          |
| V_L31_IH_21   | Line Voltage L3-L1 InterHarmonic #21 | Float [32b-LSW] | R   |         | 42699          |
| V_L31_IH_22   | Line Voltage L3-L1 InterHarmonic #22 | Float [32b-LSW] | R   |         | 42701          |
| V_L31_IH_23   | Line Voltage L3-L1 InterHarmonic #23 | Float [32b-LSW] | R   |         | 42703          |
| V_L31_IH_24   | Line Voltage L3-L1 InterHarmonic #24 | Float [32b-LSW] | R   |         | 42705          |
| V_L31_IH_25   | Line Voltage L3-L1 InterHarmonic #25 | Float [32b-LSW] | R   |         | 42707          |
| V_L31_IH_26   | Line Voltage L3-L1 InterHarmonic #26 | Float [32b-LSW] | R   |         | 42709          |
| V_L31_IH_27   | Line Voltage L3-L1 InterHarmonic #27 | Float [32b-LSW] | R   |         | 42711          |
| V_L31_IH_28   | Line Voltage L3-L1 InterHarmonic #28 | Float [32b-LSW] | R   |         | 42713          |
| V_L31_IH_29   | Line Voltage L3-L1 InterHarmonic #29 | Float [32b-LSW] | R   |         | 42715          |
| V_L31_IH_30   | Line Voltage L3-L1 InterHarmonic #30 | Float [32b-LSW] | R   |         | 42717          |
| V_L31_IH_31   | Line Voltage L3-L1 InterHarmonic #31 | Float [32b-LSW] | R   |         | 42719          |
| V_L31_IH_32   | Line Voltage L3-L1 InterHarmonic #32 | Float [32b-LSW] | R   |         | 42721          |
| V_L31_IH_33   | Line Voltage L3-L1 InterHarmonic #33 | Float [32b-LSW] | R   |         | 42723          |
| V_L31_IH_34   | Line Voltage L3-L1 InterHarmonic #34 | Float [32b-LSW] | R   |         | 42725          |
| V_L31_IH_35   | Line Voltage L3-L1 InterHarmonic #35 | Float [32b-LSW] | R   |         | 42727          |
| V_L31_IH_36   | Line Voltage L3-L1 InterHarmonic #36 | Float [32b-LSW] | R   |         | 42729          |
| V_L31_IH_37   | Line Voltage L3-L1 InterHarmonic #37 | Float [32b-LSW] | R   |         | 42731          |
| V_L31_IH_38   | Line Voltage L3-L1 InterHarmonic #38 | Float [32b-LSW] | R   |         | 42733          |
| V_L31_IH_39   | Line Voltage L3-L1 InterHarmonic #39 | Float [32b-LSW] | R   |         | 42735          |
| V_L31_IH_40   | Line Voltage L3-L1 InterHarmonic #40 | Float [32b-LSW] | R   |         | 42737          |
| V_L31_IH_41   | Line Voltage L3-L1 InterHarmonic #41 | Float [32b-LSW] | R   |         | 42739          |
| V_L31_IH_42   | Line Voltage L3-L1 InterHarmonic #42 | Float [32b-LSW] | R   |         | 42741          |
| V_L31_IH_43   | Line Voltage L3-L1 InterHarmonic #43 | Float [32b-LSW] | R   |         | 42743          |
| V_L31_IH_44   | Line Voltage L3-L1 InterHarmonic #44 | Float [32b-LSW] | R   |         | 42745          |
| V_L31_IH_45   | Line Voltage L3-L1 InterHarmonic #45 | Float [32b-LSW] | R   |         | 42747          |
| V_L31_IH_46   | Line Voltage L3-L1 InterHarmonic #46 | Float [32b-LSW] | R   |         | 42749          |
| V_L31_IH_47   | Line Voltage L3-L1 InterHarmonic #47 | Float [32b-LSW] | R   |         | 42751          |
| V_L31_IH_48   | Line Voltage L3-L1 InterHarmonic #48 | Float [32b-LSW] | R   |         | 42753          |
| V_L31_IH_49   | Line Voltage L3-L1 InterHarmonic #49 | Float [32b-LSW] | R   |         | 42755          |
| V_L31_IH_50   | Line Voltage L3-L1 InterHarmonic #50 | Float [32b-LSW] | R   |         | 42757          |
| V_L31_IH_51   | Line Voltage L3-L1 InterHarmonic #51 | Float [32b-LSW] | R   |         | 42759          |
| V_L31_IH_52   | Line Voltage L3-L1 InterHarmonic #52 | Float [32b-LSW] | R   |         | 42761          |
| V_L31_IH_53   | Line Voltage L3-L1 InterHarmonic #53 | Float [32b-LSW] | R   |         | 42763          |
| V_L31_IH_54   | Line Voltage L3-L1 InterHarmonic #54 | Float [32b-LSW] | R   |         | 42765          |
| V_L31_IH_55   | Line Voltage L3-L1 InterHarmonic #55 | Float [32b-LSW] | R   |         | 42767          |
| V_L31_IH_56   | Line Voltage L3-L1 InterHarmonic #56 | Float [32b-LSW] | R   |         | 42769          |
| V_L31_IH_57   | Line Voltage L3-L1 InterHarmonic #57 | Float [32b-LSW] | R   |         | 42771          |
| V_L31_IH_58   | Line Voltage L3-L1 InterHarmonic #58 | Float [32b-LSW] | R   |         | 42773          |
| V_L31_IH_59   | Line Voltage L3-L1 InterHarmonic #59 | Float [32b-LSW] | R   |         | 42775          |
| V_L31_IH_60   | Line Voltage L3-L1 InterHarmonic #60 | Float [32b-LSW] | R   |         | 42777          |
| V_L31_IH_61   | Line Voltage L3-L1 InterHarmonic #61 | Float [32b-LSW] | R   |         | 42779          |
| V_L31_IH_62   | Line Voltage L3-L1 InterHarmonic #62 | Float [32b-LSW] | R   |         | 42781          |
| V_L31_IH_63   | Line Voltage L3-L1 InterHarmonic #63 | Float [32b-LSW] | R   |         | 42783          |
| I_L1_IH_0     | Line Current L1 InterHarmonic #0     | Float [32b-LSW] | R   |         | 42785          |
| I_L1_IH_1     | Line Current L1 InterHarmonic #1     | Float [32b-LSW] | R   |         | 42787          |
| I_L1_IH_2     | Line Current L1 InterHarmonic #2     | Float [32b-LSW] | R   |         | 42789          |
| I_L1_IH_3     | Line Current L1 InterHarmonic #3     | Float [32b-LSW] | R   |         | 42791          |
| I_L1_IH_4     | Line Current L1 InterHarmonic #4     | Float [32b-LSW] | R   |         | 42793          |
| I_L1_IH_5     | Line Current L1 InterHarmonic #5     | Float [32b-LSW] | R   |         | 42795          |
| I_L1_IH_6     | Line Current L1 InterHarmonic #6     | Float [32b-LSW] | R   |         | 42797          |
| I_L1_IH_7     | Line Current L1 InterHarmonic #7     | Float [32b-LSW] | R   |         | 42799          |
| I_L1_IH_8     | Line Current L1 InterHarmonic #8     | Float [32b-LSW] | R   |         | 42801          |



| Register Name | Description                       | Register Type   | R/W | Default | Address Modbus |
|---------------|-----------------------------------|-----------------|-----|---------|----------------|
| I_L1_IH_9     | Line Current L1 InterHarmonic #9  | Float [32b-LSW] | R   |         | 42803          |
| I_L1_IH_10    | Line Current L1 InterHarmonic #10 | Float [32b-LSW] | R   |         | 42805          |
| I_L1_IH_11    | Line Current L1 InterHarmonic #11 | Float [32b-LSW] | R   |         | 42807          |
| I_L1_IH_12    | Line Current L1 InterHarmonic #12 | Float [32b-LSW] | R   |         | 42809          |
| I_L1_IH_13    | Line Current L1 InterHarmonic #13 | Float [32b-LSW] | R   |         | 42811          |
| I_L1_IH_14    | Line Current L1 InterHarmonic #14 | Float [32b-LSW] | R   |         | 42813          |
| I_L1_IH_15    | Line Current L1 InterHarmonic #15 | Float [32b-LSW] | R   |         | 42815          |
| I_L1_IH_16    | Line Current L1 InterHarmonic #16 | Float [32b-LSW] | R   |         | 42817          |
| I_L1_IH_17    | Line Current L1 InterHarmonic #17 | Float [32b-LSW] | R   |         | 42819          |
| I_L1_IH_18    | Line Current L1 InterHarmonic #18 | Float [32b-LSW] | R   |         | 42821          |
| I_L1_IH_19    | Line Current L1 InterHarmonic #19 | Float [32b-LSW] | R   |         | 42823          |
| I_L1_IH_20    | Line Current L1 InterHarmonic #20 | Float [32b-LSW] | R   |         | 42825          |
| I_L1_IH_21    | Line Current L1 InterHarmonic #21 | Float [32b-LSW] | R   |         | 42827          |
| I_L1_IH_22    | Line Current L1 InterHarmonic #22 | Float [32b-LSW] | R   |         | 42829          |
| I_L1_IH_23    | Line Current L1 InterHarmonic #23 | Float [32b-LSW] | R   |         | 42831          |
| I_L1_IH_24    | Line Current L1 InterHarmonic #24 | Float [32b-LSW] | R   |         | 42833          |
| I_L1_IH_25    | Line Current L1 InterHarmonic #25 | Float [32b-LSW] | R   |         | 42835          |
| I_L1_IH_26    | Line Current L1 InterHarmonic #26 | Float [32b-LSW] | R   |         | 42837          |
| I_L1_IH_27    | Line Current L1 InterHarmonic #27 | Float [32b-LSW] | R   |         | 42839          |
| I_L1_IH_28    | Line Current L1 InterHarmonic #28 | Float [32b-LSW] | R   |         | 42841          |
| I_L1_IH_29    | Line Current L1 InterHarmonic #29 | Float [32b-LSW] | R   |         | 42843          |
| I_L1_IH_30    | Line Current L1 InterHarmonic #30 | Float [32b-LSW] | R   |         | 42845          |
| I_L1_IH_31    | Line Current L1 InterHarmonic #31 | Float [32b-LSW] | R   |         | 42847          |
| I_L1_IH_32    | Line Current L1 InterHarmonic #32 | Float [32b-LSW] | R   |         | 42849          |
| I_L1_IH_33    | Line Current L1 InterHarmonic #33 | Float [32b-LSW] | R   |         | 42851          |
| I_L1_IH_34    | Line Current L1 InterHarmonic #34 | Float [32b-LSW] | R   |         | 42853          |
| I_L1_IH_35    | Line Current L1 InterHarmonic #35 | Float [32b-LSW] | R   |         | 42855          |
| I_L1_IH_36    | Line Current L1 InterHarmonic #36 | Float [32b-LSW] | R   |         | 42857          |
| I_L1_IH_37    | Line Current L1 InterHarmonic #37 | Float [32b-LSW] | R   |         | 42859          |
| I_L1_IH_38    | Line Current L1 InterHarmonic #38 | Float [32b-LSW] | R   |         | 42861          |
| I_L1_IH_39    | Line Current L1 InterHarmonic #39 | Float [32b-LSW] | R   |         | 42863          |
| I_L1_IH_40    | Line Current L1 InterHarmonic #40 | Float [32b-LSW] | R   |         | 42865          |
| I_L1_IH_41    | Line Current L1 InterHarmonic #41 | Float [32b-LSW] | R   |         | 42867          |
| I_L1_IH_42    | Line Current L1 InterHarmonic #42 | Float [32b-LSW] | R   |         | 42869          |
| I_L1_IH_43    | Line Current L1 InterHarmonic #43 | Float [32b-LSW] | R   |         | 42871          |
| I_L1_IH_44    | Line Current L1 InterHarmonic #44 | Float [32b-LSW] | R   |         | 42873          |
| I_L1_IH_45    | Line Current L1 InterHarmonic #45 | Float [32b-LSW] | R   |         | 42875          |
| I_L1_IH_46    | Line Current L1 InterHarmonic #46 | Float [32b-LSW] | R   |         | 42877          |
| I_L1_IH_47    | Line Current L1 InterHarmonic #47 | Float [32b-LSW] | R   |         | 42879          |
| I_L1_IH_48    | Line Current L1 InterHarmonic #48 | Float [32b-LSW] | R   |         | 42881          |
| I_L1_IH_49    | Line Current L1 InterHarmonic #49 | Float [32b-LSW] | R   |         | 42883          |
| I_L1_IH_50    | Line Current L1 InterHarmonic #50 | Float [32b-LSW] | R   |         | 42885          |
| I_L1_IH_51    | Line Current L1 InterHarmonic #51 | Float [32b-LSW] | R   |         | 42887          |
| I_L1_IH_52    | Line Current L1 InterHarmonic #52 | Float [32b-LSW] | R   |         | 42889          |
| I_L1_IH_53    | Line Current L1 InterHarmonic #53 | Float [32b-LSW] | R   |         | 42891          |
| I_L1_IH_54    | Line Current L1 InterHarmonic #54 | Float [32b-LSW] | R   |         | 42893          |
| I_L1_IH_55    | Line Current L1 InterHarmonic #55 | Float [32b-LSW] | R   |         | 42895          |
| I_L1_IH_56    | Line Current L1 InterHarmonic #56 | Float [32b-LSW] | R   |         | 42897          |
| I_L1_IH_57    | Line Current L1 InterHarmonic #57 | Float [32b-LSW] | R   |         | 42899          |
| I_L1_IH_58    | Line Current L1 InterHarmonic #58 | Float [32b-LSW] | R   |         | 42901          |
| I_L1_IH_59    | Line Current L1 InterHarmonic #59 | Float [32b-LSW] | R   |         | 42903          |
| I_L1_IH_60    | Line Current L1 InterHarmonic #60 | Float [32b-LSW] | R   |         | 42905          |
| I_L1_IH_61    | Line Current L1 InterHarmonic #61 | Float [32b-LSW] | R   |         | 42907          |
| I_L1_IH_62    | Line Current L1 InterHarmonic #62 | Float [32b-LSW] | R   |         | 42909          |
| I_L1_IH_63    | Line Current L1 InterHarmonic #63 | Float [32b-LSW] | R   |         | 42911          |
| I_L2_IH_0     | Line Current L2 InterHarmonic #0  | Float [32b-LSW] | R   |         | 42913          |
| I_L2_IH_1     | Line Current L2 InterHarmonic #1  | Float [32b-LSW] | R   |         | 42915          |
| I_L2_IH_2     | Line Current L2 InterHarmonic #2  | Float [32b-LSW] | R   |         | 42917          |
| I_L2_IH_3     | Line Current L2 InterHarmonic #3  | Float [32b-LSW] | R   |         | 42919          |
| I_L2_IH_4     | Line Current L2 InterHarmonic #4  | Float [32b-LSW] | R   |         | 42921          |
| I_L2_IH_5     | Line Current L2 InterHarmonic #5  | Float [32b-LSW] | R   |         | 42923          |
| I_L2_IH_6     | Line Current L2 InterHarmonic #6  | Float [32b-LSW] | R   |         | 42925          |
| I_L2_IH_7     | Line Current L2 InterHarmonic #7  | Float [32b-LSW] | R   |         | 42927          |



| Register Name | Description                       | Register Type   | R/W | Default | Address Modbus |
|---------------|-----------------------------------|-----------------|-----|---------|----------------|
| I_L2_IH_8     | Line Current L2 InterHarmonic #8  | Float [32b-LSW] | R   |         | 42929          |
| I_L2_IH_9     | Line Current L2 InterHarmonic #9  | Float [32b-LSW] | R   |         | 42931          |
| I_L2_IH_10    | Line Current L2 InterHarmonic #10 | Float [32b-LSW] | R   |         | 42933          |
| I_L2_IH_11    | Line Current L2 InterHarmonic #11 | Float [32b-LSW] | R   |         | 42935          |
| I_L2_IH_12    | Line Current L2 InterHarmonic #12 | Float [32b-LSW] | R   |         | 42937          |
| I_L2_IH_13    | Line Current L2 InterHarmonic #13 | Float [32b-LSW] | R   |         | 42939          |
| I_L2_IH_14    | Line Current L2 InterHarmonic #14 | Float [32b-LSW] | R   |         | 42941          |
| I_L2_IH_15    | Line Current L2 InterHarmonic #15 | Float [32b-LSW] | R   |         | 42943          |
| I_L2_IH_16    | Line Current L2 InterHarmonic #16 | Float [32b-LSW] | R   |         | 42945          |
| I_L2_IH_17    | Line Current L2 InterHarmonic #17 | Float [32b-LSW] | R   |         | 42947          |
| I_L2_IH_18    | Line Current L2 InterHarmonic #18 | Float [32b-LSW] | R   |         | 42949          |
| I_L2_IH_19    | Line Current L2 InterHarmonic #19 | Float [32b-LSW] | R   |         | 42951          |
| I_L2_IH_20    | Line Current L2 InterHarmonic #20 | Float [32b-LSW] | R   |         | 42953          |
| I_L2_IH_21    | Line Current L2 InterHarmonic #21 | Float [32b-LSW] | R   |         | 42955          |
| I_L2_IH_22    | Line Current L2 InterHarmonic #22 | Float [32b-LSW] | R   |         | 42957          |
| I_L2_IH_23    | Line Current L2 InterHarmonic #23 | Float [32b-LSW] | R   |         | 42959          |
| I_L2_IH_24    | Line Current L2 InterHarmonic #24 | Float [32b-LSW] | R   |         | 42961          |
| I_L2_IH_25    | Line Current L2 InterHarmonic #25 | Float [32b-LSW] | R   |         | 42963          |
| I_L2_IH_26    | Line Current L2 InterHarmonic #26 | Float [32b-LSW] | R   |         | 42965          |
| I_L2_IH_27    | Line Current L2 InterHarmonic #27 | Float [32b-LSW] | R   |         | 42967          |
| I_L2_IH_28    | Line Current L2 InterHarmonic #28 | Float [32b-LSW] | R   |         | 42969          |
| I_L2_IH_29    | Line Current L2 InterHarmonic #29 | Float [32b-LSW] | R   |         | 42971          |
| I_L2_IH_30    | Line Current L2 InterHarmonic #30 | Float [32b-LSW] | R   |         | 42973          |
| I_L2_IH_31    | Line Current L2 InterHarmonic #31 | Float [32b-LSW] | R   |         | 42975          |
| I_L2_IH_32    | Line Current L2 InterHarmonic #32 | Float [32b-LSW] | R   |         | 42977          |
| I_L2_IH_33    | Line Current L2 InterHarmonic #33 | Float [32b-LSW] | R   |         | 42979          |
| I_L2_IH_34    | Line Current L2 InterHarmonic #34 | Float [32b-LSW] | R   |         | 42981          |
| I_L2_IH_35    | Line Current L2 InterHarmonic #35 | Float [32b-LSW] | R   |         | 42983          |
| I_L2_IH_36    | Line Current L2 InterHarmonic #36 | Float [32b-LSW] | R   |         | 42985          |
| I_L2_IH_37    | Line Current L2 InterHarmonic #37 | Float [32b-LSW] | R   |         | 42987          |
| I_L2_IH_38    | Line Current L2 InterHarmonic #38 | Float [32b-LSW] | R   |         | 42989          |
| I_L2_IH_39    | Line Current L2 InterHarmonic #39 | Float [32b-LSW] | R   |         | 42991          |
| I_L2_IH_40    | Line Current L2 InterHarmonic #40 | Float [32b-LSW] | R   |         | 42993          |
| I_L2_IH_41    | Line Current L2 InterHarmonic #41 | Float [32b-LSW] | R   |         | 42995          |
| I_L2_IH_42    | Line Current L2 InterHarmonic #42 | Float [32b-LSW] | R   |         | 42997          |
| I_L2_IH_43    | Line Current L2 InterHarmonic #43 | Float [32b-LSW] | R   |         | 42999          |
| I_L2_IH_44    | Line Current L2 InterHarmonic #44 | Float [32b-LSW] | R   |         | 43001          |
| I_L2_IH_45    | Line Current L2 InterHarmonic #45 | Float [32b-LSW] | R   |         | 43003          |
| I_L2_IH_46    | Line Current L2 InterHarmonic #46 | Float [32b-LSW] | R   |         | 43005          |
| I_L2_IH_47    | Line Current L2 InterHarmonic #47 | Float [32b-LSW] | R   |         | 43007          |
| I_L2_IH_48    | Line Current L2 InterHarmonic #48 | Float [32b-LSW] | R   |         | 43009          |
| I_L2_IH_49    | Line Current L2 InterHarmonic #49 | Float [32b-LSW] | R   |         | 43011          |
| I_L2_IH_50    | Line Current L2 InterHarmonic #50 | Float [32b-LSW] | R   |         | 43013          |
| I_L2_IH_51    | Line Current L2 InterHarmonic #51 | Float [32b-LSW] | R   |         | 43015          |
| I_L2_IH_52    | Line Current L2 InterHarmonic #52 | Float [32b-LSW] | R   |         | 43017          |
| I_L2_IH_53    | Line Current L2 InterHarmonic #53 | Float [32b-LSW] | R   |         | 43019          |
| I_L2_IH_54    | Line Current L2 InterHarmonic #54 | Float [32b-LSW] | R   |         | 43021          |
| I_L2_IH_55    | Line Current L2 InterHarmonic #55 | Float [32b-LSW] | R   |         | 43023          |
| I_L2_IH_56    | Line Current L2 InterHarmonic #56 | Float [32b-LSW] | R   |         | 43025          |
| I_L2_IH_57    | Line Current L2 InterHarmonic #57 | Float [32b-LSW] | R   |         | 43027          |
| I_L2_IH_58    | Line Current L2 InterHarmonic #58 | Float [32b-LSW] | R   |         | 43029          |
| I_L2_IH_59    | Line Current L2 InterHarmonic #59 | Float [32b-LSW] | R   |         | 43031          |
| I_L2_IH_60    | Line Current L2 InterHarmonic #60 | Float [32b-LSW] | R   |         | 43033          |
| I_L2_IH_61    | Line Current L2 InterHarmonic #61 | Float [32b-LSW] | R   |         | 43035          |
| I_L2_IH_62    | Line Current L2 InterHarmonic #62 | Float [32b-LSW] | R   |         | 43037          |
| I_L2_IH_63    | Line Current L2 InterHarmonic #63 | Float [32b-LSW] | R   |         | 43039          |
| I_L3_IH_0     | Line Current L3 InterHarmonic #0  | Float [32b-LSW] | R   |         | 43041          |
| I_L3_IH_1     | Line Current L3 InterHarmonic #1  | Float [32b-LSW] | R   |         | 43043          |
| I_L3_IH_2     | Line Current L3 InterHarmonic #2  | Float [32b-LSW] | R   |         | 43045          |
| I_L3_IH_3     | Line Current L3 InterHarmonic #3  | Float [32b-LSW] | R   |         | 43047          |
| I_L3_IH_4     | Line Current L3 InterHarmonic #4  | Float [32b-LSW] | R   |         | 43049          |
| I_L3_IH_5     | Line Current L3 InterHarmonic #5  | Float [32b-LSW] | R   |         | 43051          |
| I_L3_IH_6     | Line Current L3 InterHarmonic #6  | Float [32b-LSW] | R   |         | 43053          |





| Register Name | Description                       | Register Type   | R/W | Default | Address Modbus |
|---------------|-----------------------------------|-----------------|-----|---------|----------------|
| I_L3_IH_7     | Line Current L3 InterHarmonic #7  | Float [32b-LSW] | R   |         | 43055          |
| I_L3_IH_8     | Line Current L3 InterHarmonic #8  | Float [32b-LSW] | R   |         | 43057          |
| I_L3_IH_9     | Line Current L3 InterHarmonic #9  | Float [32b-LSW] | R   |         | 43059          |
| I_L3_IH_10    | Line Current L3 InterHarmonic #10 | Float [32b-LSW] | R   |         | 43061          |
| I_L3_IH_11    | Line Current L3 InterHarmonic #11 | Float [32b-LSW] | R   |         | 43063          |
| I_L3_IH_12    | Line Current L3 InterHarmonic #12 | Float [32b-LSW] | R   |         | 43065          |
| I_L3_IH_13    | Line Current L3 InterHarmonic #13 | Float [32b-LSW] | R   |         | 43067          |
| I_L3_IH_14    | Line Current L3 InterHarmonic #14 | Float [32b-LSW] | R   |         | 43069          |
| I_L3_IH_15    | Line Current L3 InterHarmonic #15 | Float [32b-LSW] | R   |         | 43071          |
| I_L3_IH_16    | Line Current L3 InterHarmonic #16 | Float [32b-LSW] | R   |         | 43073          |
| I_L3_IH_17    | Line Current L3 InterHarmonic #17 | Float [32b-LSW] | R   |         | 43075          |
| I_L3_IH_18    | Line Current L3 InterHarmonic #18 | Float [32b-LSW] | R   |         | 43077          |
| I_L3_IH_19    | Line Current L3 InterHarmonic #19 | Float [32b-LSW] | R   |         | 43079          |
| I_L3_IH_20    | Line Current L3 InterHarmonic #20 | Float [32b-LSW] | R   |         | 43081          |
| I_L3_IH_21    | Line Current L3 InterHarmonic #21 | Float [32b-LSW] | R   |         | 43083          |
| I_L3_IH_22    | Line Current L3 InterHarmonic #22 | Float [32b-LSW] | R   |         | 43085          |
| I_L3_IH_23    | Line Current L3 InterHarmonic #23 | Float [32b-LSW] | R   |         | 43087          |
| I_L3_IH_24    | Line Current L3 InterHarmonic #24 | Float [32b-LSW] | R   |         | 43089          |
| I_L3_IH_25    | Line Current L3 InterHarmonic #25 | Float [32b-LSW] | R   |         | 43091          |
| I_L3_IH_26    | Line Current L3 InterHarmonic #26 | Float [32b-LSW] | R   |         | 43093          |
| I_L3_IH_27    | Line Current L3 InterHarmonic #27 | Float [32b-LSW] | R   |         | 43095          |
| I_L3_IH_28    | Line Current L3 InterHarmonic #28 | Float [32b-LSW] | R   |         | 43097          |
| I_L3_IH_29    | Line Current L3 InterHarmonic #29 | Float [32b-LSW] | R   |         | 43099          |
| I_L3_IH_30    | Line Current L3 InterHarmonic #30 | Float [32b-LSW] | R   |         | 43101          |
| I_L3_IH_31    | Line Current L3 InterHarmonic #31 | Float [32b-LSW] | R   |         | 43103          |
| I_L3_IH_32    | Line Current L3 InterHarmonic #32 | Float [32b-LSW] | R   |         | 43105          |
| I_L3_IH_33    | Line Current L3 InterHarmonic #33 | Float [32b-LSW] | R   |         | 43107          |
| I_L3_IH_34    | Line Current L3 InterHarmonic #34 | Float [32b-LSW] | R   |         | 43109          |
| I_L3_IH_35    | Line Current L3 InterHarmonic #35 | Float [32b-LSW] | R   |         | 43111          |
| I_L3_IH_36    | Line Current L3 InterHarmonic #36 | Float [32b-LSW] | R   |         | 43113          |
| I_L3_IH_37    | Line Current L3 InterHarmonic #37 | Float [32b-LSW] | R   |         | 43115          |
| I_L3_IH_38    | Line Current L3 InterHarmonic #38 | Float [32b-LSW] | R   |         | 43117          |
| I_L3_IH_39    | Line Current L3 InterHarmonic #39 | Float [32b-LSW] | R   |         | 43119          |
| I_L3_IH_40    | Line Current L3 InterHarmonic #40 | Float [32b-LSW] | R   |         | 43121          |
| I_L3_IH_41    | Line Current L3 InterHarmonic #41 | Float [32b-LSW] | R   |         | 43123          |
| I_L3_IH_42    | Line Current L3 InterHarmonic #42 | Float [32b-LSW] | R   |         | 43125          |
| I_L3_IH_43    | Line Current L3 InterHarmonic #43 | Float [32b-LSW] | R   |         | 43127          |
| I_L3_IH_44    | Line Current L3 InterHarmonic #44 | Float [32b-LSW] | R   |         | 43129          |
| I_L3_IH_45    | Line Current L3 InterHarmonic #45 | Float [32b-LSW] | R   |         | 43131          |
| I_L3_IH_46    | Line Current L3 InterHarmonic #46 | Float [32b-LSW] | R   |         | 43133          |
| I_L3_IH_47    | Line Current L3 InterHarmonic #47 | Float [32b-LSW] | R   |         | 43135          |
| I_L3_IH_48    | Line Current L3 InterHarmonic #48 | Float [32b-LSW] | R   |         | 43137          |
| I_L3_IH_49    | Line Current L3 InterHarmonic #49 | Float [32b-LSW] | R   |         | 43139          |
| I_L3_IH_50    | Line Current L3 InterHarmonic #50 | Float [32b-LSW] | R   |         | 43141          |
| I_L3_IH_51    | Line Current L3 InterHarmonic #51 | Float [32b-LSW] | R   |         | 43143          |
| I_L3_IH_52    | Line Current L3 InterHarmonic #52 | Float [32b-LSW] | R   |         | 43145          |
| I_L3_IH_53    | Line Current L3 InterHarmonic #53 | Float [32b-LSW] | R   |         | 43147          |
| I_L3_IH_54    | Line Current L3 InterHarmonic #54 | Float [32b-LSW] | R   |         | 43149          |
| I_L3_IH_55    | Line Current L3 InterHarmonic #55 | Float [32b-LSW] | R   |         | 43151          |
| I_L3_IH_56    | Line Current L3 InterHarmonic #56 | Float [32b-LSW] | R   |         | 43153          |
| I_L3_IH_57    | Line Current L3 InterHarmonic #57 | Float [32b-LSW] | R   |         | 43155          |
| I_L3_IH_58    | Line Current L3 InterHarmonic #58 | Float [32b-LSW] | R   |         | 43157          |
| I_L3_IH_59    | Line Current L3 InterHarmonic #59 | Float [32b-LSW] | R   |         | 43159          |
| I_L3_IH_60    | Line Current L3 InterHarmonic #60 | Float [32b-LSW] | R   |         | 43161          |
| I_L3_IH_61    | Line Current L3 InterHarmonic #61 | Float [32b-LSW] | R   |         | 43163          |
| I_L3_IH_62    | Line Current L3 InterHarmonic #62 | Float [32b-LSW] | R   |         | 43165          |
| I_L3_IH_63    | Line Current L3 InterHarmonic #63 | Float [32b-LSW] | R   |         | 43167          |
| I_N_IH_0      | Line Current N InterHarmonic #0   | Float [32b-LSW] | R   |         | 43169          |
| I_N_IH_1      | Line Current N InterHarmonic #1   | Float [32b-LSW] | R   |         | 43171          |
| I_N_IH_2      | Line Current N InterHarmonic #2   | Float [32b-LSW] | R   |         | 43173          |
| I_N_IH_3      | Line Current N InterHarmonic #3   | Float [32b-LSW] | R   |         | 43175          |
| I_N_IH_4      | Line Current N InterHarmonic #4   | Float [32b-LSW] | R   |         | 43177          |
| I_N_IH_5      | Line Current N InterHarmonic #5   | Float [32b-LSW] | R   |         | 43179          |



