

XM700 controllers and CT760 keyboard

PN 04/25 November
by Copeland Controls

Controllers for the management of multiplexed refrigerated cases

Dear Customer,
the XM700 family of electronic regulators for the optimized management of refrigerated multiplexed cabinets has been developed to guarantee high flexibility and connectivity through Bluetooth® communication system and a dedicated APP. The powerful hardware platform, easy installation mode, and the simple configuration best meet manufacturer, installer and service needs.



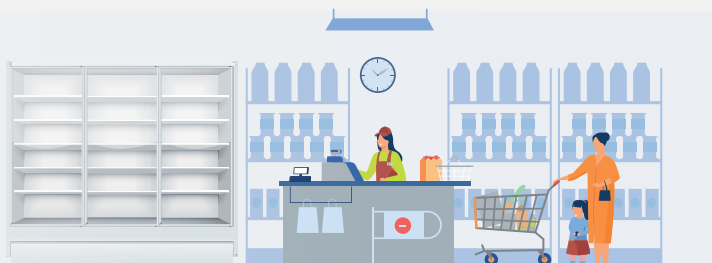
1. Applications

○ SMALL SHOPS

○ DISCOUNTS

○ SUPERMARKETS

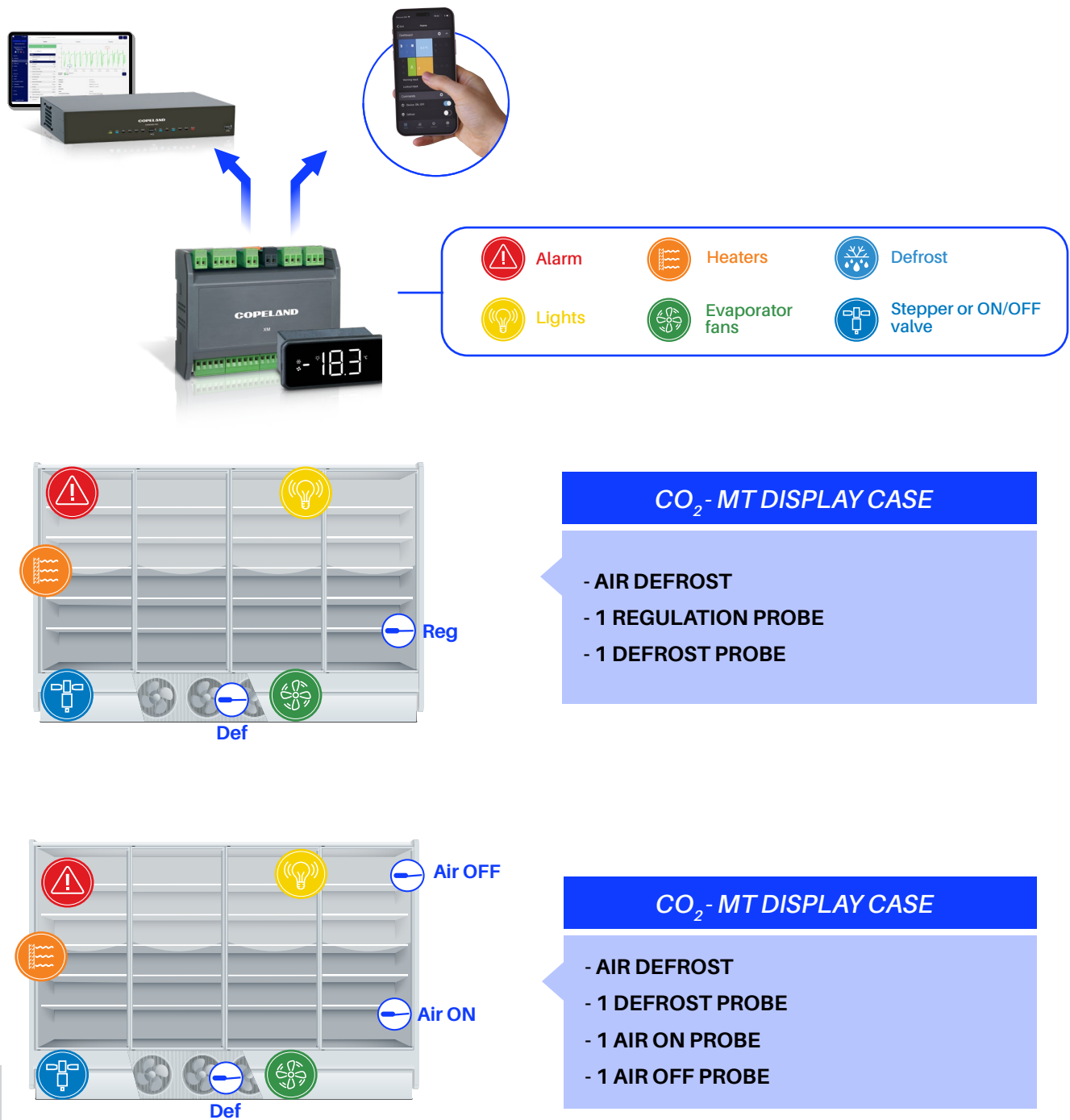
○ HYPERMARKETS

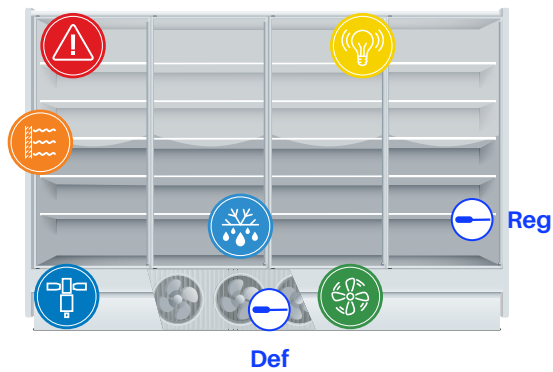


The XM700 family has been designed for remote cases, vertical cabinets, refrigerated counters and is ideal for different types of applications in the retail world, from small shops to discount stores, from supermarkets to hypermarkets. The multiple functions that characterize these controllers also make them suitable for the optimized management of cold rooms.

