24V DC-Powered Relay Modules

DC-powered relay modules provide isolation, switch high current (10A) loads, and include diode protection to prevent voltage spikes at the relay coil from damaging connected 16-point PLC I/O modules. Relays are included with these modules.

Modules mount on 35mm DIN rail (part #DN-R35S1) or 15mm DIN rail (part #DN-R15S1).

ZL-RRL16-24-1

ZL-RRL16-24-2

Specifications								
24V DC-Powered Relay Module	Part #	Pcs/ Pkg	Price/Pkg	Weight (lbs)	Part #	Pcs/ Pkg	Price/Pkg	Weight (lbs)
	ZL-RRL16-24-1	1	$216.00	1.45	ZL-RRL16-24-2	1	$216.00	1.45
Description	16 Output Relay module, sinking, with LEDs, 24VDC coil				16 Output Relay module, sourcing, with LEDs, 24VDC coil			
Operating Frequency	20 cycles per minute electrical, 300 cycles per minute mechanical							
Isolation Coil to Contact	2500VAC for 1 minute							
Isolation NC Contact to NO Contact Same Relay	1000VAC for 1 minute							
Isolation Between Relays	1000VAC for 1 minute							
Red LED Indicator State Relay	ON = relay energized, OFF = relay de-energized				ON = relay de-energized, OFF = relay energized			
Operating Temperature Range	32 to 140°F (0 to 60°C)							
Humidity Range	45 to 85% RH							
Terminal Block Contacts	Copper alloy, tin-lead plated							
Wire Range *	12–24 AWG Solid or Stranded Conductor							
Wire Strip Length	0.24–0.27 in (6–7 mm)							
Screw Torque	4.4 in·lbs (0.5 N·m)							
Connector Type	Molex Micro-Fit 3.0, 24 pin connector, example receptacle 43020-2400, Pins 43031 Series, Male							
Connecting Cables (Sold Separately)	Click on link: Wiring Selection Guides. Click on link: Connection Cable Specifications Tables.							
Replacement Relays	ZL-RELAY-24X4, Qty. 4/pkg							
Cable/Wire Clearance	0.5 in (12.7 mm) required							
Mounting Restrictions	Horizontal mounting only, non-corrosive environment							
Approvals	File # E157382 UL, cUL 508							

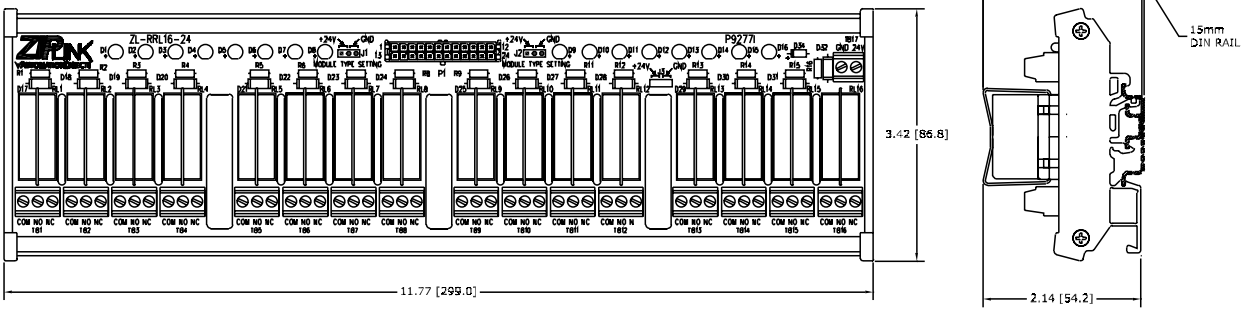
Relay Specifications **			
Contact		Coil	
Current Rating	30VDC @ 10A, 250VAC @ 8A, General Use	Input Voltage Rating	24VDC (-20%/+30%)
Contact Type	1 Form C (SPDT)	Maximum Continuous Coil Voltage	31.2 VDC
Contact Voltage (per point) *	250VAC/30VDC	Rated Current per Coil	16.7 mA (±10%) @ 24VDC
Maximum Power Inductive	2000VA General Use	Coil Resistance	1440Ω (±10%)
Maximum Power Resistive	AC 2000VA, DC 300W	Power Consumption per Coil	0.4 W
Maximum Switching Voltage	250VAC, 110VDC	Total Coil Supply Current Max.	293mA (all relays on)
Minimum Load	10mA @ 5VDC	Pick Up Current Max. per Coil	15mA
Contact Resistance	100mΩ Max @ 1A, 6VDC	Drop-Out Voltage Min.	1.2 VDC
Contact Material	AgNi (Silver Nickel Alloy)	Pick-Up Voltage Max.	19.2 VDC
Vibration Resistance	10 to 55 Hz dual amplitude width 1.5 mm	Off to On/On to Off Response Time	12ms / 8ms
Shock Resistances	1000m/s² endurance, 100m/s² operation		
Service Life	Mechanical: 10,000,000 Operations at no load condition; Electrical: 100,000 Operations at rated resistive load		