| Register Name   | Description  | Register Type   | R/W | Default | Address Modbus |
|-----------------|--|-----------------|-----|---------|----------------|
| I_N_IH_6        | Line Current N InterHarmonic #6  | Float [32b-LSW] | R   |         | 43181          |
| I_N_IH_7        | Line Current N InterHarmonic #7  | Float [32b-LSW] | R   |         | 43183          |
| I_N_IH_8        | Line Current N InterHarmonic #8  | Float [32b-LSW] | R   |         | 43185          |
| I_N_IH_9        | Line Current N InterHarmonic #9  | Float [32b-LSW] | R   |         | 43187          |
| I_N_IH_10       | Line Current N InterHarmonic #10   | Float [32b-LSW] | R   |         | 43189          |
| I_N_IH_11       | Line Current N InterHarmonic #11   | Float [32b-LSW] | R   |         | 43191          |
| I_N_IH_12       | Line Current N InterHarmonic #12   | Float [32b-LSW] | R   |         | 43193          |
| I_N_IH_13       | Line Current N InterHarmonic #13   | Float [32b-LSW] | R   |         | 43195          |
| I_N_IH_14       | Line Current N InterHarmonic #14   | Float [32b-LSW] | R   |         | 43197          |
| I_N_IH_15       | Line Current N InterHarmonic #15   | Float [32b-LSW] | R   |         | 43199          |
| I_N_IH_16       | Line Current N InterHarmonic #16   | Float [32b-LSW] | R   |         | 43201          |
| I_N_IH_17       | Line Current N InterHarmonic #17   | Float [32b-LSW] | R   |         | 43203          |
| I_N_IH_18       | Line Current N InterHarmonic #18   | Float [32b-LSW] | R   |         | 43205          |
| I_N_IH_19       | Line Current N InterHarmonic #19   | Float [32b-LSW] | R   |         | 43207          |
| I_N_IH_20       | Line Current N InterHarmonic #20   | Float [32b-LSW] | R   |         | 43209          |
| I_N_IH_21       | Line Current N InterHarmonic #21   | Float [32b-LSW] | R   |         | 43211          |
| I_N_IH_22       | Line Current N InterHarmonic #22   | Float [32b-LSW] | R   |         | 43213          |
| I_N_IH_23       | Line Current N InterHarmonic #23   | Float [32b-LSW] | R   |         | 43215          |
| I_N_IH_24       | Line Current N InterHarmonic #24   | Float [32b-LSW] | R   |         | 43217          |
| I_N_IH_25       | Line Current N InterHarmonic #25   | Float [32b-LSW] | R   |         | 43219          |
| I_N_IH_26       | Line Current N InterHarmonic #26   | Float [32b-LSW] | R   |         | 43221          |
| I_N_IH_27       | Line Current N InterHarmonic #27   | Float [32b-LSW] | R   |         | 43223          |
| I_N_IH_28       | Line Current N InterHarmonic #28   | Float [32b-LSW] | R   |         | 43225          |
| I_N_IH_29       | Line Current N InterHarmonic #29   | Float [32b-LSW] | R   |         | 43227          |
| I_N_IH_30       | Line Current N InterHarmonic #30   | Float [32b-LSW] | R   |         | 43229          |
| I_N_IH_31       | Line Current N InterHarmonic #31   | Float [32b-LSW] | R   |         | 43231          |
| I_N_IH_32       | Line Current N InterHarmonic #32   | Float [32b-LSW] | R   |         | 43233          |
| I_N_IH_33       | Line Current N InterHarmonic #33   | Float [32b-LSW] | R   |         | 43235          |
| I_N_IH_34       | Line Current N InterHarmonic #34   | Float [32b-LSW] | R   |         | 43237          |
| I_N_IH_35       | Line Current N InterHarmonic #35   | Float [32b-LSW] | R   |         | 43239          |
| I_N_IH_36       | Line Current N InterHarmonic #36   | Float [32b-LSW] | R   |         | 43241          |
| I_N_IH_37       | Line Current N InterHarmonic #37   | Float [32b-LSW] | R   |         | 43243          |
| I_N_IH_38       | Line Current N InterHarmonic #38   | Float [32b-LSW] | R   |         | 43245          |
| I_N_IH_39       | Line Current N InterHarmonic #39   | Float [32b-LSW] | R   |         | 43247          |
| I_N_IH_40       | Line Current N InterHarmonic #40   | Float [32b-LSW] | R   |         | 43249          |
| I_N_IH_41       | Line Current N InterHarmonic #41   | Float [32b-LSW] | R   |         | 43251          |
| I_N_IH_42       | Line Current N InterHarmonic #42   | Float [32b-LSW] | R   |         | 43253          |
| I_N_IH_43       | Line Current N InterHarmonic #43   | Float [32b-LSW] | R   |         | 43255          |
| I_N_IH_44       | Line Current N InterHarmonic #44   | Float [32b-LSW] | R   |         | 43257          |
| I_N_IH_45       | Line Current N InterHarmonic #45   | Float [32b-LSW] | R   |         | 43259          |
| I_N_IH_46       | Line Current N InterHarmonic #46   | Float [32b-LSW] | R   |         | 43261          |
| I_N_IH_47       | Line Current N InterHarmonic #47   | Float [32b-LSW] | R   |         | 43263          |
| I_N_IH_48       | Line Current N InterHarmonic #48   | Float [32b-LSW] | R   |         | 43265          |
| I_N_IH_49       | Line Current N InterHarmonic #49   | Float [32b-LSW] | R   |         | 43267          |
| I_N_IH_50       | Line Current N InterHarmonic #50   | Float [32b-LSW] | R   |         | 43269          |
| I_N_IH_51       | Line Current N InterHarmonic #51   | Float [32b-LSW] | R   |         | 43271          |
| I_N_IH_52       | Line Current N InterHarmonic #52   | Float [32b-LSW] | R   |         | 43273          |
| I_N_IH_53       | Line Current N InterHarmonic #53   | Float [32b-LSW] | R   |         | 43275          |
| I_N_IH_54       | Line Current N InterHarmonic #54   | Float [32b-LSW] | R   |         | 43277          |
| I_N_IH_55       | Line Current N InterHarmonic #55   | Float [32b-LSW] | R   |         | 43279          |
| I_N_IH_56       | Line Current N InterHarmonic #56   | Float [32b-LSW] | R   |         | 43281          |
| I_N_IH_57       | Line Current N InterHarmonic #57   | Float [32b-LSW] | R   |         | 43283          |
| I_N_IH_58       | Line Current N InterHarmonic #58   | Float [32b-LSW] | R   |         | 43285          |
| I_N_IH_59       | Line Current N InterHarmonic #59   | Float [32b-LSW] | R   |         | 43287          |
| I_N_IH_60       | Line Current N InterHarmonic #60   | Float [32b-LSW] | R   |         | 43289          |
| I_N_IH_61       | Line Current N InterHarmonic #61   | Float [32b-LSW] | R   |         | 43291          |
| I_N_IH_62       | Line Current N InterHarmonic #62   | Float [32b-LSW] | R   |         | 43293          |
| I_N_IH_63       | Line Current N InterHarmonic #63   | Float [32b-LSW] | R   |         | 43295          |
| V_SAG_VALUE_N_0 | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-0 | Float [32b-LSW] | R   |         | 43297          |
| V_SAG_YEAR_N_0  | Voltage Sag Year @ n-0   | UShort [16b]    | R   |         | 43299          |
| V_SAG_MONTH_N_0 | Voltage Sag Month @ n-0  | UShort [16b]    | R   |         | 43300          |
| V_SAG_DAY_N_0   | Voltage Sag Day @ n-0  | UShort [16b]    | R   |         | 43301          |



| Register Name      | Description   | Register Type   | R/W | Default | Address Modbus |
|--------------------|---|-----------------|-----|---------|----------------|
| V_SAG_HOUR_N_0     | Voltage Sag Hour @ n-0  | UShort [16b]    | R   |         | 43302          |
| V_SAG_MINUTE_N_0   | Voltage Sag Minute @ n-0  | UShort [16b]    | R   |         | 43303          |
| V_SAG_SECOND_N_0   | Voltage Sag Second @ n-0  | UShort [16b]    | R   |         | 43304          |
| V_SAG_DURATION_N_0 | Voltage Sag Duration [ms] @ n-0   | UShort [16b]    | R   |         | 43305          |
| V_SAG_QUERY_N_0    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43306          |
| V_SAG_VALUE_N_1    | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-1                              | Float [32b-LSW] | R   |         | 43307          |
| V_SAG_YEAR_N_1     | Voltage Sag Year @ n-1  | UShort [16b]    | R   |         | 43309          |
| V_SAG_MONTH_N_1    | Voltage Sag Month @ n-1   | UShort [16b]    | R   |         | 43310          |
| V_SAG_DAY_N_1      | Voltage Sag Day @ n-1   | UShort [16b]    | R   |         | 43311          |
| V_SAG_HOUR_N_1     | Voltage Sag Hour @ n-1  | UShort [16b]    | R   |         | 43312          |
| V_SAG_MINUTE_N_1   | Voltage Sag Minute @ n-1  | UShort [16b]    | R   |         | 43313          |
| V_SAG_SECOND_N_1   | Voltage Sag Second @ n-1  | UShort [16b]    | R   |         | 43314          |
| V_SAG_DURATION_N_1 | Voltage Sag Duration [ms] @ n-1   | UShort [16b]    | R   |         | 43315          |
| V_SAG_QUERY_N_1    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43316          |
| V_SAG_VALUE_N_2    | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-2                              | Float [32b-LSW] | R   |         | 43317          |
| V_SAG_YEAR_N_2     | Voltage Sag Year @ n-2  | UShort [16b]    | R   |         | 43319          |
| V_SAG_MONTH_N_2    | Voltage Sag Month @ n-2   | UShort [16b]    | R   |         | 43320          |
| V_SAG_DAY_N_2      | Voltage Sag Day @ n-2   | UShort [16b]    | R   |         | 43321          |
| V_SAG_HOUR_N_2     | Voltage Sag Hour @ n-2  | UShort [16b]    | R   |         | 43322          |
| V_SAG_MINUTE_N_2   | Voltage Sag Minute @ n-2  | UShort [16b]    | R   |         | 43323          |
| V_SAG_SECOND_N_2   | Voltage Sag Second @ n-2  | UShort [16b]    | R   |         | 43324          |
| V_SAG_DURATION_N_2 | Voltage Sag Duration [ms] @ n-2   | UShort [16b]    | R   |         | 43325          |
| V_SAG_QUERY_N_2    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43326          |
| V_SAG_VALUE_N_3    | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-3                              | Float [32b-LSW] | R   |         | 43327          |
| V_SAG_YEAR_N_3     | Voltage Sag Year @ n-3  | UShort [16b]    | R   |         | 43329          |
| V_SAG_MONTH_N_3    | Voltage Sag Month @ n-3   | UShort [16b]    | R   |         | 43330          |
| V_SAG_DAY_N_3      | Voltage Sag Day @ n-3   | UShort [16b]    | R   |         | 43331          |
| V_SAG_HOUR_N_3     | Voltage Sag Hour @ n-3  | UShort [16b]    | R   |         | 43332          |
| V_SAG_MINUTE_N_3   | Voltage Sag Minute @ n-3  | UShort [16b]    | R   |         | 43333          |
| V_SAG_SECOND_N_3   | Voltage Sag Second @ n-3  | UShort [16b]    | R   |         | 43334          |
| V_SAG_DURATION_N_3 | Voltage Sag Duration [ms] @ n-3   | UShort [16b]    | R   |         | 43335          |
| V_SAG_QUERY_N_3    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43336          |
| V_SAG_VALUE_N_4    | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-4                              | Float [32b-LSW] | R   |         | 43337          |
| V_SAG_YEAR_N_4     | Voltage Sag Year @ n-4  | UShort [16b]    | R   |         | 43339          |
| V_SAG_MONTH_N_4    | Voltage Sag Month @ n-4   | UShort [16b]    | R   |         | 43340          |
| V_SAG_DAY_N_4      | Voltage Sag Day @ n-4   | UShort [16b]    | R   |         | 43341          |
| V_SAG_HOUR_N_4     | Voltage Sag Hour @ n-4  | UShort [16b]    | R   |         | 43342          |
| V_SAG_MINUTE_N_4   | Voltage Sag Minute @ n-4  | UShort [16b]    | R   |         | 43343          |



| Register Name      | Description   | Register Type   | R/W | Default | Address Modbus |
|--------------------|---|-----------------|-----|---------|----------------|
| V_SAG_SECOND_N_4   | Voltage Sag Second @ n-4  | UShort [16b]    | R   |         | 43344          |
| V_SAG_DURATION_N_4 | Voltage Sag Duration [ms] @ n-4   | UShort [16b]    | R   |         | 43345          |
| V_SAG_QUERY_N_4    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43346          |
| V_SAG_VALUE_N_5    | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-5                              | Float [32b-LSW] | R   |         | 43347          |
| V_SAG_YEAR_N_5     | Voltage Sag Year @ n-5  | UShort [16b]    | R   |         | 43349          |
| V_SAG_MONTH_N_5    | Voltage Sag Month @ n-5   | UShort [16b]    | R   |         | 43350          |
| V_SAG_DAY_N_5      | Voltage Sag Day @ n-5   | UShort [16b]    | R   |         | 43351          |
| V_SAG_HOUR_N_5     | Voltage Sag Hour @ n-5  | UShort [16b]    | R   |         | 43352          |
| V_SAG_MINUTE_N_5   | Voltage Sag Minute @ n-5  | UShort [16b]    | R   |         | 43353          |
| V_SAG_SECOND_N_5   | Voltage Sag Second @ n-5  | UShort [16b]    | R   |         | 43354          |
| V_SAG_DURATION_N_5 | Voltage Sag Duration [ms] @ n-5   | UShort [16b]    | R   |         | 43355          |
| V_SAG_QUERY_N_5    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43356          |
| V_SAG_VALUE_N_6    | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-6                              | Float [32b-LSW] | R   |         | 43357          |
| V_SAG_YEAR_N_6     | Voltage Sag Year @ n-6  | UShort [16b]    | R   |         | 43359          |
| V_SAG_MONTH_N_6    | Voltage Sag Month @ n-6   | UShort [16b]    | R   |         | 43360          |
| V_SAG_DAY_N_6      | Voltage Sag Day @ n-6   | UShort [16b]    | R   |         | 43361          |
| V_SAG_HOUR_N_6     | Voltage Sag Hour @ n-6  | UShort [16b]    | R   |         | 43362          |
| V_SAG_MINUTE_N_6   | Voltage Sag Minute @ n-6  | UShort [16b]    | R   |         | 43363          |
| V_SAG_SECOND_N_6   | Voltage Sag Second @ n-6  | UShort [16b]    | R   |         | 43364          |
| V_SAG_DURATION_N_6 | Voltage Sag Duration [ms] @ n-6   | UShort [16b]    | R   |         | 43365          |
| V_SAG_QUERY_N_6    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43366          |
| V_SAG_VALUE_N_7    | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-7                              | Float [32b-LSW] | R   |         | 43367          |
| V_SAG_YEAR_N_7     | Voltage Sag Year @ n-7  | UShort [16b]    | R   |         | 43369          |
| V_SAG_MONTH_N_7    | Voltage Sag Month @ n-7   | UShort [16b]    | R   |         | 43370          |
| V_SAG_DAY_N_7      | Voltage Sag Day @ n-7   | UShort [16b]    | R   |         | 43371          |
| V_SAG_HOUR_N_7     | Voltage Sag Hour @ n-7  | UShort [16b]    | R   |         | 43372          |
| V_SAG_MINUTE_N_7   | Voltage Sag Minute @ n-7  | UShort [16b]    | R   |         | 43373          |
| V_SAG_SECOND_N_7   | Voltage Sag Second @ n-7  | UShort [16b]    | R   |         | 43374          |
| V_SAG_DURATION_N_7 | Voltage Sag Duration [ms] @ n-7   | UShort [16b]    | R   |         | 43375          |
| V_SAG_QUERY_N_7    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43376          |
| V_SAG_VALUE_N_8    | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-8                              | Float [32b-LSW] | R   |         | 43377          |
| V_SAG_YEAR_N_8     | Voltage Sag Year @ n-8  | UShort [16b]    | R   |         | 43379          |
| V_SAG_MONTH_N_8    | Voltage Sag Month @ n-8   | UShort [16b]    | R   |         | 43380          |
| V_SAG_DAY_N_8      | Voltage Sag Day @ n-8   | UShort [16b]    | R   |         | 43381          |
| V_SAG_HOUR_N_8     | Voltage Sag Hour @ n-8  | UShort [16b]    | R   |         | 43382          |
| V_SAG_MINUTE_N_8   | Voltage Sag Minute @ n-8  | UShort [16b]    | R   |         | 43383          |
| V_SAG_SECOND_N_8   | Voltage Sag Second @ n-8  | UShort [16b]    | R   |         | 43384          |
| V_SAG_DURATION_N_8 | Voltage Sag Duration [ms] @ n-8   | UShort [16b]    | R   |         | 43385          |



| Register Name         | Description   | Register Type   | R/W | Default | Address Modbus |
|-----------------------|---|-----------------|-----|---------|----------------|
| V_SAG_QUERY_N_8       | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43386          |
| V_SAG_VALUE_N_9       | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-9                              | Float [32b-LSW] | R   |         | 43387          |
| V_SAG_YEAR_N_9        | Voltage Sag Year @ n-9  | UShort [16b]    | R   |         | 43389          |
| V_SAG_MONTH_N_9       | Voltage Sag Month @ n-9   | UShort [16b]    | R   |         | 43390          |
| V_SAG_DAY_N_9         | Voltage Sag Day @ n-9   | UShort [16b]    | R   |         | 43391          |
| V_SAG_HOUR_N_9        | Voltage Sag Hour @ n-9  | UShort [16b]    | R   |         | 43392          |
| V_SAG_MINUTE_N_9      | Voltage Sag Minute @ n-9  | UShort [16b]    | R   |         | 43393          |
| V_SAG_SECOND_N_9      | Voltage Sag Second @ n-9  | UShort [16b]    | R   |         | 43394          |
| V_SAG_DURATION_N_9    | Voltage Sag Duration [ms] @ n-9   | UShort [16b]    | R   |         | 43395          |
| V_SAG_QUERY_N_9       | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43396          |
| V_SAG_VALUE_EEPROM    | Voltage Sag RMS Value (between 10% and 90% "Nominal_Star_Voltage") EEPROM data                        | Float [32b-LSW] | R   |         | 43397          |
| V_SAG_YEAR_EEPROM     | Voltage Sag Year EEPROM data  | UShort [16b]    | R   |         | 43399          |
| V_SAG_MONTH_EEPROM    | Voltage Sag Month EEPROM data   | UShort [16b]    | R   |         | 43400          |
| V_SAG_DAY_EEPROM      | Voltage Sag Day EEPROM data   | UShort [16b]    | R   |         | 43401          |
| V_SAG_HOUR_EEPROM     | Voltage Sag Hour EEPROM data  | UShort [16b]    | R   |         | 43402          |
| V_SAG_MINUTE_EEPROM   | Voltage Sag Minute EEPROM data  | UShort [16b]    | R   |         | 43403          |
| V_SAG_SECOND_EEPROM   | Voltage Sag Second EEPROM data  | UShort [16b]    | R   |         | 43404          |
| V_SAG_DURATION_EEPROM | Voltage Sag Duration [ms] EEPROM data   | UShort [16b]    | R   |         | 43405          |
| V_SAG_QUERY_EEPROM    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43406          |
| V_SWELL_VALUE_N_0     | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-0                            | Float [32b-LSW] | R   |         | 43407          |
| V_SWELL_YEAR_N_0      | Voltage Swell Year @ n-0  | UShort [16b]    | R   |         | 43409          |
| V_SWELL_MONTH_N_0     | Voltage Swell Month @ n-0   | UShort [16b]    | R   |         | 43410          |
| V_SWELL_DAY_N_0       | Voltage Swell Day @ n-0   | UShort [16b]    | R   |         | 43411          |
| V_SWELL_HOUR_N_0      | Voltage Swell Hour @ n-0  | UShort [16b]    | R   |         | 43412          |
| V_SWELL_MINUTE_N_0    | Voltage Swell Minute @ n-0  | UShort [16b]    | R   |         | 43413          |
| V_SWELL_SECOND_N_0    | Voltage Swell Second @ n-0  | UShort [16b]    | R   |         | 43414          |
| V_SWELL_DURATION_N_0  | Voltage Swell Duration [ms] @ n-0   | UShort [16b]    | R   |         | 43415          |
| V_SWELL_QUERY_N_0     | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43416          |
| V_SWELL_VALUE_N_1     | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-1                            | Float [32b-LSW] | R   |         | 43417          |
| V_SWELL_YEAR_N_1      | Voltage Swell Year @ n-1  | UShort [16b]    | R   |         | 43419          |
| V_SWELL_MONTH_N_1     | Voltage Swell Month @ n-1   | UShort [16b]    | R   |         | 43420          |
| V_SWELL_DAY_N_1       | Voltage Swell Day @ n-1   | UShort [16b]    | R   |         | 43421          |
| V_SWELL_HOUR_N_1      | Voltage Swell Hour @ n-1  | UShort [16b]    | R   |         | 43422          |
| V_SWELL_MINUTE_N_1    | Voltage Swell Minute @ n-1  | UShort [16b]    | R   |         | 43423          |
| V_SWELL_SECOND_N_1    | Voltage Swell Second @ n-1  | UShort [16b]    | R   |         | 43424          |
| V_SWELL_DURATION_N_1  | Voltage Swell Duration [ms] @ n-1   | UShort [16b]    | R   |         | 43425          |



| Register Name        | Description   | Register Type   | R/W | Default | Address Modbus |
|----------------------|---|-----------------|-----|---------|----------------|
| V_SWELL_QUERY_N_1    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43426          |
| V_SWELL_VALUE_N_2    | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-2                            | Float [32b-LSW] | R   |         | 43427          |
| V_SWELL_YEAR_N_2     | Voltage Swell Year @ n-2  | UShort [16b]    | R   |         | 43429          |
| V_SWELL_MONTH_N_2    | Voltage Swell Month @ n-2   | UShort [16b]    | R   |         | 43430          |
| V_SWELL_DAY_N_2      | Voltage Swell Day @ n-2   | UShort [16b]    | R   |         | 43431          |
| V_SWELL_HOUR_N_2     | Voltage Swell Hour @ n-2  | UShort [16b]    | R   |         | 43432          |
| V_SWELL_MINUTE_N_2   | Voltage Swell Minute @ n-2  | UShort [16b]    | R   |         | 43433          |
| V_SWELL_SECOND_N_2   | Voltage Swell Second @ n-2  | UShort [16b]    | R   |         | 43434          |
| V_SWELL_DURATION_N_2 | Voltage Swell Duration [ms] @ n-2   | UShort [16b]    | R   |         | 43435          |
| V_SWELL_QUERY_N_2    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43436          |
| V_SWELL_VALUE_N_3    | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-3                            | Float [32b-LSW] | R   |         | 43437          |
| V_SWELL_YEAR_N_3     | Voltage Swell Year @ n-3  | UShort [16b]    | R   |         | 43439          |
| V_SWELL_MONTH_N_3    | Voltage Swell Month @ n-3   | UShort [16b]    | R   |         | 43440          |
| V_SWELL_DAY_N_3      | Voltage Swell Day @ n-3   | UShort [16b]    | R   |         | 43441          |
| V_SWELL_HOUR_N_3     | Voltage Swell Hour @ n-3  | UShort [16b]    | R   |         | 43442          |
| V_SWELL_MINUTE_N_3   | Voltage Swell Minute @ n-3  | UShort [16b]    | R   |         | 43443          |
| V_SWELL_SECOND_N_3   | Voltage Swell Second @ n-3  | UShort [16b]    | R   |         | 43444          |
| V_SWELL_DURATION_N_3 | Voltage Swell Duration [ms] @ n-3   | UShort [16b]    | R   |         | 43445          |
| V_SWELL_QUERY_N_3    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43446          |
| V_SWELL_VALUE_N_4    | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-4                            | Float [32b-LSW] | R   |         | 43447          |
| V_SWELL_YEAR_N_4     | Voltage Swell Year @ n-4  | UShort [16b]    | R   |         | 43449          |
| V_SWELL_MONTH_N_4    | Voltage Swell Month @ n-4   | UShort [16b]    | R   |         | 43450          |
| V_SWELL_DAY_N_4      | Voltage Swell Day @ n-4   | UShort [16b]    | R   |         | 43451          |
| V_SWELL_HOUR_N_4     | Voltage Swell Hour @ n-4  | UShort [16b]    | R   |         | 43452          |
| V_SWELL_MINUTE_N_4   | Voltage Swell Minute @ n-4  | UShort [16b]    | R   |         | 43453          |
| V_SWELL_SECOND_N_4   | Voltage Swell Second @ n-4  | UShort [16b]    | R   |         | 43454          |
| V_SWELL_DURATION_N_4 | Voltage Swell Duration [ms] @ n-4   | UShort [16b]    | R   |         | 43455          |
| V_SWELL_QUERY_N_4    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43456          |
| V_SWELL_VALUE_N_5    | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-5                            | Float [32b-LSW] | R   |         | 43457          |
| V_SWELL_YEAR_N_5     | Voltage Swell Year @ n-5  | UShort [16b]    | R   |         | 43459          |
| V_SWELL_MONTH_N_5    | Voltage Swell Month @ n-5   | UShort [16b]    | R   |         | 43460          |
| V_SWELL_DAY_N_5      | Voltage Swell Day @ n-5   | UShort [16b]    | R   |         | 43461          |
| V_SWELL_HOUR_N_5     | Voltage Swell Hour @ n-5  | UShort [16b]    | R   |         | 43462          |
| V_SWELL_MINUTE_N_5   | Voltage Swell Minute @ n-5  | UShort [16b]    | R   |         | 43463          |
| V_SWELL_SECOND_N_5   | Voltage Swell Second @ n-5  | UShort [16b]    | R   |         | 43464          |
| V_SWELL_DURATION_N_5 | Voltage Swell Duration [ms] @ n-5   | UShort [16b]    | R   |         | 43465          |





| Register Name        | Description   | Register Type   | R/W | Default | Address Modbus |
|----------------------|---|-----------------|-----|---------|----------------|
| V_SWELL_QUERY_N_5    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43466          |
| V_SWELL_VALUE_N_6    | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-6                            | Float [32b-LSW] | R   |         | 43467          |
| V_SWELL_YEAR_N_6     | Voltage Swell Year @ n-6  | UShort [16b]    | R   |         | 43469          |
| V_SWELL_MONTH_N_6    | Voltage Swell Month @ n-6   | UShort [16b]    | R   |         | 43470          |
| V_SWELL_DAY_N_6      | Voltage Swell Day @ n-6   | UShort [16b]    | R   |         | 43471          |
| V_SWELL_HOUR_N_6     | Voltage Swell Hour @ n-6  | UShort [16b]    | R   |         | 43472          |
| V_SWELL_MINUTE_N_6   | Voltage Swell Minute @ n-6  | UShort [16b]    | R   |         | 43473          |
| V_SWELL_SECOND_N_6   | Voltage Swell Second @ n-6  | UShort [16b]    | R   |         | 43474          |
| V_SWELL_DURATION_N_6 | Voltage Swell Duration [ms] @ n-6   | UShort [16b]    | R   |         | 43475          |
| V_SWELL_QUERY_N_6    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43476          |
| V_SWELL_VALUE_N_7    | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-7                            | Float [32b-LSW] | R   |         | 43477          |
| V_SWELL_YEAR_N_7     | Voltage Swell Year @ n-7  | UShort [16b]    | R   |         | 43479          |
| V_SWELL_MONTH_N_7    | Voltage Swell Month @ n-7   | UShort [16b]    | R   |         | 43480          |
| V_SWELL_DAY_N_7      | Voltage Swell Day @ n-7   | UShort [16b]    | R   |         | 43481          |
| V_SWELL_HOUR_N_7     | Voltage Swell Hour @ n-7  | UShort [16b]    | R   |         | 43482          |
| V_SWELL_MINUTE_N_7   | Voltage Swell Minute @ n-7  | UShort [16b]    | R   |         | 43483          |
| V_SWELL_SECOND_N_7   | Voltage Swell Second @ n-7  | UShort [16b]    | R   |         | 43484          |
| V_SWELL_DURATION_N_7 | Voltage Swell Duration [ms] @ n-7   | UShort [16b]    | R   |         | 43485          |
| V_SWELL_QUERY_N_7    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43486          |
| V_SWELL_VALUE_N_8    | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-8                            | Float [32b-LSW] | R   |         | 43487          |
| V_SWELL_YEAR_N_8     | Voltage Swell Year @ n-8  | UShort [16b]    | R   |         | 43489          |
| V_SWELL_MONTH_N_8    | Voltage Swell Month @ n-8   | UShort [16b]    | R   |         | 43490          |
| V_SWELL_DAY_N_8      | Voltage Swell Day @ n-8   | UShort [16b]    | R   |         | 43491          |
| V_SWELL_HOUR_N_8     | Voltage Swell Hour @ n-8  | UShort [16b]    | R   |         | 43492          |
| V_SWELL_MINUTE_N_8   | Voltage Swell Minute @ n-8  | UShort [16b]    | R   |         | 43493          |
| V_SWELL_SECOND_N_8   | Voltage Swell Second @ n-8  | UShort [16b]    | R   |         | 43494          |
| V_SWELL_DURATION_N_8 | Voltage Swell Duration [ms] @ n-8   | UShort [16b]    | R   |         | 43495          |
| V_SWELL_QUERY_N_8    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43496          |
| V_SWELL_VALUE_N_9    | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-9                            | Float [32b-LSW] | R   |         | 43497          |
| V_SWELL_YEAR_N_9     | Voltage Swell Year @ n-9  | UShort [16b]    | R   |         | 43499          |
| V_SWELL_MONTH_N_9    | Voltage Swell Month @ n-9   | UShort [16b]    | R   |         | 43500          |
| V_SWELL_DAY_N_9      | Voltage Swell Day @ n-9   | UShort [16b]    | R   |         | 43501          |
| V_SWELL_HOUR_N_9     | Voltage Swell Hour @ n-9  | UShort [16b]    | R   |         | 43502          |
| V_SWELL_MINUTE_N_9   | Voltage Swell Minute @ n-9  | UShort [16b]    | R   |         | 43503          |
| V_SWELL_SECOND_N_9   | Voltage Swell Second @ n-9  | UShort [16b]    | R   |         | 43504          |
| V_SWELL_DURATION_N_9 | Voltage Swell Duration [ms] @ n-9   | UShort [16b]    | R   |         | 43505          |