1.1 Pre-set applications to save installation time

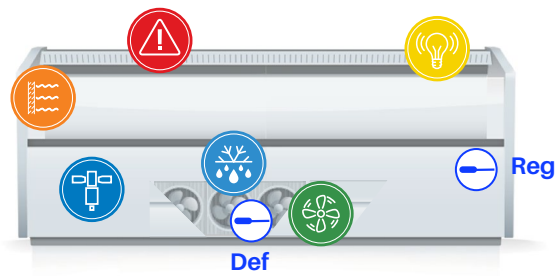
XM700 controllers are already pre-set with 6 types of applications, divided in medium and low temperature, with 1 or 2 regulation probes. These controllers guarantee a complete load control (lights, fans, heaters, and more) and high plant efficiency, both using stepper or ON/OFF valves.





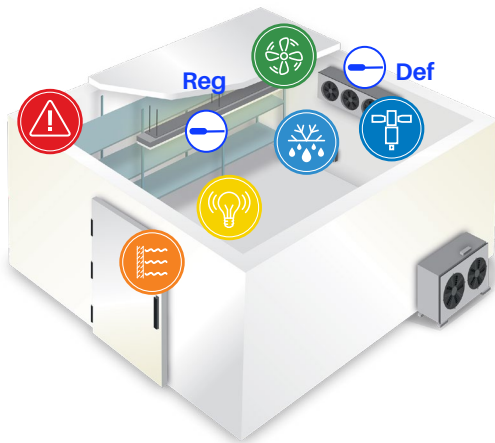
CO₂ - MT DISPLAY CASE

- HEATER DEFROST
- 1 REGULATION PROBE
- 1 DEFROST PROBE



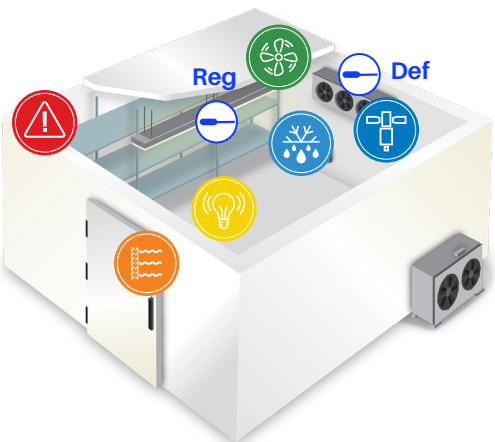
CO₂ - LT DISPLAY CASE

- HEATER DEFROST
- 1 REGULATION PROBE
- 1 DEFROST PROBE



CO₂ - MT COLD ROOM

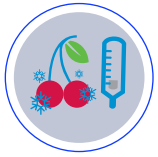
- HEATER DEFROST
- 1 REGULATION PROBE
- 1 DEFROST PROBE



CO₂ - LT COLD ROOM

- HEATER DEFROST
- 1 REGULATION PROBE
- 1 DEFROST PROBE

2. Main benefits



Food quality

The accurate and tight temperature regulation, display of events and alarm management can help to ensure the highest quality of fresh food.



