



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.

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

- 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



MR4PMUHV Temperature Control

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.

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

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.

Selection Charts

MR4PMUHV Electronic Temperature/Defrost Control with Relay Pack

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

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/1.98m |

Technical Specifications

| MR4PMUHV Electronic Temperature/Defrost Control with Relay Pack (Part 1 of 2) | | |
|---|--|--|
| 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) |
| 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 | |

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/1,320 g |

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 |

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).