| Register Name               | Description   | Register Type   | R/W | Default | Address Modbus |
|-----------------------------|---|-----------------|-----|---------|----------------|
| V_SWELL_QUERY_N_9           | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43506          |
| V_SWELL_VALUE_EEPROM        | Voltage Swell RMS Value (between 10% and 90% "Nominal_Star_Voltage") EEPROM data                      | Float [32b-LSW] | R   |         | 43507          |
| V_SWELL_YEAR_EEPROM         | Voltage Swell Year EEPROM data  | UShort [16b]    | R   |         | 43509          |
| V_SWELL_MONTH_EEPROM        | Voltage Swell Month EEPROM data   | UShort [16b]    | R   |         | 43510          |
| V_SWELL_DAY_EEPROM          | Voltage Swell Day EEPROM data   | UShort [16b]    | R   |         | 43511          |
| V_SWELL_HOUR_EEPROM         | Voltage Swell Hour EEPROM data  | UShort [16b]    | R   |         | 43512          |
| V_SWELL_MINUTE_EEPROM       | Voltage Swell Minute EEPROM data  | UShort [16b]    | R   |         | 43513          |
| V_SWELL_SECOND_EEPROM       | Voltage Swell Second EEPROM data  | UShort [16b]    | R   |         | 43514          |
| V_SWELL_DURATION_EEPROM     | Voltage Swell Duration [ms] EEPROM data   | UShort [16b]    | R   |         | 43515          |
| V_SWELL_QUERY_EEPROM        | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43516          |
| V_INTERRUPTION_VALUE_N_0    | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-0                     | Float [32b-LSW] | R   |         | 43517          |
| V_INTERRUPTION_YEAR_N_0     | Voltage Interruption Year @ n-0   | UShort [16b]    | R   |         | 43519          |
| V_INTERRUPTION_MONTH_N_0    | Voltage Interruption Month @ n-0  | UShort [16b]    | R   |         | 43520          |
| V_INTERRUPTION_DAY_N_0      | Voltage Interruption Day @ n-0  | UShort [16b]    | R   |         | 43521          |
| V_INTERRUPTION_HOUR_N_0     | Voltage Interruption Hour @ n-0   | UShort [16b]    | R   |         | 43522          |
| V_INTERRUPTION_MINUTE_N_0   | Voltage Interruption Minute @ n-0   | UShort [16b]    | R   |         | 43523          |
| V_INTERRUPTION_SECOND_N_0   | Voltage Interruption Second @ n-0   | UShort [16b]    | R   |         | 43524          |
| V_INTERRUPTION_DURATION_N_0 | Voltage Interruption Duration [ms] @ n-0  | UShort [16b]    | R   |         | 43525          |
| V_INTERRUPTION_QUERY_N_0    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43526          |
| V_INTERRUPTION_VALUE_N_1    | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-1                     | Float [32b-LSW] | R   |         | 43527          |
| V_INTERRUPTION_YEAR_N_1     | Voltage Interruption Year @ n-1   | UShort [16b]    | R   |         | 43529          |
| V_INTERRUPTION_MONTH_N_1    | Voltage Interruption Month @ n-1  | UShort [16b]    | R   |         | 43530          |
| V_INTERRUPTION_DAY_N_1      | Voltage Interruption Day @ n-1  | UShort [16b]    | R   |         | 43531          |
| V_INTERRUPTION_HOUR_N_1     | Voltage Interruption Hour @ n-1   | UShort [16b]    | R   |         | 43532          |
| V_INTERRUPTION_MINUTE_N_1   | Voltage Interruption Minute @ n-1   | UShort [16b]    | R   |         | 43533          |
| V_INTERRUPTION_SECOND_N_1   | Voltage Interruption Second @ n-1   | UShort [16b]    | R   |         | 43534          |
| V_INTERRUPTION_DURATION_N_1 | Voltage Interruption Duration [ms] @ n-1  | UShort [16b]    | R   |         | 43535          |
| V_INTERRUPTION_QUERY_N_1    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43536          |
| V_INTERRUPTION_VALUE_N_2    | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-2                     | Float [32b-LSW] | R   |         | 43537          |
| V_INTERRUPTION_YEAR_N_2     | Voltage Interruption Year @ n-2   | UShort [16b]    | R   |         | 43539          |
| V_INTERRUPTION_MONTH_N_2    | Voltage Interruption Month @ n-2  | UShort [16b]    | R   |         | 43540          |
| V_INTERRUPTION_DAY_N_2      | Voltage Interruption Day @ n-2  | UShort [16b]    | R   |         | 43541          |
| V_INTERRUPTION_HOUR_N_2     | Voltage Interruption Hour @ n-2   | UShort [16b]    | R   |         | 43542          |
| V_INTERRUPTION_MINUTE_N_2   | Voltage Interruption Minute @ n-2   | UShort [16b]    | R   |         | 43543          |
| V_INTERRUPTION_SECOND_N_2   | Voltage Interruption Second @ n-2   | UShort [16b]    | R   |         | 43544          |
| V_INTERRUPTION_DURATION_N_2 | Voltage Interruption Duration [ms] @ n-2  | UShort [16b]    | R   |         | 43545          |



| Register Name               | Description   | Register Type   | R/W | Default | Address Modbus |
|-----------------------------|---|-----------------|-----|---------|----------------|
| V_INTERRUPTION_QUERY_N_2    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43546          |
| V_INTERRUPTION_VALUE_N_3    | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-3                     | Float [32b-LSW] | R   |         | 43547          |
| V_INTERRUPTION_YEAR_N_3     | Voltage Interruption Year @ n-3   | UShort [16b]    | R   |         | 43549          |
| V_INTERRUPTION_MONTH_N_3    | Voltage Interruption Month @ n-3  | UShort [16b]    | R   |         | 43550          |
| V_INTERRUPTION_DAY_N_3      | Voltage Interruption Day @ n-3  | UShort [16b]    | R   |         | 43551          |
| V_INTERRUPTION_HOUR_N_3     | Voltage Interruption Hour @ n-3   | UShort [16b]    | R   |         | 43552          |
| V_INTERRUPTION_MINUTE_N_3   | Voltage Interruption Minute @ n-3   | UShort [16b]    | R   |         | 43553          |
| V_INTERRUPTION_SECOND_N_3   | Voltage Interruption Second @ n-3   | UShort [16b]    | R   |         | 43554          |
| V_INTERRUPTION_DURATION_N_3 | Voltage Interruption Duration [ms] @ n-3  | UShort [16b]    | R   |         | 43555          |
| V_INTERRUPTION_QUERY_N_3    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43556          |
| V_INTERRUPTION_VALUE_N_4    | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-4                     | Float [32b-LSW] | R   |         | 43557          |
| V_INTERRUPTION_YEAR_N_4     | Voltage Interruption Year @ n-4   | UShort [16b]    | R   |         | 43559          |
| V_INTERRUPTION_MONTH_N_4    | Voltage Interruption Month @ n-4  | UShort [16b]    | R   |         | 43560          |
| V_INTERRUPTION_DAY_N_4      | Voltage Interruption Day @ n-4  | UShort [16b]    | R   |         | 43561          |
| V_INTERRUPTION_HOUR_N_4     | Voltage Interruption Hour @ n-4   | UShort [16b]    | R   |         | 43562          |
| V_INTERRUPTION_MINUTE_N_4   | Voltage Interruption Minute @ n-4   | UShort [16b]    | R   |         | 43563          |
| V_INTERRUPTION_SECOND_N_4   | Voltage Interruption Second @ n-4   | UShort [16b]    | R   |         | 43564          |
| V_INTERRUPTION_DURATION_N_4 | Voltage Interruption Duration [ms] @ n-4  | UShort [16b]    | R   |         | 43565          |
| V_INTERRUPTION_QUERY_N_4    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43566          |
| V_INTERRUPTION_VALUE_N_5    | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-5                     | Float [32b-LSW] | R   |         | 43567          |
| V_INTERRUPTION_YEAR_N_5     | Voltage Interruption Year @ n-5   | UShort [16b]    | R   |         | 43569          |
| V_INTERRUPTION_MONTH_N_5    | Voltage Interruption Month @ n-5  | UShort [16b]    | R   |         | 43570          |
| V_INTERRUPTION_DAY_N_5      | Voltage Interruption Day @ n-5  | UShort [16b]    | R   |         | 43571          |
| V_INTERRUPTION_HOUR_N_5     | Voltage Interruption Hour @ n-5   | UShort [16b]    | R   |         | 43572          |
| V_INTERRUPTION_MINUTE_N_5   | Voltage Interruption Minute @ n-5   | UShort [16b]    | R   |         | 43573          |
| V_INTERRUPTION_SECOND_N_5   | Voltage Interruption Second @ n-5   | UShort [16b]    | R   |         | 43574          |
| V_INTERRUPTION_DURATION_N_5 | Voltage Interruption Duration [ms] @ n-5  | UShort [16b]    | R   |         | 43575          |
| V_INTERRUPTION_QUERY_N_5    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43576          |
| V_INTERRUPTION_VALUE_N_6    | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-6                     | Float [32b-LSW] | R   |         | 43577          |
| V_INTERRUPTION_YEAR_N_6     | Voltage Interruption Year @ n-6   | UShort [16b]    | R   |         | 43579          |
| V_INTERRUPTION_MONTH_N_6    | Voltage Interruption Month @ n-6  | UShort [16b]    | R   |         | 43580          |
| V_INTERRUPTION_DAY_N_6      | Voltage Interruption Day @ n-6  | UShort [16b]    | R   |         | 43581          |
| V_INTERRUPTION_HOUR_N_6     | Voltage Interruption Hour @ n-6   | UShort [16b]    | R   |         | 43582          |
| V_INTERRUPTION_MINUTE_N_6   | Voltage Interruption Minute @ n-6   | UShort [16b]    | R   |         | 43583          |
| V_INTERRUPTION_SECOND_N_6   | Voltage Interruption Second @ n-6   | UShort [16b]    | R   |         | 43584          |
| V_INTERRUPTION_DURATION_N_6 | Voltage Interruption Duration [ms] @ n-6  | UShort [16b]    | R   |         | 43585          |



| Register Name                | Description   | Register Type   | R/W | Default | Address Modbus |
|------------------------------|---|-----------------|-----|---------|----------------|
| V_INTERRUPTION_QUERY_N_6     | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43586          |
| V_INTERRUPTION_VALUE_N_7     | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-7                     | Float [32b-LSW] | R   |         | 43587          |
| V_INTERRUPTION_YEAR_N_7      | Voltage Interruption Year @ n-7   | UShort [16b]    | R   |         | 43589          |
| V_INTERRUPTION_MONTH_N_7     | Voltage Interruption Month @ n-7  | UShort [16b]    | R   |         | 43590          |
| V_INTERRUPTION_DAY_N_7       | Voltage Interruption Day @ n-7  | UShort [16b]    | R   |         | 43591          |
| V_INTERRUPTION_HOUR_N_7      | Voltage Interruption Hour @ n-7   | UShort [16b]    | R   |         | 43592          |
| V_INTERRUPTION_MINUTE_N_7    | Voltage Interruption Minute @ n-7   | UShort [16b]    | R   |         | 43593          |
| V_INTERRUPTION_SECOND_N_7    | Voltage Interruption Second @ n-7   | UShort [16b]    | R   |         | 43594          |
| V_INTERRUPTION_DURATION_N_7  | Voltage Interruption Duration [ms] @ n-7  | UShort [16b]    | R   |         | 43595          |
| V_INTERRUPTION_QUERY_N_7     | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43596          |
| V_INTERRUPTION_VALUE_N_8     | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-8                     | Float [32b-LSW] | R   |         | 43597          |
| V_INTERRUPTION_YEAR_N_8      | Voltage Interruption Year @ n-8   | UShort [16b]    | R   |         | 43599          |
| V_INTERRUPTION_MONTH_N_8     | Voltage Interruption Month @ n-8  | UShort [16b]    | R   |         | 43600          |
| V_INTERRUPTION_DAY_N_8       | Voltage Interruption Day @ n-8  | UShort [16b]    | R   |         | 43601          |
| V_INTERRUPTION_HOUR_N_8      | Voltage Interruption Hour @ n-8   | UShort [16b]    | R   |         | 43602          |
| V_INTERRUPTION_MINUTE_N_8    | Voltage Interruption Minute @ n-8   | UShort [16b]    | R   |         | 43603          |
| V_INTERRUPTION_SECOND_N_8    | Voltage Interruption Second @ n-8   | UShort [16b]    | R   |         | 43604          |
| V_INTERRUPTION_DURATION_N_8  | Voltage Interruption Duration [ms] @ n-8  | UShort [16b]    | R   |         | 43605          |
| V_INTERRUPTION_QUERY_N_8     | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43606          |
| V_INTERRUPTION_VALUE_N_9     | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") @ n-9                     | Float [32b-LSW] | R   |         | 43607          |
| V_INTERRUPTION_YEAR_N_9      | Voltage Interruption Year @ n-9   | UShort [16b]    | R   |         | 43609          |
| V_INTERRUPTION_MONTH_N_9     | Voltage Interruption Month @ n-9  | UShort [16b]    | R   |         | 43610          |
| V_INTERRUPTION_DAY_N_9       | Voltage Interruption Day @ n-9  | UShort [16b]    | R   |         | 43611          |
| V_INTERRUPTION_HOUR_N_9      | Voltage Interruption Hour @ n-9   | UShort [16b]    | R   |         | 43612          |
| V_INTERRUPTION_MINUTE_N_9    | Voltage Interruption Minute @ n-9   | UShort [16b]    | R   |         | 43613          |
| V_INTERRUPTION_SECOND_N_9    | Voltage Interruption Second @ n-9   | UShort [16b]    | R   |         | 43614          |
| V_INTERRUPTION_DURATION_N_9  | Voltage Interruption Duration [ms] @ n-9  | UShort [16b]    | R   |         | 43615          |
| V_INTERRUPTION_QUERY_N_9     | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43616          |
| V_INTERRUPTION_VALUE_EEPROM  | Voltage Interruption RMS Value (between 10% and 90% "Nominal_Star_Voltage") EEPROM data               | Float [32b-LSW] | R   |         | 43617          |
| V_INTERRUPTION_YEAR_EEPROM   | Voltage Interruption Year EEPROM data   | UShort [16b]    | R   |         | 43619          |
| V_INTERRUPTION_MONTH_EEPROM  | Voltage Interruption Month EEPROM data  | UShort [16b]    | R   |         | 43620          |
| V_INTERRUPTION_DAY_EEPROM    | Voltage Interruption Day EEPROM data  | UShort [16b]    | R   |         | 43621          |
| V_INTERRUPTION_HOUR_EEPROM   | Voltage Interruption Hour EEPROM data   | UShort [16b]    | R   |         | 43622          |
| V_INTERRUPTION_MINUTE_EEPROM | Voltage Interruption Minute EEPROM data   | UShort [16b]    | R   |         | 43623          |
| V_INTERRUPTION_SECOND_EEPROM | Voltage Interruption Second EEPROM data   | UShort [16b]    | R   |         | 43624          |



| Register Name                  | Description   | Register Type   | R/W | Default | Address Modbus |
|--------------------------------|---|-----------------|-----|---------|----------------|
| V_INTERRUPTION_DURATION_EEPROM | Voltage Interruption Duration [ms] EEPROM data  | UShort [16b]    | R   |         | 43625          |
| V_INTERRUPTION_QUERY_EEPROM    | Voltage Sag Type:<br>0: ND<br>1: V_L1N<br>2: V_L2N<br>3: V_L3N<br>4: V_L1L2<br>5: V_L2L3<br>6: V_L3L1 | UShort [16b]    | R   |         | 43626          |
| V_L1N_Oscilloscope_0           | Star Voltage L1-N Sample #0   | Float [32b-LSW] | R   |         | 43627          |
| V_L1N_Oscilloscope_1           | Star Voltage L1-N Sample #1   | Float [32b-LSW] | R   |         | 43629          |
| V_L1N_Oscilloscope_2           | Star Voltage L1-N Sample #2   | Float [32b-LSW] | R   |         | 43631          |
| V_L1N_Oscilloscope_3           | Star Voltage L1-N Sample #3   | Float [32b-LSW] | R   |         | 43633          |
| V_L1N_Oscilloscope_4           | Star Voltage L1-N Sample #4   | Float [32b-LSW] | R   |         | 43635          |
| V_L1N_Oscilloscope_5           | Star Voltage L1-N Sample #5   | Float [32b-LSW] | R   |         | 43637          |
| V_L1N_Oscilloscope_6           | Star Voltage L1-N Sample #6   | Float [32b-LSW] | R   |         | 43639          |
| V_L1N_Oscilloscope_7           | Star Voltage L1-N Sample #7   | Float [32b-LSW] | R   |         | 43641          |
| V_L1N_Oscilloscope_8           | Star Voltage L1-N Sample #8   | Float [32b-LSW] | R   |         | 43643          |
| V_L1N_Oscilloscope_9           | Star Voltage L1-N Sample #9   | Float [32b-LSW] | R   |         | 43645          |
| V_L1N_Oscilloscope_10          | Star Voltage L1-N Sample #10  | Float [32b-LSW] | R   |         | 43647          |
| V_L1N_Oscilloscope_11          | Star Voltage L1-N Sample #11  | Float [32b-LSW] | R   |         | 43649          |
| V_L1N_Oscilloscope_12          | Star Voltage L1-N Sample #12  | Float [32b-LSW] | R   |         | 43651          |
| V_L1N_Oscilloscope_13          | Star Voltage L1-N Sample #13  | Float [32b-LSW] | R   |         | 43653          |
| V_L1N_Oscilloscope_14          | Star Voltage L1-N Sample #14  | Float [32b-LSW] | R   |         | 43655          |
| V_L1N_Oscilloscope_15          | Star Voltage L1-N Sample #15  | Float [32b-LSW] | R   |         | 43657          |
| V_L1N_Oscilloscope_16          | Star Voltage L1-N Sample #16  | Float [32b-LSW] | R   |         | 43659          |
| V_L1N_Oscilloscope_17          | Star Voltage L1-N Sample #17  | Float [32b-LSW] | R   |         | 43661          |
| V_L1N_Oscilloscope_18          | Star Voltage L1-N Sample #18  | Float [32b-LSW] | R   |         | 43663          |
| V_L1N_Oscilloscope_19          | Star Voltage L1-N Sample #19  | Float [32b-LSW] | R   |         | 43665          |
| V_L1N_Oscilloscope_20          | Star Voltage L1-N Sample #20  | Float [32b-LSW] | R   |         | 43667          |
| V_L1N_Oscilloscope_21          | Star Voltage L1-N Sample #21  | Float [32b-LSW] | R   |         | 43669          |
| V_L1N_Oscilloscope_22          | Star Voltage L1-N Sample #22  | Float [32b-LSW] | R   |         | 43671          |
| V_L1N_Oscilloscope_23          | Star Voltage L1-N Sample #23  | Float [32b-LSW] | R   |         | 43673          |
| V_L1N_Oscilloscope_24          | Star Voltage L1-N Sample #24  | Float [32b-LSW] | R   |         | 43675          |
| V_L1N_Oscilloscope_25          | Star Voltage L1-N Sample #25  | Float [32b-LSW] | R   |         | 43677          |
| V_L1N_Oscilloscope_26          | Star Voltage L1-N Sample #26  | Float [32b-LSW] | R   |         | 43679          |
| V_L1N_Oscilloscope_27          | Star Voltage L1-N Sample #27  | Float [32b-LSW] | R   |         | 43681          |
| V_L1N_Oscilloscope_28          | Star Voltage L1-N Sample #28  | Float [32b-LSW] | R   |         | 43683          |
| V_L1N_Oscilloscope_29          | Star Voltage L1-N Sample #29  | Float [32b-LSW] | R   |         | 43685          |
| V_L1N_Oscilloscope_30          | Star Voltage L1-N Sample #30  | Float [32b-LSW] | R   |         | 43687          |
| V_L1N_Oscilloscope_31          | Star Voltage L1-N Sample #31  | Float [32b-LSW] | R   |         | 43689          |
| V_L1N_Oscilloscope_32          | Star Voltage L1-N Sample #32  | Float [32b-LSW] | R   |         | 43691          |
| V_L1N_Oscilloscope_33          | Star Voltage L1-N Sample #33  | Float [32b-LSW] | R   |         | 43693          |
| V_L1N_Oscilloscope_34          | Star Voltage L1-N Sample #34  | Float [32b-LSW] | R   |         | 43695          |
| V_L1N_Oscilloscope_35          | Star Voltage L1-N Sample #35  | Float [32b-LSW] | R   |         | 43697          |
| V_L1N_Oscilloscope_36          | Star Voltage L1-N Sample #36  | Float [32b-LSW] | R   |         | 43699          |
| V_L1N_Oscilloscope_37          | Star Voltage L1-N Sample #37  | Float [32b-LSW] | R   |         | 43701          |
| V_L1N_Oscilloscope_38          | Star Voltage L1-N Sample #38  | Float [32b-LSW] | R   |         | 43703          |
| V_L1N_Oscilloscope_39          | Star Voltage L1-N Sample #39  | Float [32b-LSW] | R   |         | 43705          |
| V_L1N_Oscilloscope_40          | Star Voltage L1-N Sample #40  | Float [32b-LSW] | R   |         | 43707          |
| V_L1N_Oscilloscope_41          | Star Voltage L1-N Sample #41  | Float [32b-LSW] | R   |         | 43709          |
| V_L1N_Oscilloscope_42          | Star Voltage L1-N Sample #42  | Float [32b-LSW] | R   |         | 43711          |
| V_L1N_Oscilloscope_43          | Star Voltage L1-N Sample #43  | Float [32b-LSW] | R   |         | 43713          |
| V_L1N_Oscilloscope_44          | Star Voltage L1-N Sample #44  | Float [32b-LSW] | R   |         | 43715          |
| V_L1N_Oscilloscope_45          | Star Voltage L1-N Sample #45  | Float [32b-LSW] | R   |         | 43717          |
| V_L1N_Oscilloscope_46          | Star Voltage L1-N Sample #46  | Float [32b-LSW] | R   |         | 43719          |
| V_L1N_Oscilloscope_47          | Star Voltage L1-N Sample #47  | Float [32b-LSW] | R   |         | 43721          |
| V_L1N_Oscilloscope_48          | Star Voltage L1-N Sample #48  | Float [32b-LSW] | R   |         | 43723          |
| V_L1N_Oscilloscope_49          | Star Voltage L1-N Sample #49  | Float [32b-LSW] | R   |         | 43725          |
| V_L1N_Oscilloscope_50          | Star Voltage L1-N Sample #50  | Float [32b-LSW] | R   |         | 43727          |
| V_L1N_Oscilloscope_51          | Star Voltage L1-N Sample #51  | Float [32b-LSW] | R   |         | 43729          |
| V_L1N_Oscilloscope_52          | Star Voltage L1-N Sample #52  | Float [32b-LSW] | R   |         | 43731          |
| V_L1N_Oscilloscope_53          | Star Voltage L1-N Sample #53  | Float [32b-LSW] | R   |         | 43733          |



| Register Name          | Description                   | Register Type   | R/W | Default | Address Modbus |
|------------------------|-------------------------------|-----------------|-----|---------|----------------|
| V_L1N_Oscilloscope_54  | Star Voltage L1-N Sample #54  | Float [32b-LSW] | R   |         | 43735          |
| V_L1N_Oscilloscope_55  | Star Voltage L1-N Sample #55  | Float [32b-LSW] | R   |         | 43737          |
| V_L1N_Oscilloscope_56  | Star Voltage L1-N Sample #56  | Float [32b-LSW] | R   |         | 43739          |
| V_L1N_Oscilloscope_57  | Star Voltage L1-N Sample #57  | Float [32b-LSW] | R   |         | 43741          |
| V_L1N_Oscilloscope_58  | Star Voltage L1-N Sample #58  | Float [32b-LSW] | R   |         | 43743          |
| V_L1N_Oscilloscope_59  | Star Voltage L1-N Sample #59  | Float [32b-LSW] | R   |         | 43745          |
| V_L1N_Oscilloscope_60  | Star Voltage L1-N Sample #60  | Float [32b-LSW] | R   |         | 43747          |
| V_L1N_Oscilloscope_61  | Star Voltage L1-N Sample #61  | Float [32b-LSW] | R   |         | 43749          |
| V_L1N_Oscilloscope_62  | Star Voltage L1-N Sample #62  | Float [32b-LSW] | R   |         | 43751          |
| V_L1N_Oscilloscope_63  | Star Voltage L1-N Sample #63  | Float [32b-LSW] | R   |         | 43753          |
| V_L1N_Oscilloscope_64  | Star Voltage L1-N Sample #64  | Float [32b-LSW] | R   |         | 43755          |
| V_L1N_Oscilloscope_65  | Star Voltage L1-N Sample #65  | Float [32b-LSW] | R   |         | 43757          |
| V_L1N_Oscilloscope_66  | Star Voltage L1-N Sample #66  | Float [32b-LSW] | R   |         | 43759          |
| V_L1N_Oscilloscope_67  | Star Voltage L1-N Sample #67  | Float [32b-LSW] | R   |         | 43761          |
| V_L1N_Oscilloscope_68  | Star Voltage L1-N Sample #68  | Float [32b-LSW] | R   |         | 43763          |
| V_L1N_Oscilloscope_69  | Star Voltage L1-N Sample #69  | Float [32b-LSW] | R   |         | 43765          |
| V_L1N_Oscilloscope_70  | Star Voltage L1-N Sample #70  | Float [32b-LSW] | R   |         | 43767          |
| V_L1N_Oscilloscope_71  | Star Voltage L1-N Sample #71  | Float [32b-LSW] | R   |         | 43769          |
| V_L1N_Oscilloscope_72  | Star Voltage L1-N Sample #72  | Float [32b-LSW] | R   |         | 43771          |
| V_L1N_Oscilloscope_73  | Star Voltage L1-N Sample #73  | Float [32b-LSW] | R   |         | 43773          |
| V_L1N_Oscilloscope_74  | Star Voltage L1-N Sample #74  | Float [32b-LSW] | R   |         | 43775          |
| V_L1N_Oscilloscope_75  | Star Voltage L1-N Sample #75  | Float [32b-LSW] | R   |         | 43777          |
| V_L1N_Oscilloscope_76  | Star Voltage L1-N Sample #76  | Float [32b-LSW] | R   |         | 43779          |
| V_L1N_Oscilloscope_77  | Star Voltage L1-N Sample #77  | Float [32b-LSW] | R   |         | 43781          |
| V_L1N_Oscilloscope_78  | Star Voltage L1-N Sample #78  | Float [32b-LSW] | R   |         | 43783          |
| V_L1N_Oscilloscope_79  | Star Voltage L1-N Sample #79  | Float [32b-LSW] | R   |         | 43785          |
| V_L1N_Oscilloscope_80  | Star Voltage L1-N Sample #80  | Float [32b-LSW] | R   |         | 43787          |
| V_L1N_Oscilloscope_81  | Star Voltage L1-N Sample #81  | Float [32b-LSW] | R   |         | 43789          |
| V_L1N_Oscilloscope_82  | Star Voltage L1-N Sample #82  | Float [32b-LSW] | R   |         | 43791          |
| V_L1N_Oscilloscope_83  | Star Voltage L1-N Sample #83  | Float [32b-LSW] | R   |         | 43793          |
| V_L1N_Oscilloscope_84  | Star Voltage L1-N Sample #84  | Float [32b-LSW] | R   |         | 43795          |
| V_L1N_Oscilloscope_85  | Star Voltage L1-N Sample #85  | Float [32b-LSW] | R   |         | 43797          |
| V_L1N_Oscilloscope_86  | Star Voltage L1-N Sample #86  | Float [32b-LSW] | R   |         | 43799          |
| V_L1N_Oscilloscope_87  | Star Voltage L1-N Sample #87  | Float [32b-LSW] | R   |         | 43801          |
| V_L1N_Oscilloscope_88  | Star Voltage L1-N Sample #88  | Float [32b-LSW] | R   |         | 43803          |
| V_L1N_Oscilloscope_89  | Star Voltage L1-N Sample #89  | Float [32b-LSW] | R   |         | 43805          |
| V_L1N_Oscilloscope_90  | Star Voltage L1-N Sample #90  | Float [32b-LSW] | R   |         | 43807          |
| V_L1N_Oscilloscope_91  | Star Voltage L1-N Sample #91  | Float [32b-LSW] | R   |         | 43809          |
| V_L1N_Oscilloscope_92  | Star Voltage L1-N Sample #92  | Float [32b-LSW] | R   |         | 43811          |
| V_L1N_Oscilloscope_93  | Star Voltage L1-N Sample #93  | Float [32b-LSW] | R   |         | 43813          |
| V_L1N_Oscilloscope_94  | Star Voltage L1-N Sample #94  | Float [32b-LSW] | R   |         | 43815          |
| V_L1N_Oscilloscope_95  | Star Voltage L1-N Sample #95  | Float [32b-LSW] | R   |         | 43817          |
| V_L1N_Oscilloscope_96  | Star Voltage L1-N Sample #96  | Float [32b-LSW] | R   |         | 43819          |
| V_L1N_Oscilloscope_97  | Star Voltage L1-N Sample #97  | Float [32b-LSW] | R   |         | 43821          |
| V_L1N_Oscilloscope_98  | Star Voltage L1-N Sample #98  | Float [32b-LSW] | R   |         | 43823          |
| V_L1N_Oscilloscope_99  | Star Voltage L1-N Sample #99  | Float [32b-LSW] | R   |         | 43825          |
| V_L1N_Oscilloscope_100 | Star Voltage L1-N Sample #100 | Float [32b-LSW] | R   |         | 43827          |
| V_L1N_Oscilloscope_101 | Star Voltage L1-N Sample #101 | Float [32b-LSW] | R   |         | 43829          |
| V_L1N_Oscilloscope_102 | Star Voltage L1-N Sample #102 | Float [32b-LSW] | R   |         | 43831          |
| V_L1N_Oscilloscope_103 | Star Voltage L1-N Sample #103 | Float [32b-LSW] | R   |         | 43833          |
| V_L1N_Oscilloscope_104 | Star Voltage L1-N Sample #104 | Float [32b-LSW] | R   |         | 43835          |
| V_L1N_Oscilloscope_105 | Star Voltage L1-N Sample #105 | Float [32b-LSW] | R   |         | 43837          |
| V_L1N_Oscilloscope_106 | Star Voltage L1-N Sample #106 | Float [32b-LSW] | R   |         | 43839          |
| V_L1N_Oscilloscope_107 | Star Voltage L1-N Sample #107 | Float [32b-LSW] | R   |         | 43841          |
| V_L1N_Oscilloscope_108 | Star Voltage L1-N Sample #108 | Float [32b-LSW] | R   |         | 43843          |
| V_L1N_Oscilloscope_109 | Star Voltage L1-N Sample #109 | Float [32b-LSW] | R   |         | 43845          |
| V_L1N_Oscilloscope_110 | Star Voltage L1-N Sample #110 | Float [32b-LSW] | R   |         | 43847          |
| V_L1N_Oscilloscope_111 | Star Voltage L1-N Sample #111 | Float [32b-LSW] | R   |         | 43849          |
| V_L1N_Oscilloscope_112 | Star Voltage L1-N Sample #112 | Float [32b-LSW] | R   |         | 43851          |
| V_L1N_Oscilloscope_113 | Star Voltage L1-N Sample #113 | Float [32b-LSW] | R   |         | 43853          |
| V_L1N_Oscilloscope_114 | Star Voltage L1-N Sample #114 | Float [32b-LSW] | R   |         | 43855          |
| V_L1N_Oscilloscope_115 | Star Voltage L1-N Sample #115 | Float [32b-LSW] | R   |         | 43857          |
| V_L1N_Oscilloscope_116 | Star Voltage L1-N Sample #116 | Float [32b-LSW] | R   |         | 43859          |