Less commissioning time

The new auto-adaptive algorithm for superheat management simplifies the cabinet setup and improves its performance in terms of temperature stability ensuring optimum food preservation and decreasing energy consumption.



Firmware update even remotely

Besides updating the firmware of the controller by using the Wizmate software directly on site, it is possible to execute this operation even remotely, through the XWEB PRO monitoring system. This avoids machine stops, which could result in wasted energy and resources, ensuring the controller is updated with the latest functions and compatible gases.



Prompt reporting

A faster communication (38,4k) between controllers and supervising systems allows the cabinet to be monitored in real time ensuring a prompt intervention of the service in case of alarms.



Energy saving

The “**Optimized Defrost Duration**” (ODD) algorithm represents a smart way to save energy.

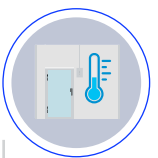
This advanced algorithm allows to:

- terminate defrost as soon as the evaporator is clean, reducing its time of up to 20% (compared with standard defrost temperature termination);
- reduce defrost heaters activation up to 80h in a year;
- reduce operating cost;
- obtain further savings related to reduced time to recover the temperature.



Speed up OEM production line

Thanks to the automatic output testing, the manufacturer can verify correct wiring connections during the production line test, ensuring accuracy and reducing time.



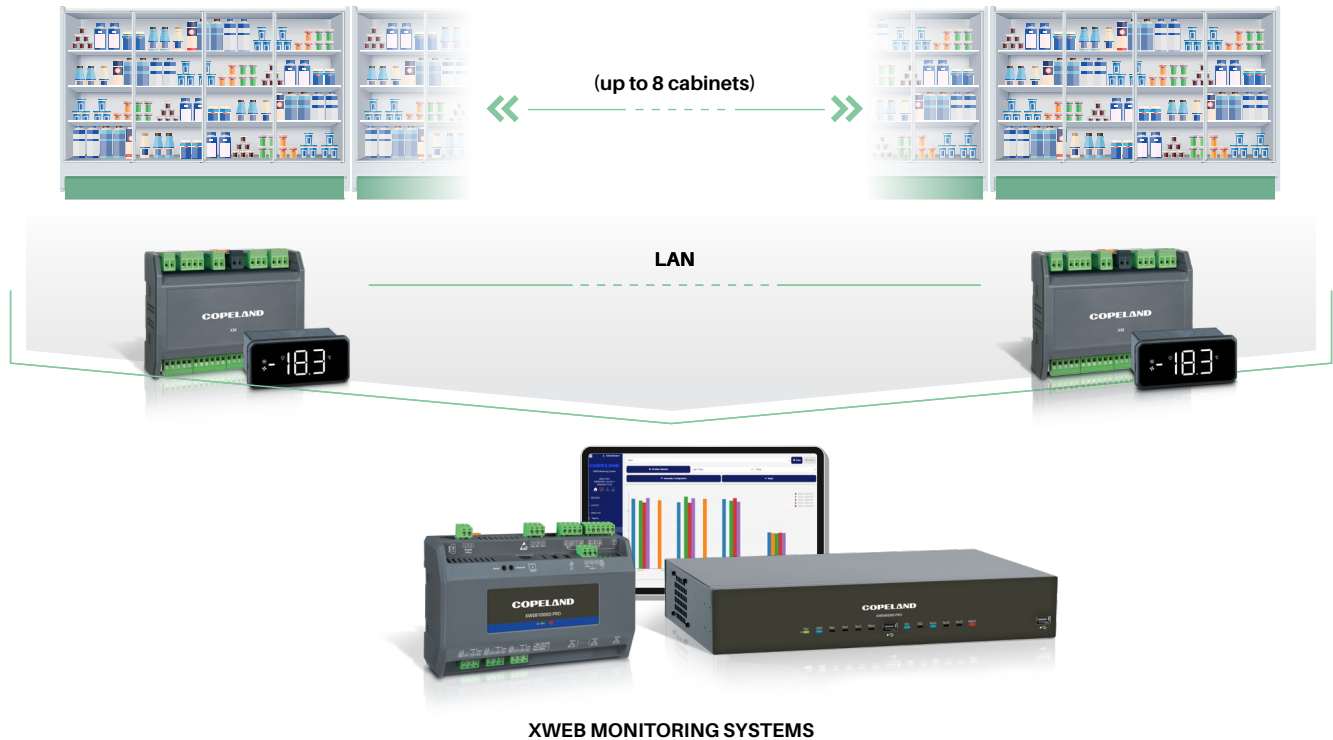
Homogeneous temperature control

Thanks to temperature regulation determined by the average of one or more probes (up to 3), it is possible to have a homogeneous temperature inside the environment. This special function is highly valued for cold rooms where the temperature results can be different and not homogeneous, affecting the quality of the product.