*** Use conductors rated for 60°/75°C for relay outputs.**
**** Relay modules are reverse polarity protected and will not operate if reverse voltage is connected.**

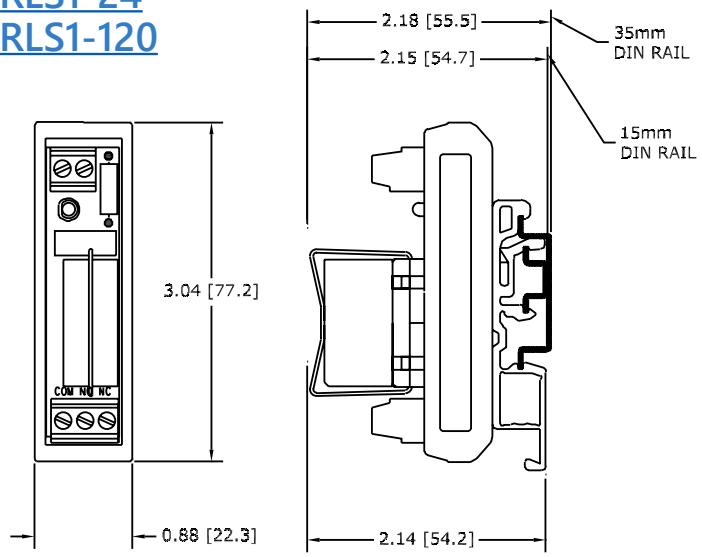
Note: See wiring details and dimensional drawings on our Web site at: http://www.automationdirect.com/static/manuals/ziplinks/ziplinks.html.

Module Dimensions

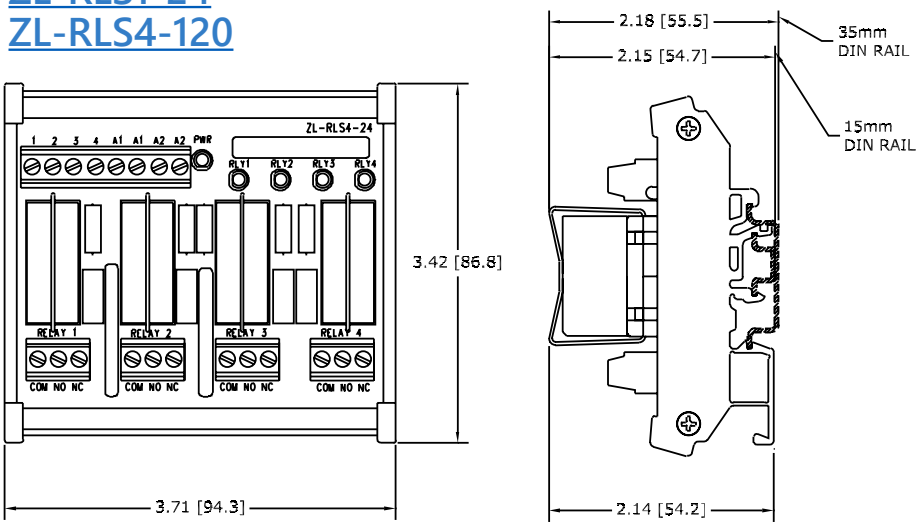
ZL-RRL16-24-1
ZL-RRL16-24-2

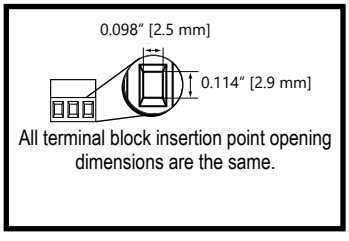


ZL-RLS1-24
ZL-RLS1-120



ZL-RLS1-24
ZL-RLS4-120





All terminal block insertion point opening dimensions are the same.