| Register Name          | Description                   | Register Type   | R/W | Default | Address Modbus |
|------------------------|-------------------------------|-----------------|-----|---------|----------------|
| V_L1N_Oscilloscope_117 | Star Voltage L1-N Sample #117 | Float [32b-LSW] | R   |         | 43861          |
| V_L1N_Oscilloscope_118 | Star Voltage L1-N Sample #118 | Float [32b-LSW] | R   |         | 43863          |
| V_L1N_Oscilloscope_119 | Star Voltage L1-N Sample #119 | Float [32b-LSW] | R   |         | 43865          |
| V_L1N_Oscilloscope_120 | Star Voltage L1-N Sample #120 | Float [32b-LSW] | R   |         | 43867          |
| V_L1N_Oscilloscope_121 | Star Voltage L1-N Sample #121 | Float [32b-LSW] | R   |         | 43869          |
| V_L1N_Oscilloscope_122 | Star Voltage L1-N Sample #122 | Float [32b-LSW] | R   |         | 43871          |
| V_L1N_Oscilloscope_123 | Star Voltage L1-N Sample #123 | Float [32b-LSW] | R   |         | 43873          |
| V_L1N_Oscilloscope_124 | Star Voltage L1-N Sample #124 | Float [32b-LSW] | R   |         | 43875          |
| V_L1N_Oscilloscope_125 | Star Voltage L1-N Sample #125 | Float [32b-LSW] | R   |         | 43877          |
| V_L1N_Oscilloscope_126 | Star Voltage L1-N Sample #126 | Float [32b-LSW] | R   |         | 43879          |
| V_L1N_Oscilloscope_127 | Star Voltage L1-N Sample #127 | Float [32b-LSW] | R   |         | 43881          |
| V_L2N_Oscilloscope_0   | Star Voltage L2-N Sample #0   | Float [32b-LSW] | R   |         | 43883          |
| V_L2N_Oscilloscope_1   | Star Voltage L2-N Sample #1   | Float [32b-LSW] | R   |         | 43885          |
| V_L2N_Oscilloscope_2   | Star Voltage L2-N Sample #2   | Float [32b-LSW] | R   |         | 43887          |
| V_L2N_Oscilloscope_3   | Star Voltage L2-N Sample #3   | Float [32b-LSW] | R   |         | 43889          |
| V_L2N_Oscilloscope_4   | Star Voltage L2-N Sample #4   | Float [32b-LSW] | R   |         | 43891          |
| V_L2N_Oscilloscope_5   | Star Voltage L2-N Sample #5   | Float [32b-LSW] | R   |         | 43893          |
| V_L2N_Oscilloscope_6   | Star Voltage L2-N Sample #6   | Float [32b-LSW] | R   |         | 43895          |
| V_L2N_Oscilloscope_7   | Star Voltage L2-N Sample #7   | Float [32b-LSW] | R   |         | 43897          |
| V_L2N_Oscilloscope_8   | Star Voltage L2-N Sample #8   | Float [32b-LSW] | R   |         | 43899          |
| V_L2N_Oscilloscope_9   | Star Voltage L2-N Sample #9   | Float [32b-LSW] | R   |         | 43901          |
| V_L2N_Oscilloscope_10  | Star Voltage L2-N Sample #10  | Float [32b-LSW] | R   |         | 43903          |
| V_L2N_Oscilloscope_11  | Star Voltage L2-N Sample #11  | Float [32b-LSW] | R   |         | 43905          |
| V_L2N_Oscilloscope_12  | Star Voltage L2-N Sample #12  | Float [32b-LSW] | R   |         | 43907          |
| V_L2N_Oscilloscope_13  | Star Voltage L2-N Sample #13  | Float [32b-LSW] | R   |         | 43909          |
| V_L2N_Oscilloscope_14  | Star Voltage L2-N Sample #14  | Float [32b-LSW] | R   |         | 43911          |
| V_L2N_Oscilloscope_15  | Star Voltage L2-N Sample #15  | Float [32b-LSW] | R   |         | 43913          |
| V_L2N_Oscilloscope_16  | Star Voltage L2-N Sample #16  | Float [32b-LSW] | R   |         | 43915          |
| V_L2N_Oscilloscope_17  | Star Voltage L2-N Sample #17  | Float [32b-LSW] | R   |         | 43917          |
| V_L2N_Oscilloscope_18  | Star Voltage L2-N Sample #18  | Float [32b-LSW] | R   |         | 43919          |
| V_L2N_Oscilloscope_19  | Star Voltage L2-N Sample #19  | Float [32b-LSW] | R   |         | 43921          |
| V_L2N_Oscilloscope_20  | Star Voltage L2-N Sample #20  | Float [32b-LSW] | R   |         | 43923          |
| V_L2N_Oscilloscope_21  | Star Voltage L2-N Sample #21  | Float [32b-LSW] | R   |         | 43925          |
| V_L2N_Oscilloscope_22  | Star Voltage L2-N Sample #22  | Float [32b-LSW] | R   |         | 43927          |
| V_L2N_Oscilloscope_23  | Star Voltage L2-N Sample #23  | Float [32b-LSW] | R   |         | 43929          |
| V_L2N_Oscilloscope_24  | Star Voltage L2-N Sample #24  | Float [32b-LSW] | R   |         | 43931          |
| V_L2N_Oscilloscope_25  | Star Voltage L2-N Sample #25  | Float [32b-LSW] | R   |         | 43933          |
| V_L2N_Oscilloscope_26  | Star Voltage L2-N Sample #26  | Float [32b-LSW] | R   |         | 43935          |
| V_L2N_Oscilloscope_27  | Star Voltage L2-N Sample #27  | Float [32b-LSW] | R   |         | 43937          |
| V_L2N_Oscilloscope_28  | Star Voltage L2-N Sample #28  | Float [32b-LSW] | R   |         | 43939          |
| V_L2N_Oscilloscope_29  | Star Voltage L2-N Sample #29  | Float [32b-LSW] | R   |         | 43941          |
| V_L2N_Oscilloscope_30  | Star Voltage L2-N Sample #30  | Float [32b-LSW] | R   |         | 43943          |
| V_L2N_Oscilloscope_31  | Star Voltage L2-N Sample #31  | Float [32b-LSW] | R   |         | 43945          |
| V_L2N_Oscilloscope_32  | Star Voltage L2-N Sample #32  | Float [32b-LSW] | R   |         | 43947          |
| V_L2N_Oscilloscope_33  | Star Voltage L2-N Sample #33  | Float [32b-LSW] | R   |         | 43949          |
| V_L2N_Oscilloscope_34  | Star Voltage L2-N Sample #34  | Float [32b-LSW] | R   |         | 43951          |
| V_L2N_Oscilloscope_35  | Star Voltage L2-N Sample #35  | Float [32b-LSW] | R   |         | 43953          |
| V_L2N_Oscilloscope_36  | Star Voltage L2-N Sample #36  | Float [32b-LSW] | R   |         | 43955          |
| V_L2N_Oscilloscope_37  | Star Voltage L2-N Sample #37  | Float [32b-LSW] | R   |         | 43957          |
| V_L2N_Oscilloscope_38  | Star Voltage L2-N Sample #38  | Float [32b-LSW] | R   |         | 43959          |
| V_L2N_Oscilloscope_39  | Star Voltage L2-N Sample #39  | Float [32b-LSW] | R   |         | 43961          |
| V_L2N_Oscilloscope_40  | Star Voltage L2-N Sample #40  | Float [32b-LSW] | R   |         | 43963          |
| V_L2N_Oscilloscope_41  | Star Voltage L2-N Sample #41  | Float [32b-LSW] | R   |         | 43965          |
| V_L2N_Oscilloscope_42  | Star Voltage L2-N Sample #42  | Float [32b-LSW] | R   |         | 43967          |
| V_L2N_Oscilloscope_43  | Star Voltage L2-N Sample #43  | Float [32b-LSW] | R   |         | 43969          |
| V_L2N_Oscilloscope_44  | Star Voltage L2-N Sample #44  | Float [32b-LSW] | R   |         | 43971          |
| V_L2N_Oscilloscope_45  | Star Voltage L2-N Sample #45  | Float [32b-LSW] | R   |         | 43973          |
| V_L2N_Oscilloscope_46  | Star Voltage L2-N Sample #46  | Float [32b-LSW] | R   |         | 43975          |
| V_L2N_Oscilloscope_47  | Star Voltage L2-N Sample #47  | Float [32b-LSW] | R   |         | 43977          |
| V_L2N_Oscilloscope_48  | Star Voltage L2-N Sample #48  | Float [32b-LSW] | R   |         | 43979          |
| V_L2N_Oscilloscope_49  | Star Voltage L2-N Sample #49  | Float [32b-LSW] | R   |         | 43981          |
| V_L2N_Oscilloscope_50  | Star Voltage L2-N Sample #50  | Float [32b-LSW] | R   |         | 43983          |
| V_L2N_Oscilloscope_51  | Star Voltage L2-N Sample #51  | Float [32b-LSW] | R   |         | 43985          |





| Register Name          | Description                   | Register Type   | R/W | Default | Address Modbus |
|------------------------|-------------------------------|-----------------|-----|---------|----------------|
| V_L2N_Oscilloscope_52  | Star Voltage L2-N Sample #52  | Float [32b-LSW] | R   |         | 43987          |
| V_L2N_Oscilloscope_53  | Star Voltage L2-N Sample #53  | Float [32b-LSW] | R   |         | 43989          |
| V_L2N_Oscilloscope_54  | Star Voltage L2-N Sample #54  | Float [32b-LSW] | R   |         | 43991          |
| V_L2N_Oscilloscope_55  | Star Voltage L2-N Sample #55  | Float [32b-LSW] | R   |         | 43993          |
| V_L2N_Oscilloscope_56  | Star Voltage L2-N Sample #56  | Float [32b-LSW] | R   |         | 43995          |
| V_L2N_Oscilloscope_57  | Star Voltage L2-N Sample #57  | Float [32b-LSW] | R   |         | 43997          |
| V_L2N_Oscilloscope_58  | Star Voltage L2-N Sample #58  | Float [32b-LSW] | R   |         | 43999          |
| V_L2N_Oscilloscope_59  | Star Voltage L2-N Sample #59  | Float [32b-LSW] | R   |         | 44001          |
| V_L2N_Oscilloscope_60  | Star Voltage L2-N Sample #60  | Float [32b-LSW] | R   |         | 44003          |
| V_L2N_Oscilloscope_61  | Star Voltage L2-N Sample #61  | Float [32b-LSW] | R   |         | 44005          |
| V_L2N_Oscilloscope_62  | Star Voltage L2-N Sample #62  | Float [32b-LSW] | R   |         | 44007          |
| V_L2N_Oscilloscope_63  | Star Voltage L2-N Sample #63  | Float [32b-LSW] | R   |         | 44009          |
| V_L2N_Oscilloscope_64  | Star Voltage L2-N Sample #64  | Float [32b-LSW] | R   |         | 44011          |
| V_L2N_Oscilloscope_65  | Star Voltage L2-N Sample #65  | Float [32b-LSW] | R   |         | 44013          |
| V_L2N_Oscilloscope_66  | Star Voltage L2-N Sample #66  | Float [32b-LSW] | R   |         | 44015          |
| V_L2N_Oscilloscope_67  | Star Voltage L2-N Sample #67  | Float [32b-LSW] | R   |         | 44017          |
| V_L2N_Oscilloscope_68  | Star Voltage L2-N Sample #68  | Float [32b-LSW] | R   |         | 44019          |
| V_L2N_Oscilloscope_69  | Star Voltage L2-N Sample #69  | Float [32b-LSW] | R   |         | 44021          |
| V_L2N_Oscilloscope_70  | Star Voltage L2-N Sample #70  | Float [32b-LSW] | R   |         | 44023          |
| V_L2N_Oscilloscope_71  | Star Voltage L2-N Sample #71  | Float [32b-LSW] | R   |         | 44025          |
| V_L2N_Oscilloscope_72  | Star Voltage L2-N Sample #72  | Float [32b-LSW] | R   |         | 44027          |
| V_L2N_Oscilloscope_73  | Star Voltage L2-N Sample #73  | Float [32b-LSW] | R   |         | 44029          |
| V_L2N_Oscilloscope_74  | Star Voltage L2-N Sample #74  | Float [32b-LSW] | R   |         | 44031          |
| V_L2N_Oscilloscope_75  | Star Voltage L2-N Sample #75  | Float [32b-LSW] | R   |         | 44033          |
| V_L2N_Oscilloscope_76  | Star Voltage L2-N Sample #76  | Float [32b-LSW] | R   |         | 44035          |
| V_L2N_Oscilloscope_77  | Star Voltage L2-N Sample #77  | Float [32b-LSW] | R   |         | 44037          |
| V_L2N_Oscilloscope_78  | Star Voltage L2-N Sample #78  | Float [32b-LSW] | R   |         | 44039          |
| V_L2N_Oscilloscope_79  | Star Voltage L2-N Sample #79  | Float [32b-LSW] | R   |         | 44041          |
| V_L2N_Oscilloscope_80  | Star Voltage L2-N Sample #80  | Float [32b-LSW] | R   |         | 44043          |
| V_L2N_Oscilloscope_81  | Star Voltage L2-N Sample #81  | Float [32b-LSW] | R   |         | 44045          |
| V_L2N_Oscilloscope_82  | Star Voltage L2-N Sample #82  | Float [32b-LSW] | R   |         | 44047          |
| V_L2N_Oscilloscope_83  | Star Voltage L2-N Sample #83  | Float [32b-LSW] | R   |         | 44049          |
| V_L2N_Oscilloscope_84  | Star Voltage L2-N Sample #84  | Float [32b-LSW] | R   |         | 44051          |
| V_L2N_Oscilloscope_85  | Star Voltage L2-N Sample #85  | Float [32b-LSW] | R   |         | 44053          |
| V_L2N_Oscilloscope_86  | Star Voltage L2-N Sample #86  | Float [32b-LSW] | R   |         | 44055          |
| V_L2N_Oscilloscope_87  | Star Voltage L2-N Sample #87  | Float [32b-LSW] | R   |         | 44057          |
| V_L2N_Oscilloscope_88  | Star Voltage L2-N Sample #88  | Float [32b-LSW] | R   |         | 44059          |
| V_L2N_Oscilloscope_89  | Star Voltage L2-N Sample #89  | Float [32b-LSW] | R   |         | 44061          |
| V_L2N_Oscilloscope_90  | Star Voltage L2-N Sample #90  | Float [32b-LSW] | R   |         | 44063          |
| V_L2N_Oscilloscope_91  | Star Voltage L2-N Sample #91  | Float [32b-LSW] | R   |         | 44065          |
| V_L2N_Oscilloscope_92  | Star Voltage L2-N Sample #92  | Float [32b-LSW] | R   |         | 44067          |
| V_L2N_Oscilloscope_93  | Star Voltage L2-N Sample #93  | Float [32b-LSW] | R   |         | 44069          |
| V_L2N_Oscilloscope_94  | Star Voltage L2-N Sample #94  | Float [32b-LSW] | R   |         | 44071          |
| V_L2N_Oscilloscope_95  | Star Voltage L2-N Sample #95  | Float [32b-LSW] | R   |         | 44073          |
| V_L2N_Oscilloscope_96  | Star Voltage L2-N Sample #96  | Float [32b-LSW] | R   |         | 44075          |
| V_L2N_Oscilloscope_97  | Star Voltage L2-N Sample #97  | Float [32b-LSW] | R   |         | 44077          |
| V_L2N_Oscilloscope_98  | Star Voltage L2-N Sample #98  | Float [32b-LSW] | R   |         | 44079          |
| V_L2N_Oscilloscope_99  | Star Voltage L2-N Sample #99  | Float [32b-LSW] | R   |         | 44081          |
| V_L2N_Oscilloscope_100 | Star Voltage L2-N Sample #100 | Float [32b-LSW] | R   |         | 44083          |
| V_L2N_Oscilloscope_101 | Star Voltage L2-N Sample #101 | Float [32b-LSW] | R   |         | 44085          |
| V_L2N_Oscilloscope_102 | Star Voltage L2-N Sample #102 | Float [32b-LSW] | R   |         | 44087          |
| V_L2N_Oscilloscope_103 | Star Voltage L2-N Sample #103 | Float [32b-LSW] | R   |         | 44089          |
| V_L2N_Oscilloscope_104 | Star Voltage L2-N Sample #104 | Float [32b-LSW] | R   |         | 44091          |
| V_L2N_Oscilloscope_105 | Star Voltage L2-N Sample #105 | Float [32b-LSW] | R   |         | 44093          |
| V_L2N_Oscilloscope_106 | Star Voltage L2-N Sample #106 | Float [32b-LSW] | R   |         | 44095          |
| V_L2N_Oscilloscope_107 | Star Voltage L2-N Sample #107 | Float [32b-LSW] | R   |         | 44097          |
| V_L2N_Oscilloscope_108 | Star Voltage L2-N Sample #108 | Float [32b-LSW] | R   |         | 44099          |
| V_L2N_Oscilloscope_109 | Star Voltage L2-N Sample #109 | Float [32b-LSW] | R   |         | 44101          |
| V_L2N_Oscilloscope_110 | Star Voltage L2-N Sample #110 | Float [32b-LSW] | R   |         | 44103          |
| V_L2N_Oscilloscope_111 | Star Voltage L2-N Sample #111 | Float [32b-LSW] | R   |         | 44105          |
| V_L2N_Oscilloscope_112 | Star Voltage L2-N Sample #112 | Float [32b-LSW] | R   |         | 44107          |
| V_L2N_Oscilloscope_113 | Star Voltage L2-N Sample #113 | Float [32b-LSW] | R   |         | 44109          |
| V_L2N_Oscilloscope_114 | Star Voltage L2-N Sample #114 | Float [32b-LSW] | R   |         | 44111          |



| Register Name          | Description                   | Register Type   | R/W | Default | Address Modbus |
|------------------------|-------------------------------|-----------------|-----|---------|----------------|
| V_L2N_Oscilloscope_115 | Star Voltage L2-N Sample #115 | Float [32b-LSW] | R   |         | 44113          |
| V_L2N_Oscilloscope_116 | Star Voltage L2-N Sample #116 | Float [32b-LSW] | R   |         | 44115          |
| V_L2N_Oscilloscope_117 | Star Voltage L2-N Sample #117 | Float [32b-LSW] | R   |         | 44117          |
| V_L2N_Oscilloscope_118 | Star Voltage L2-N Sample #118 | Float [32b-LSW] | R   |         | 44119          |
| V_L2N_Oscilloscope_119 | Star Voltage L2-N Sample #119 | Float [32b-LSW] | R   |         | 44121          |
| V_L2N_Oscilloscope_120 | Star Voltage L2-N Sample #120 | Float [32b-LSW] | R   |         | 44123          |
| V_L2N_Oscilloscope_121 | Star Voltage L2-N Sample #121 | Float [32b-LSW] | R   |         | 44125          |
| V_L2N_Oscilloscope_122 | Star Voltage L2-N Sample #122 | Float [32b-LSW] | R   |         | 44127          |
| V_L2N_Oscilloscope_123 | Star Voltage L2-N Sample #123 | Float [32b-LSW] | R   |         | 44129          |
| V_L2N_Oscilloscope_124 | Star Voltage L2-N Sample #124 | Float [32b-LSW] | R   |         | 44131          |
| V_L2N_Oscilloscope_125 | Star Voltage L2-N Sample #125 | Float [32b-LSW] | R   |         | 44133          |
| V_L2N_Oscilloscope_126 | Star Voltage L2-N Sample #126 | Float [32b-LSW] | R   |         | 44135          |
| V_L2N_Oscilloscope_127 | Star Voltage L2-N Sample #127 | Float [32b-LSW] | R   |         | 44137          |
| V_L3N_Oscilloscope_0   | Star Voltage L3-N Sample #0   | Float [32b-LSW] | R   |         | 44139          |
| V_L3N_Oscilloscope_1   | Star Voltage L3-N Sample #1   | Float [32b-LSW] | R   |         | 44141          |
| V_L3N_Oscilloscope_2   | Star Voltage L3-N Sample #2   | Float [32b-LSW] | R   |         | 44143          |
| V_L3N_Oscilloscope_3   | Star Voltage L3-N Sample #3   | Float [32b-LSW] | R   |         | 44145          |
| V_L3N_Oscilloscope_4   | Star Voltage L3-N Sample #4   | Float [32b-LSW] | R   |         | 44147          |
| V_L3N_Oscilloscope_5   | Star Voltage L3-N Sample #5   | Float [32b-LSW] | R   |         | 44149          |
| V_L3N_Oscilloscope_6   | Star Voltage L3-N Sample #6   | Float [32b-LSW] | R   |         | 44151          |
| V_L3N_Oscilloscope_7   | Star Voltage L3-N Sample #7   | Float [32b-LSW] | R   |         | 44153          |
| V_L3N_Oscilloscope_8   | Star Voltage L3-N Sample #8   | Float [32b-LSW] | R   |         | 44155          |
| V_L3N_Oscilloscope_9   | Star Voltage L3-N Sample #9   | Float [32b-LSW] | R   |         | 44157          |
| V_L3N_Oscilloscope_10  | Star Voltage L3-N Sample #10  | Float [32b-LSW] | R   |         | 44159          |
| V_L3N_Oscilloscope_11  | Star Voltage L3-N Sample #11  | Float [32b-LSW] | R   |         | 44161          |
| V_L3N_Oscilloscope_12  | Star Voltage L3-N Sample #12  | Float [32b-LSW] | R   |         | 44163          |
| V_L3N_Oscilloscope_13  | Star Voltage L3-N Sample #13  | Float [32b-LSW] | R   |         | 44165          |
| V_L3N_Oscilloscope_14  | Star Voltage L3-N Sample #14  | Float [32b-LSW] | R   |         | 44167          |
| V_L3N_Oscilloscope_15  | Star Voltage L3-N Sample #15  | Float [32b-LSW] | R   |         | 44169          |
| V_L3N_Oscilloscope_16  | Star Voltage L3-N Sample #16  | Float [32b-LSW] | R   |         | 44171          |
| V_L3N_Oscilloscope_17  | Star Voltage L3-N Sample #17  | Float [32b-LSW] | R   |         | 44173          |
| V_L3N_Oscilloscope_18  | Star Voltage L3-N Sample #18  | Float [32b-LSW] | R   |         | 44175          |
| V_L3N_Oscilloscope_19  | Star Voltage L3-N Sample #19  | Float [32b-LSW] | R   |         | 44177          |
| V_L3N_Oscilloscope_20  | Star Voltage L3-N Sample #20  | Float [32b-LSW] | R   |         | 44179          |
| V_L3N_Oscilloscope_21  | Star Voltage L3-N Sample #21  | Float [32b-LSW] | R   |         | 44181          |
| V_L3N_Oscilloscope_22  | Star Voltage L3-N Sample #22  | Float [32b-LSW] | R   |         | 44183          |
| V_L3N_Oscilloscope_23  | Star Voltage L3-N Sample #23  | Float [32b-LSW] | R   |         | 44185          |
| V_L3N_Oscilloscope_24  | Star Voltage L3-N Sample #24  | Float [32b-LSW] | R   |         | 44187          |
| V_L3N_Oscilloscope_25  | Star Voltage L3-N Sample #25  | Float [32b-LSW] | R   |         | 44189          |
| V_L3N_Oscilloscope_26  | Star Voltage L3-N Sample #26  | Float [32b-LSW] | R   |         | 44191          |
| V_L3N_Oscilloscope_27  | Star Voltage L3-N Sample #27  | Float [32b-LSW] | R   |         | 44193          |
| V_L3N_Oscilloscope_28  | Star Voltage L3-N Sample #28  | Float [32b-LSW] | R   |         | 44195          |
| V_L3N_Oscilloscope_29  | Star Voltage L3-N Sample #29  | Float [32b-LSW] | R   |         | 44197          |
| V_L3N_Oscilloscope_30  | Star Voltage L3-N Sample #30  | Float [32b-LSW] | R   |         | 44199          |
| V_L3N_Oscilloscope_31  | Star Voltage L3-N Sample #31  | Float [32b-LSW] | R   |         | 44201          |
| V_L3N_Oscilloscope_32  | Star Voltage L3-N Sample #32  | Float [32b-LSW] | R   |         | 44203          |
| V_L3N_Oscilloscope_33  | Star Voltage L3-N Sample #33  | Float [32b-LSW] | R   |         | 44205          |
| V_L3N_Oscilloscope_34  | Star Voltage L3-N Sample #34  | Float [32b-LSW] | R   |         | 44207          |
| V_L3N_Oscilloscope_35  | Star Voltage L3-N Sample #35  | Float [32b-LSW] | R   |         | 44209          |
| V_L3N_Oscilloscope_36  | Star Voltage L3-N Sample #36  | Float [32b-LSW] | R   |         | 44211          |
| V_L3N_Oscilloscope_37  | Star Voltage L3-N Sample #37  | Float [32b-LSW] | R   |         | 44213          |
| V_L3N_Oscilloscope_38  | Star Voltage L3-N Sample #38  | Float [32b-LSW] | R   |         | 44215          |
| V_L3N_Oscilloscope_39  | Star Voltage L3-N Sample #39  | Float [32b-LSW] | R   |         | 44217          |
| V_L3N_Oscilloscope_40  | Star Voltage L3-N Sample #40  | Float [32b-LSW] | R   |         | 44219          |
| V_L3N_Oscilloscope_41  | Star Voltage L3-N Sample #41  | Float [32b-LSW] | R   |         | 44221          |
| V_L3N_Oscilloscope_42  | Star Voltage L3-N Sample #42  | Float [32b-LSW] | R   |         | 44223          |
| V_L3N_Oscilloscope_43  | Star Voltage L3-N Sample #43  | Float [32b-LSW] | R   |         | 44225          |
| V_L3N_Oscilloscope_44  | Star Voltage L3-N Sample #44  | Float [32b-LSW] | R   |         | 44227          |
| V_L3N_Oscilloscope_45  | Star Voltage L3-N Sample #45  | Float [32b-LSW] | R   |         | 44229          |
| V_L3N_Oscilloscope_46  | Star Voltage L3-N Sample #46  | Float [32b-LSW] | R   |         | 44231          |
| V_L3N_Oscilloscope_47  | Star Voltage L3-N Sample #47  | Float [32b-LSW] | R   |         | 44233          |
| V_L3N_Oscilloscope_48  | Star Voltage L3-N Sample #48  | Float [32b-LSW] | R   |         | 44235          |
| V_L3N_Oscilloscope_49  | Star Voltage L3-N Sample #49  | Float [32b-LSW] | R   |         | 44237          |



| Register Name          | Description                   | Register Type   | R/W | Default | Address Modbus |
|------------------------|-------------------------------|-----------------|-----|---------|----------------|
| V_L3N_Oscilloscope_50  | Star Voltage L3-N Sample #50  | Float [32b-LSW] | R   |         | 44239          |
| V_L3N_Oscilloscope_51  | Star Voltage L3-N Sample #51  | Float [32b-LSW] | R   |         | 44241          |
| V_L3N_Oscilloscope_52  | Star Voltage L3-N Sample #52  | Float [32b-LSW] | R   |         | 44243          |
| V_L3N_Oscilloscope_53  | Star Voltage L3-N Sample #53  | Float [32b-LSW] | R   |         | 44245          |
| V_L3N_Oscilloscope_54  | Star Voltage L3-N Sample #54  | Float [32b-LSW] | R   |         | 44247          |
| V_L3N_Oscilloscope_55  | Star Voltage L3-N Sample #55  | Float [32b-LSW] | R   |         | 44249          |
| V_L3N_Oscilloscope_56  | Star Voltage L3-N Sample #56  | Float [32b-LSW] | R   |         | 44251          |
| V_L3N_Oscilloscope_57  | Star Voltage L3-N Sample #57  | Float [32b-LSW] | R   |         | 44253          |
| V_L3N_Oscilloscope_58  | Star Voltage L3-N Sample #58  | Float [32b-LSW] | R   |         | 44255          |
| V_L3N_Oscilloscope_59  | Star Voltage L3-N Sample #59  | Float [32b-LSW] | R   |         | 44257          |
| V_L3N_Oscilloscope_60  | Star Voltage L3-N Sample #60  | Float [32b-LSW] | R   |         | 44259          |
| V_L3N_Oscilloscope_61  | Star Voltage L3-N Sample #61  | Float [32b-LSW] | R   |         | 44261          |
| V_L3N_Oscilloscope_62  | Star Voltage L3-N Sample #62  | Float [32b-LSW] | R   |         | 44263          |
| V_L3N_Oscilloscope_63  | Star Voltage L3-N Sample #63  | Float [32b-LSW] | R   |         | 44265          |
| V_L3N_Oscilloscope_64  | Star Voltage L3-N Sample #64  | Float [32b-LSW] | R   |         | 44267          |
| V_L3N_Oscilloscope_65  | Star Voltage L3-N Sample #65  | Float [32b-LSW] | R   |         | 44269          |
| V_L3N_Oscilloscope_66  | Star Voltage L3-N Sample #66  | Float [32b-LSW] | R   |         | 44271          |
| V_L3N_Oscilloscope_67  | Star Voltage L3-N Sample #67  | Float [32b-LSW] | R   |         | 44273          |
| V_L3N_Oscilloscope_68  | Star Voltage L3-N Sample #68  | Float [32b-LSW] | R   |         | 44275          |
| V_L3N_Oscilloscope_69  | Star Voltage L3-N Sample #69  | Float [32b-LSW] | R   |         | 44277          |
| V_L3N_Oscilloscope_70  | Star Voltage L3-N Sample #70  | Float [32b-LSW] | R   |         | 44279          |
| V_L3N_Oscilloscope_71  | Star Voltage L3-N Sample #71  | Float [32b-LSW] | R   |         | 44281          |
| V_L3N_Oscilloscope_72  | Star Voltage L3-N Sample #72  | Float [32b-LSW] | R   |         | 44283          |
| V_L3N_Oscilloscope_73  | Star Voltage L3-N Sample #73  | Float [32b-LSW] | R   |         | 44285          |
| V_L3N_Oscilloscope_74  | Star Voltage L3-N Sample #74  | Float [32b-LSW] | R   |         | 44287          |
| V_L3N_Oscilloscope_75  | Star Voltage L3-N Sample #75  | Float [32b-LSW] | R   |         | 44289          |
| V_L3N_Oscilloscope_76  | Star Voltage L3-N Sample #76  | Float [32b-LSW] | R   |         | 44291          |
| V_L3N_Oscilloscope_77  | Star Voltage L3-N Sample #77  | Float [32b-LSW] | R   |         | 44293          |
| V_L3N_Oscilloscope_78  | Star Voltage L3-N Sample #78  | Float [32b-LSW] | R   |         | 44295          |
| V_L3N_Oscilloscope_79  | Star Voltage L3-N Sample #79  | Float [32b-LSW] | R   |         | 44297          |
| V_L3N_Oscilloscope_80  | Star Voltage L3-N Sample #80  | Float [32b-LSW] | R   |         | 44299          |
| V_L3N_Oscilloscope_81  | Star Voltage L3-N Sample #81  | Float [32b-LSW] | R   |         | 44301          |
| V_L3N_Oscilloscope_82  | Star Voltage L3-N Sample #82  | Float [32b-LSW] | R   |         | 44303          |
| V_L3N_Oscilloscope_83  | Star Voltage L3-N Sample #83  | Float [32b-LSW] | R   |         | 44305          |
| V_L3N_Oscilloscope_84  | Star Voltage L3-N Sample #84  | Float [32b-LSW] | R   |         | 44307          |
| V_L3N_Oscilloscope_85  | Star Voltage L3-N Sample #85  | Float [32b-LSW] | R   |         | 44309          |
| V_L3N_Oscilloscope_86  | Star Voltage L3-N Sample #86  | Float [32b-LSW] | R   |         | 44311          |
| V_L3N_Oscilloscope_87  | Star Voltage L3-N Sample #87  | Float [32b-LSW] | R   |         | 44313          |
| V_L3N_Oscilloscope_88  | Star Voltage L3-N Sample #88  | Float [32b-LSW] | R   |         | 44315          |
| V_L3N_Oscilloscope_89  | Star Voltage L3-N Sample #89  | Float [32b-LSW] | R   |         | 44317          |
| V_L3N_Oscilloscope_90  | Star Voltage L3-N Sample #90  | Float [32b-LSW] | R   |         | 44319          |
| V_L3N_Oscilloscope_91  | Star Voltage L3-N Sample #91  | Float [32b-LSW] | R   |         | 44321          |
| V_L3N_Oscilloscope_92  | Star Voltage L3-N Sample #92  | Float [32b-LSW] | R   |         | 44323          |
| V_L3N_Oscilloscope_93  | Star Voltage L3-N Sample #93  | Float [32b-LSW] | R   |         | 44325          |
| V_L3N_Oscilloscope_94  | Star Voltage L3-N Sample #94  | Float [32b-LSW] | R   |         | 44327          |
| V_L3N_Oscilloscope_95  | Star Voltage L3-N Sample #95  | Float [32b-LSW] | R   |         | 44329          |
| V_L3N_Oscilloscope_96  | Star Voltage L3-N Sample #96  | Float [32b-LSW] | R   |         | 44331          |
| V_L3N_Oscilloscope_97  | Star Voltage L3-N Sample #97  | Float [32b-LSW] | R   |         | 44333          |
| V_L3N_Oscilloscope_98  | Star Voltage L3-N Sample #98  | Float [32b-LSW] | R   |         | 44335          |
| V_L3N_Oscilloscope_99  | Star Voltage L3-N Sample #99  | Float [32b-LSW] | R   |         | 44337          |
| V_L3N_Oscilloscope_100 | Star Voltage L3-N Sample #100 | Float [32b-LSW] | R   |         | 44339          |
| V_L3N_Oscilloscope_101 | Star Voltage L3-N Sample #101 | Float [32b-LSW] | R   |         | 44341          |
| V_L3N_Oscilloscope_102 | Star Voltage L3-N Sample #102 | Float [32b-LSW] | R   |         | 44343          |
| V_L3N_Oscilloscope_103 | Star Voltage L3-N Sample #103 | Float [32b-LSW] | R   |         | 44345          |
| V_L3N_Oscilloscope_104 | Star Voltage L3-N Sample #104 | Float [32b-LSW] | R   |         | 44347          |
| V_L3N_Oscilloscope_105 | Star Voltage L3-N Sample #105 | Float [32b-LSW] | R   |         | 44349          |
| V_L3N_Oscilloscope_106 | Star Voltage L3-N Sample #106 | Float [32b-LSW] | R   |         | 44351          |
| V_L3N_Oscilloscope_107 | Star Voltage L3-N Sample #107 | Float [32b-LSW] | R   |         | 44353          |
| V_L3N_Oscilloscope_108 | Star Voltage L3-N Sample #108 | Float [32b-LSW] | R   |         | 44355          |
| V_L3N_Oscilloscope_109 | Star Voltage L3-N Sample #109 | Float [32b-LSW] | R   |         | 44357          |
| V_L3N_Oscilloscope_110 | Star Voltage L3-N Sample #110 | Float [32b-LSW] | R   |         | 44359          |
| V_L3N_Oscilloscope_111 | Star Voltage L3-N Sample #111 | Float [32b-LSW] | R   |         | 44361          |
| V_L3N_Oscilloscope_112 | Star Voltage L3-N Sample #112 | Float [32b-LSW] | R   |         | 44363          |