3. Synchronized management of cases

XM700 controllers are equipped with LAN output to allow the synchronization of important functions. With a single command, you can obtain:

- synchronized defrosts to ensure the correct temperature management and product preservation;
- the optimization of installation time and costs through a common pressure probe;
- the synchronization of the day/night function (curtains, night set, energy saving, and more) to decrease consumptions;
- timed light switching ON/OFF.



4. Designed for natural refrigerant



The XM700 series is designed to deal with natural refrigerants such as: A2L, CO₂, R290 and R600. These controllers are already approved according to the EN60335-2-89, and therefore they can be placed where the cabinet design requires without restrictions related to possible refrigerant leakage risk analysis. This results in:

- **reduced time to market:** controllers are not affected by extensive cabinet tests related to the qualification of the electronic controller in a possible explosive atmosphere;
- **cost reduction:** tests related to the qualification of electronic controllers in a possible explosive atmosphere are no longer required and will not be charged to the cabinet manufacturer;
- **optimized energy consumption:** use of modulating loads (fans, lights, heaters, and more) via selectable analogue outputs (PWM, 0÷10Vdc or 4÷20mA).

5. Dedicated APP

Through Bluetooth® communication and the Copeland CONNECTED App, available for both iOS and Android, interaction with the unit is even more immediate. It is now possible to check the application operation in real time via the user interface available on your mobile device (smartphone, tablet), thus expanding functionality and usability. It will therefore be possible to have full control of the unit to which you connect, and the configuration, control and maintenance activities will be even more simplified. The App provides complete reporting with graphs and statistics, allows you to view the status of the refrigerated cabinets (presence of alarm conditions), and identifies users in order to manage user access and permission levels securely and centrally.

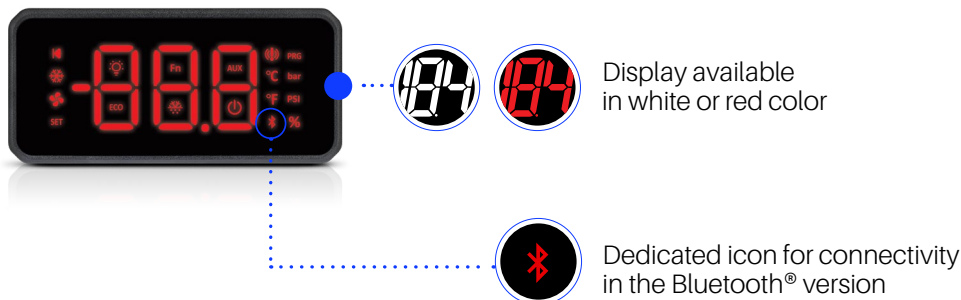


- Ready to be used in a few minutes
- Advanced machine status display and analysis
- Simplified maintenance operations and cost reduction



6. CT760 keyboard

The CT760 keyboard features an innovative Full Touch or Bluetooth® interface with wider display and integrated icons to show data in real time and provide measurement units for clear and continuous monitoring. The keyboard in Bluetooth® version offers an enhanced user experience and a clear App interaction.



6.1 Menu keyboard

The interaction with the interface is simplified and intuitive thanks to the 4 menu to access all the main functions.



