TECHNICAL MANUAL

MDTEMP

Wireless module with temperature sensor for Villeggio control units and compatible devices

090020996

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EL.MO.®SPA

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:

Wireless module with temperature sensor for Villeggio control units and compatible devices

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 MDTEMP radio equipment 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

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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.

This product needs batteries for correct functioning. Exhausted batteries have to be delivered to dumping grounds authorized for battery collection. The materials used for this product are very harmful and polluting if dispersed in the environment.

1. GENERALS

The MDTEMP module allows a Villeggio series control unit to measure the temperature in places that are away from the control unit itself. It can be installed indoors or outdoors. When installing it in the outdoors, take all precautions needed to protect it from water infiltration. When installing it indoors, place it at the typical height for a room thermostat.

The control unit LCD can display both the temperature measured by MDTEMP and the one measured by its internal thermometer, the latter usually in smaller digits.

Make sure that the Villeggio series control unit is upgraded to firmware v.4.0.0 or higher.
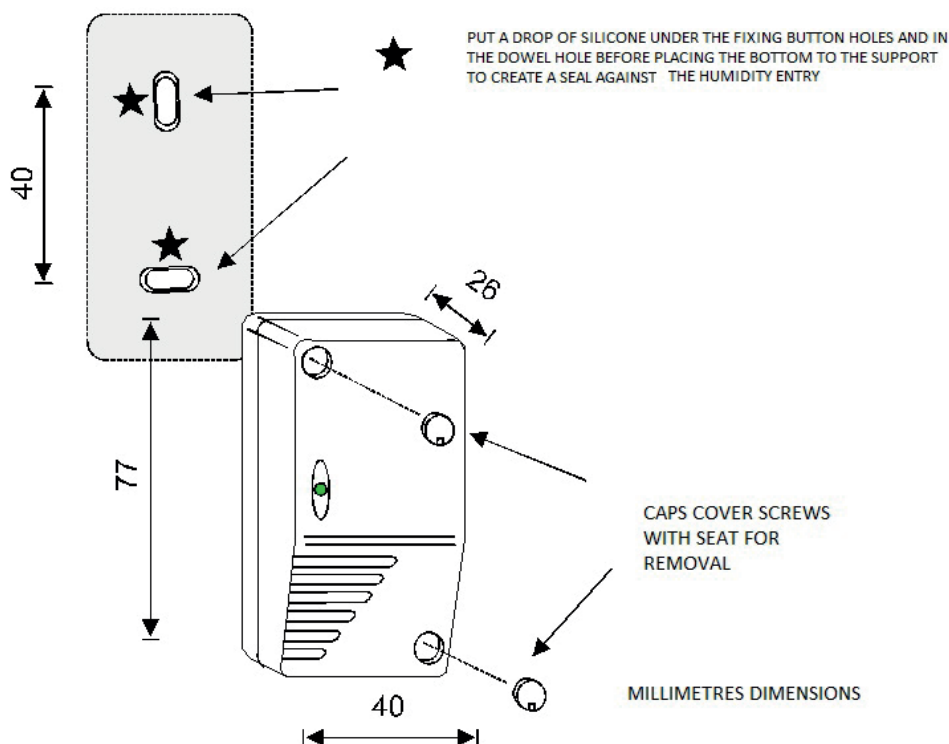
2. FEATURES

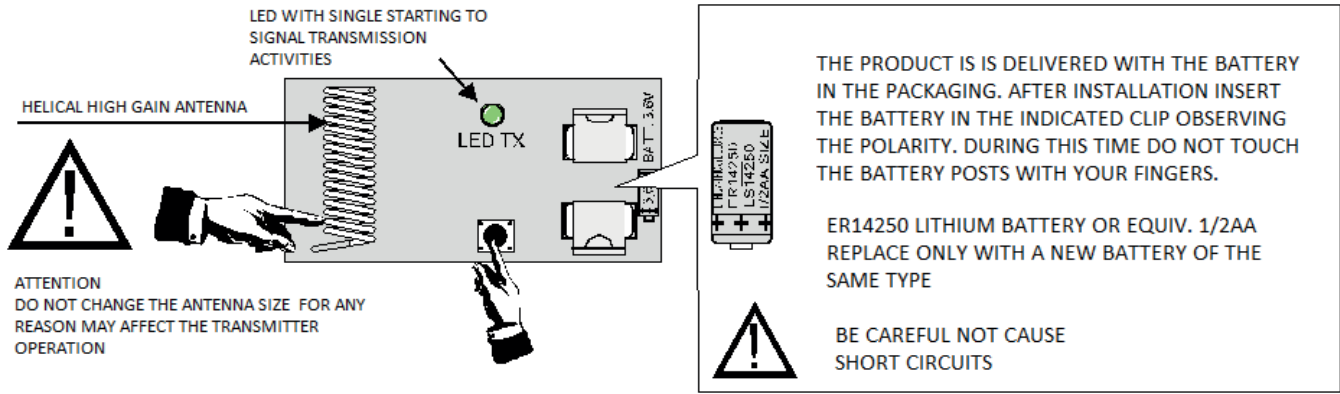|	
Model:	MDTEMP
Protection class:	IP4X
Power supply:	DC 3.6 V provided by an ER14250 battery
Power consumption @ 3.6 V:	1.5 μA idle, 17 mA in transmission
Low battery:	Threshold at 2.6 V with restore at 2.9 V
Operation:	2.35 V minimum operation threshold
Transmission:	Every 15 minutes or at each temperature change >0.3 °C (with a minimum interval of 3 minutes), or manually pressing a small button on the board
RF power:	10 mW
Indications:	Green LED ON while transimissions are in progress
Dimensions:	W 34 × H 19 × D 50 mm
Weight:	50 g
Parts supplied:	Technical manual; ER14250 battery; closing plugs