| Register Name          | Description                   | Register Type   | R/W | Default | Address Modbus |
|------------------------|-------------------------------|-----------------|-----|---------|----------------|
| V_L3N_Oscilloscope_113 | Star Voltage L3-N Sample #113 | Float [32b-LSW] | R   |         | 44365          |
| V_L3N_Oscilloscope_114 | Star Voltage L3-N Sample #114 | Float [32b-LSW] | R   |         | 44367          |
| V_L3N_Oscilloscope_115 | Star Voltage L3-N Sample #115 | Float [32b-LSW] | R   |         | 44369          |
| V_L3N_Oscilloscope_116 | Star Voltage L3-N Sample #116 | Float [32b-LSW] | R   |         | 44371          |
| V_L3N_Oscilloscope_117 | Star Voltage L3-N Sample #117 | Float [32b-LSW] | R   |         | 44373          |
| V_L3N_Oscilloscope_118 | Star Voltage L3-N Sample #118 | Float [32b-LSW] | R   |         | 44375          |
| V_L3N_Oscilloscope_119 | Star Voltage L3-N Sample #119 | Float [32b-LSW] | R   |         | 44377          |
| V_L3N_Oscilloscope_120 | Star Voltage L3-N Sample #120 | Float [32b-LSW] | R   |         | 44379          |
| V_L3N_Oscilloscope_121 | Star Voltage L3-N Sample #121 | Float [32b-LSW] | R   |         | 44381          |
| V_L3N_Oscilloscope_122 | Star Voltage L3-N Sample #122 | Float [32b-LSW] | R   |         | 44383          |
| V_L3N_Oscilloscope_123 | Star Voltage L3-N Sample #123 | Float [32b-LSW] | R   |         | 44385          |
| V_L3N_Oscilloscope_124 | Star Voltage L3-N Sample #124 | Float [32b-LSW] | R   |         | 44387          |
| V_L3N_Oscilloscope_125 | Star Voltage L3-N Sample #125 | Float [32b-LSW] | R   |         | 44389          |
| V_L3N_Oscilloscope_126 | Star Voltage L3-N Sample #126 | Float [32b-LSW] | R   |         | 44391          |
| V_L3N_Oscilloscope_127 | Star Voltage L3-N Sample #127 | Float [32b-LSW] | R   |         | 44393          |
| V_L12_Oscilloscope_0   | Line Voltage L1-L2 Sample #0  | Float [32b-LSW] | R   |         | 44395          |
| V_L12_Oscilloscope_1   | Line Voltage L1-L2 Sample #1  | Float [32b-LSW] | R   |         | 44397          |
| V_L12_Oscilloscope_2   | Line Voltage L1-L2 Sample #2  | Float [32b-LSW] | R   |         | 44399          |
| V_L12_Oscilloscope_3   | Line Voltage L1-L2 Sample #3  | Float [32b-LSW] | R   |         | 44401          |
| V_L12_Oscilloscope_4   | Line Voltage L1-L2 Sample #4  | Float [32b-LSW] | R   |         | 44403          |
| V_L12_Oscilloscope_5   | Line Voltage L1-L2 Sample #5  | Float [32b-LSW] | R   |         | 44405          |
| V_L12_Oscilloscope_6   | Line Voltage L1-L2 Sample #6  | Float [32b-LSW] | R   |         | 44407          |
| V_L12_Oscilloscope_7   | Line Voltage L1-L2 Sample #7  | Float [32b-LSW] | R   |         | 44409          |
| V_L12_Oscilloscope_8   | Line Voltage L1-L2 Sample #8  | Float [32b-LSW] | R   |         | 44411          |
| V_L12_Oscilloscope_9   | Line Voltage L1-L2 Sample #9  | Float [32b-LSW] | R   |         | 44413          |
| V_L12_Oscilloscope_10  | Line Voltage L1-L2 Sample #10 | Float [32b-LSW] | R   |         | 44415          |
| V_L12_Oscilloscope_11  | Line Voltage L1-L2 Sample #11 | Float [32b-LSW] | R   |         | 44417          |
| V_L12_Oscilloscope_12  | Line Voltage L1-L2 Sample #12 | Float [32b-LSW] | R   |         | 44419          |
| V_L12_Oscilloscope_13  | Line Voltage L1-L2 Sample #13 | Float [32b-LSW] | R   |         | 44421          |
| V_L12_Oscilloscope_14  | Line Voltage L1-L2 Sample #14 | Float [32b-LSW] | R   |         | 44423          |
| V_L12_Oscilloscope_15  | Line Voltage L1-L2 Sample #15 | Float [32b-LSW] | R   |         | 44425          |
| V_L12_Oscilloscope_16  | Line Voltage L1-L2 Sample #16 | Float [32b-LSW] | R   |         | 44427          |
| V_L12_Oscilloscope_17  | Line Voltage L1-L2 Sample #17 | Float [32b-LSW] | R   |         | 44429          |
| V_L12_Oscilloscope_18  | Line Voltage L1-L2 Sample #18 | Float [32b-LSW] | R   |         | 44431          |
| V_L12_Oscilloscope_19  | Line Voltage L1-L2 Sample #19 | Float [32b-LSW] | R   |         | 44433          |
| V_L12_Oscilloscope_20  | Line Voltage L1-L2 Sample #20 | Float [32b-LSW] | R   |         | 44435          |
| V_L12_Oscilloscope_21  | Line Voltage L1-L2 Sample #21 | Float [32b-LSW] | R   |         | 44437          |
| V_L12_Oscilloscope_22  | Line Voltage L1-L2 Sample #22 | Float [32b-LSW] | R   |         | 44439          |
| V_L12_Oscilloscope_23  | Line Voltage L1-L2 Sample #23 | Float [32b-LSW] | R   |         | 44441          |
| V_L12_Oscilloscope_24  | Line Voltage L1-L2 Sample #24 | Float [32b-LSW] | R   |         | 44443          |
| V_L12_Oscilloscope_25  | Line Voltage L1-L2 Sample #25 | Float [32b-LSW] | R   |         | 44445          |
| V_L12_Oscilloscope_26  | Line Voltage L1-L2 Sample #26 | Float [32b-LSW] | R   |         | 44447          |
| V_L12_Oscilloscope_27  | Line Voltage L1-L2 Sample #27 | Float [32b-LSW] | R   |         | 44449          |
| V_L12_Oscilloscope_28  | Line Voltage L1-L2 Sample #28 | Float [32b-LSW] | R   |         | 44451          |
| V_L12_Oscilloscope_29  | Line Voltage L1-L2 Sample #29 | Float [32b-LSW] | R   |         | 44453          |
| V_L12_Oscilloscope_30  | Line Voltage L1-L2 Sample #30 | Float [32b-LSW] | R   |         | 44455          |
| V_L12_Oscilloscope_31  | Line Voltage L1-L2 Sample #31 | Float [32b-LSW] | R   |         | 44457          |
| V_L12_Oscilloscope_32  | Line Voltage L1-L2 Sample #32 | Float [32b-LSW] | R   |         | 44459          |
| V_L12_Oscilloscope_33  | Line Voltage L1-L2 Sample #33 | Float [32b-LSW] | R   |         | 44461          |
| V_L12_Oscilloscope_34  | Line Voltage L1-L2 Sample #34 | Float [32b-LSW] | R   |         | 44463          |
| V_L12_Oscilloscope_35  | Line Voltage L1-L2 Sample #35 | Float [32b-LSW] | R   |         | 44465          |
| V_L12_Oscilloscope_36  | Line Voltage L1-L2 Sample #36 | Float [32b-LSW] | R   |         | 44467          |
| V_L12_Oscilloscope_37  | Line Voltage L1-L2 Sample #37 | Float [32b-LSW] | R   |         | 44469          |
| V_L12_Oscilloscope_38  | Line Voltage L1-L2 Sample #38 | Float [32b-LSW] | R   |         | 44471          |
| V_L12_Oscilloscope_39  | Line Voltage L1-L2 Sample #39 | Float [32b-LSW] | R   |         | 44473          |
| V_L12_Oscilloscope_40  | Line Voltage L1-L2 Sample #40 | Float [32b-LSW] | R   |         | 44475          |
| V_L12_Oscilloscope_41  | Line Voltage L1-L2 Sample #41 | Float [32b-LSW] | R   |         | 44477          |
| V_L12_Oscilloscope_42  | Line Voltage L1-L2 Sample #42 | Float [32b-LSW] | R   |         | 44479          |
| V_L12_Oscilloscope_43  | Line Voltage L1-L2 Sample #43 | Float [32b-LSW] | R   |         | 44481          |
| V_L12_Oscilloscope_44  | Line Voltage L1-L2 Sample #44 | Float [32b-LSW] | R   |         | 44483          |
| V_L12_Oscilloscope_45  | Line Voltage L1-L2 Sample #45 | Float [32b-LSW] | R   |         | 44485          |
| V_L12_Oscilloscope_46  | Line Voltage L1-L2 Sample #46 | Float [32b-LSW] | R   |         | 44487          |
| V_L12_Oscilloscope_47  | Line Voltage L1-L2 Sample #47 | Float [32b-LSW] | R   |         | 44489          |





| Register Name          | Description                    | Register Type   | R/W | Default | Address Modbus |
|------------------------|--------------------------------|-----------------|-----|---------|----------------|
| V_L12_Oscilloscope_48  | Line Voltage L1-L2 Sample #48  | Float [32b-LSW] | R   |         | 44491          |
| V_L12_Oscilloscope_49  | Line Voltage L1-L2 Sample #49  | Float [32b-LSW] | R   |         | 44493          |
| V_L12_Oscilloscope_50  | Line Voltage L1-L2 Sample #50  | Float [32b-LSW] | R   |         | 44495          |
| V_L12_Oscilloscope_51  | Line Voltage L1-L2 Sample #51  | Float [32b-LSW] | R   |         | 44497          |
| V_L12_Oscilloscope_52  | Line Voltage L1-L2 Sample #52  | Float [32b-LSW] | R   |         | 44499          |
| V_L12_Oscilloscope_53  | Line Voltage L1-L2 Sample #53  | Float [32b-LSW] | R   |         | 44501          |
| V_L12_Oscilloscope_54  | Line Voltage L1-L2 Sample #54  | Float [32b-LSW] | R   |         | 44503          |
| V_L12_Oscilloscope_55  | Line Voltage L1-L2 Sample #55  | Float [32b-LSW] | R   |         | 44505          |
| V_L12_Oscilloscope_56  | Line Voltage L1-L2 Sample #56  | Float [32b-LSW] | R   |         | 44507          |
| V_L12_Oscilloscope_57  | Line Voltage L1-L2 Sample #57  | Float [32b-LSW] | R   |         | 44509          |
| V_L12_Oscilloscope_58  | Line Voltage L1-L2 Sample #58  | Float [32b-LSW] | R   |         | 44511          |
| V_L12_Oscilloscope_59  | Line Voltage L1-L2 Sample #59  | Float [32b-LSW] | R   |         | 44513          |
| V_L12_Oscilloscope_60  | Line Voltage L1-L2 Sample #60  | Float [32b-LSW] | R   |         | 44515          |
| V_L12_Oscilloscope_61  | Line Voltage L1-L2 Sample #61  | Float [32b-LSW] | R   |         | 44517          |
| V_L12_Oscilloscope_62  | Line Voltage L1-L2 Sample #62  | Float [32b-LSW] | R   |         | 44519          |
| V_L12_Oscilloscope_63  | Line Voltage L1-L2 Sample #63  | Float [32b-LSW] | R   |         | 44521          |
| V_L12_Oscilloscope_64  | Line Voltage L1-L2 Sample #64  | Float [32b-LSW] | R   |         | 44523          |
| V_L12_Oscilloscope_65  | Line Voltage L1-L2 Sample #65  | Float [32b-LSW] | R   |         | 44525          |
| V_L12_Oscilloscope_66  | Line Voltage L1-L2 Sample #66  | Float [32b-LSW] | R   |         | 44527          |
| V_L12_Oscilloscope_67  | Line Voltage L1-L2 Sample #67  | Float [32b-LSW] | R   |         | 44529          |
| V_L12_Oscilloscope_68  | Line Voltage L1-L2 Sample #68  | Float [32b-LSW] | R   |         | 44531          |
| V_L12_Oscilloscope_69  | Line Voltage L1-L2 Sample #69  | Float [32b-LSW] | R   |         | 44533          |
| V_L12_Oscilloscope_70  | Line Voltage L1-L2 Sample #70  | Float [32b-LSW] | R   |         | 44535          |
| V_L12_Oscilloscope_71  | Line Voltage L1-L2 Sample #71  | Float [32b-LSW] | R   |         | 44537          |
| V_L12_Oscilloscope_72  | Line Voltage L1-L2 Sample #72  | Float [32b-LSW] | R   |         | 44539          |
| V_L12_Oscilloscope_73  | Line Voltage L1-L2 Sample #73  | Float [32b-LSW] | R   |         | 44541          |
| V_L12_Oscilloscope_74  | Line Voltage L1-L2 Sample #74  | Float [32b-LSW] | R   |         | 44543          |
| V_L12_Oscilloscope_75  | Line Voltage L1-L2 Sample #75  | Float [32b-LSW] | R   |         | 44545          |
| V_L12_Oscilloscope_76  | Line Voltage L1-L2 Sample #76  | Float [32b-LSW] | R   |         | 44547          |
| V_L12_Oscilloscope_77  | Line Voltage L1-L2 Sample #77  | Float [32b-LSW] | R   |         | 44549          |
| V_L12_Oscilloscope_78  | Line Voltage L1-L2 Sample #78  | Float [32b-LSW] | R   |         | 44551          |
| V_L12_Oscilloscope_79  | Line Voltage L1-L2 Sample #79  | Float [32b-LSW] | R   |         | 44553          |
| V_L12_Oscilloscope_80  | Line Voltage L1-L2 Sample #80  | Float [32b-LSW] | R   |         | 44555          |
| V_L12_Oscilloscope_81  | Line Voltage L1-L2 Sample #81  | Float [32b-LSW] | R   |         | 44557          |
| V_L12_Oscilloscope_82  | Line Voltage L1-L2 Sample #82  | Float [32b-LSW] | R   |         | 44559          |
| V_L12_Oscilloscope_83  | Line Voltage L1-L2 Sample #83  | Float [32b-LSW] | R   |         | 44561          |
| V_L12_Oscilloscope_84  | Line Voltage L1-L2 Sample #84  | Float [32b-LSW] | R   |         | 44563          |
| V_L12_Oscilloscope_85  | Line Voltage L1-L2 Sample #85  | Float [32b-LSW] | R   |         | 44565          |
| V_L12_Oscilloscope_86  | Line Voltage L1-L2 Sample #86  | Float [32b-LSW] | R   |         | 44567          |
| V_L12_Oscilloscope_87  | Line Voltage L1-L2 Sample #87  | Float [32b-LSW] | R   |         | 44569          |
| V_L12_Oscilloscope_88  | Line Voltage L1-L2 Sample #88  | Float [32b-LSW] | R   |         | 44571          |
| V_L12_Oscilloscope_89  | Line Voltage L1-L2 Sample #89  | Float [32b-LSW] | R   |         | 44573          |
| V_L12_Oscilloscope_90  | Line Voltage L1-L2 Sample #90  | Float [32b-LSW] | R   |         | 44575          |
| V_L12_Oscilloscope_91  | Line Voltage L1-L2 Sample #91  | Float [32b-LSW] | R   |         | 44577          |
| V_L12_Oscilloscope_92  | Line Voltage L1-L2 Sample #92  | Float [32b-LSW] | R   |         | 44579          |
| V_L12_Oscilloscope_93  | Line Voltage L1-L2 Sample #93  | Float [32b-LSW] | R   |         | 44581          |
| V_L12_Oscilloscope_94  | Line Voltage L1-L2 Sample #94  | Float [32b-LSW] | R   |         | 44583          |
| V_L12_Oscilloscope_95  | Line Voltage L1-L2 Sample #95  | Float [32b-LSW] | R   |         | 44585          |
| V_L12_Oscilloscope_96  | Line Voltage L1-L2 Sample #96  | Float [32b-LSW] | R   |         | 44587          |
| V_L12_Oscilloscope_97  | Line Voltage L1-L2 Sample #97  | Float [32b-LSW] | R   |         | 44589          |
| V_L12_Oscilloscope_98  | Line Voltage L1-L2 Sample #98  | Float [32b-LSW] | R   |         | 44591          |
| V_L12_Oscilloscope_99  | Line Voltage L1-L2 Sample #99  | Float [32b-LSW] | R   |         | 44593          |
| V_L12_Oscilloscope_100 | Line Voltage L1-L2 Sample #100 | Float [32b-LSW] | R   |         | 44595          |
| V_L12_Oscilloscope_101 | Line Voltage L1-L2 Sample #101 | Float [32b-LSW] | R   |         | 44597          |
| V_L12_Oscilloscope_102 | Line Voltage L1-L2 Sample #102 | Float [32b-LSW] | R   |         | 44599          |
| V_L12_Oscilloscope_103 | Line Voltage L1-L2 Sample #103 | Float [32b-LSW] | R   |         | 44601          |
| V_L12_Oscilloscope_104 | Line Voltage L1-L2 Sample #104 | Float [32b-LSW] | R   |         | 44603          |
| V_L12_Oscilloscope_105 | Line Voltage L1-L2 Sample #105 | Float [32b-LSW] | R   |         | 44605          |
| V_L12_Oscilloscope_106 | Line Voltage L1-L2 Sample #106 | Float [32b-LSW] | R   |         | 44607          |
| V_L12_Oscilloscope_107 | Line Voltage L1-L2 Sample #107 | Float [32b-LSW] | R   |         | 44609          |
| V_L12_Oscilloscope_108 | Line Voltage L1-L2 Sample #108 | Float [32b-LSW] | R   |         | 44611          |
| V_L12_Oscilloscope_109 | Line Voltage L1-L2 Sample #109 | Float [32b-LSW] | R   |         | 44613          |
| V_L12_Oscilloscope_110 | Line Voltage L1-L2 Sample #110 | Float [32b-LSW] | R   |         | 44615          |



| Register Name          | Description                    | Register Type   | R/W | Default | Address Modbus |
|------------------------|--------------------------------|-----------------|-----|---------|----------------|
| V_L12_Oscilloscope_111 | Line Voltage L1-L2 Sample #111 | Float [32b-LSW] | R   |         | 44617          |
| V_L12_Oscilloscope_112 | Line Voltage L1-L2 Sample #112 | Float [32b-LSW] | R   |         | 44619          |
| V_L12_Oscilloscope_113 | Line Voltage L1-L2 Sample #113 | Float [32b-LSW] | R   |         | 44621          |
| V_L12_Oscilloscope_114 | Line Voltage L1-L2 Sample #114 | Float [32b-LSW] | R   |         | 44623          |
| V_L12_Oscilloscope_115 | Line Voltage L1-L2 Sample #115 | Float [32b-LSW] | R   |         | 44625          |
| V_L12_Oscilloscope_116 | Line Voltage L1-L2 Sample #116 | Float [32b-LSW] | R   |         | 44627          |
| V_L12_Oscilloscope_117 | Line Voltage L1-L2 Sample #117 | Float [32b-LSW] | R   |         | 44629          |
| V_L12_Oscilloscope_118 | Line Voltage L1-L2 Sample #118 | Float [32b-LSW] | R   |         | 44631          |
| V_L12_Oscilloscope_119 | Line Voltage L1-L2 Sample #119 | Float [32b-LSW] | R   |         | 44633          |
| V_L12_Oscilloscope_120 | Line Voltage L1-L2 Sample #120 | Float [32b-LSW] | R   |         | 44635          |
| V_L12_Oscilloscope_121 | Line Voltage L1-L2 Sample #121 | Float [32b-LSW] | R   |         | 44637          |
| V_L12_Oscilloscope_122 | Line Voltage L1-L2 Sample #122 | Float [32b-LSW] | R   |         | 44639          |
| V_L12_Oscilloscope_123 | Line Voltage L1-L2 Sample #123 | Float [32b-LSW] | R   |         | 44641          |
| V_L12_Oscilloscope_124 | Line Voltage L1-L2 Sample #124 | Float [32b-LSW] | R   |         | 44643          |
| V_L12_Oscilloscope_125 | Line Voltage L1-L2 Sample #125 | Float [32b-LSW] | R   |         | 44645          |
| V_L12_Oscilloscope_126 | Line Voltage L1-L2 Sample #126 | Float [32b-LSW] | R   |         | 44647          |
| V_L12_Oscilloscope_127 | Line Voltage L1-L2 Sample #127 | Float [32b-LSW] | R   |         | 44649          |
| V_L23_Oscilloscope_0   | Line Voltage L2-L3 Sample #0   | Float [32b-LSW] | R   |         | 44651          |
| V_L23_Oscilloscope_1   | Line Voltage L2-L3 Sample #1   | Float [32b-LSW] | R   |         | 44653          |
| V_L23_Oscilloscope_2   | Line Voltage L2-L3 Sample #2   | Float [32b-LSW] | R   |         | 44655          |
| V_L23_Oscilloscope_3   | Line Voltage L2-L3 Sample #3   | Float [32b-LSW] | R   |         | 44657          |
| V_L23_Oscilloscope_4   | Line Voltage L2-L3 Sample #4   | Float [32b-LSW] | R   |         | 44659          |
| V_L23_Oscilloscope_5   | Line Voltage L2-L3 Sample #5   | Float [32b-LSW] | R   |         | 44661          |
| V_L23_Oscilloscope_6   | Line Voltage L2-L3 Sample #6   | Float [32b-LSW] | R   |         | 44663          |
| V_L23_Oscilloscope_7   | Line Voltage L2-L3 Sample #7   | Float [32b-LSW] | R   |         | 44665          |
| V_L23_Oscilloscope_8   | Line Voltage L2-L3 Sample #8   | Float [32b-LSW] | R   |         | 44667          |
| V_L23_Oscilloscope_9   | Line Voltage L2-L3 Sample #9   | Float [32b-LSW] | R   |         | 44669          |
| V_L23_Oscilloscope_10  | Line Voltage L2-L3 Sample #10  | Float [32b-LSW] | R   |         | 44671          |
| V_L23_Oscilloscope_11  | Line Voltage L2-L3 Sample #11  | Float [32b-LSW] | R   |         | 44673          |
| V_L23_Oscilloscope_12  | Line Voltage L2-L3 Sample #12  | Float [32b-LSW] | R   |         | 44675          |
| V_L23_Oscilloscope_13  | Line Voltage L2-L3 Sample #13  | Float [32b-LSW] | R   |         | 44677          |
| V_L23_Oscilloscope_14  | Line Voltage L2-L3 Sample #14  | Float [32b-LSW] | R   |         | 44679          |
| V_L23_Oscilloscope_15  | Line Voltage L2-L3 Sample #15  | Float [32b-LSW] | R   |         | 44681          |
| V_L23_Oscilloscope_16  | Line Voltage L2-L3 Sample #16  | Float [32b-LSW] | R   |         | 44683          |
| V_L23_Oscilloscope_17  | Line Voltage L2-L3 Sample #17  | Float [32b-LSW] | R   |         | 44685          |
| V_L23_Oscilloscope_18  | Line Voltage L2-L3 Sample #18  | Float [32b-LSW] | R   |         | 44687          |
| V_L23_Oscilloscope_19  | Line Voltage L2-L3 Sample #19  | Float [32b-LSW] | R   |         | 44689          |
| V_L23_Oscilloscope_20  | Line Voltage L2-L3 Sample #20  | Float [32b-LSW] | R   |         | 44691          |
| V_L23_Oscilloscope_21  | Line Voltage L2-L3 Sample #21  | Float [32b-LSW] | R   |         | 44693          |
| V_L23_Oscilloscope_22  | Line Voltage L2-L3 Sample #22  | Float [32b-LSW] | R   |         | 44695          |
| V_L23_Oscilloscope_23  | Line Voltage L2-L3 Sample #23  | Float [32b-LSW] | R   |         | 44697          |
| V_L23_Oscilloscope_24  | Line Voltage L2-L3 Sample #24  | Float [32b-LSW] | R   |         | 44699          |
| V_L23_Oscilloscope_25  | Line Voltage L2-L3 Sample #25  | Float [32b-LSW] | R   |         | 44701          |
| V_L23_Oscilloscope_26  | Line Voltage L2-L3 Sample #26  | Float [32b-LSW] | R   |         | 44703          |
| V_L23_Oscilloscope_27  | Line Voltage L2-L3 Sample #27  | Float [32b-LSW] | R   |         | 44705          |
| V_L23_Oscilloscope_28  | Line Voltage L2-L3 Sample #28  | Float [32b-LSW] | R   |         | 44707          |
| V_L23_Oscilloscope_29  | Line Voltage L2-L3 Sample #29  | Float [32b-LSW] | R   |         | 44709          |
| V_L23_Oscilloscope_30  | Line Voltage L2-L3 Sample #30  | Float [32b-LSW] | R   |         | 44711          |
| V_L23_Oscilloscope_31  | Line Voltage L2-L3 Sample #31  | Float [32b-LSW] | R   |         | 44713          |
| V_L23_Oscilloscope_32  | Line Voltage L2-L3 Sample #32  | Float [32b-LSW] | R   |         | 44715          |
| V_L23_Oscilloscope_33  | Line Voltage L2-L3 Sample #33  | Float [32b-LSW] | R   |         | 44717          |
| V_L23_Oscilloscope_34  | Line Voltage L2-L3 Sample #34  | Float [32b-LSW] | R   |         | 44719          |
| V_L23_Oscilloscope_35  | Line Voltage L2-L3 Sample #35  | Float [32b-LSW] | R   |         | 44721          |
| V_L23_Oscilloscope_36  | Line Voltage L2-L3 Sample #36  | Float [32b-LSW] | R   |         | 44723          |
| V_L23_Oscilloscope_37  | Line Voltage L2-L3 Sample #37  | Float [32b-LSW] | R   |         | 44725          |
| V_L23_Oscilloscope_38  | Line Voltage L2-L3 Sample #38  | Float [32b-LSW] | R   |         | 44727          |
| V_L23_Oscilloscope_39  | Line Voltage L2-L3 Sample #39  | Float [32b-LSW] | R   |         | 44729          |
| V_L23_Oscilloscope_40  | Line Voltage L2-L3 Sample #40  | Float [32b-LSW] | R   |         | 44731          |
| V_L23_Oscilloscope_41  | Line Voltage L2-L3 Sample #41  | Float [32b-LSW] | R   |         | 44733          |
| V_L23_Oscilloscope_42  | Line Voltage L2-L3 Sample #42  | Float [32b-LSW] | R   |         | 44735          |
| V_L23_Oscilloscope_43  | Line Voltage L2-L3 Sample #43  | Float [32b-LSW] | R   |         | 44737          |
| V_L23_Oscilloscope_44  | Line Voltage L2-L3 Sample #44  | Float [32b-LSW] | R   |         | 44739          |
| V_L23_Oscilloscope_45  | Line Voltage L2-L3 Sample #45  | Float [32b-LSW] | R   |         | 44741          |





