



Comply With  
**HACCP**  
93/43/EU

## MasterCella series

is the new series of controllers for cold rooms that joins the wide range of CAREL's cooling control solutions.

There are two available products: **MasterCella compact** and **MasterCella split**.

### **Intelligent!**

**MasterCella** represents the complete electronic solution for static or ventilated single-phase/three-phase cold rooms. It directly manages single-phase units with compressors up to 2 Hp. Thanks to its high capacity relays, it can also control the other actuators: the evaporator fans, defrost, the lights and the alarm relay.

### **Simple to install!**

The high index of protection - IP65 - allows the installation of **MasterCella** in particularly damp or humid rooms. The case can be installed directly on the wall at the front of the cold room. Wiring is made simple thanks to the access door located on the front panel.

### **Safe!**

**MasterCella** is guaranteed by the CAREL's design and production system, which ensures a high standard of reliability and quality in all its products. All of them are sold at a very competitive price compared to a similar electromechanical panel.

**MasterCella** can also be connected to CAREL's supervisory systems.

### **Simple to set!**

The operating parameters can be programmed either using the keypad or the remote control.

**MasterCella** is supplied already pre-configured for the management of the door switch: when the door is opened the compressor and the evaporator fans are stopped, the temperature alarms are delayed and the light is switched on.



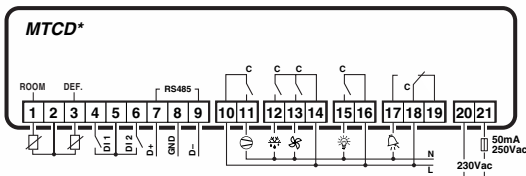
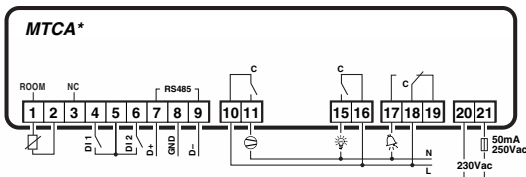
**MasterCella compact** is the compact solution for the control of single-phase cold rooms. **MasterCella compact** does not require an extra electrical panel, because it works too as the electrical panel for the cold room. Its 5 relays directly manage all the actuators, in particular the compressor up to 2 Hp.







**MasterCella compact** can be either wall-mounted (at the front of the cold room) or panel-mounted. The electrical cables can be connected to the instrument through standard plastic channels that are fastened directly onto the case.

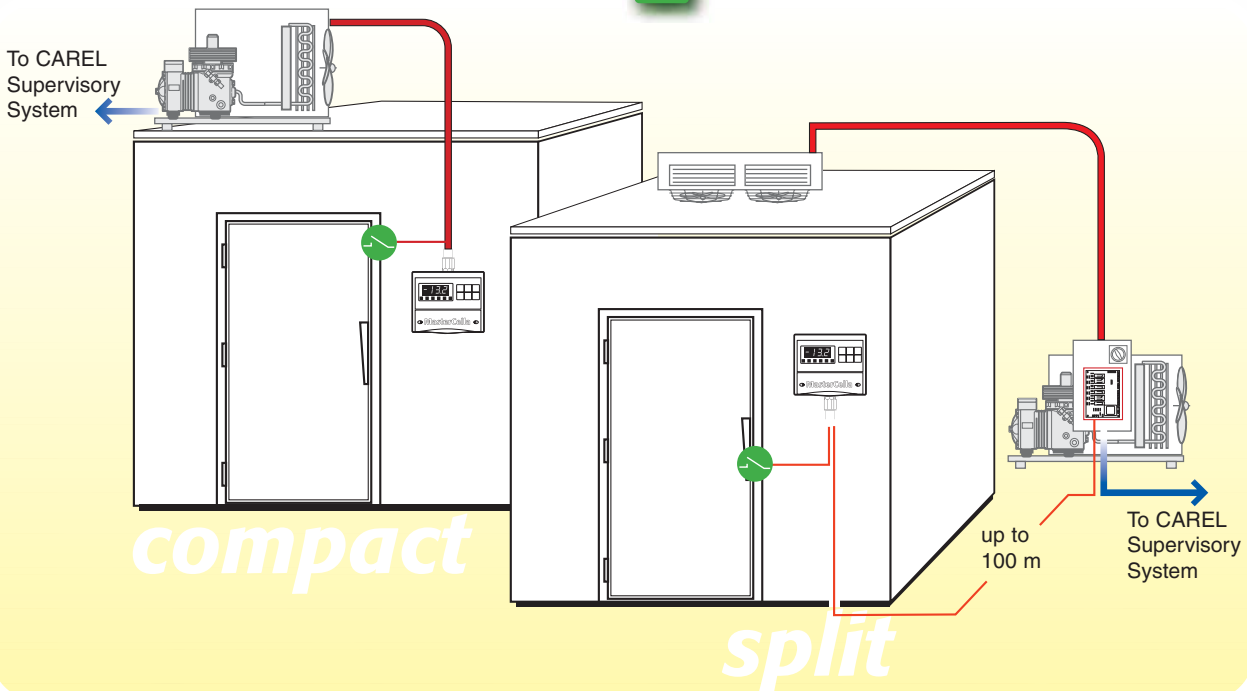
Wiring is handy thanks to the front door that can be opened.

The user interface is simple and complete.

