

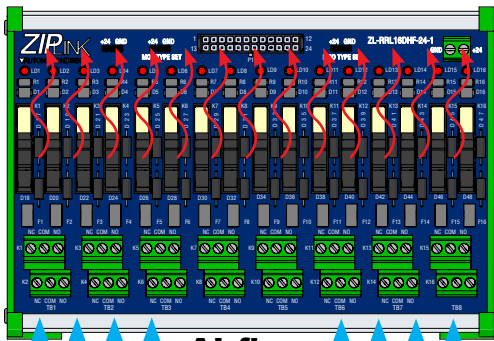
ZIP LINK™ 24V DC-Powered Relay Module Installation Instructions

AUTOMATIONDIRECT™

Sinking ZL-RRL16HDF-24-1

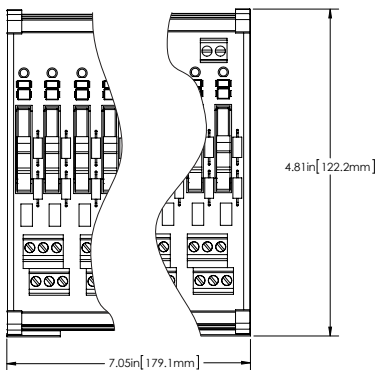
Sourcing ZL-RRL16HDF-24-2

Heat Dissipation Mounting Requirements

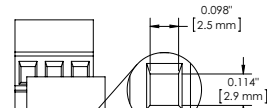


Airflow

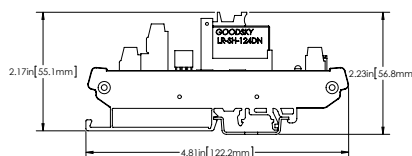
IMPORTANT! Mount Module horizontally to provide proper ventilation.



WARNING: We recommend installing up to a 0.75 Amp fast-blow fuse such as AGC-75 or similar in series with the power supply as an extra safety measure.



Terminal Block Insertion Point Opening Dimension



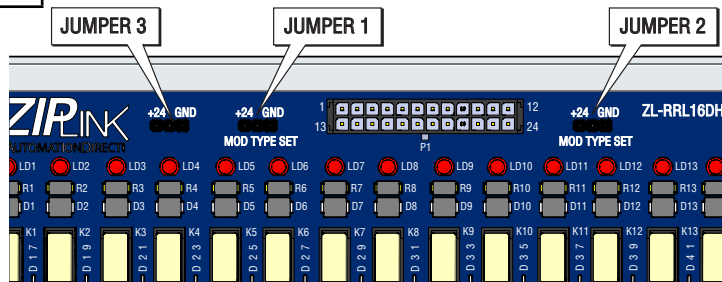
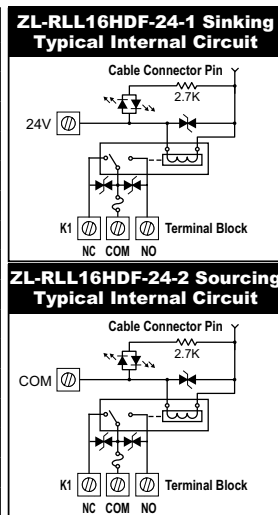
ZL-RRL16HDF-1 Sinking				
DirectLOGIC	Productivity3000	CLICK	Productivity2000	BRX
J1 +24V	J1 +24V	J1	J1	J1
J2 +24V	J2 +24V	J2	J2	J2
J3 +24V	J3 +24V	J3	J3	J3

ZL-RRL16HDF-2 Sourcing				
DirectLOGIC	Productivity3000	CLICK	Productivity2000	BRX
J1	J1	J1	J1	J1
J2 +24V	J2 +24V	J2	J2	J2
J3	J3	J3	J3	J3

Jumper Position	Description
J1, J2, and J3	+24V GND Jumpers referenced above and below have this silkscreen on the PCB
J1 +24V	Connects +24VDC to Connector Pins 1,7,13, & 19
J1 GND	Connects GND to Connector Pins 1,7,13, & 19
J2 +24V	Connects +24VDC to Connector Pins 2, 8,14, & 20
J2 GND	Connects GND to Connector Pins 2, 8, 14, & 20
J3 +24V	Factory set On ZL-RRL16-24-1 Connects +24VDC to Relay Coil Commons
J3 GND	Factory set On ZL-RRL16-24-2 Connects GND to Relay Coil Common

*All jumpers MUST be positioned according to the above diagram for appropriate module operation.