| Register Name          | Description                    | Register Type   | R/W | Default | Address Modbus |
|------------------------|--------------------------------|-----------------|-----|---------|----------------|
| V_L23_Oscilloscope_46  | Line Voltage L2-L3 Sample #46  | Float [32b-LSW] | R   |         | 44743          |
| V_L23_Oscilloscope_47  | Line Voltage L2-L3 Sample #47  | Float [32b-LSW] | R   |         | 44745          |
| V_L23_Oscilloscope_48  | Line Voltage L2-L3 Sample #48  | Float [32b-LSW] | R   |         | 44747          |
| V_L23_Oscilloscope_49  | Line Voltage L2-L3 Sample #49  | Float [32b-LSW] | R   |         | 44749          |
| V_L23_Oscilloscope_50  | Line Voltage L2-L3 Sample #50  | Float [32b-LSW] | R   |         | 44751          |
| V_L23_Oscilloscope_51  | Line Voltage L2-L3 Sample #51  | Float [32b-LSW] | R   |         | 44753          |
| V_L23_Oscilloscope_52  | Line Voltage L2-L3 Sample #52  | Float [32b-LSW] | R   |         | 44755          |
| V_L23_Oscilloscope_53  | Line Voltage L2-L3 Sample #53  | Float [32b-LSW] | R   |         | 44757          |
| V_L23_Oscilloscope_54  | Line Voltage L2-L3 Sample #54  | Float [32b-LSW] | R   |         | 44759          |
| V_L23_Oscilloscope_55  | Line Voltage L2-L3 Sample #55  | Float [32b-LSW] | R   |         | 44761          |
| V_L23_Oscilloscope_56  | Line Voltage L2-L3 Sample #56  | Float [32b-LSW] | R   |         | 44763          |
| V_L23_Oscilloscope_57  | Line Voltage L2-L3 Sample #57  | Float [32b-LSW] | R   |         | 44765          |
| V_L23_Oscilloscope_58  | Line Voltage L2-L3 Sample #58  | Float [32b-LSW] | R   |         | 44767          |
| V_L23_Oscilloscope_59  | Line Voltage L2-L3 Sample #59  | Float [32b-LSW] | R   |         | 44769          |
| V_L23_Oscilloscope_60  | Line Voltage L2-L3 Sample #60  | Float [32b-LSW] | R   |         | 44771          |
| V_L23_Oscilloscope_61  | Line Voltage L2-L3 Sample #61  | Float [32b-LSW] | R   |         | 44773          |
| V_L23_Oscilloscope_62  | Line Voltage L2-L3 Sample #62  | Float [32b-LSW] | R   |         | 44775          |
| V_L23_Oscilloscope_63  | Line Voltage L2-L3 Sample #63  | Float [32b-LSW] | R   |         | 44777          |
| V_L23_Oscilloscope_64  | Line Voltage L2-L3 Sample #64  | Float [32b-LSW] | R   |         | 44779          |
| V_L23_Oscilloscope_65  | Line Voltage L2-L3 Sample #65  | Float [32b-LSW] | R   |         | 44781          |
| V_L23_Oscilloscope_66  | Line Voltage L2-L3 Sample #66  | Float [32b-LSW] | R   |         | 44783          |
| V_L23_Oscilloscope_67  | Line Voltage L2-L3 Sample #67  | Float [32b-LSW] | R   |         | 44785          |
| V_L23_Oscilloscope_68  | Line Voltage L2-L3 Sample #68  | Float [32b-LSW] | R   |         | 44787          |
| V_L23_Oscilloscope_69  | Line Voltage L2-L3 Sample #69  | Float [32b-LSW] | R   |         | 44789          |
| V_L23_Oscilloscope_70  | Line Voltage L2-L3 Sample #70  | Float [32b-LSW] | R   |         | 44791          |
| V_L23_Oscilloscope_71  | Line Voltage L2-L3 Sample #71  | Float [32b-LSW] | R   |         | 44793          |
| V_L23_Oscilloscope_72  | Line Voltage L2-L3 Sample #72  | Float [32b-LSW] | R   |         | 44795          |
| V_L23_Oscilloscope_73  | Line Voltage L2-L3 Sample #73  | Float [32b-LSW] | R   |         | 44797          |
| V_L23_Oscilloscope_74  | Line Voltage L2-L3 Sample #74  | Float [32b-LSW] | R   |         | 44799          |
| V_L23_Oscilloscope_75  | Line Voltage L2-L3 Sample #75  | Float [32b-LSW] | R   |         | 44801          |
| V_L23_Oscilloscope_76  | Line Voltage L2-L3 Sample #76  | Float [32b-LSW] | R   |         | 44803          |
| V_L23_Oscilloscope_77  | Line Voltage L2-L3 Sample #77  | Float [32b-LSW] | R   |         | 44805          |
| V_L23_Oscilloscope_78  | Line Voltage L2-L3 Sample #78  | Float [32b-LSW] | R   |         | 44807          |
| V_L23_Oscilloscope_79  | Line Voltage L2-L3 Sample #79  | Float [32b-LSW] | R   |         | 44809          |
| V_L23_Oscilloscope_80  | Line Voltage L2-L3 Sample #80  | Float [32b-LSW] | R   |         | 44811          |
| V_L23_Oscilloscope_81  | Line Voltage L2-L3 Sample #81  | Float [32b-LSW] | R   |         | 44813          |
| V_L23_Oscilloscope_82  | Line Voltage L2-L3 Sample #82  | Float [32b-LSW] | R   |         | 44815          |
| V_L23_Oscilloscope_83  | Line Voltage L2-L3 Sample #83  | Float [32b-LSW] | R   |         | 44817          |
| V_L23_Oscilloscope_84  | Line Voltage L2-L3 Sample #84  | Float [32b-LSW] | R   |         | 44819          |
| V_L23_Oscilloscope_85  | Line Voltage L2-L3 Sample #85  | Float [32b-LSW] | R   |         | 44821          |
| V_L23_Oscilloscope_86  | Line Voltage L2-L3 Sample #86  | Float [32b-LSW] | R   |         | 44823          |
| V_L23_Oscilloscope_87  | Line Voltage L2-L3 Sample #87  | Float [32b-LSW] | R   |         | 44825          |
| V_L23_Oscilloscope_88  | Line Voltage L2-L3 Sample #88  | Float [32b-LSW] | R   |         | 44827          |
| V_L23_Oscilloscope_89  | Line Voltage L2-L3 Sample #89  | Float [32b-LSW] | R   |         | 44829          |
| V_L23_Oscilloscope_90  | Line Voltage L2-L3 Sample #90  | Float [32b-LSW] | R   |         | 44831          |
| V_L23_Oscilloscope_91  | Line Voltage L2-L3 Sample #91  | Float [32b-LSW] | R   |         | 44833          |
| V_L23_Oscilloscope_92  | Line Voltage L2-L3 Sample #92  | Float [32b-LSW] | R   |         | 44835          |
| V_L23_Oscilloscope_93  | Line Voltage L2-L3 Sample #93  | Float [32b-LSW] | R   |         | 44837          |
| V_L23_Oscilloscope_94  | Line Voltage L2-L3 Sample #94  | Float [32b-LSW] | R   |         | 44839          |
| V_L23_Oscilloscope_95  | Line Voltage L2-L3 Sample #95  | Float [32b-LSW] | R   |         | 44841          |
| V_L23_Oscilloscope_96  | Line Voltage L2-L3 Sample #96  | Float [32b-LSW] | R   |         | 44843          |
| V_L23_Oscilloscope_97  | Line Voltage L2-L3 Sample #97  | Float [32b-LSW] | R   |         | 44845          |
| V_L23_Oscilloscope_98  | Line Voltage L2-L3 Sample #98  | Float [32b-LSW] | R   |         | 44847          |
| V_L23_Oscilloscope_99  | Line Voltage L2-L3 Sample #99  | Float [32b-LSW] | R   |         | 44849          |
| V_L23_Oscilloscope_100 | Line Voltage L2-L3 Sample #100 | Float [32b-LSW] | R   |         | 44851          |
| V_L23_Oscilloscope_101 | Line Voltage L2-L3 Sample #101 | Float [32b-LSW] | R   |         | 44853          |
| V_L23_Oscilloscope_102 | Line Voltage L2-L3 Sample #102 | Float [32b-LSW] | R   |         | 44855          |
| V_L23_Oscilloscope_103 | Line Voltage L2-L3 Sample #103 | Float [32b-LSW] | R   |         | 44857          |
| V_L23_Oscilloscope_104 | Line Voltage L2-L3 Sample #104 | Float [32b-LSW] | R   |         | 44859          |
| V_L23_Oscilloscope_105 | Line Voltage L2-L3 Sample #105 | Float [32b-LSW] | R   |         | 44861          |
| V_L23_Oscilloscope_106 | Line Voltage L2-L3 Sample #106 | Float [32b-LSW] | R   |         | 44863          |
| V_L23_Oscilloscope_107 | Line Voltage L2-L3 Sample #107 | Float [32b-LSW] | R   |         | 44865          |
| V_L23_Oscilloscope_108 | Line Voltage L2-L3 Sample #108 | Float [32b-LSW] | R   |         | 44867          |



| Register Name          | Description                    | Register Type   | R/W | Default | Address Modbus |
|------------------------|--------------------------------|-----------------|-----|---------|----------------|
| V_L23_Oscilloscope_109 | Line Voltage L2-L3 Sample #109 | Float [32b-LSW] | R   |         | 44869          |
| V_L23_Oscilloscope_110 | Line Voltage L2-L3 Sample #110 | Float [32b-LSW] | R   |         | 44871          |
| V_L23_Oscilloscope_111 | Line Voltage L2-L3 Sample #111 | Float [32b-LSW] | R   |         | 44873          |
| V_L23_Oscilloscope_112 | Line Voltage L2-L3 Sample #112 | Float [32b-LSW] | R   |         | 44875          |
| V_L23_Oscilloscope_113 | Line Voltage L2-L3 Sample #113 | Float [32b-LSW] | R   |         | 44877          |
| V_L23_Oscilloscope_114 | Line Voltage L2-L3 Sample #114 | Float [32b-LSW] | R   |         | 44879          |
| V_L23_Oscilloscope_115 | Line Voltage L2-L3 Sample #115 | Float [32b-LSW] | R   |         | 44881          |
| V_L23_Oscilloscope_116 | Line Voltage L2-L3 Sample #116 | Float [32b-LSW] | R   |         | 44883          |
| V_L23_Oscilloscope_117 | Line Voltage L2-L3 Sample #117 | Float [32b-LSW] | R   |         | 44885          |
| V_L23_Oscilloscope_118 | Line Voltage L2-L3 Sample #118 | Float [32b-LSW] | R   |         | 44887          |
| V_L23_Oscilloscope_119 | Line Voltage L2-L3 Sample #119 | Float [32b-LSW] | R   |         | 44889          |
| V_L23_Oscilloscope_120 | Line Voltage L2-L3 Sample #120 | Float [32b-LSW] | R   |         | 44891          |
| V_L23_Oscilloscope_121 | Line Voltage L2-L3 Sample #121 | Float [32b-LSW] | R   |         | 44893          |
| V_L23_Oscilloscope_122 | Line Voltage L2-L3 Sample #122 | Float [32b-LSW] | R   |         | 44895          |
| V_L23_Oscilloscope_123 | Line Voltage L2-L3 Sample #123 | Float [32b-LSW] | R   |         | 44897          |
| V_L23_Oscilloscope_124 | Line Voltage L2-L3 Sample #124 | Float [32b-LSW] | R   |         | 44899          |
| V_L23_Oscilloscope_125 | Line Voltage L2-L3 Sample #125 | Float [32b-LSW] | R   |         | 44901          |
| V_L23_Oscilloscope_126 | Line Voltage L2-L3 Sample #126 | Float [32b-LSW] | R   |         | 44903          |
| V_L23_Oscilloscope_127 | Line Voltage L2-L3 Sample #127 | Float [32b-LSW] | R   |         | 44905          |
| V_L31_Oscilloscope_0   | Line Voltage L3-L1 Sample #0   | Float [32b-LSW] | R   |         | 44907          |
| V_L31_Oscilloscope_1   | Line Voltage L3-L1 Sample #1   | Float [32b-LSW] | R   |         | 44909          |
| V_L31_Oscilloscope_2   | Line Voltage L3-L1 Sample #2   | Float [32b-LSW] | R   |         | 44911          |
| V_L31_Oscilloscope_3   | Line Voltage L3-L1 Sample #3   | Float [32b-LSW] | R   |         | 44913          |
| V_L31_Oscilloscope_4   | Line Voltage L3-L1 Sample #4   | Float [32b-LSW] | R   |         | 44915          |
| V_L31_Oscilloscope_5   | Line Voltage L3-L1 Sample #5   | Float [32b-LSW] | R   |         | 44917          |
| V_L31_Oscilloscope_6   | Line Voltage L3-L1 Sample #6   | Float [32b-LSW] | R   |         | 44919          |
| V_L31_Oscilloscope_7   | Line Voltage L3-L1 Sample #7   | Float [32b-LSW] | R   |         | 44921          |
| V_L31_Oscilloscope_8   | Line Voltage L3-L1 Sample #8   | Float [32b-LSW] | R   |         | 44923          |
| V_L31_Oscilloscope_9   | Line Voltage L3-L1 Sample #9   | Float [32b-LSW] | R   |         | 44925          |
| V_L31_Oscilloscope_10  | Line Voltage L3-L1 Sample #10  | Float [32b-LSW] | R   |         | 44927          |
| V_L31_Oscilloscope_11  | Line Voltage L3-L1 Sample #11  | Float [32b-LSW] | R   |         | 44929          |
| V_L31_Oscilloscope_12  | Line Voltage L3-L1 Sample #12  | Float [32b-LSW] | R   |         | 44931          |
| V_L31_Oscilloscope_13  | Line Voltage L3-L1 Sample #13  | Float [32b-LSW] | R   |         | 44933          |
| V_L31_Oscilloscope_14  | Line Voltage L3-L1 Sample #14  | Float [32b-LSW] | R   |         | 44935          |
| V_L31_Oscilloscope_15  | Line Voltage L3-L1 Sample #15  | Float [32b-LSW] | R   |         | 44937          |
| V_L31_Oscilloscope_16  | Line Voltage L3-L1 Sample #16  | Float [32b-LSW] | R   |         | 44939          |
| V_L31_Oscilloscope_17  | Line Voltage L3-L1 Sample #17  | Float [32b-LSW] | R   |         | 44941          |
| V_L31_Oscilloscope_18  | Line Voltage L3-L1 Sample #18  | Float [32b-LSW] | R   |         | 44943          |
| V_L31_Oscilloscope_19  | Line Voltage L3-L1 Sample #19  | Float [32b-LSW] | R   |         | 44945          |
| V_L31_Oscilloscope_20  | Line Voltage L3-L1 Sample #20  | Float [32b-LSW] | R   |         | 44947          |
| V_L31_Oscilloscope_21  | Line Voltage L3-L1 Sample #21  | Float [32b-LSW] | R   |         | 44949          |
| V_L31_Oscilloscope_22  | Line Voltage L3-L1 Sample #22  | Float [32b-LSW] | R   |         | 44951          |
| V_L31_Oscilloscope_23  | Line Voltage L3-L1 Sample #23  | Float [32b-LSW] | R   |         | 44953          |
| V_L31_Oscilloscope_24  | Line Voltage L3-L1 Sample #24  | Float [32b-LSW] | R   |         | 44955          |
| V_L31_Oscilloscope_25  | Line Voltage L3-L1 Sample #25  | Float [32b-LSW] | R   |         | 44957          |
| V_L31_Oscilloscope_26  | Line Voltage L3-L1 Sample #26  | Float [32b-LSW] | R   |         | 44959          |
| V_L31_Oscilloscope_27  | Line Voltage L3-L1 Sample #27  | Float [32b-LSW] | R   |         | 44961          |
| V_L31_Oscilloscope_28  | Line Voltage L3-L1 Sample #28  | Float [32b-LSW] | R   |         | 44963          |
| V_L31_Oscilloscope_29  | Line Voltage L3-L1 Sample #29  | Float [32b-LSW] | R   |         | 44965          |
| V_L31_Oscilloscope_30  | Line Voltage L3-L1 Sample #30  | Float [32b-LSW] | R   |         | 44967          |
| V_L31_Oscilloscope_31  | Line Voltage L3-L1 Sample #31  | Float [32b-LSW] | R   |         | 44969          |
| V_L31_Oscilloscope_32  | Line Voltage L3-L1 Sample #32  | Float [32b-LSW] | R   |         | 44971          |
| V_L31_Oscilloscope_33  | Line Voltage L3-L1 Sample #33  | Float [32b-LSW] | R   |         | 44973          |
| V_L31_Oscilloscope_34  | Line Voltage L3-L1 Sample #34  | Float [32b-LSW] | R   |         | 44975          |
| V_L31_Oscilloscope_35  | Line Voltage L3-L1 Sample #35  | Float [32b-LSW] | R   |         | 44977          |
| V_L31_Oscilloscope_36  | Line Voltage L3-L1 Sample #36  | Float [32b-LSW] | R   |         | 44979          |
| V_L31_Oscilloscope_37  | Line Voltage L3-L1 Sample #37  | Float [32b-LSW] | R   |         | 44981          |
| V_L31_Oscilloscope_38  | Line Voltage L3-L1 Sample #38  | Float [32b-LSW] | R   |         | 44983          |
| V_L31_Oscilloscope_39  | Line Voltage L3-L1 Sample #39  | Float [32b-LSW] | R   |         | 44985          |
| V_L31_Oscilloscope_40  | Line Voltage L3-L1 Sample #40  | Float [32b-LSW] | R   |         | 44987          |
| V_L31_Oscilloscope_41  | Line Voltage L3-L1 Sample #41  | Float [32b-LSW] | R   |         | 44989          |
| V_L31_Oscilloscope_42  | Line Voltage L3-L1 Sample #42  | Float [32b-LSW] | R   |         | 44991          |
| V_L31_Oscilloscope_43  | Line Voltage L3-L1 Sample #43  | Float [32b-LSW] | R   |         | 44993          |



| Register Name          | Description                    | Register Type   | R/W | Default | Address Modbus |
|------------------------|--------------------------------|-----------------|-----|---------|----------------|
| V_L31_Oscilloscope_44  | Line Voltage L3-L1 Sample #44  | Float [32b-LSW] | R   |         | 44995          |
| V_L31_Oscilloscope_45  | Line Voltage L3-L1 Sample #45  | Float [32b-LSW] | R   |         | 44997          |
| V_L31_Oscilloscope_46  | Line Voltage L3-L1 Sample #46  | Float [32b-LSW] | R   |         | 44999          |
| V_L31_Oscilloscope_47  | Line Voltage L3-L1 Sample #47  | Float [32b-LSW] | R   |         | 45001          |
| V_L31_Oscilloscope_48  | Line Voltage L3-L1 Sample #48  | Float [32b-LSW] | R   |         | 45003          |
| V_L31_Oscilloscope_49  | Line Voltage L3-L1 Sample #49  | Float [32b-LSW] | R   |         | 45005          |
| V_L31_Oscilloscope_50  | Line Voltage L3-L1 Sample #50  | Float [32b-LSW] | R   |         | 45007          |
| V_L31_Oscilloscope_51  | Line Voltage L3-L1 Sample #51  | Float [32b-LSW] | R   |         | 45009          |
| V_L31_Oscilloscope_52  | Line Voltage L3-L1 Sample #52  | Float [32b-LSW] | R   |         | 45011          |
| V_L31_Oscilloscope_53  | Line Voltage L3-L1 Sample #53  | Float [32b-LSW] | R   |         | 45013          |
| V_L31_Oscilloscope_54  | Line Voltage L3-L1 Sample #54  | Float [32b-LSW] | R   |         | 45015          |
| V_L31_Oscilloscope_55  | Line Voltage L3-L1 Sample #55  | Float [32b-LSW] | R   |         | 45017          |
| V_L31_Oscilloscope_56  | Line Voltage L3-L1 Sample #56  | Float [32b-LSW] | R   |         | 45019          |
| V_L31_Oscilloscope_57  | Line Voltage L3-L1 Sample #57  | Float [32b-LSW] | R   |         | 45021          |
| V_L31_Oscilloscope_58  | Line Voltage L3-L1 Sample #58  | Float [32b-LSW] | R   |         | 45023          |
| V_L31_Oscilloscope_59  | Line Voltage L3-L1 Sample #59  | Float [32b-LSW] | R   |         | 45025          |
| V_L31_Oscilloscope_60  | Line Voltage L3-L1 Sample #60  | Float [32b-LSW] | R   |         | 45027          |
| V_L31_Oscilloscope_61  | Line Voltage L3-L1 Sample #61  | Float [32b-LSW] | R   |         | 45029          |
| V_L31_Oscilloscope_62  | Line Voltage L3-L1 Sample #62  | Float [32b-LSW] | R   |         | 45031          |
| V_L31_Oscilloscope_63  | Line Voltage L3-L1 Sample #63  | Float [32b-LSW] | R   |         | 45033          |
| V_L31_Oscilloscope_64  | Line Voltage L3-L1 Sample #64  | Float [32b-LSW] | R   |         | 45035          |
| V_L31_Oscilloscope_65  | Line Voltage L3-L1 Sample #65  | Float [32b-LSW] | R   |         | 45037          |
| V_L31_Oscilloscope_66  | Line Voltage L3-L1 Sample #66  | Float [32b-LSW] | R   |         | 45039          |
| V_L31_Oscilloscope_67  | Line Voltage L3-L1 Sample #67  | Float [32b-LSW] | R   |         | 45041          |
| V_L31_Oscilloscope_68  | Line Voltage L3-L1 Sample #68  | Float [32b-LSW] | R   |         | 45043          |
| V_L31_Oscilloscope_69  | Line Voltage L3-L1 Sample #69  | Float [32b-LSW] | R   |         | 45045          |
| V_L31_Oscilloscope_70  | Line Voltage L3-L1 Sample #70  | Float [32b-LSW] | R   |         | 45047          |
| V_L31_Oscilloscope_71  | Line Voltage L3-L1 Sample #71  | Float [32b-LSW] | R   |         | 45049          |
| V_L31_Oscilloscope_72  | Line Voltage L3-L1 Sample #72  | Float [32b-LSW] | R   |         | 45051          |
| V_L31_Oscilloscope_73  | Line Voltage L3-L1 Sample #73  | Float [32b-LSW] | R   |         | 45053          |
| V_L31_Oscilloscope_74  | Line Voltage L3-L1 Sample #74  | Float [32b-LSW] | R   |         | 45055          |
| V_L31_Oscilloscope_75  | Line Voltage L3-L1 Sample #75  | Float [32b-LSW] | R   |         | 45057          |
| V_L31_Oscilloscope_76  | Line Voltage L3-L1 Sample #76  | Float [32b-LSW] | R   |         | 45059          |
| V_L31_Oscilloscope_77  | Line Voltage L3-L1 Sample #77  | Float [32b-LSW] | R   |         | 45061          |
| V_L31_Oscilloscope_78  | Line Voltage L3-L1 Sample #78  | Float [32b-LSW] | R   |         | 45063          |
| V_L31_Oscilloscope_79  | Line Voltage L3-L1 Sample #79  | Float [32b-LSW] | R   |         | 45065          |
| V_L31_Oscilloscope_80  | Line Voltage L3-L1 Sample #80  | Float [32b-LSW] | R   |         | 45067          |
| V_L31_Oscilloscope_81  | Line Voltage L3-L1 Sample #81  | Float [32b-LSW] | R   |         | 45069          |
| V_L31_Oscilloscope_82  | Line Voltage L3-L1 Sample #82  | Float [32b-LSW] | R   |         | 45071          |
| V_L31_Oscilloscope_83  | Line Voltage L3-L1 Sample #83  | Float [32b-LSW] | R   |         | 45073          |
| V_L31_Oscilloscope_84  | Line Voltage L3-L1 Sample #84  | Float [32b-LSW] | R   |         | 45075          |
| V_L31_Oscilloscope_85  | Line Voltage L3-L1 Sample #85  | Float [32b-LSW] | R   |         | 45077          |
| V_L31_Oscilloscope_86  | Line Voltage L3-L1 Sample #86  | Float [32b-LSW] | R   |         | 45079          |
| V_L31_Oscilloscope_87  | Line Voltage L3-L1 Sample #87  | Float [32b-LSW] | R   |         | 45081          |
| V_L31_Oscilloscope_88  | Line Voltage L3-L1 Sample #88  | Float [32b-LSW] | R   |         | 45083          |
| V_L31_Oscilloscope_89  | Line Voltage L3-L1 Sample #89  | Float [32b-LSW] | R   |         | 45085          |
| V_L31_Oscilloscope_90  | Line Voltage L3-L1 Sample #90  | Float [32b-LSW] | R   |         | 45087          |
| V_L31_Oscilloscope_91  | Line Voltage L3-L1 Sample #91  | Float [32b-LSW] | R   |         | 45089          |
| V_L31_Oscilloscope_92  | Line Voltage L3-L1 Sample #92  | Float [32b-LSW] | R   |         | 45091          |
| V_L31_Oscilloscope_93  | Line Voltage L3-L1 Sample #93  | Float [32b-LSW] | R   |         | 45093          |
| V_L31_Oscilloscope_94  | Line Voltage L3-L1 Sample #94  | Float [32b-LSW] | R   |         | 45095          |
| V_L31_Oscilloscope_95  | Line Voltage L3-L1 Sample #95  | Float [32b-LSW] | R   |         | 45097          |
| V_L31_Oscilloscope_96  | Line Voltage L3-L1 Sample #96  | Float [32b-LSW] | R   |         | 45099          |
| V_L31_Oscilloscope_97  | Line Voltage L3-L1 Sample #97  | Float [32b-LSW] | R   |         | 45101          |
| V_L31_Oscilloscope_98  | Line Voltage L3-L1 Sample #98  | Float [32b-LSW] | R   |         | 45103          |
| V_L31_Oscilloscope_99  | Line Voltage L3-L1 Sample #99  | Float [32b-LSW] | R   |         | 45105          |
| V_L31_Oscilloscope_100 | Line Voltage L3-L1 Sample #100 | Float [32b-LSW] | R   |         | 45107          |
| V_L31_Oscilloscope_101 | Line Voltage L3-L1 Sample #101 | Float [32b-LSW] | R   |         | 45109          |
| V_L31_Oscilloscope_102 | Line Voltage L3-L1 Sample #102 | Float [32b-LSW] | R   |         | 45111          |
| V_L31_Oscilloscope_103 | Line Voltage L3-L1 Sample #103 | Float [32b-LSW] | R   |         | 45113          |
| V_L31_Oscilloscope_104 | Line Voltage L3-L1 Sample #104 | Float [32b-LSW] | R   |         | 45115          |
| V_L31_Oscilloscope_105 | Line Voltage L3-L1 Sample #105 | Float [32b-LSW] | R   |         | 45117          |
| V_L31_Oscilloscope_106 | Line Voltage L3-L1 Sample #106 | Float [32b-LSW] | R   |         | 45119          |



| Register Name          | Description                    | Register Type   | R/W | Default | Address Modbus |
|------------------------|--------------------------------|-----------------|-----|---------|----------------|
| V_L31_Oscilloscope_107 | Line Voltage L3-L1 Sample #107 | Float [32b-LSW] | R   |         | 45121          |
| V_L31_Oscilloscope_108 | Line Voltage L3-L1 Sample #108 | Float [32b-LSW] | R   |         | 45123          |
| V_L31_Oscilloscope_109 | Line Voltage L3-L1 Sample #109 | Float [32b-LSW] | R   |         | 45125          |
| V_L31_Oscilloscope_110 | Line Voltage L3-L1 Sample #110 | Float [32b-LSW] | R   |         | 45127          |
| V_L31_Oscilloscope_111 | Line Voltage L3-L1 Sample #111 | Float [32b-LSW] | R   |         | 45129          |
| V_L31_Oscilloscope_112 | Line Voltage L3-L1 Sample #112 | Float [32b-LSW] | R   |         | 45131          |
| V_L31_Oscilloscope_113 | Line Voltage L3-L1 Sample #113 | Float [32b-LSW] | R   |         | 45133          |
| V_L31_Oscilloscope_114 | Line Voltage L3-L1 Sample #114 | Float [32b-LSW] | R   |         | 45135          |
| V_L31_Oscilloscope_115 | Line Voltage L3-L1 Sample #115 | Float [32b-LSW] | R   |         | 45137          |
| V_L31_Oscilloscope_116 | Line Voltage L3-L1 Sample #116 | Float [32b-LSW] | R   |         | 45139          |
| V_L31_Oscilloscope_117 | Line Voltage L3-L1 Sample #117 | Float [32b-LSW] | R   |         | 45141          |
| V_L31_Oscilloscope_118 | Line Voltage L3-L1 Sample #118 | Float [32b-LSW] | R   |         | 45143          |
| V_L31_Oscilloscope_119 | Line Voltage L3-L1 Sample #119 | Float [32b-LSW] | R   |         | 45145          |
| V_L31_Oscilloscope_120 | Line Voltage L3-L1 Sample #120 | Float [32b-LSW] | R   |         | 45147          |
| V_L31_Oscilloscope_121 | Line Voltage L3-L1 Sample #121 | Float [32b-LSW] | R   |         | 45149          |
| V_L31_Oscilloscope_122 | Line Voltage L3-L1 Sample #122 | Float [32b-LSW] | R   |         | 45151          |
| V_L31_Oscilloscope_123 | Line Voltage L3-L1 Sample #123 | Float [32b-LSW] | R   |         | 45153          |
| V_L31_Oscilloscope_124 | Line Voltage L3-L1 Sample #124 | Float [32b-LSW] | R   |         | 45155          |
| V_L31_Oscilloscope_125 | Line Voltage L3-L1 Sample #125 | Float [32b-LSW] | R   |         | 45157          |
| V_L31_Oscilloscope_126 | Line Voltage L3-L1 Sample #126 | Float [32b-LSW] | R   |         | 45159          |
| V_L31_Oscilloscope_127 | Line Voltage L3-L1 Sample #127 | Float [32b-LSW] | R   |         | 45161          |
| I_L1_Oscilloscope_0    | Line Current L1 Sample #0      | Float [32b-LSW] | R   |         | 45163          |
| I_L1_Oscilloscope_1    | Line Current L1 Sample #1      | Float [32b-LSW] | R   |         | 45165          |
| I_L1_Oscilloscope_2    | Line Current L1 Sample #2      | Float [32b-LSW] | R   |         | 45167          |
| I_L1_Oscilloscope_3    | Line Current L1 Sample #3      | Float [32b-LSW] | R   |         | 45169          |
| I_L1_Oscilloscope_4    | Line Current L1 Sample #4      | Float [32b-LSW] | R   |         | 45171          |
| I_L1_Oscilloscope_5    | Line Current L1 Sample #5      | Float [32b-LSW] | R   |         | 45173          |
| I_L1_Oscilloscope_6    | Line Current L1 Sample #6      | Float [32b-LSW] | R   |         | 45175          |
| I_L1_Oscilloscope_7    | Line Current L1 Sample #7      | Float [32b-LSW] | R   |         | 45177          |
| I_L1_Oscilloscope_8    | Line Current L1 Sample #8      | Float [32b-LSW] | R   |         | 45179          |
| I_L1_Oscilloscope_9    | Line Current L1 Sample #9      | Float [32b-LSW] | R   |         | 45181          |
| I_L1_Oscilloscope_10   | Line Current L1 Sample #10     | Float [32b-LSW] | R   |         | 45183          |
| I_L1_Oscilloscope_11   | Line Current L1 Sample #11     | Float [32b-LSW] | R   |         | 45185          |
| I_L1_Oscilloscope_12   | Line Current L1 Sample #12     | Float [32b-LSW] | R   |         | 45187          |
| I_L1_Oscilloscope_13   | Line Current L1 Sample #13     | Float [32b-LSW] | R   |         | 45189          |
| I_L1_Oscilloscope_14   | Line Current L1 Sample #14     | Float [32b-LSW] | R   |         | 45191          |
| I_L1_Oscilloscope_15   | Line Current L1 Sample #15     | Float [32b-LSW] | R   |         | 45193          |
| I_L1_Oscilloscope_16   | Line Current L1 Sample #16     | Float [32b-LSW] | R   |         | 45195          |
| I_L1_Oscilloscope_17   | Line Current L1 Sample #17     | Float [32b-LSW] | R   |         | 45197          |
| I_L1_Oscilloscope_18   | Line Current L1 Sample #18     | Float [32b-LSW] | R   |         | 45199          |
| I_L1_Oscilloscope_19   | Line Current L1 Sample #19     | Float [32b-LSW] | R   |         | 45201          |
| I_L1_Oscilloscope_20   | Line Current L1 Sample #20     | Float [32b-LSW] | R   |         | 45203          |
| I_L1_Oscilloscope_21   | Line Current L1 Sample #21     | Float [32b-LSW] | R   |         | 45205          |
| I_L1_Oscilloscope_22   | Line Current L1 Sample #22     | Float [32b-LSW] | R   |         | 45207          |
| I_L1_Oscilloscope_23   | Line Current L1 Sample #23     | Float [32b-LSW] | R   |         | 45209          |
| I_L1_Oscilloscope_24   | Line Current L1 Sample #24     | Float [32b-LSW] | R   |         | 45211          |
| I_L1_Oscilloscope_25   | Line Current L1 Sample #25     | Float [32b-LSW] | R   |         | 45213          |
| I_L1_Oscilloscope_26   | Line Current L1 Sample #26     | Float [32b-LSW] | R   |         | 45215          |
| I_L1_Oscilloscope_27   | Line Current L1 Sample #27     | Float [32b-LSW] | R   |         | 45217          |
| I_L1_Oscilloscope_28   | Line Current L1 Sample #28     | Float [32b-LSW] | R   |         | 45219          |
| I_L1_Oscilloscope_29   | Line Current L1 Sample #29     | Float [32b-LSW] | R   |         | 45221          |
| I_L1_Oscilloscope_30   | Line Current L1 Sample #30     | Float [32b-LSW] | R   |         | 45223          |
| I_L1_Oscilloscope_31   | Line Current L1 Sample #31     | Float [32b-LSW] | R   |         | 45225          |
| I_L1_Oscilloscope_32   | Line Current L1 Sample #32     | Float [32b-LSW] | R   |         | 45227          |
| I_L1_Oscilloscope_33   | Line Current L1 Sample #33     | Float [32b-LSW] | R   |         | 45229          |
| I_L1_Oscilloscope_34   | Line Current L1 Sample #34     | Float [32b-LSW] | R   |         | 45231          |
| I_L1_Oscilloscope_35   | Line Current L1 Sample #35     | Float [32b-LSW] | R   |         | 45233          |
| I_L1_Oscilloscope_36   | Line Current L1 Sample #36     | Float [32b-LSW] | R   |         | 45235          |
| I_L1_Oscilloscope_37   | Line Current L1 Sample #37     | Float [32b-LSW] | R   |         | 45237          |
| I_L1_Oscilloscope_38   | Line Current L1 Sample #38     | Float [32b-LSW] | R   |         | 45239          |
| I_L1_Oscilloscope_39   | Line Current L1 Sample #39     | Float [32b-LSW] | R   |         | 45241          |
| I_L1_Oscilloscope_40   | Line Current L1 Sample #40     | Float [32b-LSW] | R   |         | 45243          |
| I_L1_Oscilloscope_41   | Line Current L1 Sample #41     | Float [32b-LSW] | R   |         | 45245          |