MAIN DISPLAY

Home navigation with temperature display



VIRTUAL KEYBOARD

Selection of the desired icon to activate the related function



SET POINT TEMPERATURE

Direct and fast set point adjustment



PROGRAMMING MENU

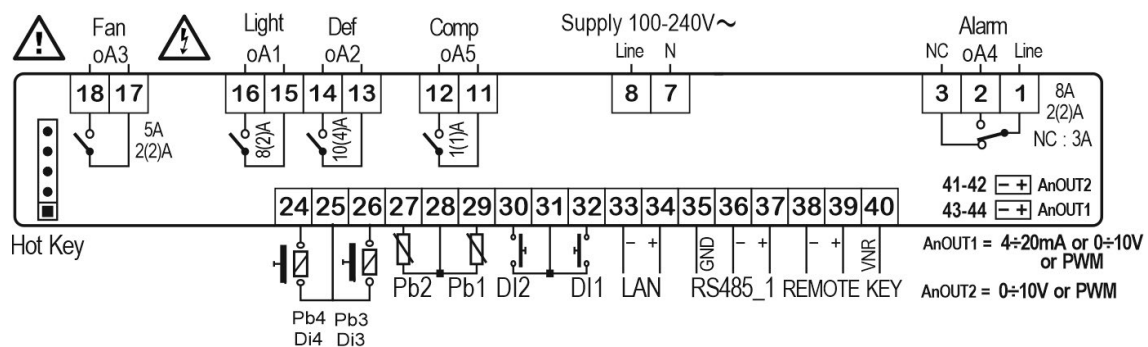
Quick parameter setting through direct access (X9) or group selection

7. Technical features

MODELS	XM750D	XM756D	XM759D
Power supply	230Vac or 100÷240Vac	100÷240Vac	230Vac or 100÷240Vac
Probe inputs	2 x NTC/PTC/PT1000/NTC_US + 2 x NTC/PTC/PT1000/NTC_US/DI all configurable	3 x NTC/PTC/PT1000/NTC_US + 2 x NTC/PTC/PT1000/NTC_US/DI + 1 x 0÷5V/4÷20mA all configurable	3 x NTC/PTC/PT1000/NTC_US + 2 x NTC/PTC/PT1000/NTC_US/DI + 1 x 0÷5V/4÷20mA all configurable
Digital inputs	2 x configurable	2 x configurable	2 x configurable
Relay outputs	2 x 16A SPST + 2 x 8A SPST + 1 x 5A SPST all configurable	2 x 16A SPST + 2 x 8A SPST + 1 x 5A SPST all configurable	2 x 16A SPST + 2 x 8A SPST + 1 x 5A SPST all configurable
Hot Key output	present	present	present
0÷10Vdc output	present	present	present
0÷10V/4÷20mA/PWM output	present	present	present
RS485 serial output	client	client	client
LAN output	up to 8 devices	up to 8 devices	up to 8 devices
Driver valve output		stepper (unipolar up to 0,40A)	ON/OFF (triac 8÷30W)
Back-up battery for EEV		internal	
Real Time Clock	present	present	present
Connectors	plug-in, plug-in + faston	plug-in, plug-in + faston	plug-in, plug-in + faston
Certifications	EN/UL60335-2-89	EN/UL60335-2-89	EN/UL60335-2-89

7.1 Connections

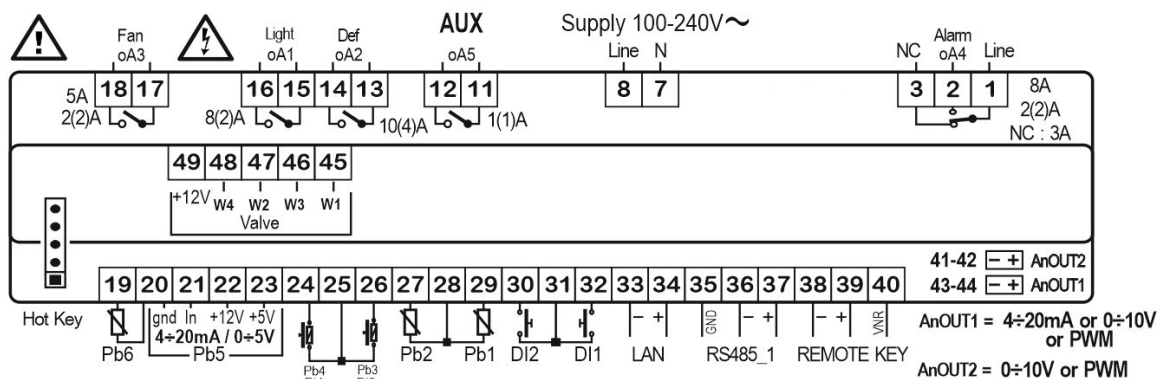
XM750D



NOTE:

