TECHNICAL MANUAL

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

090010915

IT08020000001624

Compatible with the e-Connect platform

EL.MO.SPA

FOREWORD

FOR INSTALLERS

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 USERS

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...).

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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 compatible 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).

DISPOSAL INSTRUCTIONS - USER INFORMATIONS

According to Directive 2012/19/EU on the Waste of Electric and Electronic Equipment (WEEE), it is here specified that this Electrical-Electromechanical Device started to be commercialized after 13th August 2005, and it shall be disposed of separately from ordinary waste products.

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1. GENERALS

The MDWIFI module makes it possible to manage a compatible control unit via e-Connect by using a Wi-Fi local network connection. The module is small, easy and quick to configure and includes an integrated antenna.

The MDWIFI module provides a single communication channel. It can **ONLY** be used for connecting to e-Connect, even for remote assistance sessions.

MDWIFI is compatible with VIDOMO, VIBASIC, VIDOMOBTRX, VICOMPACTRX, VIDOMO2K,VICOMPACT2K and other expressly compatible models that will be soon introduced.

Before installing the MDWIFI module, update BrowserOne to the latest version (typically, v. 3.4.7 or higher) and install the specific module (v.8.x or higher) for the serviced control unit. It will then be necessary to update the firmware of the control unit to v.8.0.xx or higher. The update process can be run by selecting the "Software update" and "Firmware update" entries in the "Tools" menu. It is possible to check the status of the module and to set the Wi-Fi connection parameters both from BrowserOne and from any keyboard connected to the control unit.

2. TECHNICAL SPECIFICATIONS

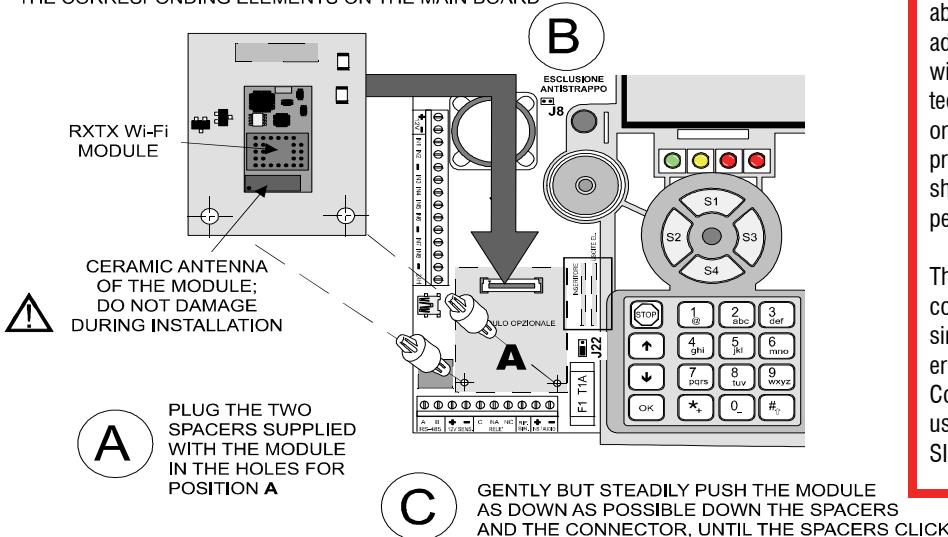|			
Model:	MDWIFI	**Installation:**	plug-in with fixing clips.
Power supply:	12 V_{DC} from the control unit.	**Range:**	limited according to the router model and to ambient conditions.
Power consumption:	30 mA, 51 mA max during the first connection to e-Connect.	**Dimensions:**	W 40 x H 50 x D 8 mm.
Wi-Fi transmission:	channels in the 2.4 GHz band. Integrated ISM band antenna. 802.11 b/g/n IEEE standard.	**Weight:**	7 g.
		Parts supplied:	Nylon clips, technical manual, label to stick to the outside of the control unit casing.
Transmitted power	100 mW maximum		
Connectors:	miniaturized multipolar connector.		

