



techsystem

automatyka klimatyzacja wentylacja

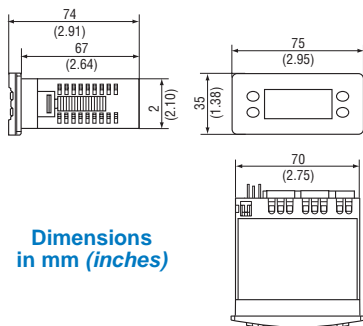
▸ zapoznaj się z naszą ofertą

Refrigeration Field Controllers

MR10 Electronic Controls for compressor and Defrost Management (1/4)



MR10 Series



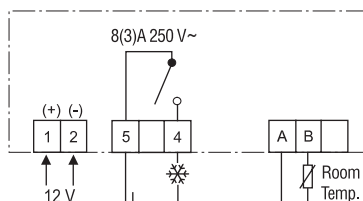
Dimensions
in mm (inches)

Description

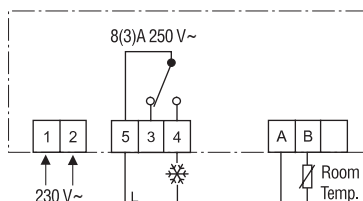
The MR10 range of controllers has been specifically designed for 'static' or 'ventilated' refrigeration units working at positive or negative temperatures. It incorporates all the features needed by modern units such as compressor and evaporator fan full management, 'off-cycle' or 'active' defrost control. Particular emphasis has been given to the cost, the MR10 offers the basic features for a complete solution maintaining the cost at a very competitive level. Its style has been particularly studied in order to better suit your machine design.

Features

- Attractive Panel mount enclosure
- Up to 4 relays in a single package
- Up to 16A thermostat output
- 230 Volt power supply models available
- Accurate and interchangeable IP 68 sensor available
- Wide range of sensors with various enclosures available
- SMD technology
- Keyboard lock



MR11PM12R-1C Wiring



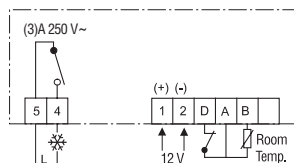
MR11PM230-1C Wiring

MR11 Thermostats for Compressor Management - Selection Table

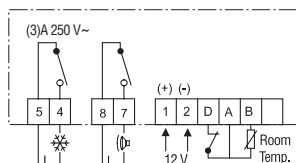
Range (°C)	Enclosure	Power Supply	Display	Output Rating	Protection Class	Additional Features	Ordering Codes
-40 to +70	Panel	12 VAC/DC	3 digits	SPST 8(3)A	Overall IP20 Faceplate IP54	Accuracy: ±1 °C Power Consumption: 2 VA 50/60 Hz	MR11PM12R-1C
		230 VAC	3 digits				MR11PM230-1C

MR12 Thermostats with "off cycle" Defrost Control - Selection Table

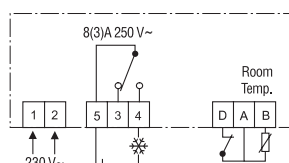
Range (°C)	Enclosure	Power Supply	Display	Output Rating	Protection Class	Additional Features	Ordering Codes
-40 to +70	Panel	12 VAC/DC	3 digits	SPST 8(3)A	Overall IP20 Faceplate IP54	Accuracy: ±1 °C Power Consumption: 2 VA 50/60 Hz	MR12PM12R-1C
		230 VAC		MR12PM12R-A1C			
		12 VAC/DC		SPST 16(12)A			MR12PM230-Z1C
							MR12PM12H-1C



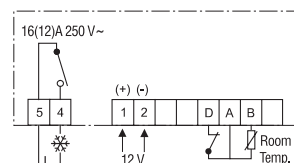
MR12PM12R-1C Wiring



MR12PM12R-A1C Wiring



MR12PM230-Z1C Wiring



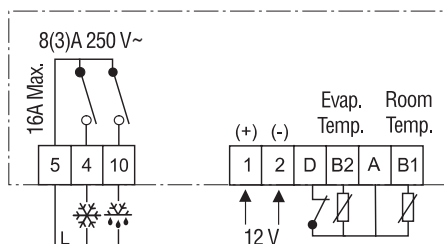
MR12PM12H-1C Wiring

Refrigeration Field Controllers

MR10 Electronic Controls for compressor and Defrost Management (2/4)

