



MDWIFIH

Module for Wi-Fi connection to the e-Connect service platform for HERCOLA control units

090051222



Compatible with the e-Connect platform



FOREWORD

FOR THE INSTALLER:

Comply strictly with current standards governing the installation of electrical systems and security systems, and with the manufacturer's directions given in the manuals supplied with the products.

Provide the user with full information on using the system installed and on its limitations, pointing out that there are different levels of security performance that will need to suit the user's requirements within the constraints of the specific applicable standards. See that the user looks through the warnings given herein.

FOR THE USER:

Check the system's operation thoroughly at regular intervals, making sure the equipment can be armed and disarmed properly.

Make sure the system receives proper routine maintenance, employing the services of specialist personnel who meet the requirements prescribed by current regulations.

Ask your installer to check that the system suits changing operating conditions (e.g. changes in the extent of the areas to be protected, change in access methods, etc...).

This device has been designed, built and tested with the utmost care and attention, adopting test and inspection procedures in accordance with current legislation. Full compliance of the working specifications is only achieved in the event the device is used solely for its intended purpose, namely:

Module for Wi-Fi connection to the e-Connect service platform for HERCOLA control units.

The device is not intended for any use other than the above and hence its correct functioning in such cases cannot be assured.

Consequently, any use of the manual in your possession for any purpose other than those for which it was compiled - namely for the purpose of explaining the product's technical features and operating procedures - is strictly prohibited.

Production processes are closely monitored in order to prevent faults and malfunctions. However, the componentry adopted is subject to an extremely modest percentage of faults, which is nonetheless the case with any electronic or mechanical product.

Given the intended use of this item (protection of property and people), we invite you to adapt the level of protection offered by the system to suit the actual situation of risk (allowing for the possibility of impaired system operation due to faults or other problems), while reminding you that there are specific standards for the design and production of systems intended for this kind of application.

We hereby advise you (the system's operator) to see that the system receives regular routine maintenance, at least in accordance with the provisions of current legislation, and also check on as regular a basis as the risk involved requires that the system in question is operating properly, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. You must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply. If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

EU DECLARATION OF CONFORMITY

Hereby, EL.MO. S.p.A. declares that the radio equipment MDWIFIH is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following Internet address: elmospa.com – registration is quick and easy.

DISPOSAL INSTRUCTIONS - INFORMATION FOR THE USER



In accordance with Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), please be advised that the EEE was placed on the market after 13 August 2005 and must be disposed of separately from normal household waste.

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1. GENERALS

The MDWIFIH module makes it possible to manage HERCOLA or PREGIO500 control units through e-Connect by connecting to the local network via Wi-Fi. This small size device features a built-in antenna and allows quick installation and configuration. The MDWIFIH module provides one communication channel only and it can only be used for connecting to e-Connect, even to perform remote assistance sessions.

It is compatible with the HERCOLA control units equipped with main board having 99002388 or higher as serial number (this can be read just below the keypad, next to the bottom edge of the printed board).

Before installing the MDWIFIH module, update BrowserOne to the latest version available (typically 3.5.3 or higher) and install the specific module for the control unit in use (8.2.0 or higher); then, update also the control unit firmware to version 8.3.1.0 or higher.

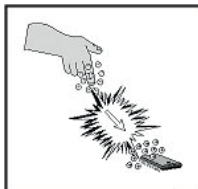
The update procedure can be launched by selecting “Software update” and “Firmware update” entries in the “Tools” control unit menu. It will be possible to check the module status and set the Wi-Fi connection parameters both via BrowserOne and using the keypad.

2. FEATURES

Model	MDWIFIH
Power supply voltage	DC 12 V from control unit.
Current draw	30 mA, 50 mA max during the first connection to e-Connect
Wi-Fi transmission	Channels in the 2.4 Ghz band, built-in ISM band antenna, IEEE 802.11 b/g/n standard
Transmitted power	100 mW maximum
Connector	Non-reversible multipoint connector

Installation type	Cantilevered plug-in
Range	Subject to limitations due to the router model and the environmental conditions
Dimensions	W 30 × H 35 × D 13 mm
Weight	7 g
Parts supplied	Technical manual, label to be stuck to the outer side of the control unit housing

3. INSTALLATION



The electronic board can be damaged by electrostatic discharge. The installer shall free himself free electrostatic charges before opening the housing and he shall keep free from electrostatic charges during the whole installation or maintenance process.

Module positioning.



Correctly inserted module.

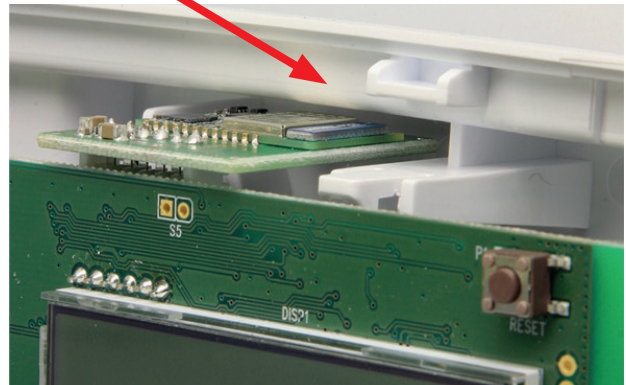




Operation sequence to have the HERCOLA main board, once equipped with the MDWIFIH module, correctly hooked in position.



