MR4PMUHV Electronic Temperature/Defrost Control with Relay Pack Catalog Page

LIT-1927380

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Description

The MR Series temperature controls are designed for use with hot gas or electric heat defrost in both refrigeration and freezer units. Either time or temperature based defrost termination may be selected.

The MR Series incorporates control functions such as compressor control, defrost management, fan management, and alarm management.

Refer to the *MR4PMUHV Electronic Temperature/Defrost Control with Relay Pack Product Bulletin (LIT-125190)* for important product application information.

Features

- Single package provides the functionality of multiple components at a cost-effective price
- Mounting flexibility allows the control and relay pack to be mounted together or separately, facilitating multiple configurations
- Accurate, interchangeable temperature sensor provides reliable control performance with up to 300 ft. of wiring (an offset is provided for longer wiring)
- Easily readable temperature display can show either evaporator or process temperature at the touch of a button
- Heavy-duty relays allow direct control of compressors, fans, defrost heaters, and alarms
- Alarm management functions provide both local alarm codes and a relay closure that can be used to trigger a remote alarm or a dial-out modem

Applications

These relay pack mounted controls provide direct control of compressors up to 2 hp, electric heater loads of up to 20 amperes, and evaporator fan loads of up to 3/4 hp. The need for separate relays is eliminated in these applications.

In addition, the MR4PMUHV controls combine the functionality of an electromechanical thermostat, mechanical clock, defrost termination device, and temperature readout device with the accuracy of electronic technology.

Selection Charts

Table 1: MR4PMUHV Electronic Temperature/ Defrost Control with Relay Pack

Product Code Number	Description
MR4PMUHV-12C	Relay pack defrost control with two A99BB-200C sensors

Table 2: Repair Parts

Product Code Number	Description
MR4PM12C-12C	Replacement control for use in relay pack
RP4MRUHV-1C	Relay pack without control
A99BB-200C	Sensor, cable length: 6.5 ft/1.98 m

MR4PMUHV Electronic Temperature/Defrost Control with Relay Pack technical specifications

Table 3: MR4PMUHV Electronic Temperature/ Defrost Control with Relay Pack technical specifications

Specification		Description
Frequency		60/50 Hz at 120/240 VAC
Power consumption		10 VA at 240 VAC, 5 VA at 120 VAC
Supply Level		120 and L1: 120 VAC +10%/-15% 240 and L1: 240 VAC +10%/-15%
Accuracy		± 1.8F°/± 1C°
A99 Sensor Cable		6.5 ft/1.98 m
Ambient Operating Conditions	MR4PMUHV-12C	+14° to +111°F/-10° to +44°C; derating 6.25% per 1°C to 60°C; 0 to 95% RH (noncondensing)
	MR4PM12C-12C	+14° to +140°F/-10° to +60°C; 0 to 95% RH (noncondensing)
	RP4MRUHV-1C	-40° to +111°F/ -40° to +44°C; derating 6.25% per 1°C to 60°C; 0 to 95% RH (noncondensing)

Table 3: MR4PMUHV Electronic Temperature/ Defrost Control with Relay Pack technical specifications

Specification		Description
Ambient Storage Conditions	MR4PMUHV-12C	-22° to +176°F/-30° to +80°C; 0 to 95% RH (noncondensing)
	MR4PM12C-12C	-22° to +176°F/-30° to +80°C; 0 to 95% RH (noncondensing)
	RP4MRUHV-1C	-40° to +185°F/-40° to +85°C; 0 to 95% RH (noncondensing)
Dimensions (H x W x D)		7.94 x 3.6 x 2.4 in. 202 x 92 x 61 mm
Agency Listings		UL Listed (File SA516, UL Guide SDFY; cUL Guide SDFY7)
Shipping Weight		2.9 lb/1,320 g

Table 4: Relay Electrical Ratings

	24	120	208	240
SPST Compressor Relay				
Horsepower Rating	—	1	1.5	2
AC Full Load Amperes	—	16	11	12
AC Locked Rotor Amperes	—	96	66	72
Pilot Duty (VA)	125	750	875	1,125
SPDT Fan Relay				
Horsepower Rating	—	1/3	1/2	3/4
AC Full Load Amperes	—	7.2	5.65	6.9
AC Locked Rotor Amperes	—	43.2	33.9	41.4
Pilot Duty (VA)	50	325	450	600
SPST Defrost Heater Relay				
Horsepower Rating	—	1	1.5	2
AC Full Load Ampere	—	16	11	12
AC Locked Rotor Amperes	—	96	66	72
Non-Inductive Load Amperes	—	20	20	20
Pilot Duty (VA)	125	750	825	1,125
SPST Alarm Relay				
Non-Inductive Load Ampere	5	5	5	5
Pilot Duty (VA)	—	125	250	325

ⓘ **Note:** Ratings shown are for ambient operation at -40 to 44°C. Derate electrical ratings 6.25% per 1°C (1.8°F) between 44°C (111°F) and 60°C (140°F).

Product warranty

This product is covered by a limited warranty, details of which can be found at www.johnsoncontrols.com/buildingswarranty.

Software terms

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