MR13 Thermostats with Active Defrost Management - Selection Table

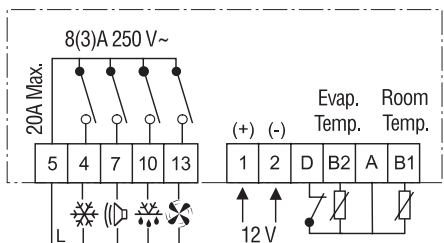
Range (°C)	Enclosure	Power Supply	Display	Output Rating 250 VAC			Protection Class	Additional Features	Ordering Codes
				Compressor	Alarm	Defrost			
-40 to +70	Panel	12 VAC/DC	3 digits	SPST 8(3)A		SPST 8(3)A	Overall IP20 Faceplate IP54	Accuracy: ±1° C Power Consumption: 2 VA 50/60 Hz	MR13PM12R-2C



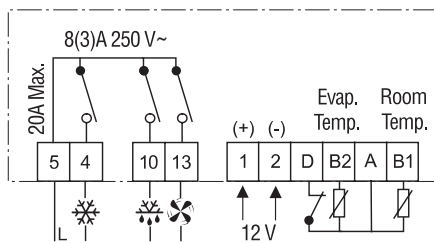
MR13PM12R-2C Wiring

MR14 Thermostats with Defrost and Fan Management - Selection Table

Range (°C)	Enclosure	Power Supply	Display	Output Rating 250 VAC				Protection Class	Additional Features	Ordering Codes
				Compressor	Alarm	Defrost	Fan			
-40 to +70	Panel	12 VAC/DC	3 digits	SPST8(3)A		SPST 8(3)A	SPST 8(3)A	Overall IP20 Faceplate IP54	Accuracy: ±1° C Power Consumption: 2 VA 50/60 Hz	MR14PM12R-A2C
				SPST 8(3)A	SPST 8(3)A	SPST 8(3)A	SPST 8(3)A			MR14PM12R-2C



MR14PM12R-A2C Wiring



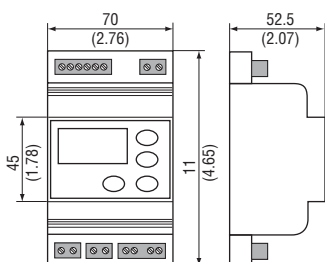
MR14PM12R-2C Wiring

Refrigeration Field Controllers

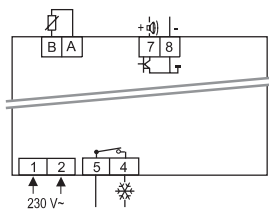
MR10 Electronic Controls for compressor and Defrost Management (3/4)



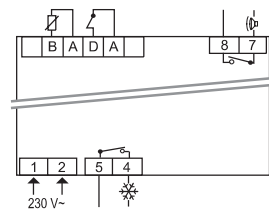
MR11 Series



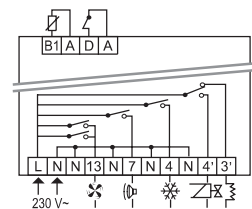
Dimensions in mm (inches)
DIN-Rail enclosure



MR1DR230-1C Wiring



MR2DR230-1C Wiring



MR12DR230-1C Wiring

MR11 Thermostats for Compressor Management - Selection Table

Range (°C)	Enclosure	Power Supply	Display	Output Rating 250 VAC		Protection Class	Additional Features	Ordering Codes
				Compressor	Alarm			
-40 to +70	DIN Rail (4 models)	230 VAC ±10%, 2 VA 50/60 Hz	3 digits	SPST 8(3)A	Open Collector	IP20	Accuracy: ±1 °C	MR1DR230-1C