Connector Pin	Relay
3	Relay 1 (K1-TB1 Top)
4	Relay 2 (K2-TB1 Bottom)
5	Relay 3 (K3-TB2 Top)
6	Relay 4 (K4-TB2 Bottom)
15	Relay 5 (K5-TB3 Top)
16	Relay 6 (K6-TB3 Bottom)
17	Relay 7 (K7-TB4 Top)
18	Relay 8 (K8-TB4 Bottom)
9	Relay 9 (K9-TB5 Top)
10	Relay 10 (K10-TB5 Bottom)
11	Relay 11 (K11-TB6 Top)
12	Relay 12 (K12-TB6 Bottom)
21	Relay 13 (K13-TB7 Top)
22	Relay 14 (K14-TB7 Bottom)
23	Relay 15 (K15-TB8 Top)
24	Relay 16 (K16-TB8 Bottom)



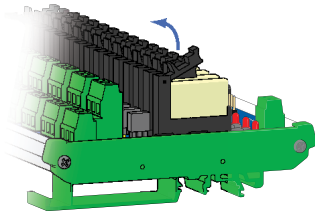
General Module Specifications		Relay Contact Specifications	
Description	16 Fused Output Relay module with LEDs, 24 VDC Coil	Current Rating	30VDC @ 5A General Use 250VAC @ 5A General Use
Mechanical Life	1,000,000 Operations at no load condition	Contact Type	1 Form C (SPDT)
Electrical Life	50,000 Operations at rated resistive load (Normally Open) 30,000 Operations at rated resistive load (Normally Closed) 6 cycles per minute electrical 180 cycles per minute mechanical	Contact Voltage*	250VAC/30VDC
Operating Frequency		Maximum Power Inductive	1250VA General Use
Isolation Coil to Contact	2500VAC for 1 minute	Maximum Power Resistive	AC1250VA, DC150W
Isolation NC Contact to NO Contact	1000VAC for 1 minute	Maximum Switching Voltage	250VAC, 30VDC
Isolation Between Relays	1000VAC for 1 minute	Minimum Load	10mA @ 5VDC
Red LED Indicator State Relay	ON = relay energized, OFF = relay de-energized	Contact Resistance	100mΩ Max @ 1A, 6VDC
Operating Temperature Range	32 to 140°F (0 to 60°C)	Contact Capacity	D300, 0.8 A/240VAC Pilot Duty FLA 2A @ 277VAC / 125VAC 1.8 HP @ 230VAC
Shock Resistance	1000m/s ² endurance, 100m/s ² operation	Contact Material	AgNi (Silver Nickel Alloy)
Terminal Block Contacts	Copper alloy, tin-lead plated	Coil Specifications	
Wire Range*	12-24AWG Solid or Stranded Conductor	Input Voltage Rating**	24VDC (-20 / +30%)
Wire Strip Length	0.24-0.27 in (6-7 mm)	Maximum Continuous Coil Voltage	31.2 VDC
Screw Torque	4.4 in-lbs (0.5 Nm)	Rated Current Per Coil	7.1 mA (±10%) @ 24VDC
Connector Type	Molex Micro-Fit 3.0, 24 pin connector, example receptacle 43020-2400, Pins 43031 Series, Male	Coil Resistance	3388Ω (±10%)
Replacement Relays	ZL-RELAY-HDF24X4, Qty. 4/pkg	Power Consumption Per Coil	0.17 W
Fuses (sold separately)	Sixteen 8.35mm x 3.95 mm x 7.55 mm or 8.4 mm x 8.3 mm	Total Coil Supply Current Max.	275mA (Total 16 relays)
Recommended Fuses (sold separately)	Littlefuse, Subminiature TR5 Series or Equivalent	Pick Up Current Max. Per Coil	15mA
Replacement Fuses (sold separately)	See ZL-FUSE section range up to a Max. 6.3 amp fuse	Drop-Out Voltage Min.	1.2 VDC (TBD)
Cable/Wire Clearance	0.5 in (12.7 mm)	Pick-Up Voltage Max.	19.2 VDC
Weight	480g (16.9 oz)	Off to On/On to Off Response Time	8ms/4ms
Approvals	File # E139594 UL, cUL 508, CE, EN 61131-2:2007		

*Use conductors rated 60°/75°C for relay outputs.

