Honeywell

CR Series Command Relays

INSTALLATION INSTRUCTIONS

APPLICATION

The CR (Command Relay) Series brings control (start/stop) functionality to your load trending and fan/pump/motor status monitoring applications. Each unit has a Form 1C-SPDT relay which means you have both a N/O and a N/C contact in the same unit. (See Table 1 for output ratings).

The patented 35mm Din-Rail Mounting Flange (US Patent #7,416,421) will allow you to use the CR Series with any Honeywell analog current sensor or switch. This will reduce your inventory by not having to stock as many different items. The stacking feature will also allow you to reduce the required panel space, since up to two CR Series Command Relays may be stacked together during installation.

The command relays are for use with:
- Motor control
- Lighting applications
- Interposing relay
- Control pumps/compressors
- Appliances/industrial equipment

FEATURES

- **Patented 35mm Din-rail mounting flange (US Patent 7,416,421)**
- **SPDT Form 1C Relay contacts**
- **Pilot duty rated**
- **LED status indication**
- **Stackable for streamlined installation**
- **Can be used with any Honeywell analog current sensor or switch**

SPECIFICATIONS

Din Rail: 35mm

Dimensions: 34.32 mm W x 41.46 mm H x 33.52 mm D

Unit Weight: 2 oz (0.125lb.)

Enclosure: UL94-5VB / Burgundy

Operating Temp: -15 to 40°C (5 to 104°F)

Operating RH: 0 to 95% RH, non-condensing

Status LED: All units

Approvals:
UL 508 (E179139)
CE

62-0414-03

Table 1. CR Models.

Part #	Contact Rating	Max. Switching Voltage	Max. Switching Current
CR-DC-5A	5A @ 250VAC General Use 5A @ 125VAC Resistive 5A @ 30VDC Resistive 1/4HP, 120/250/277VAC C150 Pilot Duty	250VAC, 30VDC	5 A (NO)/3 A (NC)
CR-DC-12A	12A @ 250VAC General Use 12A @ 250VAC Resistive 12A @ 30VDC Resistive 1HP, 120/240/480VAC – NO 1/2HP, 120/240/480VAC – NC A300 Pilot Duty	250VAC, 30VDC	12 Amps
CR-12DC-12A	12A @ 250VAC General Use 12A @ 250VAC Resistive 12A @ 30VDC Resistive 1HP, 120/240/480VAC – NO 1/2HP, 120/240/480VAC – NC A300 Pilot Duty	250VAC, 30VDC	12 Amps
CR-24AC-10A	10A @ 250VAC General Use 10A @ 250VAC Resistive 10A @ 30VDC Resistive 1HP, 120/240/480VAC – NO 1/2HP, 120/240/480VAC – NC A300 Pilot Duty	250VAC, 30VDC	10 Amps
CR-115AC-8A	8A @ 250VAC General Use 8A @ 250VAC Resistive 8A @ 30VDC Resistive 1HP, 120/240/480VAC – NO 1/2HP, 120/240/480VAC – NC A300 Pilot Duty	250VAC, 30VDC	8 Amps
CR-230AC-8A	8A @ 250VAC General Use 8A @ 250VAC Resistive 8A @ 30VDC Resistive 1HP, 120/240/480VAC – NO 1/2HP, 120/240/480VAC – NC A300 Pilot Duty	250VAC, 30VDC	8 Amps