This product is intended as an accessory for VIDOMO, VIBASIC, VIDOMOBTRX, VICOMPACTRX, VIDOMO2K,VICOMPACT2K and other expressly compatible control units.

Hereby, EL.MO. S.p.A. declares that the radio equipment MDWIFI radio device 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.

3. BOARD VIEW AND INSTALLATION

IMPORTANT: POWER DOWN THE CONTROL UNIT AND AVOID ANY ELECTROSTATIC CHARGE WHILE INSTALLING THE MODULE

POSITION THE MODULE PARALLEL TO THE MAIN BOARD, ALIGNING THE SPACER HOLES AND THE CONNECTOR WITH THE CORRESPONDING ELEMENTS ON THE MAIN BOARD

RXTX Wi-Fi MODULE

CERAMIC ANTENNA OF THE MODULE; DO NOT DAMAGE DURING INSTALLATION

A PLUG THE TWO SPACERS SUPPLIED WITH THE MODULE IN THE HOLES FOR POSITION **A**

C GENTLY BUT STEADILY PUSH THE MODULE AS DOWN AS POSSIBLE DOWN THE SPACERS AND THE CONNECTOR, UNTIL THE SPACERS CLICK

----------- IMPORTANT --------------

The MDWIFI module has to be placed in an optimal place inside the range of an available Wi-Fi network, for it is not possible to add an external antenna to cope with a wireless signal that is low due to the architecture of the site. The installer shall move or point the router as appropriate to improve the reception of the signal, or he shall install an high quality wireless repeater.

The VICOMPACT control units are not compatible with the MDWIFI module, since they are not equipped with the proper connector. If you wish to access the e-Connect platform with this control units, use the MDGSMI module equipped with SIM card.

Note: the MDWIFI module blocks the Mini-DIN port, preventing the connection of the optional ETREIB module for Konnex management. MDWIFI is meant to be installed alternatively to the MDGPS module.

MDWIFI will access e-Connect and the Internet by connecting to a modem router. To guarantee modem operation also in case of mains failure, we suggest that you equip the modem with an UPS supplying adequate power.

4. LABEL POSITIONING

The MDWIFI module is provided with a label containing the following data:

Contains Transmitter Module
FCC ID: VRA-SG9011203
IC: 7420A-SG9011203

The installer shall stick the label on the case of the control unit, in a visible position.

5. CONFIGURATION

As mentioned above, the MDWIFI module needs the control unit firmware to be updated to version v.8.x or higher. For a proper configuration and use of the MDWIFI module, the installer shall do the following:

