Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 01/13/15

Multi-Voltage Conventional Relays

System Sensor's multi-voltage conventional relays are used for high-current switching applications such as fan and damper assembly control, door control, air handling unit controls, and other types of system interfacing.

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Features

- Multi-voltage operation
- Activation LEDs
- Easy and flexible installation
- Reliable and robust design
- Multipurpose field installations
- Multi-voltage relays with terminal strip field wiring connections, mounting track, and hardware for R-10T/20T and R-14T/24T
- Removable front cover on steel enclosure for R-10E/R-20E and R-14/R-24E, which mount inside the enclosure
- LED viewing hole on top of the steel enclosure's cover
- Extra pair of wires for redundant power input on PR-3
- Terminal strip field wiring connections, mounting track, and hardware

The R-10T, R-20T, R-14T, and the R-24T models are multi-voltage relays with terminal strip field wiring connections, mounting track, and hardware. The R-10T is a single FORM–C (SPDT) relay with a red activation LED, and the R-14T is a four-gang 1 FORM–C (SPDT) relay with four red activation LEDs. The R-20T is a single 2 FORM–C (DPDT) relay with a red activation LED, and the R-24T is a four-gang 2 FORM–C (DPDT) relay with four red activation LEDs.

The R-10E/R-20E and R-14E/R-24E are similar to the T-series track mount relays, but they are mounted into a steel enclosure. The enclosure has a removable front cover that provides easy access and an LED viewing hole on the top of the cover.

PR-1/PR-2/PR-3 are epoxy encapsulated multi-voltage relays. They are single-pole double-throw relays that use a red LED as a visible indication of relay coil energization. PR–3 is identical to PR–2, except it has an extra pair of wires for redundant power input.

Model EOLR-1 is an epoxy encapsulated, single-pole single-throw, normally open relay that can be used as an end of line device in fire alarm systems, e.g. to supervise power supplies.

Agency Listings

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Multi-Voltage Conventional Relay Specifications

Specifications: R-10T/R-14T/R-20T/R-24T	
Operating Voltage	18 – 35 VDC, 18 – 35 VAC, 115 VAC, 230 VAC
Operating Current	20 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC (R-10T/R-14T) 40 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC (R-20T/R-24T)
Operating Temperature	–40°F to 158°F (–40°C to 70°C)
Humidity Range	10% – 93% non-condensing
Dimensions	R-10T/R-20T: 2.5″L × 3.35″W × 1.2″H R-14T/R-24T: 10″L × 3.35″W × 1.2″H
Contact Ratings	24 VDC: 7 A with L/R = 5 mS 120 VAC: 10 A 120 VAC: 1/6 HP 230 VAC: 7 A

Specifications: R-10E/R-14E/ R-20E/R-24E	
Operating Voltage	18 – 35 VDC, 18 – 35 VAC, 115 VAC, 230 VAC
Operating Current	20 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC (R-10E/R-14E) 40 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC (R-20E/R-24E)
Operating Temperature	–40°F to 158°F (–40°C to 70°C)
Humidity Range	10% – 93% non-condensing
Dimensions	R-10E/R-20E: 5.1″L × 3.75″W × 2.5″H R-14E/R-24E: 11″L × 5.3″W × 2.5″H
Contact Ratings	24 VDC: 7 A with L/R = 5 mS 120 VAC: 10 A 120 VAC: 1/6 HP 230 VAC: 7 A

Specifications: PR-1	
Operating Voltage	18 – 35 VDC, 18 – 3
Operating Current	15 mA DC max. @ 2
Operating Temperature	–40°F to 158°F (–40
Humidity Range	10 – 93% RH
Wire Length	8″ minimum
Dimensions	0.87″H × 2.01″W × 1.42″D
Contact Ratings	24 VDC: 7 A with L/R = 5 mS 120 VAC: 7 A max. (0.35 PF) 250 VAC: 10 A resistive 30 VDC: 10 A resistive

Specifications: PR-2/PR-3	
Operating Voltage	10 to 40 VDC
Operating Current	30 mA DC max.
Operating Temperature	–40°F to 158°F (–40°C to 70°C)
Humidity Range	10 – 93% RH
Wire Length	8″ minimum
Dimensions	0.91″H × 1.65″W × 1.22″D
Contact Ratings	120 VAC: 10 A max. (resistive load) 120 VAC: 7 A max. (0.35 PF) 250 VAC: 10 A max. (resistive load) 30 VDC: 10 A max. (resistive load)

Specifications: EOLR-1	
Operating Voltage	9 to 40 VDC
Operating Current	20 mA DC max.
Operating Temperature	–22°F to 140°F (–30°C to 60°C)
Humidity Range	10 – 93% RH
Wire Length	8″ minimum
Contact Ratings	120 VAC: 0.5 A max. (resistive load) 30 VDC: 3 A max. (resistive load)

PR–1

EOLR–1

PR–3

R-10E & R-20E Enclosure

PR–2

R–10T

R–14T

R-14E & R-24E Enclosure

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