

MR4PMUHV

# Electronic Temperature/Defrost Control with Relay Pack



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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.

## 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
- easily readable temperature display can show either evaporator or process temperature at the touch of a button
- accurate, interchangeable temperature sensor provides reliable control performance with up to 300 ft. of wiring (an offset is provided for longer wiring)
- 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.

## To Order

Specify the code number from the following selection chart.

## Selection Chart

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

## Specifications

MR4PMUHV Electronic Temperature/Defrost Control with Relay Pack	
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	± 1.8°F/ ± 1°C°
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
Agency Listings	UL Listed (File SA516, UL Guide SDFY; cUL Guide SDFY7)
Shipping Weight	2.9 lb/1320g

## 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

## 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
SPDT 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
SPDT Alarm Relay				
Non-Inductive Load Ampere	5	5	5	5
Pilot Duty (VA)	—	125	250	325

Note: Ambient Operation: -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).