- Register the module by pressing 1 in the "REGIST. MODULES / WiFi Module" menu.
- Browse to the NETWORK PARAM. menu and press "Ok"; if MDWIFI is the only module installed, the strength of the wireless signal of the local router and the MAC ADDRESS will be shown.
  The RSSI wireless signal strength is expressed with ???? (no signal) or with #### (maximum signal).
- Connect the control unit to a PC with BrowserOne v.3.4.7 or higher and the compatible module v.8.x, via USB.
- Read the control unit setup and set the network parameters from the "Options" tab.
  The following images show some example values for the e-Connect and Wi-Fi areas:
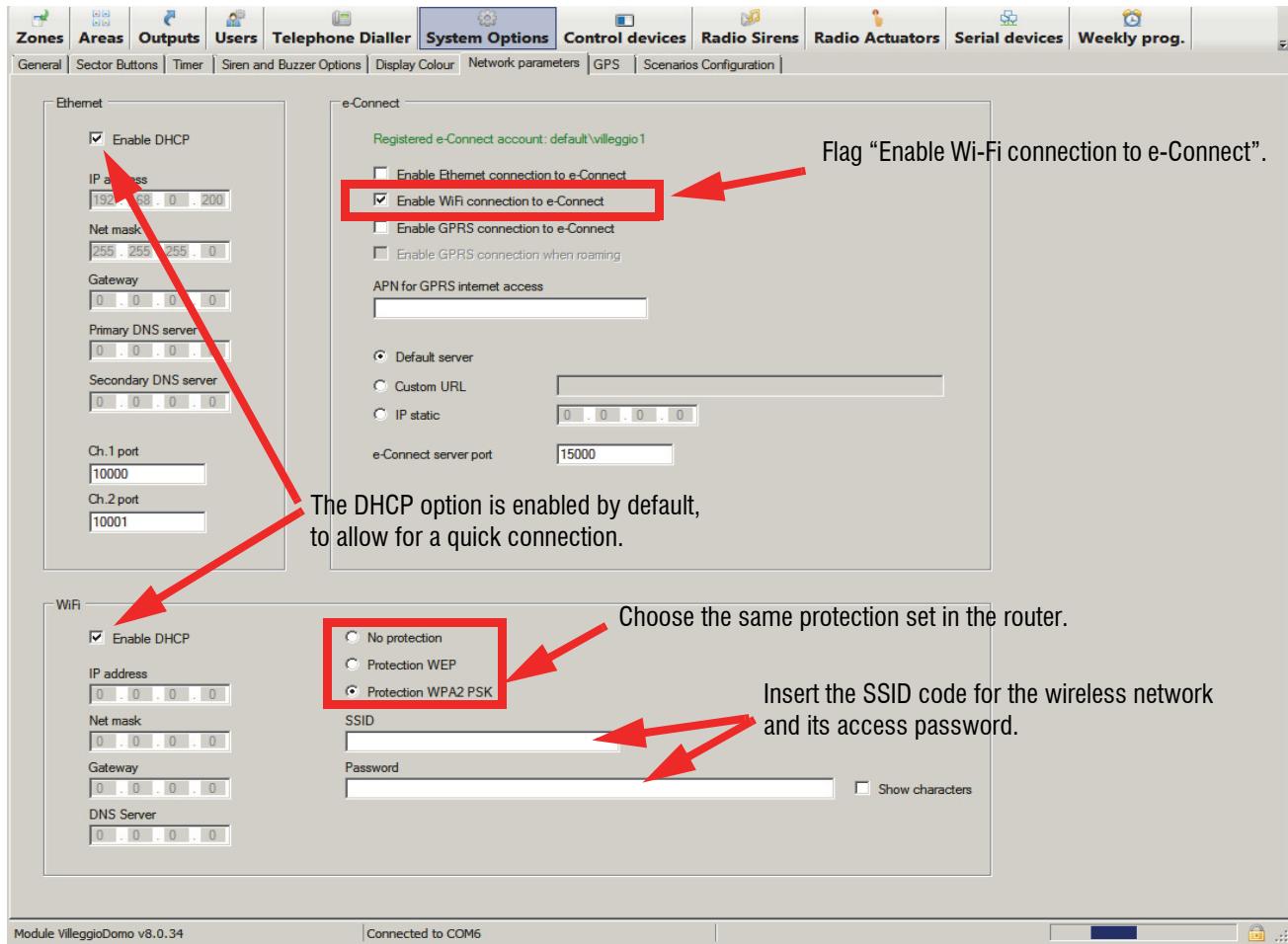
- Write the setup to the control unit.
- Create a user account in the e-Connect service. The service sends a registration key to the specified e-mail address.
- Type the key in the "INTERNET ACCOUNT" menu of the control unit, then press OK and wait for the registration to happen. In case of registration errors, read the "ERRORS" chapter of this manual.
- Use an internet browser or a smartphone to check that the user can really access to the control unit page.

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

6. OPERATIVE NOTES

MDWIFI also makes it possible to run remote assistance sessions via e-Connect.
The response time, anyway, is affected by the latency of the communication channel.
This latency is also perceivable when consulting the e-Connect user page from either a PC or a cellphone.

7. 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 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.
- 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.

8. 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 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 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 64bit (5 ascii characters) or 128bit (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.