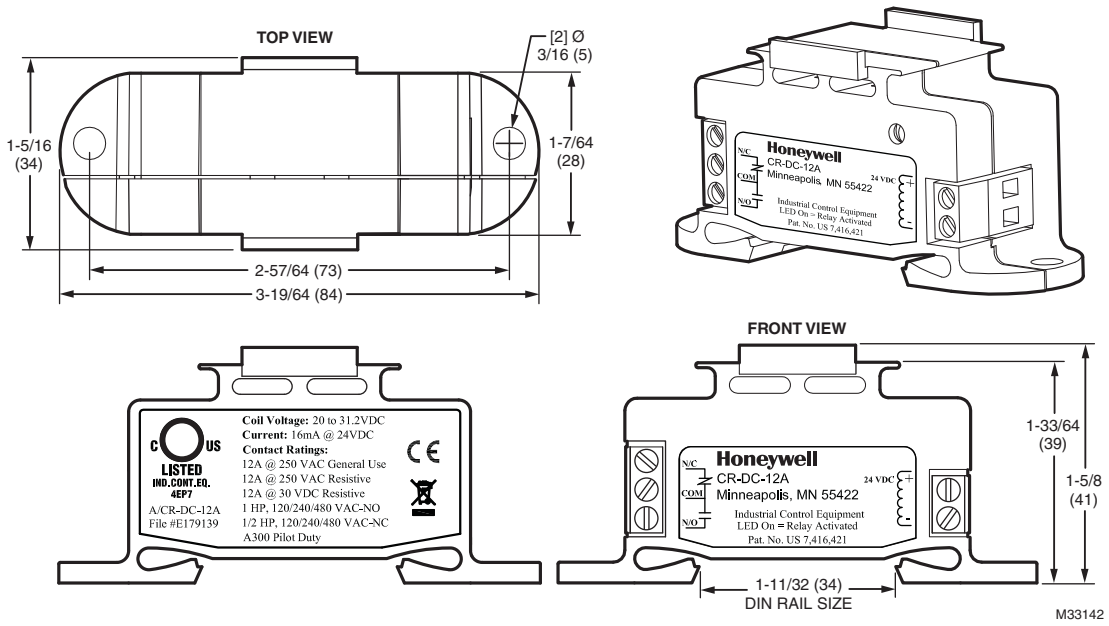

Fig. 1. Dimensions in in (mm).

INSTALLATION

⚠ WARNING

This product is not intended to be used for Life or Safety applications.

⚠ WARNING

This product is not intended for use in any hazardous or classified locations.

⚠ WARNING

Electrical Shock Hazard.
Can cause severe injury, death or property damage.
Disconnect and lock out all power sources before installation as severe injury or death may result from electrical shock due to contact with high voltage wires.

INSTALLATION

When Installing This Product…

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in these instructions to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out operation as provided in these instructions.

Make sure that all installations are in compliance with all national and local electrical codes. The Command Relays require an external power source for the relay coils (see Table 2).

Table 2. Electrical Ratings.

Honeywell Model #	Coil Voltage	Rated Current
CR-DC-5A	23 to 31.2VDC	15mA @ 24VDC
CR-DC-12A	20 to 31.2VDC	16mA @ 24VDC
CR-12DC-12A	10 to 15.6VDC	30mA @ 12VDC
CR-24AC-10A	16 to 26.4VAC	28mA @ 24VAC
CR-115AC-8A	80 to 132VAC	10mA @ 115VAC
CR-230AC-8A	165 to 264VAC	5mA @ 230VAC

⚠ WARNING

Electrical Shock Hazard.
Can cause severe injury, death or property damage.
Never rely on the Red LED to determine whether power is present at the command relay. The Red LED will indicate whether the relay coil is energized (LED On) or De-energized (LED OFF).

1. The Command Relays may be mounted in any position using the (2) #8 x 3/4” Tek screws and the mounting holes in the base or snapped directly on to the 35mm DIN rail (see Fig. 2 and 3).

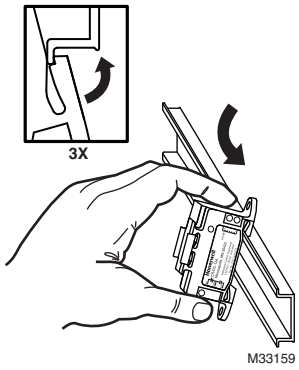

Fig. 2. Relay placed on rail.

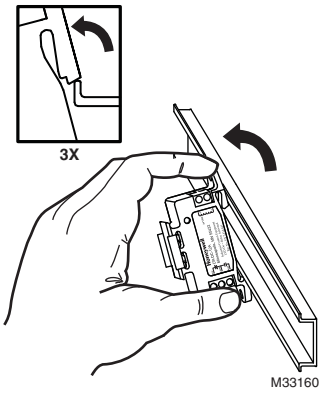

Fig. 3. Relay removed from rail.

2. The Honeywell current switches and sensors may be snapped directly on to the top of the command relays (see Fig. 4) or multiple command relays may be snapped directly on to the top of each other (see Fig. 5).

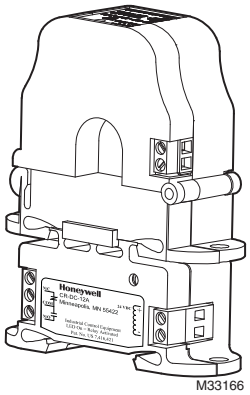

Fig. 4. Switches and sensors snapped to the command relay.