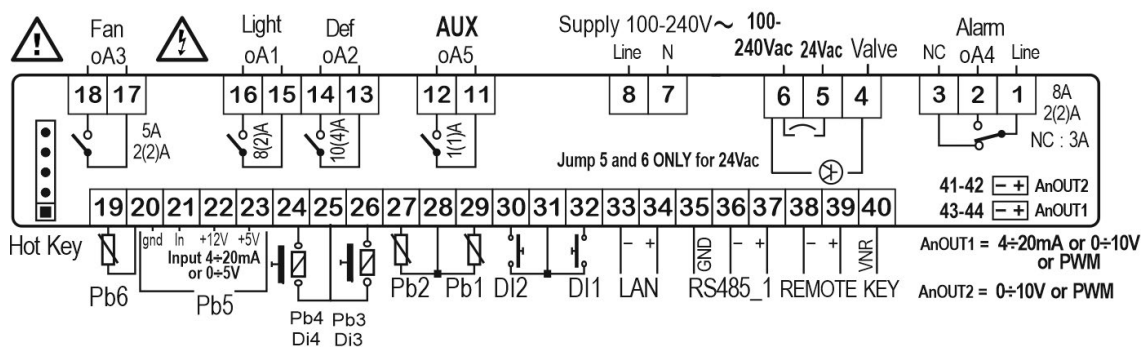
Models at 230Vac: connect supply to terminals 7-8
 Models at 115Vac: connect supply to terminals 7-8
 Analog outputs are optional

XM756D



NOTE:
Analog outputs are optional

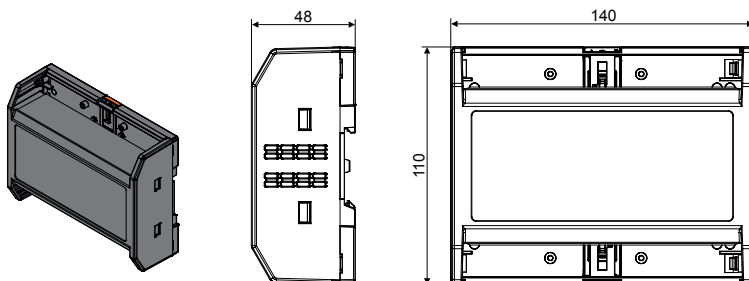
XM759D



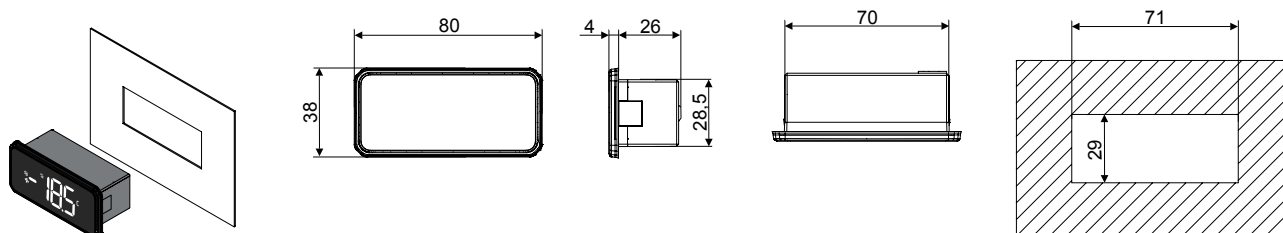
NOTE:
Models at 230Vac: connect supply to terminals 7-8
Models at 115Vac: connect supply to terminals 7-8
Analog outputs are optional

7.2 Dimensions and cut-out

XM700



CT760



8. Main accessories



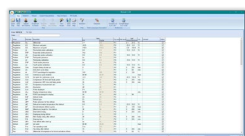
CT760-REP

Remote display available in red or white color.



HOT KEY 64K

Key for a quick and easy parameter update.



WIZMATE PROG-TOOL KIT

Programming tool for a quick and easy parameter update.



XJ485USB-KIT

USB to RS485 serial converter.



CAB/CJ15, CAB/CJ30

Connectors for analog outputs.



PROBES

Temperature and pressure probes available for every kind of application.

9. How to order

XM750D

XM750D-7N1CA --> Power supply 100-240Vac

XM750D-5N1CA --> Power supply 230Vac

XM756D

XM756D-7N3CA --> Power supply 100-240Vac

XM759D

XM759D-5N1CA --> Power supply 230Vac

XM759D-7N1CA --> Power supply 100-240Vac

CT760 KEYBOARD

CT760-001W2 --> White display - Bluetooth version

CT760-101W0 --> White display - Versione touch

CT760-101N0 --> Red display - Versione touch

CT760-001N2 --> Red display - Bluetooth version

10. Pricing

Please contact our sales department for prices and further information.

11. Availability and orders

The XM700 series is available. Please contact our sales department for delivery time.

XM600 models will be phased-out in November 2026. Please contact our sales department to schedule the transition to the XM700 family.