| Register Name         | Description                 | Register Type   | R/W | Default | Address Modbus |
|-----------------------|-----------------------------|-----------------|-----|---------|----------------|
| I_L1_Oscilloscope_42  | Line Current L1 Sample #42  | Float [32b-LSW] | R   |         | 45247          |
| I_L1_Oscilloscope_43  | Line Current L1 Sample #43  | Float [32b-LSW] | R   |         | 45249          |
| I_L1_Oscilloscope_44  | Line Current L1 Sample #44  | Float [32b-LSW] | R   |         | 45251          |
| I_L1_Oscilloscope_45  | Line Current L1 Sample #45  | Float [32b-LSW] | R   |         | 45253          |
| I_L1_Oscilloscope_46  | Line Current L1 Sample #46  | Float [32b-LSW] | R   |         | 45255          |
| I_L1_Oscilloscope_47  | Line Current L1 Sample #47  | Float [32b-LSW] | R   |         | 45257          |
| I_L1_Oscilloscope_48  | Line Current L1 Sample #48  | Float [32b-LSW] | R   |         | 45259          |
| I_L1_Oscilloscope_49  | Line Current L1 Sample #49  | Float [32b-LSW] | R   |         | 45261          |
| I_L1_Oscilloscope_50  | Line Current L1 Sample #50  | Float [32b-LSW] | R   |         | 45263          |
| I_L1_Oscilloscope_51  | Line Current L1 Sample #51  | Float [32b-LSW] | R   |         | 45265          |
| I_L1_Oscilloscope_52  | Line Current L1 Sample #52  | Float [32b-LSW] | R   |         | 45267          |
| I_L1_Oscilloscope_53  | Line Current L1 Sample #53  | Float [32b-LSW] | R   |         | 45269          |
| I_L1_Oscilloscope_54  | Line Current L1 Sample #54  | Float [32b-LSW] | R   |         | 45271          |
| I_L1_Oscilloscope_55  | Line Current L1 Sample #55  | Float [32b-LSW] | R   |         | 45273          |
| I_L1_Oscilloscope_56  | Line Current L1 Sample #56  | Float [32b-LSW] | R   |         | 45275          |
| I_L1_Oscilloscope_57  | Line Current L1 Sample #57  | Float [32b-LSW] | R   |         | 45277          |
| I_L1_Oscilloscope_58  | Line Current L1 Sample #58  | Float [32b-LSW] | R   |         | 45279          |
| I_L1_Oscilloscope_59  | Line Current L1 Sample #59  | Float [32b-LSW] | R   |         | 45281          |
| I_L1_Oscilloscope_60  | Line Current L1 Sample #60  | Float [32b-LSW] | R   |         | 45283          |
| I_L1_Oscilloscope_61  | Line Current L1 Sample #61  | Float [32b-LSW] | R   |         | 45285          |
| I_L1_Oscilloscope_62  | Line Current L1 Sample #62  | Float [32b-LSW] | R   |         | 45287          |
| I_L1_Oscilloscope_63  | Line Current L1 Sample #63  | Float [32b-LSW] | R   |         | 45289          |
| I_L1_Oscilloscope_64  | Line Current L1 Sample #64  | Float [32b-LSW] | R   |         | 45291          |
| I_L1_Oscilloscope_65  | Line Current L1 Sample #65  | Float [32b-LSW] | R   |         | 45293          |
| I_L1_Oscilloscope_66  | Line Current L1 Sample #66  | Float [32b-LSW] | R   |         | 45295          |
| I_L1_Oscilloscope_67  | Line Current L1 Sample #67  | Float [32b-LSW] | R   |         | 45297          |
| I_L1_Oscilloscope_68  | Line Current L1 Sample #68  | Float [32b-LSW] | R   |         | 45299          |
| I_L1_Oscilloscope_69  | Line Current L1 Sample #69  | Float [32b-LSW] | R   |         | 45301          |
| I_L1_Oscilloscope_70  | Line Current L1 Sample #70  | Float [32b-LSW] | R   |         | 45303          |
| I_L1_Oscilloscope_71  | Line Current L1 Sample #71  | Float [32b-LSW] | R   |         | 45305          |
| I_L1_Oscilloscope_72  | Line Current L1 Sample #72  | Float [32b-LSW] | R   |         | 45307          |
| I_L1_Oscilloscope_73  | Line Current L1 Sample #73  | Float [32b-LSW] | R   |         | 45309          |
| I_L1_Oscilloscope_74  | Line Current L1 Sample #74  | Float [32b-LSW] | R   |         | 45311          |
| I_L1_Oscilloscope_75  | Line Current L1 Sample #75  | Float [32b-LSW] | R   |         | 45313          |
| I_L1_Oscilloscope_76  | Line Current L1 Sample #76  | Float [32b-LSW] | R   |         | 45315          |
| I_L1_Oscilloscope_77  | Line Current L1 Sample #77  | Float [32b-LSW] | R   |         | 45317          |
| I_L1_Oscilloscope_78  | Line Current L1 Sample #78  | Float [32b-LSW] | R   |         | 45319          |
| I_L1_Oscilloscope_79  | Line Current L1 Sample #79  | Float [32b-LSW] | R   |         | 45321          |
| I_L1_Oscilloscope_80  | Line Current L1 Sample #80  | Float [32b-LSW] | R   |         | 45323          |
| I_L1_Oscilloscope_81  | Line Current L1 Sample #81  | Float [32b-LSW] | R   |         | 45325          |
| I_L1_Oscilloscope_82  | Line Current L1 Sample #82  | Float [32b-LSW] | R   |         | 45327          |
| I_L1_Oscilloscope_83  | Line Current L1 Sample #83  | Float [32b-LSW] | R   |         | 45329          |
| I_L1_Oscilloscope_84  | Line Current L1 Sample #84  | Float [32b-LSW] | R   |         | 45331          |
| I_L1_Oscilloscope_85  | Line Current L1 Sample #85  | Float [32b-LSW] | R   |         | 45333          |
| I_L1_Oscilloscope_86  | Line Current L1 Sample #86  | Float [32b-LSW] | R   |         | 45335          |
| I_L1_Oscilloscope_87  | Line Current L1 Sample #87  | Float [32b-LSW] | R   |         | 45337          |
| I_L1_Oscilloscope_88  | Line Current L1 Sample #88  | Float [32b-LSW] | R   |         | 45339          |
| I_L1_Oscilloscope_89  | Line Current L1 Sample #89  | Float [32b-LSW] | R   |         | 45341          |
| I_L1_Oscilloscope_90  | Line Current L1 Sample #90  | Float [32b-LSW] | R   |         | 45343          |
| I_L1_Oscilloscope_91  | Line Current L1 Sample #91  | Float [32b-LSW] | R   |         | 45345          |
| I_L1_Oscilloscope_92  | Line Current L1 Sample #92  | Float [32b-LSW] | R   |         | 45347          |
| I_L1_Oscilloscope_93  | Line Current L1 Sample #93  | Float [32b-LSW] | R   |         | 45349          |
| I_L1_Oscilloscope_94  | Line Current L1 Sample #94  | Float [32b-LSW] | R   |         | 45351          |
| I_L1_Oscilloscope_95  | Line Current L1 Sample #95  | Float [32b-LSW] | R   |         | 45353          |
| I_L1_Oscilloscope_96  | Line Current L1 Sample #96  | Float [32b-LSW] | R   |         | 45355          |
| I_L1_Oscilloscope_97  | Line Current L1 Sample #97  | Float [32b-LSW] | R   |         | 45357          |
| I_L1_Oscilloscope_98  | Line Current L1 Sample #98  | Float [32b-LSW] | R   |         | 45359          |
| I_L1_Oscilloscope_99  | Line Current L1 Sample #99  | Float [32b-LSW] | R   |         | 45361          |
| I_L1_Oscilloscope_100 | Line Current L1 Sample #100 | Float [32b-LSW] | R   |         | 45363          |
| I_L1_Oscilloscope_101 | Line Current L1 Sample #101 | Float [32b-LSW] | R   |         | 45365          |
| I_L1_Oscilloscope_102 | Line Current L1 Sample #102 | Float [32b-LSW] | R   |         | 45367          |
| I_L1_Oscilloscope_103 | Line Current L1 Sample #103 | Float [32b-LSW] | R   |         | 45369          |
| I_L1_Oscilloscope_104 | Line Current L1 Sample #104 | Float [32b-LSW] | R   |         | 45371          |



| Register Name         | Description                 | Register Type   | R/W | Default | Address Modbus |
|-----------------------|-----------------------------|-----------------|-----|---------|----------------|
| I_L1_Oscilloscope_105 | Line Current L1 Sample #105 | Float [32b-LSW] | R   |         | 45373          |
| I_L1_Oscilloscope_106 | Line Current L1 Sample #106 | Float [32b-LSW] | R   |         | 45375          |
| I_L1_Oscilloscope_107 | Line Current L1 Sample #107 | Float [32b-LSW] | R   |         | 45377          |
| I_L1_Oscilloscope_108 | Line Current L1 Sample #108 | Float [32b-LSW] | R   |         | 45379          |
| I_L1_Oscilloscope_109 | Line Current L1 Sample #109 | Float [32b-LSW] | R   |         | 45381          |
| I_L1_Oscilloscope_110 | Line Current L1 Sample #110 | Float [32b-LSW] | R   |         | 45383          |
| I_L1_Oscilloscope_111 | Line Current L1 Sample #111 | Float [32b-LSW] | R   |         | 45385          |
| I_L1_Oscilloscope_112 | Line Current L1 Sample #112 | Float [32b-LSW] | R   |         | 45387          |
| I_L1_Oscilloscope_113 | Line Current L1 Sample #113 | Float [32b-LSW] | R   |         | 45389          |
| I_L1_Oscilloscope_114 | Line Current L1 Sample #114 | Float [32b-LSW] | R   |         | 45391          |
| I_L1_Oscilloscope_115 | Line Current L1 Sample #115 | Float [32b-LSW] | R   |         | 45393          |
| I_L1_Oscilloscope_116 | Line Current L1 Sample #116 | Float [32b-LSW] | R   |         | 45395          |
| I_L1_Oscilloscope_117 | Line Current L1 Sample #117 | Float [32b-LSW] | R   |         | 45397          |
| I_L1_Oscilloscope_118 | Line Current L1 Sample #118 | Float [32b-LSW] | R   |         | 45399          |
| I_L1_Oscilloscope_119 | Line Current L1 Sample #119 | Float [32b-LSW] | R   |         | 45401          |
| I_L1_Oscilloscope_120 | Line Current L1 Sample #120 | Float [32b-LSW] | R   |         | 45403          |
| I_L1_Oscilloscope_121 | Line Current L1 Sample #121 | Float [32b-LSW] | R   |         | 45405          |
| I_L1_Oscilloscope_122 | Line Current L1 Sample #122 | Float [32b-LSW] | R   |         | 45407          |
| I_L1_Oscilloscope_123 | Line Current L1 Sample #123 | Float [32b-LSW] | R   |         | 45409          |
| I_L1_Oscilloscope_124 | Line Current L1 Sample #124 | Float [32b-LSW] | R   |         | 45411          |
| I_L1_Oscilloscope_125 | Line Current L1 Sample #125 | Float [32b-LSW] | R   |         | 45413          |
| I_L1_Oscilloscope_126 | Line Current L1 Sample #126 | Float [32b-LSW] | R   |         | 45415          |
| I_L1_Oscilloscope_127 | Line Current L1 Sample #127 | Float [32b-LSW] | R   |         | 45417          |
| I_L2_Oscilloscope_0   | Line Current L2 Sample #0   | Float [32b-LSW] | R   |         | 45419          |
| I_L2_Oscilloscope_1   | Line Current L2 Sample #1   | Float [32b-LSW] | R   |         | 45421          |
| I_L2_Oscilloscope_2   | Line Current L2 Sample #2   | Float [32b-LSW] | R   |         | 45423          |
| I_L2_Oscilloscope_3   | Line Current L2 Sample #3   | Float [32b-LSW] | R   |         | 45425          |
| I_L2_Oscilloscope_4   | Line Current L2 Sample #4   | Float [32b-LSW] | R   |         | 45427          |
| I_L2_Oscilloscope_5   | Line Current L2 Sample #5   | Float [32b-LSW] | R   |         | 45429          |
| I_L2_Oscilloscope_6   | Line Current L2 Sample #6   | Float [32b-LSW] | R   |         | 45431          |
| I_L2_Oscilloscope_7   | Line Current L2 Sample #7   | Float [32b-LSW] | R   |         | 45433          |
| I_L2_Oscilloscope_8   | Line Current L2 Sample #8   | Float [32b-LSW] | R   |         | 45435          |
| I_L2_Oscilloscope_9   | Line Current L2 Sample #9   | Float [32b-LSW] | R   |         | 45437          |
| I_L2_Oscilloscope_10  | Line Current L2 Sample #10  | Float [32b-LSW] | R   |         | 45439          |
| I_L2_Oscilloscope_11  | Line Current L2 Sample #11  | Float [32b-LSW] | R   |         | 45441          |
| I_L2_Oscilloscope_12  | Line Current L2 Sample #12  | Float [32b-LSW] | R   |         | 45443          |
| I_L2_Oscilloscope_13  | Line Current L2 Sample #13  | Float [32b-LSW] | R   |         | 45445          |
| I_L2_Oscilloscope_14  | Line Current L2 Sample #14  | Float [32b-LSW] | R   |         | 45447          |
| I_L2_Oscilloscope_15  | Line Current L2 Sample #15  | Float [32b-LSW] | R   |         | 45449          |
| I_L2_Oscilloscope_16  | Line Current L2 Sample #16  | Float [32b-LSW] | R   |         | 45451          |
| I_L2_Oscilloscope_17  | Line Current L2 Sample #17  | Float [32b-LSW] | R   |         | 45453          |
| I_L2_Oscilloscope_18  | Line Current L2 Sample #18  | Float [32b-LSW] | R   |         | 45455          |
| I_L2_Oscilloscope_19  | Line Current L2 Sample #19  | Float [32b-LSW] | R   |         | 45457          |
| I_L2_Oscilloscope_20  | Line Current L2 Sample #20  | Float [32b-LSW] | R   |         | 45459          |
| I_L2_Oscilloscope_21  | Line Current L2 Sample #21  | Float [32b-LSW] | R   |         | 45461          |
| I_L2_Oscilloscope_22  | Line Current L2 Sample #22  | Float [32b-LSW] | R   |         | 45463          |
| I_L2_Oscilloscope_23  | Line Current L2 Sample #23  | Float [32b-LSW] | R   |         | 45465          |
| I_L2_Oscilloscope_24  | Line Current L2 Sample #24  | Float [32b-LSW] | R   |         | 45467          |
| I_L2_Oscilloscope_25  | Line Current L2 Sample #25  | Float [32b-LSW] | R   |         | 45469          |
| I_L2_Oscilloscope_26  | Line Current L2 Sample #26  | Float [32b-LSW] | R   |         | 45471          |
| I_L2_Oscilloscope_27  | Line Current L2 Sample #27  | Float [32b-LSW] | R   |         | 45473          |
| I_L2_Oscilloscope_28  | Line Current L2 Sample #28  | Float [32b-LSW] | R   |         | 45475          |
| I_L2_Oscilloscope_29  | Line Current L2 Sample #29  | Float [32b-LSW] | R   |         | 45477          |
| I_L2_Oscilloscope_30  | Line Current L2 Sample #30  | Float [32b-LSW] | R   |         | 45479          |
| I_L2_Oscilloscope_31  | Line Current L2 Sample #31  | Float [32b-LSW] | R   |         | 45481          |
| I_L2_Oscilloscope_32  | Line Current L2 Sample #32  | Float [32b-LSW] | R   |         | 45483          |
| I_L2_Oscilloscope_33  | Line Current L2 Sample #33  | Float [32b-LSW] | R   |         | 45485          |
| I_L2_Oscilloscope_34  | Line Current L2 Sample #34  | Float [32b-LSW] | R   |         | 45487          |
| I_L2_Oscilloscope_35  | Line Current L2 Sample #35  | Float [32b-LSW] | R   |         | 45489          |
| I_L2_Oscilloscope_36  | Line Current L2 Sample #36  | Float [32b-LSW] | R   |         | 45491          |
| I_L2_Oscilloscope_37  | Line Current L2 Sample #37  | Float [32b-LSW] | R   |         | 45493          |
| I_L2_Oscilloscope_38  | Line Current L2 Sample #38  | Float [32b-LSW] | R   |         | 45495          |
| I_L2_Oscilloscope_39  | Line Current L2 Sample #39  | Float [32b-LSW] | R   |         | 45497          |





| Register Name         | Description                 | Register Type   | R/W | Default | Address Modbus |
|-----------------------|-----------------------------|-----------------|-----|---------|----------------|
| I_L2_Oscilloscope_40  | Line Current L2 Sample #40  | Float [32b-LSW] | R   |         | 45499          |
| I_L2_Oscilloscope_41  | Line Current L2 Sample #41  | Float [32b-LSW] | R   |         | 45501          |
| I_L2_Oscilloscope_42  | Line Current L2 Sample #42  | Float [32b-LSW] | R   |         | 45503          |
| I_L2_Oscilloscope_43  | Line Current L2 Sample #43  | Float [32b-LSW] | R   |         | 45505          |
| I_L2_Oscilloscope_44  | Line Current L2 Sample #44  | Float [32b-LSW] | R   |         | 45507          |
| I_L2_Oscilloscope_45  | Line Current L2 Sample #45  | Float [32b-LSW] | R   |         | 45509          |
| I_L2_Oscilloscope_46  | Line Current L2 Sample #46  | Float [32b-LSW] | R   |         | 45511          |
| I_L2_Oscilloscope_47  | Line Current L2 Sample #47  | Float [32b-LSW] | R   |         | 45513          |
| I_L2_Oscilloscope_48  | Line Current L2 Sample #48  | Float [32b-LSW] | R   |         | 45515          |
| I_L2_Oscilloscope_49  | Line Current L2 Sample #49  | Float [32b-LSW] | R   |         | 45517          |
| I_L2_Oscilloscope_50  | Line Current L2 Sample #50  | Float [32b-LSW] | R   |         | 45519          |
| I_L2_Oscilloscope_51  | Line Current L2 Sample #51  | Float [32b-LSW] | R   |         | 45521          |
| I_L2_Oscilloscope_52  | Line Current L2 Sample #52  | Float [32b-LSW] | R   |         | 45523          |
| I_L2_Oscilloscope_53  | Line Current L2 Sample #53  | Float [32b-LSW] | R   |         | 45525          |
| I_L2_Oscilloscope_54  | Line Current L2 Sample #54  | Float [32b-LSW] | R   |         | 45527          |
| I_L2_Oscilloscope_55  | Line Current L2 Sample #55  | Float [32b-LSW] | R   |         | 45529          |
| I_L2_Oscilloscope_56  | Line Current L2 Sample #56  | Float [32b-LSW] | R   |         | 45531          |
| I_L2_Oscilloscope_57  | Line Current L2 Sample #57  | Float [32b-LSW] | R   |         | 45533          |
| I_L2_Oscilloscope_58  | Line Current L2 Sample #58  | Float [32b-LSW] | R   |         | 45535          |
| I_L2_Oscilloscope_59  | Line Current L2 Sample #59  | Float [32b-LSW] | R   |         | 45537          |
| I_L2_Oscilloscope_60  | Line Current L2 Sample #60  | Float [32b-LSW] | R   |         | 45539          |
| I_L2_Oscilloscope_61  | Line Current L2 Sample #61  | Float [32b-LSW] | R   |         | 45541          |
| I_L2_Oscilloscope_62  | Line Current L2 Sample #62  | Float [32b-LSW] | R   |         | 45543          |
| I_L2_Oscilloscope_63  | Line Current L2 Sample #63  | Float [32b-LSW] | R   |         | 45545          |
| I_L2_Oscilloscope_64  | Line Current L2 Sample #64  | Float [32b-LSW] | R   |         | 45547          |
| I_L2_Oscilloscope_65  | Line Current L2 Sample #65  | Float [32b-LSW] | R   |         | 45549          |
| I_L2_Oscilloscope_66  | Line Current L2 Sample #66  | Float [32b-LSW] | R   |         | 45551          |
| I_L2_Oscilloscope_67  | Line Current L2 Sample #67  | Float [32b-LSW] | R   |         | 45553          |
| I_L2_Oscilloscope_68  | Line Current L2 Sample #68  | Float [32b-LSW] | R   |         | 45555          |
| I_L2_Oscilloscope_69  | Line Current L2 Sample #69  | Float [32b-LSW] | R   |         | 45557          |
| I_L2_Oscilloscope_70  | Line Current L2 Sample #70  | Float [32b-LSW] | R   |         | 45559          |
| I_L2_Oscilloscope_71  | Line Current L2 Sample #71  | Float [32b-LSW] | R   |         | 45561          |
| I_L2_Oscilloscope_72  | Line Current L2 Sample #72  | Float [32b-LSW] | R   |         | 45563          |
| I_L2_Oscilloscope_73  | Line Current L2 Sample #73  | Float [32b-LSW] | R   |         | 45565          |
| I_L2_Oscilloscope_74  | Line Current L2 Sample #74  | Float [32b-LSW] | R   |         | 45567          |
| I_L2_Oscilloscope_75  | Line Current L2 Sample #75  | Float [32b-LSW] | R   |         | 45569          |
| I_L2_Oscilloscope_76  | Line Current L2 Sample #76  | Float [32b-LSW] | R   |         | 45571          |
| I_L2_Oscilloscope_77  | Line Current L2 Sample #77  | Float [32b-LSW] | R   |         | 45573          |
| I_L2_Oscilloscope_78  | Line Current L2 Sample #78  | Float [32b-LSW] | R   |         | 45575          |
| I_L2_Oscilloscope_79  | Line Current L2 Sample #79  | Float [32b-LSW] | R   |         | 45577          |
| I_L2_Oscilloscope_80  | Line Current L2 Sample #80  | Float [32b-LSW] | R   |         | 45579          |
| I_L2_Oscilloscope_81  | Line Current L2 Sample #81  | Float [32b-LSW] | R   |         | 45581          |
| I_L2_Oscilloscope_82  | Line Current L2 Sample #82  | Float [32b-LSW] | R   |         | 45583          |
| I_L2_Oscilloscope_83  | Line Current L2 Sample #83  | Float [32b-LSW] | R   |         | 45585          |
| I_L2_Oscilloscope_84  | Line Current L2 Sample #84  | Float [32b-LSW] | R   |         | 45587          |
| I_L2_Oscilloscope_85  | Line Current L2 Sample #85  | Float [32b-LSW] | R   |         | 45589          |
| I_L2_Oscilloscope_86  | Line Current L2 Sample #86  | Float [32b-LSW] | R   |         | 45591          |
| I_L2_Oscilloscope_87  | Line Current L2 Sample #87  | Float [32b-LSW] | R   |         | 45593          |
| I_L2_Oscilloscope_88  | Line Current L2 Sample #88  | Float [32b-LSW] | R   |         | 45595          |
| I_L2_Oscilloscope_89  | Line Current L2 Sample #89  | Float [32b-LSW] | R   |         | 45597          |
| I_L2_Oscilloscope_90  | Line Current L2 Sample #90  | Float [32b-LSW] | R   |         | 45599          |
| I_L2_Oscilloscope_91  | Line Current L2 Sample #91  | Float [32b-LSW] | R   |         | 45601          |
| I_L2_Oscilloscope_92  | Line Current L2 Sample #92  | Float [32b-LSW] | R   |         | 45603          |
| I_L2_Oscilloscope_93  | Line Current L2 Sample #93  | Float [32b-LSW] | R   |         | 45605          |
| I_L2_Oscilloscope_94  | Line Current L2 Sample #94  | Float [32b-LSW] | R   |         | 45607          |
| I_L2_Oscilloscope_95  | Line Current L2 Sample #95  | Float [32b-LSW] | R   |         | 45609          |
| I_L2_Oscilloscope_96  | Line Current L2 Sample #96  | Float [32b-LSW] | R   |         | 45611          |
| I_L2_Oscilloscope_97  | Line Current L2 Sample #97  | Float [32b-LSW] | R   |         | 45613          |
| I_L2_Oscilloscope_98  | Line Current L2 Sample #98  | Float [32b-LSW] | R   |         | 45615          |
| I_L2_Oscilloscope_99  | Line Current L2 Sample #99  | Float [32b-LSW] | R   |         | 45617          |
| I_L2_Oscilloscope_100 | Line Current L2 Sample #100 | Float [32b-LSW] | R   |         | 45619          |
| I_L2_Oscilloscope_101 | Line Current L2 Sample #101 | Float [32b-LSW] | R   |         | 45621          |
| I_L2_Oscilloscope_102 | Line Current L2 Sample #102 | Float [32b-LSW] | R   |         | 45623          |



| Register Name         | Description                 | Register Type   | R/W | Default | Address Modbus |
|-----------------------|-----------------------------|-----------------|-----|---------|----------------|
| I_L2_Oscilloscope_103 | Line Current L2 Sample #103 | Float [32b-LSW] | R   |         | 45625          |
| I_L2_Oscilloscope_104 | Line Current L2 Sample #104 | Float [32b-LSW] | R   |         | 45627          |
| I_L2_Oscilloscope_105 | Line Current L2 Sample #105 | Float [32b-LSW] | R   |         | 45629          |
| I_L2_Oscilloscope_106 | Line Current L2 Sample #106 | Float [32b-LSW] | R   |         | 45631          |
| I_L2_Oscilloscope_107 | Line Current L2 Sample #107 | Float [32b-LSW] | R   |         | 45633          |
| I_L2_Oscilloscope_108 | Line Current L2 Sample #108 | Float [32b-LSW] | R   |         | 45635          |
| I_L2_Oscilloscope_109 | Line Current L2 Sample #109 | Float [32b-LSW] | R   |         | 45637          |
| I_L2_Oscilloscope_110 | Line Current L2 Sample #110 | Float [32b-LSW] | R   |         | 45639          |
| I_L2_Oscilloscope_111 | Line Current L2 Sample #111 | Float [32b-LSW] | R   |         | 45641          |
| I_L2_Oscilloscope_112 | Line Current L2 Sample #112 | Float [32b-LSW] | R   |         | 45643          |
| I_L2_Oscilloscope_113 | Line Current L2 Sample #113 | Float [32b-LSW] | R   |         | 45645          |
| I_L2_Oscilloscope_114 | Line Current L2 Sample #114 | Float [32b-LSW] | R   |         | 45647          |
| I_L2_Oscilloscope_115 | Line Current L2 Sample #115 | Float [32b-LSW] | R   |         | 45649          |
| I_L2_Oscilloscope_116 | Line Current L2 Sample #116 | Float [32b-LSW] | R   |         | 45651          |
| I_L2_Oscilloscope_117 | Line Current L2 Sample #117 | Float [32b-LSW] | R   |         | 45653          |
| I_L2_Oscilloscope_118 | Line Current L2 Sample #118 | Float [32b-LSW] | R   |         | 45655          |
| I_L2_Oscilloscope_119 | Line Current L2 Sample #119 | Float [32b-LSW] | R   |         | 45657          |
| I_L2_Oscilloscope_120 | Line Current L2 Sample #120 | Float [32b-LSW] | R   |         | 45659          |
| I_L2_Oscilloscope_121 | Line Current L2 Sample #121 | Float [32b-LSW] | R   |         | 45661          |
| I_L2_Oscilloscope_122 | Line Current L2 Sample #122 | Float [32b-LSW] | R   |         | 45663          |
| I_L2_Oscilloscope_123 | Line Current L2 Sample #123 | Float [32b-LSW] | R   |         | 45665          |
| I_L2_Oscilloscope_124 | Line Current L2 Sample #124 | Float [32b-LSW] | R   |         | 45667          |
| I_L2_Oscilloscope_125 | Line Current L2 Sample #125 | Float [32b-LSW] | R   |         | 45669          |
| I_L2_Oscilloscope_126 | Line Current L2 Sample #126 | Float [32b-LSW] | R   |         | 45671          |
| I_L2_Oscilloscope_127 | Line Current L2 Sample #127 | Float [32b-LSW] | R   |         | 45673          |
| I_L3_Oscilloscope_0   | Line Current L3 Sample #0   | Float [32b-LSW] | R   |         | 45675          |
| I_L3_Oscilloscope_1   | Line Current L3 Sample #1   | Float [32b-LSW] | R   |         | 45677          |
| I_L3_Oscilloscope_2   | Line Current L3 Sample #2   | Float [32b-LSW] | R   |         | 45679          |
| I_L3_Oscilloscope_3   | Line Current L3 Sample #3   | Float [32b-LSW] | R   |         | 45681          |
| I_L3_Oscilloscope_4   | Line Current L3 Sample #4   | Float [32b-LSW] | R   |         | 45683          |
| I_L3_Oscilloscope_5   | Line Current L3 Sample #5   | Float [32b-LSW] | R   |         | 45685          |
| I_L3_Oscilloscope_6   | Line Current L3 Sample #6   | Float [32b-LSW] | R   |         | 45687          |
| I_L3_Oscilloscope_7   | Line Current L3 Sample #7   | Float [32b-LSW] | R   |         | 45689          |
| I_L3_Oscilloscope_8   | Line Current L3 Sample #8   | Float [32b-LSW] | R   |         | 45691          |
| I_L3_Oscilloscope_9   | Line Current L3 Sample #9   | Float [32b-LSW] | R   |         | 45693          |
| I_L3_Oscilloscope_10  | Line Current L3 Sample #10  | Float [32b-LSW] | R   |         | 45695          |
| I_L3_Oscilloscope_11  | Line Current L3 Sample #11  | Float [32b-LSW] | R   |         | 45697          |
| I_L3_Oscilloscope_12  | Line Current L3 Sample #12  | Float [32b-LSW] | R   |         | 45699          |
| I_L3_Oscilloscope_13  | Line Current L3 Sample #13  | Float [32b-LSW] | R   |         | 45701          |
| I_L3_Oscilloscope_14  | Line Current L3 Sample #14  | Float [32b-LSW] | R   |         | 45703          |
| I_L3_Oscilloscope_15  | Line Current L3 Sample #15  | Float [32b-LSW] | R   |         | 45705          |
| I_L3_Oscilloscope_16  | Line Current L3 Sample #16  | Float [32b-LSW] | R   |         | 45707          |
| I_L3_Oscilloscope_17  | Line Current L3 Sample #17  | Float [32b-LSW] | R   |         | 45709          |
| I_L3_Oscilloscope_18  | Line Current L3 Sample #18  | Float [32b-LSW] | R   |         | 45711          |
| I_L3_Oscilloscope_19  | Line Current L3 Sample #19  | Float [32b-LSW] | R   |         | 45713          |
| I_L3_Oscilloscope_20  | Line Current L3 Sample #20  | Float [32b-LSW] | R   |         | 45715          |
| I_L3_Oscilloscope_21  | Line Current L3 Sample #21  | Float [32b-LSW] | R   |         | 45717          |
| I_L3_Oscilloscope_22  | Line Current L3 Sample #22  | Float [32b-LSW] | R   |         | 45719          |
| I_L3_Oscilloscope_23  | Line Current L3 Sample #23  | Float [32b-LSW] | R   |         | 45721          |
| I_L3_Oscilloscope_24  | Line Current L3 Sample #24  | Float [32b-LSW] | R   |         | 45723          |
| I_L3_Oscilloscope_25  | Line Current L3 Sample #25  | Float [32b-LSW] | R   |         | 45725          |
| I_L3_Oscilloscope_26  | Line Current L3 Sample #26  | Float [32b-LSW] | R   |         | 45727          |
| I_L3_Oscilloscope_27  | Line Current L3 Sample #27  | Float [32b-LSW] | R   |         | 45729          |
| I_L3_Oscilloscope_28  | Line Current L3 Sample #28  | Float [32b-LSW] | R   |         | 45731          |
| I_L3_Oscilloscope_29  | Line Current L3 Sample #29  | Float [32b-LSW] | R   |         | 45733          |
| I_L3_Oscilloscope_30  | Line Current L3 Sample #30  | Float [32b-LSW] | R   |         | 45735          |
| I_L3_Oscilloscope_31  | Line Current L3 Sample #31  | Float [32b-LSW] | R   |         | 45737          |
| I_L3_Oscilloscope_32  | Line Current L3 Sample #32  | Float [32b-LSW] | R   |         | 45739          |
| I_L3_Oscilloscope_33  | Line Current L3 Sample #33  | Float [32b-LSW] | R   |         | 45741          |
| I_L3_Oscilloscope_34  | Line Current L3 Sample #34  | Float [32b-LSW] | R   |         | 45743          |
| I_L3_Oscilloscope_35  | Line Current L3 Sample #35  | Float [32b-LSW] | R   |         | 45745          |
| I_L3_Oscilloscope_36  | Line Current L3 Sample #36  | Float [32b-LSW] | R   |         | 45747          |
| I_L3_Oscilloscope_37  | Line Current L3 Sample #37  | Float [32b-LSW] | R   |         | 45749          |