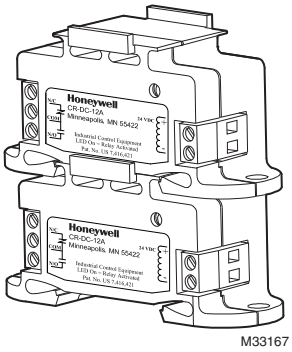

Fig. 5. Multiple command relays snapped on top of each other.

3. Leave a minimum distance of 1 in (3 cm) between the command relays and any other magnetic devices such as contactors and transformers.

WIRING

Honeywell recommends the use of a 14 to 24 AWG wires, copper wire only for all command relay coil installations. The command relay DC coil terminals are polarity sensitive. Honeywell recommends the use of 12 to 14 AWG wires, copper wire only for all command relay contacts (Output) installations. The maximum tightening torque to be used on the terminal block connections is 0.6 Nm or 5.3 in-lbs.

See Fig. 6 and 7 for sample wiring diagrams.

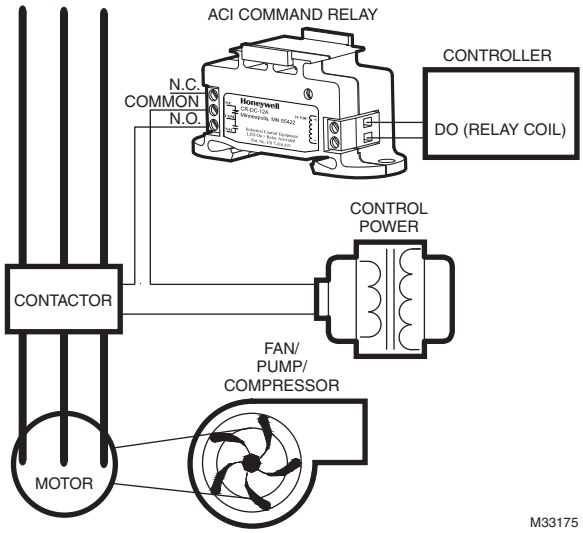

Fig. 6. Wiring with command relay.

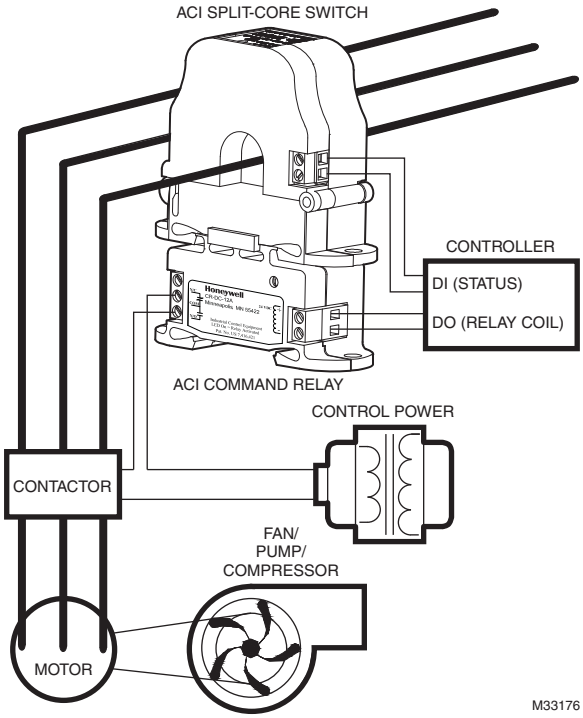

Fig. 7. Wiring with command relay and split-core switch.

TROUBLESHOOTING

Problem	Solution
LED is on but the Command Relay didn't activate	Disconnect the wires from the command relay output. Measure the resistance across the contacts with an Ohmmeter.
LED didn't turn on and the Command Relay didn't activate	Verify the voltage at the coil input See Table 1 on page 2.
LED not on but the Command Relay is Activated	Disconnect the wires from the command relay output. Measure the resistance across the contacts with an Ohmmeter. LED not indicating correctly, may have been damaged

WEEE Directive

At the end of their useful life the packaging and product should be disposed of via a suitable recycling centre. Do not dispose of with household waste. Do not burn.

Automation and Control Solutions

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