CURRENT TRANSDUCER AND RELAY
RIBX-V SERIES

Functional Devices, Inc. RIB

MADE IN USA

DESCRIPTION

The Relay In a Box **RIBX-V Series** provides a unique and cost-effective solution to on/off motor control and analog current sensing. Combined in a single, convenient junction box with high- and low-voltage separation are a control relay and a current sensing transducer that outputs 0-5 VDC or 0-10 VDC. A three-position closed/open/auto switch is available to override the output of the relay. This versatile product allows both control and analog current sensing of electrical loads by a building automation system, all in a self-contained, easy-to-install housing.

RIBX-V

FEATURES

- ***Cost-effective analog current sensing with a control relay***
- ***Self-contained housing with high- and low-voltage separation***
- ***LED indication of relay***
- ***Optional relay contact override switch***
- ***Plenum-rated housing***
- ***UL and ULC listed for UL 916 Energy Management and UL 864 Fire***

CE

RoHS

c UL us

SPECIFICATIONS

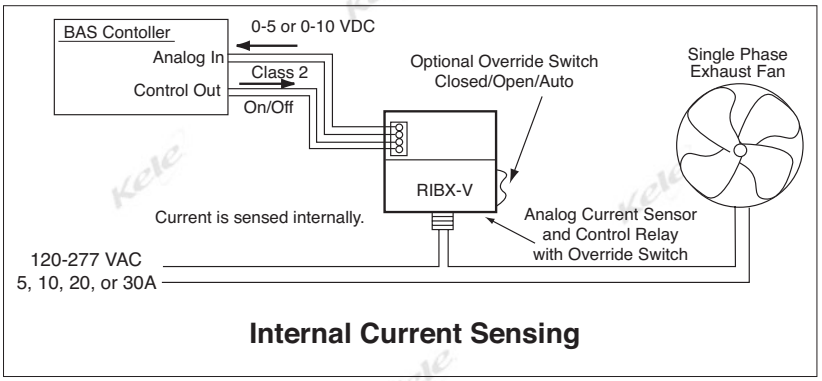
Frequency	50/60 Hz
Output	0-5 VDC or 0-10 VDC, proportional to current sensing range
Output Impedance	30 kΩ minimum
LED Indication	LED on = relay activated
Relay	
Life Rating	10 million cycles minimum mechanical
Pull In Voltage	
10-30 VAC/VDC models	9 VAC, 10 VDC
24 VAC/VDC models	18 VAC, 22 VDC
Drop Out Voltage	
10-30 VAC/VDC models	2.1 VAC, 2.8 VDC
24 VAC/VDC models	3 VAC, 3.8 VDC
Accuracy	±1% FS
Lead Wires	16" (40.6 cm)
Operating Temperature	-30° to 140°F (-34° to 60°C)
Operating Humidity	5% to 95% (non-condensing)
Dimensions	4"H x 4"W x 1.8"D (10.2 x 10.2 x 4.6 cm), NEMA 1 th 1/2" NPT
Weight	Approximately 1 lb (0.45 kg)
Approvals	UL and cUL listed, file #E68805 (UL 916) and #S7312 (UL 864)
RoHS Statement	Yes
Warranty	1 year

CURRENT TRANSDUCER AND RELAY
RIBX-V SERIES

APPLICATION

Internal Current Sensing

The **RIBX-V Series** with internal current sensing is great for direct control and analog current sensing of exhaust fans, pumps, and other single-phase electrical loads up to 20A. The control relay contacts of these models wire directly in series with single-phase motors using the wires that exit the housing through the 1/2" conduit hub. The current of the load is sensed within the housing. Low-voltage wiring from the controller for the control relay coil and analog current signal enter the separate Class 2 wiring compartment in the housing through star bushings or conduit and are connected to screw terminals.



Internal Current Sensing

ORDERING INFORMATION

MODEL	CURRENT SENSING	CURRENT SENSING RANGE (amps)	OVER SW	RELAY CONTACT RATINGS	RELAY CONTACT WIRING	RELAY COIL AND ANALOG OUTPUT
RIBXLCEV	Internal	0-5	–	* 5A resistive 277 VAC 345 VA pilot duty 120/240 VAC N.O. 211 VA pilot duty 120/240 VAC N.C. 268 VA pilot duty 277 VAC N.O. 175 VA pilot duty 277 VAC N.C. 1/3 hp for N.O. 120/240 VAC 1/6 hp for N.C. 120/240 VAC 1/4 hp for N.O. 277 VAC 1/8 hp for N.C. 277 VAC	**RIBXLCEV, RIBXLCV 1-SPDT Relay** (blue) N.C. (yellow) COM (orange) N.O.	**Relay input current** 30 mA @ 10 VAC 12 mA @ 10 VDC 32 mA @ 12 VAC 14 mA @ 12 VDC 42 mA @ 24 VAC 16 mA @ 24 VDC 50 mA @ 30 VAC 18 mA @ 30 VDC **Relay coil wiring** 10-30 VAC/VDC, Common **Analog out wiring** 0-10 VDC, 0-5 VDC, Common
RIBXLSEV			Yes			
RIBXLCV	Internal	0-10	–	* 10A resistive 120/240/277 VAC - 28 VDC 480 VA pilot duty 240/277 VAC 480 VA ballast 277 VAC 600W tungsten 120 VAC N.O 240W tungsten 120 VAC N.C. 1/3 hp for N.O. 120/240 VAC 1/6 hp for N.C. 120/240 VAC 1/4 hp for N.O. 277 VAC 1/8 hp for N.C. 277 VAC	**RIBXLSEV, RIBXLSV 1-SPST Relay** (orange)* (orange)* Closed, Open, Auto 1 *Gray wire on RIBXLSEV	
RIBXLSV			Yes			
RIBX24BV	Internal	0-20	–	* 20A resistive 277 VAC 1110 VA pilot duty 277 VAC 240W tungsten N.C. 120 VAC 770 VA pilot duty 120 VAC 1 hp 120 VAC 2 hp 277 VAC 20A ballast N.O. 277 VAC 10A ballast N.C. 277 VAC 10A tungsten N.O. 120 VAC Not rated for electrical.	**1-SPDT Relay** (blue) N.C. (yellow) COM (orange) N.O. **1-SPST Relay** (orange) (orange) Closed, Open, Auto 1	**Relay input current** 75 mA @ 24 VAC, 32 mA @ 24 VDC **Relay coil wiring** 24 VAC/VDC, Common **Analog out wiring** 0-10 VDC, 0-5 VDC, Common
RIBX24SBV			Yes			
RIBX243PV	Internal	0-20	–	* 20A resistive 300 VAC 20A resistive 28 VDC 15A resistive 600 VAC 1 hp 120 VAC, 1 Ph 2 hp 240-277 VAC, 1 Ph 3 hp 480-600 VAC, 1 Ph 5 hp 240 VAC, 3 Ph 7.5 hp 480 VAC, 3 Ph 20A ballast 277-480 VAC	(blue) (blue) N.O. (yellow) (yellow) N.O. (orange) (orange) N.O. 2	**Relay input current** 190 mA @ 24 VAC **Relay coil wiring** 24 VAC/VDC, Common **Analog out wiring** 0-10 VDC, Common
RIBXV	Internal	0-30	–	Current transducer only, 0-30A	**Current Sensor Wiring** Current Sensor (purple) (purple)	**Analog out wiring** 0-10 VDC, 0-5 VDC, Common

Note: 1 Internal yellow jumper determines if SPST contacts are N.O. or N.C. 2 Order N.C. by adding **-NC** after model number.
* Not rated for electrical ballast.