All versions

Only in Plus version

Register Name	Description	Register Type	R/W	Default	Modbus Address
Machine_Id	Machine ID	unsigned short	R	36 or 37 (STD, PLUS)	**40001**
HW_FW_version	Hardware (MSB) and Firmware (LSB) Revision	unsigned short	R		**40002**
address	modbus address	unsigned short	R/W	1	**40003**
delay	answer delay expressed as cycles	unsigned short	R/W	1	**40004**
Baudrate	0 → 1200 1 → 2400 2 → 4800 3 → 9600 4 → 19200 5 → 38400 6 → 57600 7 → 115200	unsigned short	R/W	3	**40005**
Parity	0 -> NONE 1 -> ODD 2 -> EVEN	unsigned short	R/W	0	**40006**
Configuration_Flag	Bit 0: Current Measurement type 0 → Input 1A/5A 1 → Input 333 mV/ Rogowski Bit 5: Reactive power calculation method 0 → Triangle method 1 → Budeanu Bit 6: RS-485 as Switch 0 → RS-485 1 → Switch Bit 7: Frequency detection Channel 0 → Voltage 1 → Current Bit 8: Voltage input type 0 → Normal load 1 → PWM modulated input (Inverter Load) Bit 9: Energy saving 0 → Disabled 1 → Enabled Bit 11..12: Measurement type 0 → Float 1 → Float Swapped 2 → Hundredth (Float * 100) 3 → Hundredth swapped (Float * 100 SW) Bit 13: Integrator condition 0 → Integrator disabled 1 → Integrator enabled (Rogowski input) Bit 10, 14: Output switch initial condition 0 → Closed initial condition 1 → Windowed: closed contact between thresholds 2 → Open initial condition 3→ Windowed: closed contact outside thresholds Bit 15: Filtered measurement 0 → Filtering disabled 1 → Filtering enabled	unsigned short	R/W	16928: INPUT_1A_5A | BUDEANU | RS485_BEHAVIOUR | FREQUENCY_DETECTION_ON_VOLTAGE | NORMAL_INPUT | ENERGY_SAVING_ENABLED | FLOAT_TYPE | INTEGRATOR_DISABLED | OPEN_COND | FILTERED_OUTPUT_DISABLED	**40007**
Led_settings	Set Fail LED Bit: 0 → Fail Eeprom (settings, calibration or Energy) 2 → I1 Over-range 3 → I1 Under-range 8 → V1 Over-range 9 → V1 Under-range	unsigned short	R/W	1: Fail Eeprom	**40008**
CT_Transducer_ratio	If Input 1A/5A → Current transformer ratio M/N (Ex: 600:5 → transducer_ratio = 120) If Input Rogowski / 333mV → (1 / Sensitivity) [A/V] (Ex: 100mV/1KA → transducer_ratio = 10000, 333mV/5A → transducer_ratio = 15)	float	R/W	1	**40009**
CT_Transducer_delay	Current transformer delay in [°] @ 50 Hz for accurate power calculation	float	R/W	0	**40011**
VT_Transducer_ratio	Voltage transformer ratio M/N - Default 1.0 (Ex: 1000:100 → transducer_ratio = 10)	float	R/W	1	**40013**
VT_Transducer_delay	Voltage transformer delay in [°] @ 50 Hz for accurate power calculation	float	R/W	0	**40015**
minimum_voltage_ripple	Minimum threshold under which the instrument reads 0 independent from the input value	float	R/W	0	**40017**
minimum_current_ripple	Minimum threshold under which the instrument reads 0 independent from the input value	float	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	R/W	0	**40021**
DC_Filter	Number of tenth seconds for I RMS value in DC	unsigned short	R/W	10	**40023**
AC_Filter	Number of zero crossings for I RMS value in AC	unsigned short	R/W	50	**40024**
minute_for_Max_demand	Minute for Max demand calculation (0..45)	unsigned short	R/W	15	**40025**
seconds_for_mean_RMS	Register in seconds (0..30) for RMS average	unsigned short	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	unsigned short	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	unsigned short	R/W	0	**40029**
Energy_unit_factor	Variable for changing Energy measurement unit: 0 -> [Wh/10] 1 -> [Wh] 4 -> [KWh]	unsigned short	R/W	0	**40030**
Alarm_Register_start_addres	Float value Starting address for alarm (40361 V_L1_N, ecc)	unsigned short	R/W	40361	**40036**
Alarm_trip_value	Alarm Threshold for "closed" and "open" condition OR first alarm Threshold for "within threshold" and "Outs	float	R/W	0	**40037**
Alarm_hysteresis	Alarm Hysteresis	float	R/W	1	**40039**
Alarm_trip_value_2	Second alarm Threshold for "within threshold" and "Outside threshold" condition	float	R/W		**40041**
Power_Threshold_for_exceed	Threshold for Power exceedings monitoring	float	R/W	0	**40043**