Note: Dimensions shown in Inches [mm]

Accessories

Replacement Relays

Replacement relays are offered with a 24VDC coil or 120VAC coil and are for use with the ***ZIP***Link relay modules.

Sold in packages of 4.

ZL-RELAY-24X4
$21.50

ZL-RELAY-120X4
$29.00

24VDC Relay Specifications			
Contact		***Coil***	
Current Rating	30VDC @ 10A 250VAC @ 8A General Use	***Input Voltage Range***	24VDC (-20%/+30%)
		Maximum Continuous Coil Voltage	31.2 VDC
Contact Type	1 Form C (SPDT)	***Rated Current per Coil***	16.7 mA (±10%) @ 24VDC
Contact Voltage (per point)	250VAC/30VDC	***Coil Resistance***	1440Ω (±10%)
Maximum Power Inductive	2000VA General Use	***Power Consumption per Coil***	0.4 W
Maximum Power Resistive	AC 2000VA, DC 300W	***Pick Up Current Max. per Coil***	15mA
Maximum Switching Voltage	250VAC, 110VDC	***Drop-Out Voltage Min.***	1.2 VDC
Minimum Load	10mA @ 5VDC	***Pick-Up Voltage Max.***	19.2 VDC
Contact Resistance	100mΩ Max @ 1A, 6VDC	***Off to On/On to Off Response Time***	12ms/8ms
Contact Material	AgNi (Silver Nickel Alloy)	***Weight (lbs)***	0.11

120VAC Relay Specifications			
Contact		***Coil***	
Current Rating	30VDC @ 10A 250VAC @ 8A General Use	***Input Voltage Range***	115VAC (-20%/+30%), 50–60Hz
Contact Type	1 Form C (SPDT)	***Maximum Continuous Coil Voltage***	150VAC
Contact Voltage (per point)	250VAC/30VDC	***Rated Current per Coil***	7.65 mA (±10%) @ 115VAC 50Hz 6.30 mA (±10%) @ 115VAC 60Hz
Maximum Power Inductive	2000VA General Use	***Coil Resistance***	8100Ω (±10%)
Maximum Power Resistive	AC 2000VA, DC 300W	***Power Consumption per Coil***	0.88 W @ 50Hz 0.73 W @ 60Hz
Maximum Switching Voltage	250VAC, 110VDC	***Drop-Out Voltage Min.***	34.5 VAC
Minimum Load	10mA @ 5VDC	***Pick-Up Voltage Max.***	92VAC
Contact Resistance	100mΩ Max @ 1A, 6VDC	***Off to On / On to Off Response Time***	12ms/8ms
Contact Material	AgNi (Silver Nickel Alloy)	***Weight (lbs)***	0.11

Installation Accessories

Accessories			
	Part #	***Pcs/Pkg***	***Price/Pkg***
DIN Rail	DN-R35S1	10	$39.00
Angled Support Bracket	DN-ASB1	50	$107.00
End Bracket	DN-EB35	50	$67.00

ZIPLink Accessories

Replacement Relays

Replacement 24VDC relays are offered for use with the ***ZIP***Link relay modules ZL-RRL16F-24-1/-2.

Sold in packages of 4.

ZL-RELAY-F24X4
$24.00

ZL-RELAY-F24x4 24VDC Relay Specifications			
Contact		***Coil***	
Current Rating	30VDC @ 8A 250VAC @ 8A General Use	***Input Voltage Range***	24VDC (-20%/+30%)
		Maximum Continuous Coil Voltage	31.2 VDC
Contact Type	1 Form C (SPDT)	***Rated Current per Coil***	16.7 mA (±10%) @ 24VDC
Contact Voltage (per point)	250VAC / 30VDC	***Coil Resistance***	1440Ω (±10%)
Maximum Power Inductive	2000VA General Use	***Power Consumption per Coil***	0.4 W
Maximum Power Resistive	AC 2000VA, DC 240W	***Pick Up Current Max. per Coil***	15mA
Maximum Switching Voltage	250VAC, 300VDC	***Drop-Out Voltage Min.***	1.2 VDC
Minimum Load	10mA @ 5VDC	***Pick-Up Voltage Max.***	19.2 VDC
Contact Resistance	100mΩ Max @ 1A, 6VDC	***Off to On/On to Off Response Time***	12ms/8ms
Contact Material	AgNi (Silver Nickel Alloy)	***Weight (lbs)***	0.11