| Register Name         | Description                 | Register Type   | R/W | Default | Address Modbus |
|-----------------------|-----------------------------|-----------------|-----|---------|----------------|
| I_L3_Oscilloscope_38  | Line Current L3 Sample #38  | Float [32b-LSW] | R   |         | 45751          |
| I_L3_Oscilloscope_39  | Line Current L3 Sample #39  | Float [32b-LSW] | R   |         | 45753          |
| I_L3_Oscilloscope_40  | Line Current L3 Sample #40  | Float [32b-LSW] | R   |         | 45755          |
| I_L3_Oscilloscope_41  | Line Current L3 Sample #41  | Float [32b-LSW] | R   |         | 45757          |
| I_L3_Oscilloscope_42  | Line Current L3 Sample #42  | Float [32b-LSW] | R   |         | 45759          |
| I_L3_Oscilloscope_43  | Line Current L3 Sample #43  | Float [32b-LSW] | R   |         | 45761          |
| I_L3_Oscilloscope_44  | Line Current L3 Sample #44  | Float [32b-LSW] | R   |         | 45763          |
| I_L3_Oscilloscope_45  | Line Current L3 Sample #45  | Float [32b-LSW] | R   |         | 45765          |
| I_L3_Oscilloscope_46  | Line Current L3 Sample #46  | Float [32b-LSW] | R   |         | 45767          |
| I_L3_Oscilloscope_47  | Line Current L3 Sample #47  | Float [32b-LSW] | R   |         | 45769          |
| I_L3_Oscilloscope_48  | Line Current L3 Sample #48  | Float [32b-LSW] | R   |         | 45771          |
| I_L3_Oscilloscope_49  | Line Current L3 Sample #49  | Float [32b-LSW] | R   |         | 45773          |
| I_L3_Oscilloscope_50  | Line Current L3 Sample #50  | Float [32b-LSW] | R   |         | 45775          |
| I_L3_Oscilloscope_51  | Line Current L3 Sample #51  | Float [32b-LSW] | R   |         | 45777          |
| I_L3_Oscilloscope_52  | Line Current L3 Sample #52  | Float [32b-LSW] | R   |         | 45779          |
| I_L3_Oscilloscope_53  | Line Current L3 Sample #53  | Float [32b-LSW] | R   |         | 45781          |
| I_L3_Oscilloscope_54  | Line Current L3 Sample #54  | Float [32b-LSW] | R   |         | 45783          |
| I_L3_Oscilloscope_55  | Line Current L3 Sample #55  | Float [32b-LSW] | R   |         | 45785          |
| I_L3_Oscilloscope_56  | Line Current L3 Sample #56  | Float [32b-LSW] | R   |         | 45787          |
| I_L3_Oscilloscope_57  | Line Current L3 Sample #57  | Float [32b-LSW] | R   |         | 45789          |
| I_L3_Oscilloscope_58  | Line Current L3 Sample #58  | Float [32b-LSW] | R   |         | 45791          |
| I_L3_Oscilloscope_59  | Line Current L3 Sample #59  | Float [32b-LSW] | R   |         | 45793          |
| I_L3_Oscilloscope_60  | Line Current L3 Sample #60  | Float [32b-LSW] | R   |         | 45795          |
| I_L3_Oscilloscope_61  | Line Current L3 Sample #61  | Float [32b-LSW] | R   |         | 45797          |
| I_L3_Oscilloscope_62  | Line Current L3 Sample #62  | Float [32b-LSW] | R   |         | 45799          |
| I_L3_Oscilloscope_63  | Line Current L3 Sample #63  | Float [32b-LSW] | R   |         | 45801          |
| I_L3_Oscilloscope_64  | Line Current L3 Sample #64  | Float [32b-LSW] | R   |         | 45803          |
| I_L3_Oscilloscope_65  | Line Current L3 Sample #65  | Float [32b-LSW] | R   |         | 45805          |
| I_L3_Oscilloscope_66  | Line Current L3 Sample #66  | Float [32b-LSW] | R   |         | 45807          |
| I_L3_Oscilloscope_67  | Line Current L3 Sample #67  | Float [32b-LSW] | R   |         | 45809          |
| I_L3_Oscilloscope_68  | Line Current L3 Sample #68  | Float [32b-LSW] | R   |         | 45811          |
| I_L3_Oscilloscope_69  | Line Current L3 Sample #69  | Float [32b-LSW] | R   |         | 45813          |
| I_L3_Oscilloscope_70  | Line Current L3 Sample #70  | Float [32b-LSW] | R   |         | 45815          |
| I_L3_Oscilloscope_71  | Line Current L3 Sample #71  | Float [32b-LSW] | R   |         | 45817          |
| I_L3_Oscilloscope_72  | Line Current L3 Sample #72  | Float [32b-LSW] | R   |         | 45819          |
| I_L3_Oscilloscope_73  | Line Current L3 Sample #73  | Float [32b-LSW] | R   |         | 45821          |
| I_L3_Oscilloscope_74  | Line Current L3 Sample #74  | Float [32b-LSW] | R   |         | 45823          |
| I_L3_Oscilloscope_75  | Line Current L3 Sample #75  | Float [32b-LSW] | R   |         | 45825          |
| I_L3_Oscilloscope_76  | Line Current L3 Sample #76  | Float [32b-LSW] | R   |         | 45827          |
| I_L3_Oscilloscope_77  | Line Current L3 Sample #77  | Float [32b-LSW] | R   |         | 45829          |
| I_L3_Oscilloscope_78  | Line Current L3 Sample #78  | Float [32b-LSW] | R   |         | 45831          |
| I_L3_Oscilloscope_79  | Line Current L3 Sample #79  | Float [32b-LSW] | R   |         | 45833          |
| I_L3_Oscilloscope_80  | Line Current L3 Sample #80  | Float [32b-LSW] | R   |         | 45835          |
| I_L3_Oscilloscope_81  | Line Current L3 Sample #81  | Float [32b-LSW] | R   |         | 45837          |
| I_L3_Oscilloscope_82  | Line Current L3 Sample #82  | Float [32b-LSW] | R   |         | 45839          |
| I_L3_Oscilloscope_83  | Line Current L3 Sample #83  | Float [32b-LSW] | R   |         | 45841          |
| I_L3_Oscilloscope_84  | Line Current L3 Sample #84  | Float [32b-LSW] | R   |         | 45843          |
| I_L3_Oscilloscope_85  | Line Current L3 Sample #85  | Float [32b-LSW] | R   |         | 45845          |
| I_L3_Oscilloscope_86  | Line Current L3 Sample #86  | Float [32b-LSW] | R   |         | 45847          |
| I_L3_Oscilloscope_87  | Line Current L3 Sample #87  | Float [32b-LSW] | R   |         | 45849          |
| I_L3_Oscilloscope_88  | Line Current L3 Sample #88  | Float [32b-LSW] | R   |         | 45851          |
| I_L3_Oscilloscope_89  | Line Current L3 Sample #89  | Float [32b-LSW] | R   |         | 45853          |
| I_L3_Oscilloscope_90  | Line Current L3 Sample #90  | Float [32b-LSW] | R   |         | 45855          |
| I_L3_Oscilloscope_91  | Line Current L3 Sample #91  | Float [32b-LSW] | R   |         | 45857          |
| I_L3_Oscilloscope_92  | Line Current L3 Sample #92  | Float [32b-LSW] | R   |         | 45859          |
| I_L3_Oscilloscope_93  | Line Current L3 Sample #93  | Float [32b-LSW] | R   |         | 45861          |
| I_L3_Oscilloscope_94  | Line Current L3 Sample #94  | Float [32b-LSW] | R   |         | 45863          |
| I_L3_Oscilloscope_95  | Line Current L3 Sample #95  | Float [32b-LSW] | R   |         | 45865          |
| I_L3_Oscilloscope_96  | Line Current L3 Sample #96  | Float [32b-LSW] | R   |         | 45867          |
| I_L3_Oscilloscope_97  | Line Current L3 Sample #97  | Float [32b-LSW] | R   |         | 45869          |
| I_L3_Oscilloscope_98  | Line Current L3 Sample #98  | Float [32b-LSW] | R   |         | 45871          |
| I_L3_Oscilloscope_99  | Line Current L3 Sample #99  | Float [32b-LSW] | R   |         | 45873          |
| I_L3_Oscilloscope_100 | Line Current L3 Sample #100 | Float [32b-LSW] | R   |         | 45875          |



| Register Name         | Description                 | Register Type   | R/W | Default | Address Modbus |
|-----------------------|-----------------------------|-----------------|-----|---------|----------------|
| I_L3_Oscilloscope_101 | Line Current L3 Sample #101 | Float [32b-LSW] | R   |         | 45877          |
| I_L3_Oscilloscope_102 | Line Current L3 Sample #102 | Float [32b-LSW] | R   |         | 45879          |
| I_L3_Oscilloscope_103 | Line Current L3 Sample #103 | Float [32b-LSW] | R   |         | 45881          |
| I_L3_Oscilloscope_104 | Line Current L3 Sample #104 | Float [32b-LSW] | R   |         | 45883          |
| I_L3_Oscilloscope_105 | Line Current L3 Sample #105 | Float [32b-LSW] | R   |         | 45885          |
| I_L3_Oscilloscope_106 | Line Current L3 Sample #106 | Float [32b-LSW] | R   |         | 45887          |
| I_L3_Oscilloscope_107 | Line Current L3 Sample #107 | Float [32b-LSW] | R   |         | 45889          |
| I_L3_Oscilloscope_108 | Line Current L3 Sample #108 | Float [32b-LSW] | R   |         | 45891          |
| I_L3_Oscilloscope_109 | Line Current L3 Sample #109 | Float [32b-LSW] | R   |         | 45893          |
| I_L3_Oscilloscope_110 | Line Current L3 Sample #110 | Float [32b-LSW] | R   |         | 45895          |
| I_L3_Oscilloscope_111 | Line Current L3 Sample #111 | Float [32b-LSW] | R   |         | 45897          |
| I_L3_Oscilloscope_112 | Line Current L3 Sample #112 | Float [32b-LSW] | R   |         | 45899          |
| I_L3_Oscilloscope_113 | Line Current L3 Sample #113 | Float [32b-LSW] | R   |         | 45901          |
| I_L3_Oscilloscope_114 | Line Current L3 Sample #114 | Float [32b-LSW] | R   |         | 45903          |
| I_L3_Oscilloscope_115 | Line Current L3 Sample #115 | Float [32b-LSW] | R   |         | 45905          |
| I_L3_Oscilloscope_116 | Line Current L3 Sample #116 | Float [32b-LSW] | R   |         | 45907          |
| I_L3_Oscilloscope_117 | Line Current L3 Sample #117 | Float [32b-LSW] | R   |         | 45909          |
| I_L3_Oscilloscope_118 | Line Current L3 Sample #118 | Float [32b-LSW] | R   |         | 45911          |
| I_L3_Oscilloscope_119 | Line Current L3 Sample #119 | Float [32b-LSW] | R   |         | 45913          |
| I_L3_Oscilloscope_120 | Line Current L3 Sample #120 | Float [32b-LSW] | R   |         | 45915          |
| I_L3_Oscilloscope_121 | Line Current L3 Sample #121 | Float [32b-LSW] | R   |         | 45917          |
| I_L3_Oscilloscope_122 | Line Current L3 Sample #122 | Float [32b-LSW] | R   |         | 45919          |
| I_L3_Oscilloscope_123 | Line Current L3 Sample #123 | Float [32b-LSW] | R   |         | 45921          |
| I_L3_Oscilloscope_124 | Line Current L3 Sample #124 | Float [32b-LSW] | R   |         | 45923          |
| I_L3_Oscilloscope_125 | Line Current L3 Sample #125 | Float [32b-LSW] | R   |         | 45925          |
| I_L3_Oscilloscope_126 | Line Current L3 Sample #126 | Float [32b-LSW] | R   |         | 45927          |
| I_L3_Oscilloscope_127 | Line Current L3 Sample #127 | Float [32b-LSW] | R   |         | 45929          |
| I_N_Oscilloscope_0    | Line Current N Sample #0    | Float [32b-LSW] | R   |         | 45931          |
| I_N_Oscilloscope_1    | Line Current N Sample #1    | Float [32b-LSW] | R   |         | 45933          |
| I_N_Oscilloscope_2    | Line Current N Sample #2    | Float [32b-LSW] | R   |         | 45935          |
| I_N_Oscilloscope_3    | Line Current N Sample #3    | Float [32b-LSW] | R   |         | 45937          |
| I_N_Oscilloscope_4    | Line Current N Sample #4    | Float [32b-LSW] | R   |         | 45939          |
| I_N_Oscilloscope_5    | Line Current N Sample #5    | Float [32b-LSW] | R   |         | 45941          |
| I_N_Oscilloscope_6    | Line Current N Sample #6    | Float [32b-LSW] | R   |         | 45943          |
| I_N_Oscilloscope_7    | Line Current N Sample #7    | Float [32b-LSW] | R   |         | 45945          |
| I_N_Oscilloscope_8    | Line Current N Sample #8    | Float [32b-LSW] | R   |         | 45947          |
| I_N_Oscilloscope_9    | Line Current N Sample #9    | Float [32b-LSW] | R   |         | 45949          |
| I_N_Oscilloscope_10   | Line Current N Sample #10   | Float [32b-LSW] | R   |         | 45951          |
| I_N_Oscilloscope_11   | Line Current N Sample #11   | Float [32b-LSW] | R   |         | 45953          |
| I_N_Oscilloscope_12   | Line Current N Sample #12   | Float [32b-LSW] | R   |         | 45955          |
| I_N_Oscilloscope_13   | Line Current N Sample #13   | Float [32b-LSW] | R   |         | 45957          |
| I_N_Oscilloscope_14   | Line Current N Sample #14   | Float [32b-LSW] | R   |         | 45959          |
| I_N_Oscilloscope_15   | Line Current N Sample #15   | Float [32b-LSW] | R   |         | 45961          |
| I_N_Oscilloscope_16   | Line Current N Sample #16   | Float [32b-LSW] | R   |         | 45963          |
| I_N_Oscilloscope_17   | Line Current N Sample #17   | Float [32b-LSW] | R   |         | 45965          |
| I_N_Oscilloscope_18   | Line Current N Sample #18   | Float [32b-LSW] | R   |         | 45967          |
| I_N_Oscilloscope_19   | Line Current N Sample #19   | Float [32b-LSW] | R   |         | 45969          |
| I_N_Oscilloscope_20   | Line Current N Sample #20   | Float [32b-LSW] | R   |         | 45971          |
| I_N_Oscilloscope_21   | Line Current N Sample #21   | Float [32b-LSW] | R   |         | 45973          |
| I_N_Oscilloscope_22   | Line Current N Sample #22   | Float [32b-LSW] | R   |         | 45975          |
| I_N_Oscilloscope_23   | Line Current N Sample #23   | Float [32b-LSW] | R   |         | 45977          |
| I_N_Oscilloscope_24   | Line Current N Sample #24   | Float [32b-LSW] | R   |         | 45979          |
| I_N_Oscilloscope_25   | Line Current N Sample #25   | Float [32b-LSW] | R   |         | 45981          |
| I_N_Oscilloscope_26   | Line Current N Sample #26   | Float [32b-LSW] | R   |         | 45983          |
| I_N_Oscilloscope_27   | Line Current N Sample #27   | Float [32b-LSW] | R   |         | 45985          |
| I_N_Oscilloscope_28   | Line Current N Sample #28   | Float [32b-LSW] | R   |         | 45987          |
| I_N_Oscilloscope_29   | Line Current N Sample #29   | Float [32b-LSW] | R   |         | 45989          |
| I_N_Oscilloscope_30   | Line Current N Sample #30   | Float [32b-LSW] | R   |         | 45991          |
| I_N_Oscilloscope_31   | Line Current N Sample #31   | Float [32b-LSW] | R   |         | 45993          |
| I_N_Oscilloscope_32   | Line Current N Sample #32   | Float [32b-LSW] | R   |         | 45995          |
| I_N_Oscilloscope_33   | Line Current N Sample #33   | Float [32b-LSW] | R   |         | 45997          |
| I_N_Oscilloscope_34   | Line Current N Sample #34   | Float [32b-LSW] | R   |         | 45999          |
| I_N_Oscilloscope_35   | Line Current N Sample #35   | Float [32b-LSW] | R   |         | 46001          |





| Register Name       | Description               | Register Type   | R/W | Default | Address Modbus |
|---------------------|---------------------------|-----------------|-----|---------|----------------|
| I_N_Oscilloscope_36 | Line Current N Sample #36 | Float [32b-LSW] | R   |         | 46003          |
| I_N_Oscilloscope_37 | Line Current N Sample #37 | Float [32b-LSW] | R   |         | 46005          |
| I_N_Oscilloscope_38 | Line Current N Sample #38 | Float [32b-LSW] | R   |         | 46007          |
| I_N_Oscilloscope_39 | Line Current N Sample #39 | Float [32b-LSW] | R   |         | 46009          |
| I_N_Oscilloscope_40 | Line Current N Sample #40 | Float [32b-LSW] | R   |         | 46011          |
| I_N_Oscilloscope_41 | Line Current N Sample #41 | Float [32b-LSW] | R   |         | 46013          |
| I_N_Oscilloscope_42 | Line Current N Sample #42 | Float [32b-LSW] | R   |         | 46015          |
| I_N_Oscilloscope_43 | Line Current N Sample #43 | Float [32b-LSW] | R   |         | 46017          |
| I_N_Oscilloscope_44 | Line Current N Sample #44 | Float [32b-LSW] | R   |         | 46019          |
| I_N_Oscilloscope_45 | Line Current N Sample #45 | Float [32b-LSW] | R   |         | 46021          |
| I_N_Oscilloscope_46 | Line Current N Sample #46 | Float [32b-LSW] | R   |         | 46023          |
| I_N_Oscilloscope_47 | Line Current N Sample #47 | Float [32b-LSW] | R   |         | 46025          |
| I_N_Oscilloscope_48 | Line Current N Sample #48 | Float [32b-LSW] | R   |         | 46027          |
| I_N_Oscilloscope_49 | Line Current N Sample #49 | Float [32b-LSW] | R   |         | 46029          |
| I_N_Oscilloscope_50 | Line Current N Sample #50 | Float [32b-LSW] | R   |         | 46031          |
| I_N_Oscilloscope_51 | Line Current N Sample #51 | Float [32b-LSW] | R   |         | 46033          |
| I_N_Oscilloscope_52 | Line Current N Sample #52 | Float [32b-LSW] | R   |         | 46035          |
| I_N_Oscilloscope_53 | Line Current N Sample #53 | Float [32b-LSW] | R   |         | 46037          |
| I_N_Oscilloscope_54 | Line Current N Sample #54 | Float [32b-LSW] | R   |         | 46039          |
| I_N_Oscilloscope_55 | Line Current N Sample #55 | Float [32b-LSW] | R   |         | 46041          |
| I_N_Oscilloscope_56 | Line Current N Sample #56 | Float [32b-LSW] | R   |         | 46043          |
| I_N_Oscilloscope_57 | Line Current N Sample #57 | Float [32b-LSW] | R   |         | 46045          |
| I_N_Oscilloscope_58 | Line Current N Sample #58 | Float [32b-LSW] | R   |         | 46047          |
| I_N_Oscilloscope_59 | Line Current N Sample #59 | Float [32b-LSW] | R   |         | 46049          |
| I_N_Oscilloscope_60 | Line Current N Sample #60 | Float [32b-LSW] | R   |         | 46051          |
| I_N_Oscilloscope_61 | Line Current N Sample #61 | Float [32b-LSW] | R   |         | 46053          |
| I_N_Oscilloscope_62 | Line Current N Sample #62 | Float [32b-LSW] | R   |         | 46055          |
| I_N_Oscilloscope_63 | Line Current N Sample #63 | Float [32b-LSW] | R   |         | 46057          |
| I_N_Oscilloscope_64 | Line Current N Sample #64 | Float [32b-LSW] | R   |         | 46059          |
| I_N_Oscilloscope_65 | Line Current N Sample #65 | Float [32b-LSW] | R   |         | 46061          |
| I_N_Oscilloscope_66 | Line Current N Sample #66 | Float [32b-LSW] | R   |         | 46063          |
| I_N_Oscilloscope_67 | Line Current N Sample #67 | Float [32b-LSW] | R   |         | 46065          |
| I_N_Oscilloscope_68 | Line Current N Sample #68 | Float [32b-LSW] | R   |         | 46067          |
| I_N_Oscilloscope_69 | Line Current N Sample #69 | Float [32b-LSW] | R   |         | 46069          |
| I_N_Oscilloscope_70 | Line Current N Sample #70 | Float [32b-LSW] | R   |         | 46071          |
| I_N_Oscilloscope_71 | Line Current N Sample #71 | Float [32b-LSW] | R   |         | 46073          |
| I_N_Oscilloscope_72 | Line Current N Sample #72 | Float [32b-LSW] | R   |         | 46075          |
| I_N_Oscilloscope_73 | Line Current N Sample #73 | Float [32b-LSW] | R   |         | 46077          |
| I_N_Oscilloscope_74 | Line Current N Sample #74 | Float [32b-LSW] | R   |         | 46079          |
| I_N_Oscilloscope_75 | Line Current N Sample #75 | Float [32b-LSW] | R   |         | 46081          |
| I_N_Oscilloscope_76 | Line Current N Sample #76 | Float [32b-LSW] | R   |         | 46083          |
| I_N_Oscilloscope_77 | Line Current N Sample #77 | Float [32b-LSW] | R   |         | 46085          |
| I_N_Oscilloscope_78 | Line Current N Sample #78 | Float [32b-LSW] | R   |         | 46087          |
| I_N_Oscilloscope_79 | Line Current N Sample #79 | Float [32b-LSW] | R   |         | 46089          |
| I_N_Oscilloscope_80 | Line Current N Sample #80 | Float [32b-LSW] | R   |         | 46091          |
| I_N_Oscilloscope_81 | Line Current N Sample #81 | Float [32b-LSW] | R   |         | 46093          |
| I_N_Oscilloscope_82 | Line Current N Sample #82 | Float [32b-LSW] | R   |         | 46095          |
| I_N_Oscilloscope_83 | Line Current N Sample #83 | Float [32b-LSW] | R   |         | 46097          |
| I_N_Oscilloscope_84 | Line Current N Sample #84 | Float [32b-LSW] | R   |         | 46099          |
| I_N_Oscilloscope_85 | Line Current N Sample #85 | Float [32b-LSW] | R   |         | 46101          |
| I_N_Oscilloscope_86 | Line Current N Sample #86 | Float [32b-LSW] | R   |         | 46103          |
| I_N_Oscilloscope_87 | Line Current N Sample #87 | Float [32b-LSW] | R   |         | 46105          |
| I_N_Oscilloscope_88 | Line Current N Sample #88 | Float [32b-LSW] | R   |         | 46107          |
| I_N_Oscilloscope_89 | Line Current N Sample #89 | Float [32b-LSW] | R   |         | 46109          |
| I_N_Oscilloscope_90 | Line Current N Sample #90 | Float [32b-LSW] | R   |         | 46111          |
| I_N_Oscilloscope_91 | Line Current N Sample #91 | Float [32b-LSW] | R   |         | 46113          |
| I_N_Oscilloscope_92 | Line Current N Sample #92 | Float [32b-LSW] | R   |         | 46115          |
| I_N_Oscilloscope_93 | Line Current N Sample #93 | Float [32b-LSW] | R   |         | 46117          |
| I_N_Oscilloscope_94 | Line Current N Sample #94 | Float [32b-LSW] | R   |         | 46119          |
| I_N_Oscilloscope_95 | Line Current N Sample #95 | Float [32b-LSW] | R   |         | 46121          |
| I_N_Oscilloscope_96 | Line Current N Sample #96 | Float [32b-LSW] | R   |         | 46123          |
| I_N_Oscilloscope_97 | Line Current N Sample #97 | Float [32b-LSW] | R   |         | 46125          |
| I_N_Oscilloscope_98 | Line Current N Sample #98 | Float [32b-LSW] | R   |         | 46127          |



| Register Name        | Description                | Register Type   | R/W | Default | Address Modbus |
|----------------------|----------------------------|-----------------|-----|---------|----------------|
| I_N_Oscilloscope_99  | Line Current N Sample #99  | Float [32b-LSW] | R   |         | 46129          |
| I_N_Oscilloscope_100 | Line Current N Sample #100 | Float [32b-LSW] | R   |         | 46131          |
| I_N_Oscilloscope_101 | Line Current N Sample #101 | Float [32b-LSW] | R   |         | 46133          |
| I_N_Oscilloscope_102 | Line Current N Sample #102 | Float [32b-LSW] | R   |         | 46135          |
| I_N_Oscilloscope_103 | Line Current N Sample #103 | Float [32b-LSW] | R   |         | 46137          |
| I_N_Oscilloscope_104 | Line Current N Sample #104 | Float [32b-LSW] | R   |         | 46139          |
| I_N_Oscilloscope_105 | Line Current N Sample #105 | Float [32b-LSW] | R   |         | 46141          |
| I_N_Oscilloscope_106 | Line Current N Sample #106 | Float [32b-LSW] | R   |         | 46143          |
| I_N_Oscilloscope_107 | Line Current N Sample #107 | Float [32b-LSW] | R   |         | 46145          |
| I_N_Oscilloscope_108 | Line Current N Sample #108 | Float [32b-LSW] | R   |         | 46147          |
| I_N_Oscilloscope_109 | Line Current N Sample #109 | Float [32b-LSW] | R   |         | 46149          |
| I_N_Oscilloscope_110 | Line Current N Sample #110 | Float [32b-LSW] | R   |         | 46151          |
| I_N_Oscilloscope_111 | Line Current N Sample #111 | Float [32b-LSW] | R   |         | 46153          |
| I_N_Oscilloscope_112 | Line Current N Sample #112 | Float [32b-LSW] | R   |         | 46155          |
| I_N_Oscilloscope_113 | Line Current N Sample #113 | Float [32b-LSW] | R   |         | 46157          |
| I_N_Oscilloscope_114 | Line Current N Sample #114 | Float [32b-LSW] | R   |         | 46159          |
| I_N_Oscilloscope_115 | Line Current N Sample #115 | Float [32b-LSW] | R   |         | 46161          |
| I_N_Oscilloscope_116 | Line Current N Sample #116 | Float [32b-LSW] | R   |         | 46163          |
| I_N_Oscilloscope_117 | Line Current N Sample #117 | Float [32b-LSW] | R   |         | 46165          |
| I_N_Oscilloscope_118 | Line Current N Sample #118 | Float [32b-LSW] | R   |         | 46167          |
| I_N_Oscilloscope_119 | Line Current N Sample #119 | Float [32b-LSW] | R   |         | 46169          |
| I_N_Oscilloscope_120 | Line Current N Sample #120 | Float [32b-LSW] | R   |         | 46171          |
| I_N_Oscilloscope_121 | Line Current N Sample #121 | Float [32b-LSW] | R   |         | 46173          |
| I_N_Oscilloscope_122 | Line Current N Sample #122 | Float [32b-LSW] | R   |         | 46175          |
| I_N_Oscilloscope_123 | Line Current N Sample #123 | Float [32b-LSW] | R   |         | 46177          |
| I_N_Oscilloscope_124 | Line Current N Sample #124 | Float [32b-LSW] | R   |         | 46179          |
| I_N_Oscilloscope_125 | Line Current N Sample #125 | Float [32b-LSW] | R   |         | 46181          |
| I_N_Oscilloscope_126 | Line Current N Sample #126 | Float [32b-LSW] | R   |         | 46183          |
| I_N_Oscilloscope_127 | Line Current N Sample #127 | Float [32b-LSW] | R   |         | 46185          |

**LEGEND:**

Short [16b] = Signed Short (16 bit)  
UShort [16b] = Unsigned Short (16 bit)

Long [32b-MSW] = Signed Long (32 bit - MSW First Register)  
Long [32b-LWS] = Signed Long (32 bit - LSW First Register)  
ULong [32b-LSW] = Unsigned Long (32 bit - LSW First Register)  
ULong [32b] = Unsigned Long (32 bit)

Float [32b-MSW] = Float (32 bit - MSW First Register)  
Float [32b-LSW] = Float (32 bit - LSW First Register)

UInt [16b] = Unsigned Integer (16 bit)  
UInt [32b-MSW] = Unsigned Integer (32 bit - MSW First Register)  
Int [64b-LSW] = Signed Long Long (64 bit - LSW First Register)