The large LED display provides excellent display of the temperature, even in poor light conditions. The large buttons are designed to be user-friendly. Numerous signal LEDs continuously display the status of the cold room:



-  room ON-OFF (flashing when OFF)
-  cooling actuator ON
-  "continuous cycle" operation
-  evaporator fan ON
-  defrost in progress
-  light ON



## MasterCella split

## the advanced solution

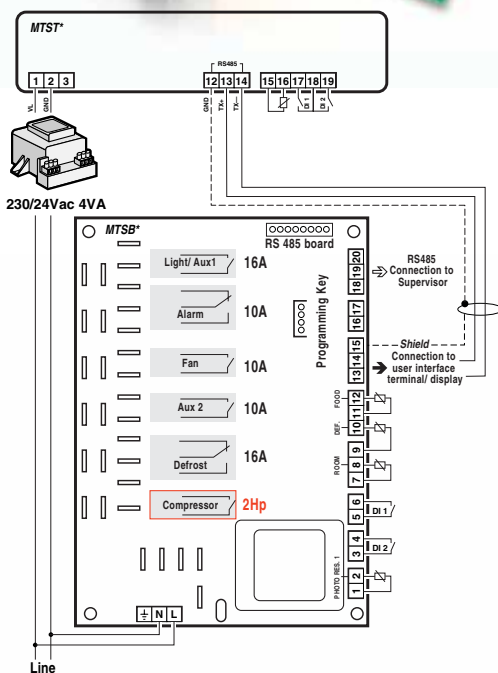
**MasterCella split:** the simple and complete solution

for the control of cold rooms with remote refrigeration unit. As a matter of fact, the power board can be located up to 100 metres and thus can be installed in the electrical panel of the condensation unit. In this way, **MasterCella split** user interface becomes the front cold room panel.

The power board is wired quickly, through faston connections.

**MasterCella split** power board is fitted with 6 relays for the complete control of: compressors up to 2 Hp, evaporator fans, defrost heaters, lights, auxiliary outputs, alarms.

The relay outputs can be configured either for power switching contacts (230 Vac) or free contacts. Furthermore, the Real Time Clock option allows the defrost cycles to be programmed for set times. **MasterCella split** can be configured either using the keypad or by using an electronic programming key, which allows the quick transfer of a standard configuration, avoiding errors and lengthy programming times.



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### The solution for compliance

**HACCP:** that is, Hazard Analysis and Control Critical Point (EU Directive 93/43 – Italian decree law no.155/156, 1997) is a method for controlling processes to ensure the safety of food.

Temperature is undoubtedly one of the critical variables that needs to be controlled.

**MasterCella** series simplifies the “HACCP” procedure, in that it informs the user of the correct temperature trend, activating a local alarm (buzzer) and remote alarm (special relay) if the maximum set limit is exceeded.

**MasterCella split**, in particular, features innovative functions that combine safety and simplicity.

It is in fact fitted with a dedicated HACCP signal LED and button. The LED lights up not only if the temperature limit has been exceeded for the maximum set period, but also in the absence of power for a period that may compromise the correct conservation of the product.

The Clock option, pressing the HACCP button lets the user know when the problem occurred. Information is saved in the memory (even in the event of a blackout) until the user decides to cancel it, using a special password.

**MasterCella** series controllers can be connected to the CAREL PlantVisor and PlantWatch data acquisition systems for saving and printing all the measured temperatures and alarms.



## Technical specifications

### Compact series models

Operating range	0T50 °C, 20 to 80% rH	<b>Inputs</b>	
Index of protection	IP65	Type	2 digital with free contacts 2 analogical (CAREL NTC 10 kΩ at 25 °C) for ambient and defrost probe
Parameter setting	using keypad, remote control	Precision	±1 °C
Display	2 and a half digits	<b>Models</b>	
Signal lights	ON, compressor, continuous cycle, defrost, fan, light	MTCA000100	for Normal Temperature unit

### Electrical specifications

Power supply	230 Vac, 10 to -15%, 50/60 Hz, 7 VA
Terminal block	screw terminals, cross-section: max 1.5 mm <sup>2</sup> and min 0.5 mm <sup>2</sup>

Serial connection using MTCSE0000 board to CAREL 485 supervisory systems.

### Relay output

Compressor	SPST relay 8 A res. MTCA, MTCD0 SPST relay 2 Hp "MTCD200100"
Defrost	SPST relay 10 A res. 250 Vac
Fans	SPST relay 4 A res. 250 Vac
Light/aux output	SPST relay 4 A ind. 250 Vac
Alarm output	SPST relay 2 A res. 250 Vac

### Split series models

Operating range	0T50 °C, 20 to 80% rH	<b>Inputs</b>	
Index of protection	IP65	Type	2 digital with free contact 3 analogical (CAREL NTC 10 kΩ at 25 °C) for ambient, defrost and product probe
Parameter setting	using keypad	Precision	±1 °C
Display	3 and a half digits	<b>Models</b>	
Signal light	ON, compressor, continuous cycle, defrost, fan, light, HACCP, aux.	MTST00V100	terminal

### Electrical specifications

Power supply, MTSB board	230 Vac, 10 to -15%, 50/60 Hz, 3 VA
Power supply, MTST terminal	with transformer 230/24 Vac, 10 to -15%, 50/60 Hz, 4 VA
Terminal block, MTSB board	screw terminals (signal), cross-section: max 1.5 mm <sup>2</sup> - screw terminals (power), cross-section: max 2.5 mm <sup>2</sup> and faston max 6.3 mm
Terminal block, MTST terminal	screw terminals, cross-section: max 1.5 mm <sup>2</sup> e min 0.5 mm <sup>2</sup>

Connection between MTST terminal and MTSB board, max. distance 100 m with shielded cable. Serial connection using FCSE00000 serial board to CAREL 485 supervisory systems.

### Relay output

Compressor	SPST relay 2 Hp
Defrost	SPST relay 16 A res. 250 Vac
Fans	SPST relay 10 A res. 250 Vac
Light output	SPST relay 16 A res. 250 Vac
Aux output	SPST relay 10 A res. 250 Vac
Alarm output	SPST relay 10 A res. 250 Vac

## Dimensions

