Models:
RL12:   Omni RL12 Relay Module for Omni Controllers

Omni RL12 Relay Module for Omni Controllers

Overview

The Innotech Omni RL12 Relay Module by Phoenix Contact is for use with Innotech Omni BEMS Controllers and is DIN rail mountable. The RL12 is space efficient and can comfortably be mounted beside other Relay modules with no spacing required.

Features

- Ultra thin at only 6.2mm wide
- LED Indication
- Low input current of 15.4mA
- RT III sealed relay
- Safe isolation according to DIN EN 50178 between coil and contact
- Integrated input circuit and interference suppression circuit
- The Omni RL12 is an energy efficient way of utilising every output on an Omni Controller.
- The matching Innotech Blue ensures easy identification of the number of outputs designated as Omni Digital Outputs.

Applications

The Omni RL12 relays are used in any application controlled by an Omni BEMS Controller.

Installation

The Omni RL12 should be installed in an environment that does not exceed the maximum operating parameters of the device. It should be mounted in a clean and dry environment free of vibration, and properly ventilated.

The Omni RL12 should be mounted on DIN rail in cabinets approved for switchgear or industrial control equipment. Maximum terminal cable entry is 2.5mm^2.

Wiring should be done in accordance with Innotech connection diagrams and local bylaws or refer to your local distributor.
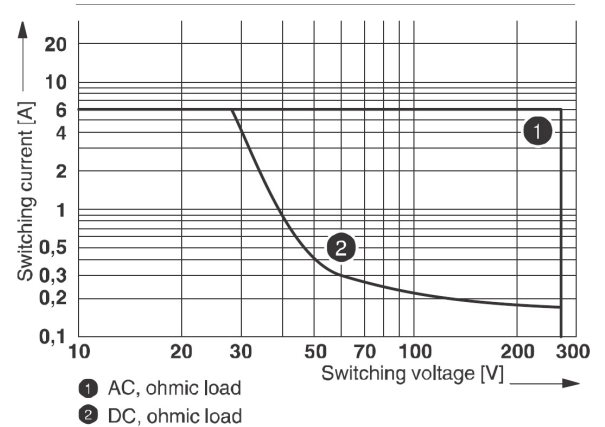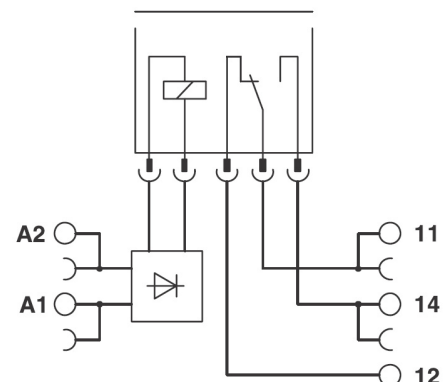
Approvals

EN 50178
EN 61000-6-2
EN 61000-6-4
RoHS2

Environmental Conditions

Operating Temperature	-40°C … 60°C (104°F … 140°F)
Storage Temperature	-40°C … 85°C (104°F … 185°F)

Omni RL12 Diagrams

❶ AC, ohmic load
❷ DC, ohmic load

Circuit diagram

Specifications

OMNI RL12 DIMENSIONS

Suitable for DIN rail mounting. Housing moulded from flame retardant plastics recognised by UL as UL94-V0.

Colour	Blue/Black/White
Dimensions	W 6.2mm x H 80mm x D 94mm (0.24" x 3.15" x 3.70")

10 PACK OMNI RL12 RELAYS

Packing Unit	10pc
Part Number	10PKRL12
Part Details	12VDC Relay Module (15.4mA, SPDT, LED, 6A Resistance)
Weight Per Piece (excl. packing)	33.150g
Weight Per Piece (incl. packing)	39.640g
Country of Origin	Germany

COIL SIDE

Nominal Input Voltage U_N	12VDC
Typical Input Current at U_N	15.4mA
Typical Response Time	5ms
Typical Release Time	8ms
Protective Circuit	Reverse polarity protection, Polarity protection diode, Free-wheeling diode, Damping diode
Operating Voltage Display	Yellow LED
Power Dissipation for Nominal Condition	0.18W

CONTACT SIDE

Contact Type	SPDT
Type of Switch Contact	Single Contact
Contact Material	AgSnO
Maximum Switching Voltage	250VAC/DC
Minimum Switching Voltage	5V (@ 100mA)
Minimum Switching Current	10mA (@12V)
Maximum Inrush Current	10A (4s)
Limiting Continuous Current	6A
Interrupting Rating (ohmic load) max.	140W (@24VDC) 20W (@48VDC) 18W (@60VDC) 23W (@110VDC) 40W (@220VDC) 1500VA (for 250VAC)

CONTACT SIDE (continued)

Switching Capacity in acc. with DIN VDE 0660/IEC 60947	2A (@24V, DC13) 0.2A (@110V, DC13) 0.1A (@220V, DC13) 3A (@24V, AC15) 3A (@120V, AC15) 3A (@230V, AC15)

CONNECTION DATA INPUT SIDE

Connection Name	Coil Side
Connection Method	Screw Connection
Stripping Length	8mm
Screw Thread	M3
Conductor Cross Section Solid	$0.14mm^2 \dots 2.5mm^2$
Conductor Cross Section Flexible	$0.14mm^2 \dots 2.5mm^2$
Conductor Cross Section AWG	26 ... 14

CONNECTION DATA OUTPUT SIDE

Connection Name	Contact Side
Connection Method	Screw Connection
Stripping Length	8mm
Screw Thread	M3
Conductor Cross Section Solid	$0.14mm^2 \dots 2.5mm^2$
Conductor Cross Section Flexible	$0.14mm^2 \dots 2.5mm^2$
Conductor Cross Section AWG	26 ... 14

GENERAL

Test Voltage Relay Winding / Relay Contact	4kV AC (50Hz, 1min.)
Operating Mode	100% Operating Factor, IP20 (Relay Base)
Mechanical Service Life	2×10^7 cycles
Mounting Position	Any
Assembly Instructions	In Rows with Zero Spacing

STANDARDS AND REGULATIONS

Connection in acc. with standard	-
Designation	Standards / Regulations
Declaration of Conformity	EN 50178 EN 61000-6-2 EN 61000-6-4 RoHS2
Degree of Pollution	3
Overvoltage Category	III
Flammability Rating According to UL94	V0