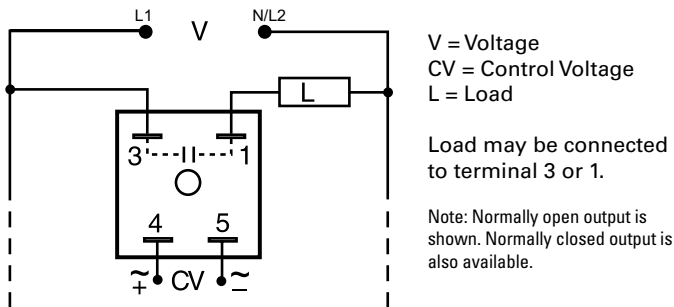


SIR SERIES

Solid-State Relay - Isolated



Wiring Diagram



Description

The SIR Series is designed for industrial applications requiring rugged reliable operation. Provides an optically isolated, high capacity, solid-state output, with power switching capability up to 20A steady state, 200A inrush. Zero voltage switching SIR2 extends the life of an incandescent lamp up to 10 times. Random switching SIR1 is ideal for inductive loads. When fully insulated female terminals are used on the connection wires, the system meets the requirements for touch-proof connections.

Operation

The solid-state output is located between terminals 1 and 3, and is normally open or normally closed without control voltage applied to terminals 4 and 5. When control voltage is applied to terminals 4 and 5, the solid-state output opens or closes respectively.

Reset: Removing control voltage resets the output. The unit is also reset if output voltage is removed.

Features & Benefits

FEATURES	BENEFITS
Compact design measures 2 in. (50.8mm) square	Perfect for OEM applications where space is limited
Totally solid state and encapsulated	No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration and humidity
Up to 20A, 200A inrush output rating	Provides direct control of heavy inductive, incandescent or resistive loads
Switching output is optically isolated from the control input	Provides the ability to interface between 2 different electrical circuits
SIR1 models provide random switching	Designed for use with resistive and incandescent loads, extending lamp life up to 10 times
SIR2 models provide zero voltage switching	Perfect for resistive and incandescent loads
Metalized mounting surface	Facilitates heat transfer in high current applications

Ordering Information

MODEL	SWITCHING	CONTROL VOLTAGE	RATING	OUTPUT FORM	OUTPUT VOLTAGE
SIR1A1A4	Random	9 to 30VAC or DC	3A	Normally open	120VAC
SIR1A20A4	Random	9 to 30VAC or DC	20A	Normally open	120VAC
SIR1B6B4	Random	90 to 150VAC or DC	6A	Normally closed	120VAC
SIR1C20B6	Random	190 to 290VAC or DC	20A	Normally closed	230VAC
SIR2A20A4	Zero voltage	9 to 30VAC or DC	20A	Normally open	120VAC
SIR2B20A4	Zero voltage	90 to 150VAC or DC	20A	Normally open	120VAC
SIR2B20B4	Zero voltage	90 to 150VAC or DC	20A	Normally closed	120VAC

If you don't find the part you need, call us for a custom product 800-843-8848

SIR SERIES

Accessories

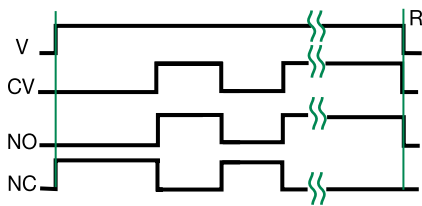


P1015-13 (AWG 10/12), **P1015-64** (AWG 14/16), **P1015-14** (AWG 18/22) **Female Quick Connect**
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



P1015-18 Quick Connect to Screw Adapter
Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.

Function Diagram



V = Voltage
CV = Control Voltage
NO = Normally Open Contact
NC = Normally Closed Contact
R = Reset
—||— = Undefined Time

Specifications

Output

Type

Optical isolation, totally solid state

Form

SPST, NO or NC

Voltage

24, 120, or 230VAC

Tolerance

±20%

Ratings

Steady State	Inrush*	Output Device
3A	30A	Triac
6A	60A	Triac
10A	100A	Triac
20A	200A	Triac

Minimum Load Current

≅ 50mA

Voltage Drop

≅ 2.0V at rated current

Leakage Current (Open State)

≅ 6mA

Input

Type

Optical isolation LED/photo transistor

Control Voltage

9 to 290VAC/DC in 3 ranges

Power Consumption

≤ 0.5W

Protection

Circuitry

Encapsulated

Dielectric Breakdown

≥ 2000V RMS terminals to mounting surface

Insulation Resistance

≥ 100 MΩ

Mechanical

Mounting*

Surface mount with one #10 (M5 x 0.8) screw

Dimensions

H 50.8 mm (2.0"); **W** 50.8 mm (2.0");

D 38.4 mm (1.51")

0.25 in. (6.35 mm) male quick connect terminals

Termination

Environmental

Operating/Storage

Temperature

-40° to 60°C / -55° to 85°C

Humidity

95% relative, non-condensing

Weight

≅ 3.9 oz (111 g)

*Must be bolted to a metal surface using the included heat sink compound. The maximum mounting surface temperature is 90°C. Inrush: Non-repetitive for 16ms.

Mouser Electronics

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[Littelfuse:](#)

[SIR2A20A4](#) [SIR2B20A4](#) [SIR1C20B6](#) [SIR1B6B4](#) [SIR2B20B4](#)