MR2 Thermostat for Compressor Management with 'Off Cycle' Defrost Control - Selection Table

Range (°C)	Enclosure	Power Supply	Protection Class	Additional Features	Display	Output Rating 250 VAC					Ordering Codes
						Compressor	Defrost	Fan	Alarm	Pump Down	
-40 to +70	DIN Rail (4 modules)	230 VAC ±10% 2 VA 50/60 Hz	IP 20	Accuracy: ±1 °C	3 digits	SPST 8(3)A			SPST 8(3)A		MR2DR230-1C
						SPST 8(3)A		SPST 16(6)A	SPST 8(3)A	SPST 8(3)A	MR12DR230-1C

MR4 Thermostat with Active Defrost and Fan Management - Selection Table

Range (°C)	Enclosure	Power Supply	Protection Class	Additional Features	Display	Output Rating 250 VAC					Ordering Codes
						Compressor	Defrost	Fan	Alarm	Pump Down	
-40 to +70	DIN Rail (4 modules)	230 VAC ±10% 2 VA 50/60 Hz	IP 20	Accuracy: ±1 °C	3 digits	SPST 8(3)A			SPST 8(3)A		MR2DR230-1C
						SPST 8(3)A		SPST 16(6)A	SPST 8(3)A	SPST 8(3)A	MR12DR230-1C

Refrigeration Field Controllers
MR10 Electronic Controls for compressor and Defrost Management (4/4)
Parameters Description

Display Code	Parameter	Setting Range	Default	MR11 and MR1	MR12 and MR2	MR13	MR14 MR4 and MR15
Temperature control parameters							
Hy	Hysteresis (HY)	1 to 9 K	2	●	●	●	●
LL	Lower setpoint limit (LL)	-40 °C to higher limit	-40	●	●	●	●
HL	Higher setpoint limit (HL)	lower limit to 70 °C	70	●	●	●	●
CC	Anti short cycling (CC)	0 to 9 min	2	●	●	●	●
Co	Deep freezing time (Co)	0 to 99 min	60	●	●	●	●
Alarm parameters							
AH	High. temperature alarm	0 to 50 °C related to setpoint	10	●	●	●	●
AL	Low temperature alarm	-50 to 0 °C related to setpoint	-10	●	●	●	●
Ad	Alarm differential	1 to 9 K	1	●	●	●	●
At	Alarm time delay	0 to 99 min	30	●	●	●	●
Defrost parameters							
dF	Defrost function	0 = Electric heater 1 = Hot gas	0			●	●
dE	Defrost end function	0 = By time 1 = By temperature	1			●	●
dt	Defrost termination temp	0 to 20 °C	7			●	●
di	Defrost interval time	0 to 99 hours	6		●	●	●
dd	Max. defrost duration	0 to 99 min	40		●	●	●
dC	Dripping time	0 to 99 min	5		●	●	●
dU	First defrost after power on	OFF, 0 to 99 min	OF		●	●	●
dP	Display during defrost	0 = Last value before defrost 1 = Setpoint	0		●	●	●
dr	Delay displayed temp after defrost	1 to 99 min	20		●	●	●
Digital input parameters							
iF	Digital input function	0 = Not Connected 1 = High Level Al. 2 = Delayed Alarm 3 = Door switch	0		●	●	●
id	Digital input time delay	0 to 99 min	5		●	●	●
Fan control parameters							
FF	Fan operating function	0 = Parallel with compressor 1 = Continuous <i>Always OFF during defrost</i>	0				●
Fd	Fan start-up delay after defrost end and power up	0 to 99 min.	5				●
Fr	Fan start-up temperature after defrost end and power up	-30 to +5 °C	-5				●
Other parameters							
SF	Thermostat operating function if sensor failure	0 = Always ON 1 = Always OFF 2 = Automatic	2	●	●	●	●
So	Sensor offset	-20 to +20 k	0	●	●	●	●
Un	Temperature units	0 = °C 1 = °F	0	●	●	●	●
PU	Display updating time	1 to 99 sec	1	●	●	●	●