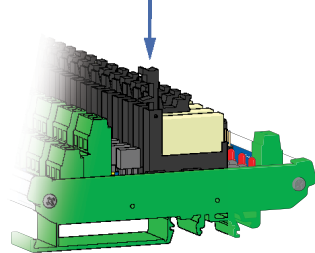
**Relay modules are reverse polarity protected and will not operate if reverse voltage is connected.

Remove or Install Relay

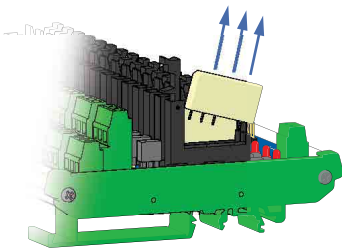
1 Rotate retaining clip off of relay.



2 Press retaining clip down to eject relay.



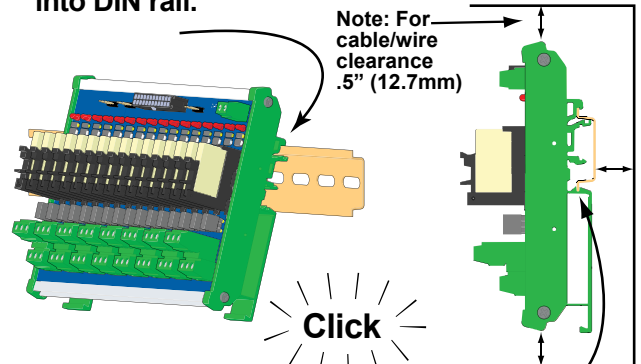
3 Remove relay from module.



Reverse procedure to replace relay.

DIN Rail Installation and Removal

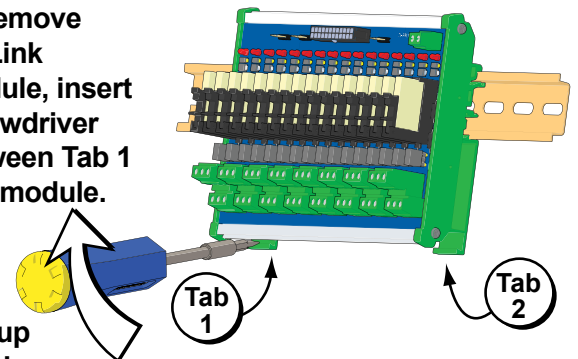
To install ZIPLink module, insert upper tab into DIN rail.



Rotate until firmly seated

and locked on DIN rail

To remove ZIPLink module, insert screwdriver between Tab 1 and module.



Pry up to release clip from DIN rail.

Repeat for Tab 2.

WARNING: To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call Technical Support at 770-844-4200.

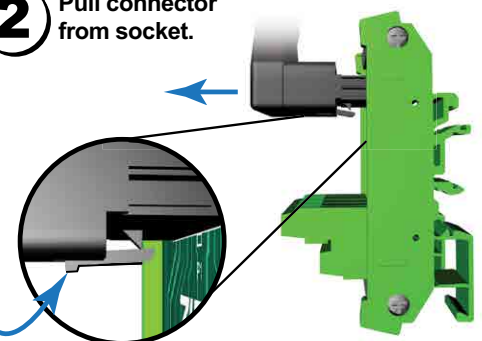
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ZIPLink Cable Removal

2 Pull connector from socket.

1

Push tab on raised tip and hold.



For Replacement Relay
Use ZL-RELAY-HDF24X2, Qty. 4/pkg.

Part Number	Revision	Date
ZL-RRL16HDF-24	4th Ed.	1/24/2018