Certifications: MDTEMP is an accessory for expressly compatible systems.

3. INSTALLATION

For indoor installations, place MDTEMP at around 1.6 m from the floor, as usual for thermostats.

For outdoor installations, place MDTEMP where it is protected from rain and direct sunlight.

PUT A DROP OF SILICONE UNDER THE FIXING BUTTON HOLES AND IN THE DOWEL HOLE BEFORE PLACING THE BOTTOM TO THE SUPPORT TO CREATE A SEAL AGAINST THE HUMIDITY ENTRY

CAPS COVER SCREWS WITH SEAT FOR REMOVAL

MILLIMETRES DIMENSIONS

PCB overview:

LED WITH SINGLE STARTING TO
SIGNAL TRANSMISSION
ACTIVITIES

HELICAL HIGH GAIN ANTENNA

LED TX

BATT. 3.6V

THE PRODUCT IS IS DELIVERED WITH THE BATTERY
IN THE PACKAGING. AFTER INSTALLATION INSERT
THE BATTERY IN THE INDICATED CLIP OBSERVING
THE POLARITY. DURING THIS TIME DO NOT TOUCH
THE BATTERY POSTS WITH YOUR FINGERS.

ER14250 LITHIUM BATTERY OR EQUIV. 1/2AA
REPLACE ONLY WITH A NEW BATTERY OF THE
SAME TYPE

ATTENTION
DO NOT CHANGE THE ANTENNA SIZE FOR ANY
REASON MAY AFFECT THE TRANSMITTER
OPERATION

⚠ BE CAREFUL NOT CAUSE
SHORT CIRCUITS

4. SENSOR LEARNING AND MANAGEMENT

To learn the sensor, enter the wireless sensor code learning menu. The default position is 00. The temperature measured by the internal sensor is still displayed but with a smaller font, next to the temperature of the wireless sensor. The internal temperature viewing can be disabled through a specific programming option.

The correctly learned sensor is supervised on a 12 hours unmodifiable interval; the supervision can not be disabled.

The temperature sensor periodically transmits the measured temperature to the control unit. Immediately after the control unit starts, the temperature value is replaced by a flashing "???°" writing to signify that no value has been sent yet.

While the temperature is unknown, the boiler control output is switched off. All other outputs related to temperature are controlled using the last known temperature (25 °C at startup).

If the 12 hours supervision interval is spent without a transmission, the boiler output turns off and the flashing "???°" writing appears. The other functions related to temperature are controlled using the last known temperature.

After sensor learning, the flashing "???°" writing will be used until another transmission is received from the sensor.

The temperature sensor makes a transmission every 15 minutes or at the temperature variation detection; however, the minimum interval between the two transmissions is 3 minutes.

The temperature sensor can be calibrated from the programming or maintenance keypad menu. It is possible to make a separate calibration for the wireless temperature sensor and for the sensor integrated in the control unit. The calibration menu of the wireless sensor is accessible only from the on-board keypad and only if the sensor has been learned.

Note: it is advisable to wait at least an hour from the installation before performing the sensor calibration.

Note: for the correct programming of the control unit equipped with the remote temperature sensor, it is recommended to consult the programming manual for Villeggio series control units with firmware 4.0.0 or higher.

Warning: when MDTEMP is used to keep a building at an anti-freeze temperature, it is suggested to configure the dialler to report the "Device Low Batt." and "No Sens. Superv." events.