Q-WIFI485

Visit the Q-WIFI485 page
for news, updates and downloads

CONTENTS

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.

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

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

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

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.

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.

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.

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

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 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.

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.

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

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

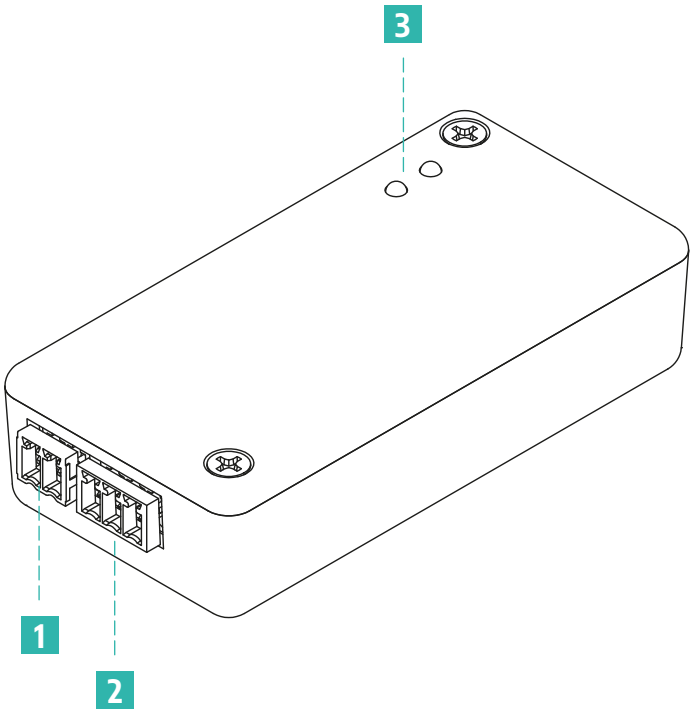
technical@qeed.it

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.

PRODUCT OVERVIEW

The Q-WIFI485 is a compact gateway with an on-board web server that provides a Wi-Fi - RS485 (master to slave) interface for connectivity to third party systems. Using the MQTT protocol, the device allows connection to DEM's proprietary cloud, Q-LOUD. This allows all tools to be transformed for Industry 4.0.

FW upgradeable from web server.



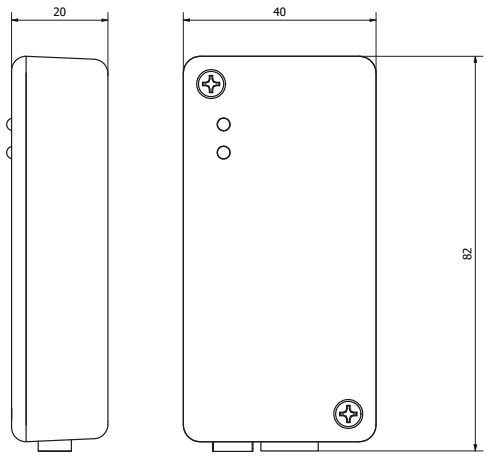
1 Power supply terminals
2 Connection terminals
3 Status LEDs
Green = product powered
Yellow = error or FW upgrade in progress

TECHNICAL SPECIFICATIONS

Electrical characteristics

Power supply	10÷ 30 VDC
Output	Wi-Fi AP-STA RS485 Modbus RTU

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	82x40x20 mm 
Weight	30 g
Terminal cable cross-section	0.05÷1.5 mm² (30÷14 AWG)
Approvals and certifications	EN 61000-6-4 / EN 64000-6-2 / EN 61010-1 / EN 60742

Order codes

Product	Q-WIFI485

Communication characteristics

Communication protocol	Q-WIFI485	Frequency	2.4GHz
	Modbus RTU	Baudrate	9600÷ 115200 baud (default 9600)
		Addresses	1 ÷ 247 (default 1)
		Data format	1 bit di start, 8 bit dati, parità NO/ODD/EVEN (default NO parità), 1-2 bit di stop (default 1)
		Response delay	1÷ 1000ms
Network interfaces	Wi-Fi Access Point	Connection	SSID and PW
		Supported functions	Web Server
		Maximum number of simultaneously connected stations	8
	Wi-Fi Station	Connection	- DHCP enabled by default - SSID and PW of the access point you want to connect to
		Supported functions	Web Server, MQTT
Application features	Web Server	Maximum number of clients supported	1 (the higher the number of clients, the slower the web server loads)
	MQTT	Supported functions	Communication to/from dedicated cloud (when connected to an access point)

STATUS LEDS

Function	Status	Meaning
Power (green)	ON	Powered device
Connessione (yellow)	Flashing	Connected to the network, but not to Q-LOUD
	Fast double flashing	Network and Q-LOUD connected

CONNECTION

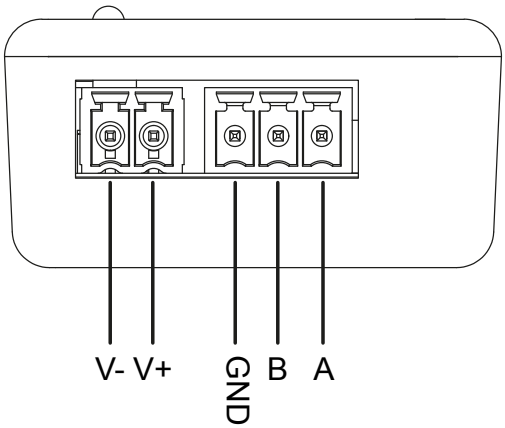


Figure 1: Connection pinout

DEVICE CONFIGURATION

Once powered on, connect to the product's Wi-Fi network:

- SSID: Q-WIFI485-AP-XXXX (where XXXX represents the MAC address of the product)
- Password: 12345678

Once connected to its access point, via browser connect to the webserver (192.168.100.50) using the following credentials:

- Username: admin
- Password: admin

The "Serial" and "Network" screens allows to configure the Modbus communication settings that the Q-WIFI485 must use to communicate with the products connected to the RS485 bus and the network to which it must connect in order to send data to the Q-LOUD.

Q-LOUD CONFIGURATION

In order to access Q-LOUD, it is necessary to obtain access credentials from the product distributor.

Once connected, the installed Q-WIFI485 must be configured in the "gateway" tab:

- Name
- MAC address (found on the product label)

Once the Q-WIFI485 has been configured, the 'device' tab must be used to specify which QEED/DEM devices are connected to the module's RS485 bus.

For each of them, you will need to enter:

- Device name
- Model of the device connected to the RS485 bus (select from the drop-down menu
- Device serial number
- Modbus address (Slave ID) for Modbus RS485 communication
- Name of the Q-WIFI485 to which the device is connected (selectable from the drop-down menu) if there is more than one Q-WIFI485

Q-LOUD functions

From the Q-LOUD, all products configured and connected to a Q-WIFI485 can be viewed in real time.

In specific, each product has a "Parameters" and a "Status" page where configurations, real-time readings and any product alarms can be accessed.

There's also the possibility of storing the read data in the Q-LOUD and also the option of sending an e-mail in the event of an alarm can be activated.

D.E.M. SpA
Zona Ind. Villanova 20
32013 Longarone (BL)
ITALIA

www.dem-it.com
www.qeed.it

As standards, specifications, and design change from time to time, please ask for confirmation of the information given in this publication.