Arrange the HERCOLA main board in position on the lower holding brackets.



View of the board (not hooked yet) from above. As it can be noticed, the available room is very little, therefore we suggest that you pay much attention when hooking the board.



View of the HERCOLA main board with the MDWIFIH module in correct position.

Note: for installation with PREGIO500 units, please consult control unit technical manual.

IMPORTANT: the MDWIFIH module must be used in environments where the Wi-Fi coverage is optimum. In case the signal is weak due to architectural limits, it will not be possible to use additional external antennas. See the configuration section for information on signal strength control.

The installer shall adjust the router orientation or position in order to increase the signal strength, or he shall install a high-quality wireless repeater. Provide the router with an UPS supplying adequate power, as a measure in case of mains failure.

Note: MDWIFIH is meant to be installed alternatively to the built-in GSM/GPRS module to access the e-Connect service platform.



4. CONFIGURATION

As previously stated, the MDWIFIH module requires that the control unit firmware is updated to version 8.3.1.0 or higher. In order to guarantee MDWIFIH proper configuration and use, the installer shall perform the following actions:

1. Register the module: browse to the “REGIST. MODULES » Wi-Fi Module” menu, then press “1”.
2. Browse to the “NETWORK PARAM.” menu, then press “OK”; the display will show the RSSI signal strength (from ??? for no signal to #### for max strength) and the MAC ADDRESS. A signal strength indication is also given in the software status window.
3. Connect the control unit to BrowserOne v.3.5.3 or higher with a compatible module (v.8.2.0 or higher) via USB.
4. Read the control unit configuration, then set the e-Connect and WiFi parameters in the “System Options” page, as shown in the picture below:

The screenshot shows the 'System Options' configuration page. The 'e-Connect' section has the following settings:

- Registered e-Connect account: nome_installatore1\Test_Hercola
- Enable WiFi connection to e-Connect (highlighted with a red box and arrow pointing to the text: "Flag 'Enable Wi-Fi connection to e-Connect'".)
- Enable GPRS connection to e-Connect
- Enable GPRS connection when roaming
- APN for GPRS internet access: [empty field]
- Default server: (selected)
- Custom URL: [empty field]
- IP static: [0 . 0 . 0 . 0]
- e-Connect server port: 15000

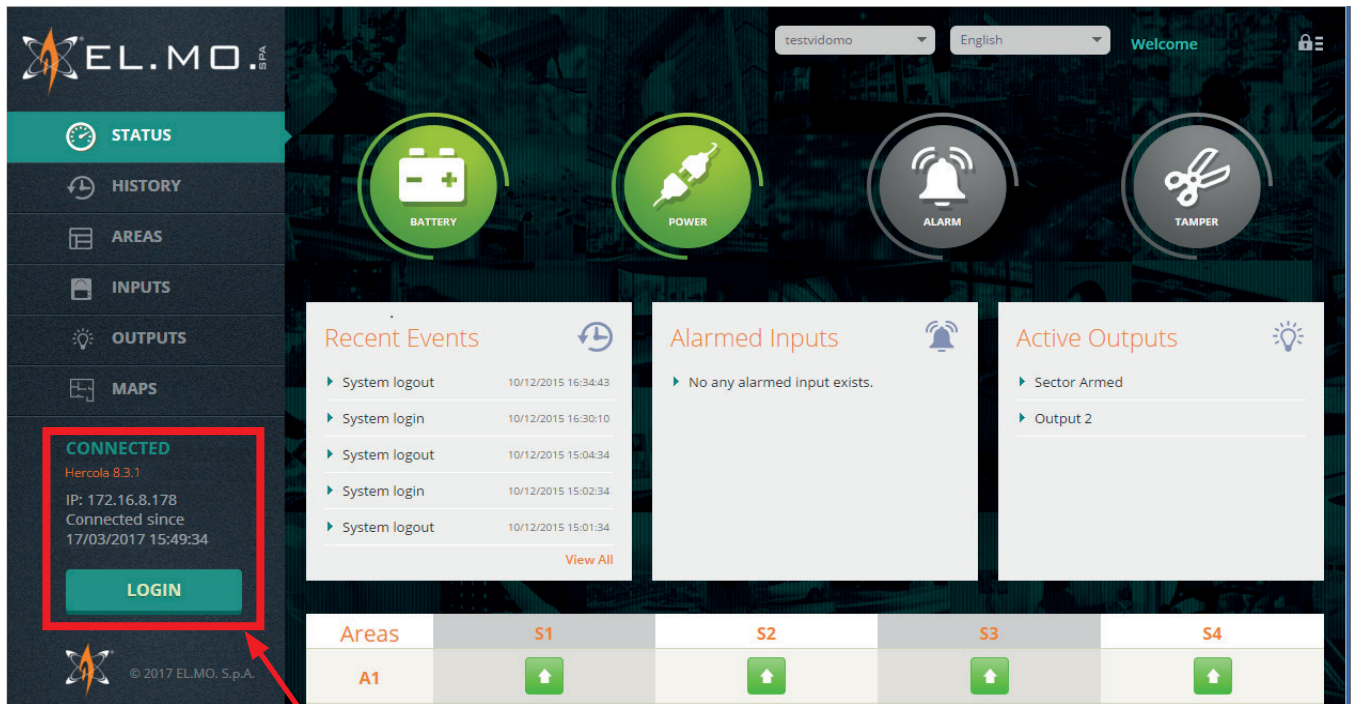
The 'WiFi' section has the following settings:

- Enable DHCP (highlighted with a red box and arrow pointing to the text: "The DHCP option is enabled by default, to allow for a quick connection.")
- IP address: 192 . 168 . 0 . 201
- Net mask: 255 . 255 . 255 . 0
- Gateway: 0 . 0 . 0 . 0
- DNS Server: 0 . 0 . 0 . 0
- Protection: Protection WPA2 PSK (highlighted with a red box and arrow pointing to the text: "Choose the same protection set in the router.")
- SSID: [empty field] (highlighted with a red box and arrow pointing to the text: "Insert the SSID code for the wireless network and its access password.")
- Password: [empty field]
- Show characters:

5. Write the setup to the control unit.
6. Create a new e-Connect user account; after creation, you will be e-mailed a registration code.
7. Type the key in the “INTERNET ACCOUNT” menu of the control unit, then press OK and wait for the registration to take place. In case any error occurs during the registration process, please read the “ERRORS” section in this manual.



8. Use an internet browser or the smartphone App to check that the user can actually access to the control unit page.



The control unit is correctly connected to the e-Connect service.

5. OPERATIONAL NOTES

Installing the MDWIFIH module also makes it possible to perform remote assistance sessions via e-Connect. **However, please keep in mind that the response times are affected by the latency of the used transmission systems.** Such delays are also perceivable while the e-Connect page is being displayed on the PC or smartphone screen.



6. ERRORS

Generic error codes that might show up during the account registration to the e-Connect service:

Error 1: DNS resolution error or connection opening.

- For GPRS connections only: verify that the proper APN for Internet access is set, make sure that the tariff plan of the SIM includes internet traffic, check the remaining credit on the card.
- If using a custom URL for the e-Connect server, verify that the URL is correctly inserted.
- For Ethernet connections only: if a static IP is not used, check the DNS servers setting, verify the correctness of the IP addresses of the DNS servers from the "Network parameters" menu of the control unit.
- If using a static IP for e-Connect server, verify the correctness of the entered IP.
- For Ethernet connections only: if a static IP is used, check the setting of the Internet access gateway, verify the correctness of the gateway IP address from the "Network parameters" of the control unit.

Error 2: connection opening error.

- For GPRS connections only: verify that the proper APN for Internet access is set, make sure that the tariff plan of the SIM includes internet traffic, check the remaining credit on the card.
- If using a static IP for e-Connect server, verify the correctness of the entered IP
- For Ethernet connections only: if a static IP is used, check the DNS servers setting, verify the correctness of the IP addresses of the DNS servers from the "Network parameters" menu of the control unit.
- For Ethernet connections only: verify that the 15000 port is open on the possible proxy/firewall.
- Check the functioning of the e-Connect server through the Web interface connection at the following address: <https://connect.elmospa.com>

Error 3: data exchange with the e-Connect server

- For GPRS connections only: verify that the proper APN for Internet access is set, make sure that the tariff plan of the SIM includes internet traffic, check the remaining credit on the card.
- Check the functioning of the e-Connect server through the Web interface connection at the following address: <https://connect.elmospa.com>

Error 4: incorrect registration code

- Generate a new registration code and repeat the procedure with the new code.

7. IMPORTANT WARNING ON INTERNET SECURITY

Using the Internet to connect to security systems exposes the devices to hacker attacks that day by day grow more and more sophisticated and potentially dangerous for the functioning of the devices.

For a safe functioning of the devices used in security systems, adopt actions targeted at protecting these devices from cyber attacks.

The possible solutions are many, some are listed below:

1. Use a physical firewall between the device and the Internet, then program the router so as to enable only the MAC ADDRESSES of the devices connected to the router itself.
2. Use a WPA2-PSK protection key, instead of a WEP one. Do not use connections without protection keys.
3. Periodically change the password for router access. This solution requires the participation of a maintenance technician, possibly during the maintenance routines.

Note for WEP keys: you can use 64 bit (5 ascii characters) or 128 bit (13 ascii characters) WEP keys.

Not taking actions against this kind of attacks exposes the device to attacks whose consequences can not be hypothesized or forecast.