

MT-512C

CONTROLLER FOR COOLING WITH NATURAL DEFROST

Version 07



Find manuals of all line on Web:
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 MADE IN BRAZIL

DESCRIPTION

The **MT-512C** is a controller and indicator of temperature with cyclical timer. It controls refrigeration and defrost when compressor stops.

APPLICATIONS

Counters and refrigerated balconies.

THE TECHNICAL SPECIFICATIONS

- Power supply: 127 or 220 Vac (50/60 Hz)
12 or 24 Vac/dc
- Control temperature: -50 to 75.0°C (between -10 and 100 °C)
- Load current: 10 Amperes (resistive load)
- Dimensions: Diameter → 60 mm
Depth → 40 mm
- Operation temperature: 0 to 50 °C
- Operation humidity: 10 to 90% UR (without condensation)

CONFIGURATIONS

CONTROL TEMPERATURE ADJUST (SETPOINT):

- Press **SET** for 2 seconds until **SEt** appears, and release it. The temperature control to be adjusted appears.
- Use the keys **▼** and **▲** to change the values and then press **SET** to record.

PARAMETERS TABLE

F01	Access code: 123 (one hundred and twenty-three)	-	-	-
F02	Display offset	-5.0	5.0	°C
F03	Minimum setting allowed to user (locking)	-50	75.0	°C
F04	Maximum setting allowed to user (locking)	-50	75.0	°C
F05	Control differential (hysteresis)	0.1	20.0	°C
F06	Delay to turn thermostat output on	0	999	sec.
F07	Refrigeration time	1	999	min.
F08	Defrost cycle duration	1	999	min.
F09	Initial status when turn the instrument on	0 - refrig.	1 - defr.	-
F10	Blockade thermometer when defrost cycle is on	0 - no	1 - yes	-
F11	Delay when the instrument is turned on	0	240	min.
F12	Additional timer at the end of first cycle	0	240	min.

Note: F02 Function allows to correct eventual shunting lines in the reading, Proceeding from the exchange of the sensor.

PARAMETERS CONFIGURATION

- Access the function F01 pressing simultaneously the keys **▼** and **▲** for 2 seconds until appears **Fun**, freeing after that. Soon appears **F01**, so pressing **SET** (short touch).
- Use the keys **▼** and **▲** to enter the access code (123) when ready press **SET**.
- Use the keys **▼** and **▲** to access the desired function.
- After select the function, press **SET** (short touch) to visualize the value configured for that function.
- Use the keys **▼** and **▲** to change the value and, when ready, press **SET** to save the configured value and return to functions menu.
- To return the normal operation, press **SET** (long touch) until **---** appears.

FUNCTIONS WITH FACILITATED ACCESS

Registers of minimum and maximum temperatures

Press **SET**, the registered minimum temperature appears and after soon the maximum temperature registered.

Note: To reset the registered values, keep the key **SET** pressed during the visualization of the minimum and maximum temperature until **r5t** appears

Manual Defrost:

- To change the stage ("refrigeration" to "defrost") keep pressed the key **▼** for 4 seconds until **-** appears. To see the actual time (in minutes), press **▲**.

SIGNALLING

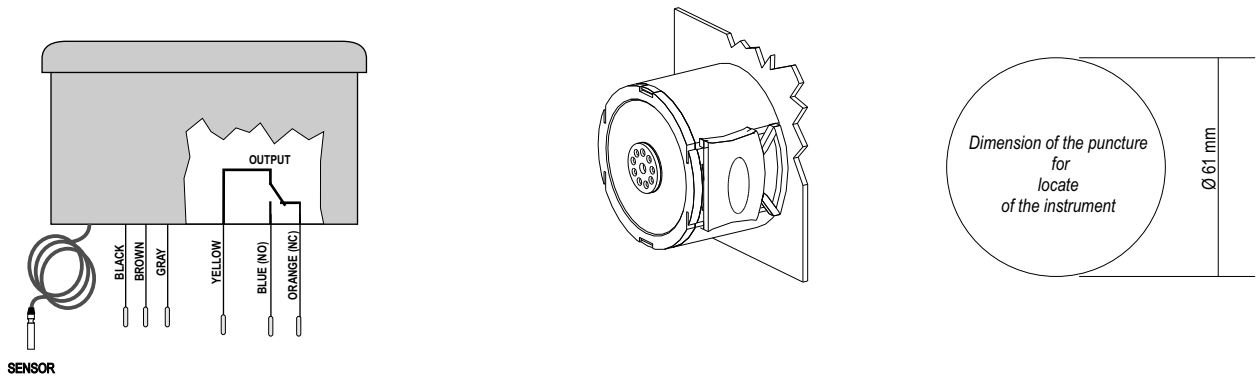
LEDS

REFRIG - Refrigeration output on

DEFROST - Natural defrost in progress

Err - Sensor detached or temperature outside the specified range

WIRING DIAGRAM



BLACK and BROWN : 220 Vac (24 Vac/dc)
BLACK and GRAY: 127 Vac (12 Vac/dc)
YELLOW: Common
BLUE: Contact NO
ORANGE: Contact NC

Above specified current use a contactor

Note: The sensor cable length can be increased by the user unit
 200 meters, using PP 2 x 24 AWG Cable.
 For immersion in water it uses thermometric well

IMPORTANT

According to the chapters from the IEC60364 standard:

- 1: Install protectors against over voltage on power supply
- 2: Sensor cables and computer signals can be together, however not at the same place where power supply and load wires pass for
- 3: Install suppressor of transient (RC filters) in parallel to loads to increase the usefull life of the relays

For more information contact our Application Eng. Department through e-mail support@fullgauge.com or dial +55 51 34753308.

Contact suppressor connection diagram

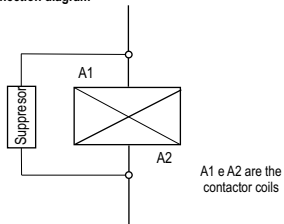


Diagram for suppressor installation for direct drive load inputs

