

# 24V DC-Powered Fused Relay Modules

DC-powered fused relay modules provide isolation, switch high current (8A) loads, and includes fused 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-R35\$1) or 15mm DIN rail (part #DN-R15S1).





Specifications								
24V DC-Powered	Part #	Pcs/ Pkg	Price/Pkg	Weight (lbs)	Part #	Pcs/ Pkg	Price/Pkg	Weight (lbs)
Fused Relay Module	ZL-RRL16F-24-1	1		2.05	ZL-RRL16F-24-2	1		2.05
Description	16 Fused Output Relay	module,	sinking, with LE	Ds, 24VDC coil	16 Fused Output Relay	module,	sourcing, with l	EDs, 24VDC coil
Mechanical Life	1,000,000 Operations no load condition							
Electrical Life	1,000,000 Operations at rated resistive load							
Operating Frequency	6 cycles per minute electrical, 180 cycles per minute mechanical							
Isolation Coil to Contact	2500VAC for 1 minute							
Isolation NC Contact to NO Contact	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				nergized			
Operating Temperature Range	32 to 140°F (0 to 60°C)							
Humidity Range	45 to 85% RH							
Vibration Resistance	10 to 55 Hz dual amplitude width 1.5 mm							
Shock Resistances	1000m/s² endurance, 100m/s² operation							
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							
Replacement Relays	ZL-RELAY-24X4, Qty. 4/pkg							
Fuses (Sold Separately)	Sixteen 5x20mm, 250V							
Replacement Fuses	See Edison 5x20mm Glass Fuse section, range up to Max. 10							
Cable/Wire Clearance	0.5 in (12.7 mm)							
Approvals	File # E139594 UL, cUL 508, CE, EN61131-2:2007							

Relay Specifications **					
С	ontact	Coil			
Current Rating	30VDC @ 8A, 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 240W	Power Consumption per Coil	0.4 W		
Maximum Switching Voltage	250VAC, 300VDC	Total Coil Supply Current Max.	400mA (Total 16 relays)		
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 Capacity	5FLA/30LRA, 250VAC, 1/2 HP, 250VAC, Pilot Duty B300-C300	Pick-Up Voltage Max.	19.2 VDC		
Contact Material	AgNi (Silver Nickel Alloy)	Off to On/On to Off Response Time	12ms/8ms		

<sup>\*</sup> Use conductors rated for  $60^{\circ}/75^{\circ}\mathrm{C}$  for relay outputs.

<sup>\* \*</sup> Relay modules are reverse polarity protected and will not operate if reverse voltage is connected.

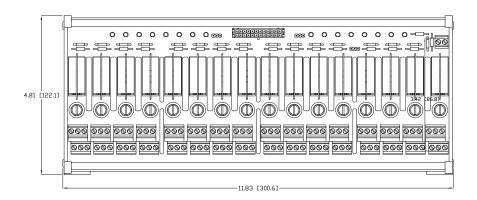


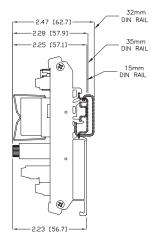
Note: See wiring details and dimensional drawings on our Web site at: /static/manuals/ziplinks/ziplinks.html.



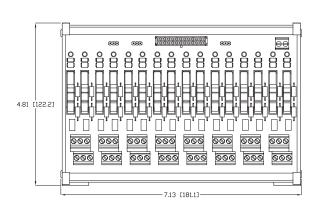
### **Module Dimensions**

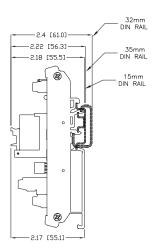
#### ZL-RRL16F-24-1 ZL-RRL16F-24-2



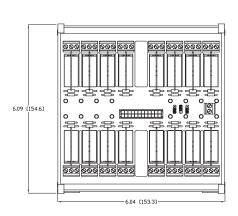


#### ZL-RRL16HDF-24-1 ZL-RRL16HDF-24-2

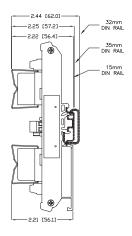


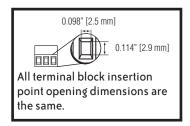


#### ZL-RRL16W-24-1 ZL-RRL16W-24-2



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 ZIPLink relay modules.

Sold in packages of 4.





ZL-RELAY-24X4

ZL-RELAY-120X4

	24VDC R	elay Specifications		
Contact		Coil		
Current Rating	30VDC @ 10A 250VAC @ 8A	Input Voltage Range	24VDC (-20%/+30%)	
Guirent nating	General Use	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 F	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 50H. 6.30 mA (±10%) @ 115VAC 60H.	
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				
Angled Support Bracket	DN-ASB1	50				
End Bracket	DN-EB35	50				



## Accessories

### Replacement Relays

Replacement 24VDC relays are offered for use with the *ZIP*Link relay modules ZL-RRL16F-24-1/-2 and ZL-RRL16HDF-24-1/-2.

Sold in packages of 4.





ZL-RELAY-F24X4

ZL-RELAY-HDF24X4

	ZL-RELAY-F24x4 2	4VDC Relay Specifications			
Contact		Coil			
Current Dating	30VDC @ 8A 250VAC @ 8A	Input Voltage Range	24VDC (-20%/+30%)		
Current Rating	General Use	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	100m <b>Ω</b> Max @ 1A, 6VDC	Off to On/On to Off Response Time	12ms/8ms		
Contact Material	AgNi (Silver Nickel Alloy)	Weight (lbs)	0.11		
ZL-RELAY-HDF24x4		24VDC Relay Specifications			
Contact		Coil			
Current Rating	30VDC @ 5A 250VAC @ 5A General Use	Input Voltage Range	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	1250VA General Use	Coil Resistance	3388Ω (±10%)		
Maximum Power Resistive	AC 1250VA; DC 150W	Power Consumption per Coil	0.17 W		
Maximum Switching Voltage	250VAC, 30VDC	Drop-Out Voltage Min.	1.2 VDC (TBD)		
Minimum Load	10mA @ 5VDC	Pick-Up Voltage Max.	19.2 VDC		
Contact Resistance	100m <b>Ω</b> Max @ 1A, 6VDC	Off to On/On to Off Response Time	8ms/4ms		
Contact Capacity	D300, 0.8 A/240VAC Pilot Duty FLA 2A @ 277VAC / 125VAC 1/8 HP @ 250VAC	Weight (lbs)	0.11		
Contact Material	AgNi (Silver Nickel Alloy)				