

MR4PMUHV

Electronic Temperature/Defrost Control with Relay Pack

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.

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.



MR4PMUHV

Selection Charts

MR4PMUHV Electronic Temperature/Defrost Control with Relay Pack

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

Repair Parts

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/1.98m

Technical Specifications

MR4PMUHV Electronic Temperature/Defrost Control with Relay Pack (Part 1 of 2)		
Frequency	60/50 Hz @ 120/240 VAC	
Power consumption	10VA @240 VAC, 5VA @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/1.98m	
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 (non-condensing)
	MR4PM12C-12C	+14° to +140°F/-10° to +60°C; 0 to 95 % RH (non-condensing)
	RP4MRUHV-1C	-40° to +111°F/ -40° to +44°C; derating 6.25% per 1°C to 60° C; 0 to 95 % RH (non-condensing)
Ambient Storage Conditions	MR4PMUHV-12C	-22° to +176°F/-30° to +80°C 0 to 95 % RH (non-condensing)
	MR4PM12C-12C	-22° to +176°F/-30° to +80°C 0 to 95 % RH (non-condensing)
	RP4MRUHV-1C	-40° to +185°F/-40° to +85°C 0 to 95 % RH (non-condensing)
Dimensions (H x W x D)	7.94 x 3.6 x 2.4 in./202 x 92 x 61 mm	

Technical Specifications (Continued)

MR4PMUHV Electronic Temperature/Defrost Control with Relay Pack (Part 2 of 2)	
Agency Listings	UL Listed (File SA516, UL Guide SDFY; cUL Guide SDFY7)
Shipping Weight	2.9 lb/1320g

Relay Electrical Ratings

	24	120	208	240
SPST Compressor Relay				
Horsepower Rating	—	1	1.5	2
AC Full Load Amps	—	16	11	12
AC Locked Rotor Amps	—	96	66	72
Pilot Duty (VA)	125	750	875	1125
SPDT Fan Relay				
Horsepower Rating	—	1/3	1/2	3/4
AC Full Load Amps	—	7.2	5.65	6.9
AC Locked Rotor Amps	—	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 Amps	—	16	11	12
AC Locked Rotor Amps	—	96	66	72
Non-Inductive Load Ampere	—	20	20	20
Pilot Duty (VA)	125	750	825	1125
SPST Alarm Relay				
Non-Inductive Load Ampere	5	5	5	5
Pilot Duty (VA)	—	125	250	325

Relay Electrical Ratings 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).