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Register Name	Description	Register Type	R/W	Default	Modbus Address
Status_1	bit 0: flash settings error; bit 1: flash calibration error; bit 2: Current I1 Over Range; bit 3: Current I1 Under Range; bit 4..7: don't care; bit 8: Current V1 Over Range; bit 9: Current V1 Under Range; bit10..14: don't care; bit 14: Zero crossing detecting; bit 15: Switch open; bit 16: Wh storing error; bit 17..18: don't care; bit 19: Alarm detection; bit 20..27: don't care; bit 28: Leading Power factor PF1; bit 29..30: don't care;	unsigned long	R		**40239**
Command	Flash settings save command = 0xC1C0; Reset command = 0xC1A0; Save energy command = 0xBABA Close Switch command = 0xDAAA (only if Digital Output is enabled) Open Switch command = 0xDAAB (only if Digital Output is enabled) Enter Bootloader command = 0xB000 Reset MAX Demand registers command = 0xF000	unsigned short	R/W		**40244**
KWh	Active energy [Wh tenth]	signed long long	R/W		**40245**
KWh_Plus	Positive Active energy [Wh tenth]	signed long long	R/W		**40261**
KWh_Neg	Negative Active energy [Wh tenth]	signed long long	R/W		**40277**
KVARh	Reactive energy [VARh tenth]	signed long long	R/W		**40293**
KVARh_Inductive	Inductive Reactive energy [VARh tenth]	signed long long	R/W		**40309**
KVARh_Capacitive	Capacitive Reactive energy [VARh tenth]	signed long long	R/W		**40325**
KVAh	Apparent energy [VAh tenth]	signed long long	R/W		**40341**
Wh_storage_count	Number of Wh flash savings (every 20 seconds)	unsigned long	R		**40357**
V	RMS star voltage [V]	float	R		**40359**
I	RMS line current [A]	float	R		**40375**
P	RMS active power [W]	float	R		**40385**
Q	RMS reactive power [VAR]	float	R		**40393**
S	RMS apparent power [VA]	float	R		**40401**
PF	Power Factor	float	R		**40409**
CF	Crest Factor	float	R		**40417**
Frequency	Frequency [Hz]	float	R		**40425**
V_peak	Star voltage peak [V]	float	R/W		**40427**
I_peak	current peak [A]	float	R/W		**40439**
DPF	Distortion Power Factor (+ inductive, - capacitive)	float	R		**40467**
TAN_FI	Tangentθ (+ inductive, - capacitive)	float	R		**40475**
Internal_temperature	Internal Temperature [°C]	float	R		**40485**
V_RMS_AVG	Star voltage RMS average [V] over "seconds_for_mean_RMS"	float	R		**40487**
V_RMS_MAX	Star voltage MAX RMS [V] over last "seconds_for_MAX_RMS"	float	R		**40489**
V_RMS_min	Star voltage Min RMS [V] over last"seconds_for_min_RMS"	float	R		**40491**
IRMS_AVG	RMS average [A] over "seconds_for_mean_RMS"	float	R		**40535**
IRMS_MAX	MAX RMS [A] over last "seconds_for_MAX_RMS"	float	R		**40537**
IRMS_min	Min RMS [A] over last"seconds_for_min_RMS"	float	R		**40539**
P_RMS_AVG	P RMS average [A] over "seconds_for_mean_RMS"	float	R		**40565**
P_RMS_MAX	P MAX RMS [A] over last "seconds_for_MAX_RMS"	float	R		**40567**
P_RMS_min	P Min RMS [A] over last"seconds_for_min_RMS"	float	R		**40569**
Q_RMS_AVG	Q RMS average [A] over "seconds_for_mean_RMS"	float	R		**40589**
Q_RMS_MAX	Q MAX RMS [A] over last "seconds_for_MAX_RMS"	float	R		**40591**
Q_RMS_min	Q Min RMS [A] over last"seconds_for_min_RMS"	float	R		**40593**
S_RMS_AVG	S RMS average [A] over "seconds_for_mean_RMS"	float	R		**40613**
S_RMS_MAX	S MAX RMS [A] over last "seconds_for_MAX_RMS"	float	R		**40615**
S_RMS_min	S Min RMS [A] over last"seconds_for_min_RMS"	float	R		**40617**
PF_RMS_AVG	PF RMS average [A] over "seconds_for_mean_RMS"	float	R		**40637**
PF_RMS_MAX	PF MAX RMS [A] over last "seconds_for_MAX_RMS"	float	R		**40639**
PF_RMS_min	PF Min RMS [A] over last"seconds_for_min_RMS"	float	R		**40641**
P_Time_over_threshold	Time above threshold specified in "Power_Threshold_for_exceedings" for Active Power P [min]	float	R		**40661**
P_MaxDemand	Max Demand over 15minutes for P for current month	float	R		**40669**
Time_of_P_MaxDemand	Time at which arises Max Demand over 15minutes for P for current month (month | day | hour | minutes)	unsigned long	R		**40677**
K_factor	K-factor for I, see IEEE Standard 1100-1992	float	R		**40685**
Year	RTC : year (2000-2099)	unsigned short	R/W		**40691**
Month	RTC : month (1-12)	unsigned short	R/W		**40692**
Day	RTC : day month (1-31)	unsigned short	R/W		**40693**
Hour	RTC : hour (0-23)	unsigned short	R/W		**40694**
Minute	RTC : minute (0-59)	unsigned short	R/W		**40695**
Seconds	RTC : second (0-59)	unsigned short	R/W		**40696**
THD_V	THD Star Voltage	float	R		**40697**
THD_I	THD Line Current	float	R		**40709**
TDD_I	TDD Line Current	float	R		**40717**