FC-3RLY4 Analog Input, 4-Relay, **Limit Alarm Module**

\$151.00



Overview

This an Analog to Relay Limit Alarm module that is field configurable for a variety of alarm and control applications. The FC-3RLY4 can be powered by 24VAC or 24VDC and accept input signals of 0-15V, 0-30V, or 0-20mA. Configuration and Trip/Release Point programming is accomplished with DIP switches, and a single PGMpushbutton. LED's provide an indication of operating status and are used during the Trip/Release Point programming. The module can be 35mm DIN rail or side mounted.



Specifications				
I	nput Specifications			
Number of Inputs and Type	(1) Single Ended, (1) Common			
Input Ranges	0-15VDC, 0-30VDC, 0-20mA (DIP Switch Selectable)			
Input Impedance	100KΩ voltage input / 250 Ohms current input			
External DC Power Required	24VAC or 24VDC @ 100mA ±10%			
Low-pass Filtering	-3dB at 100Hz, (-6dB per octave)			
Set/Release Point Voltage Repeatability	0.05% of full scale Voltage range (Constant temperature)			
Set/Release Point Current Repeatability	0.1% of full scale Current range (Constant temperature)			
0	utput Specifications			
Relay Contacts Current Contact Rating	4 SPST, Form A, non-latching 250VAC @ 5A, 30VDC @ 5A (Resistive Load) 380VAC			
<u> </u>	Max., 30VDC Max.			
Relay Operation	DIP Switch selectable			
Relay Trip Point Setting Relay Release Point Setting	Program Mode enabled by pushbutton			
Relay Dead-band = Trip Point ± Release Point	0-15 VDC Range: 1.0% minimum deadband (150mV) 0-30 VDC Range: 1.0% minimum deadband (300mV) 0-20 mA Range: 3.0% minimum deadband (600µA)			
Terminal Block Specifications				
Field Wiring	Removable Screw Type Terminal Blocks, (included)			
Number of Positions	(6) Two Position (Dinkle: EC350V-02P)			
Wire Range	28-14 AWG solid or stranded conductor; wire strip length 1/4" (6-7mm)			
Screw Torque	1.7 inch-pounds (0.19 Nm)			
Ge	eneral Specifications			
Surrounding Air Temperature	0 to 60°C (32 to 140°F) IEC 60068-2-14 (Test Nb, Thermal Shock)			
Storage Temperature	-20 to 70°C (-4 to 158°F) IEC 60068-2-1 (Test Ab, Cold) IEC 60068-2-2 (Test Bb, Dry Heat) IEC 60068-2-14 (Test Na, Thermal Shock)			
Humidity	5 to 95% (non-condensing) IEC 60068-2-30 (Test Db, Damp Heat)			
Environmental Air	No corrosive gases permitted (EN61131-2 pollution degree 1)			
Vibration	MIL STD 810C 514.2 IEC 60068-2-6 (Test Fc)			
Shock	MIL STD 810C 516.2 IEC 60068-2-27 (Test Ea)			
Insulation Resistance	>10MΩ @ 500VDC			
Noise Immunity	NEMA ICS3-304 IEC 61000-4-2 (ESD) Impulse 1000 V @ 1µS pulse IEC 61000-4-4 (FTB) RFI, (145 MHz, 440 MHz 5W @ 15 cm) IEC 61000-4-3 (RFI)			
Weight	0.3lbs			
Isolation	1800VDC Power to Output 1800VDC Input to Output applied for 1 second (100% tested)			
Agency Approvals	UL508**, File Number: E157382, CE			
* The 0V and COM terminals should isolation between the External Pov	be considered the same reference point. There is no			

isolation between the External Power and Input Terminal blocks.

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In order to comply with UL508, the supplied power must be less than 26VDC and fused at a maximum of 3 amps.

FC-3RLY4 Modes of Operation

Independent and Simultaneous Relay Control Modes

Independent Relay Control Mode

• Relays A, B, C and D are controlled with independent Trip Points and Release Points for each relay. All relays can be independently set to operate in Increasing or Decreasing mode (see next section). This mode can be used to control multiple loads in sequence, or monitor for multilevel alarm conditions.

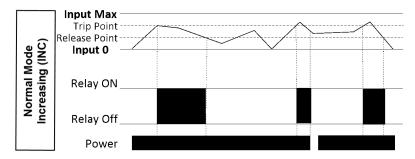
Simultaneous Relay Control Mode

- Relays A and B operate simultaneously, both controlled by Trip Point A and Release Point A settings. Both relays operate in Increasing or Decreasing mode (see next section).
- Relays C and D operate simultaneously, both controlled by Trip Point B and Release Point B settings. Both relays operate in Increasing or Decreasing mode (see next section).
- This mode can be used where it is desired to have two relays controlled by common Trip and Release Points such as using one relay for local alarm indication with a horn or strobe and the other relay for remote alarm monitoring by a PLC.

Relay Trip Point / Release Point Control Modes

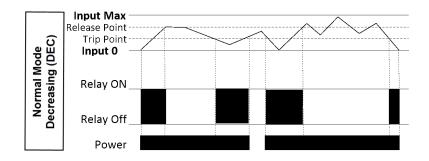
Increasing (INC) Mode

The relay will turn ON when the input signal increases to the programmed Trip Point. The relay will remain ON until the input signal decreases below the Release Point. In INC mode, the Trip Point must always be greater than the Release Point (TP > RP).



Decreasing (DEC) Mode

The relay will turn on when the input signal decreases below the programmed trip point. The relay will remain on until the input signal increases above the release point. In DEC mode, the Trip Point must always be less than the release point (TP < RP).



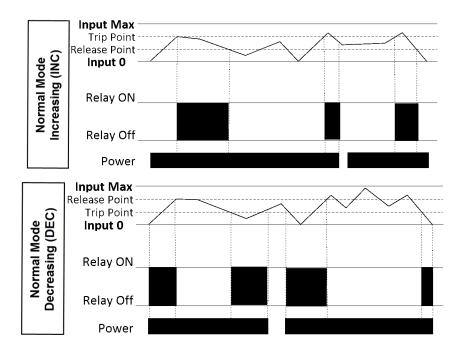
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FC-3RLY4 Modes of Operation (continued)

Non-Latching and Latching Relay Control Modes

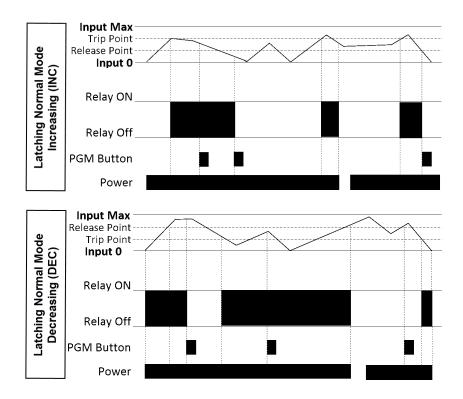
Non-Latching Relay Control Mode

All relays operate automatically at the Trip and Release Point settings.



Latching Relay Control Mode

All relays operate automatically at the Latch Trip Point settings and remain <u>electrically</u> latched until the input signal reaches the Manual Release Point, at which time the <u>FC-3RLY4</u> relays can be manually reset by pressing the PGM-pushbutton as shown in the following diagrams.



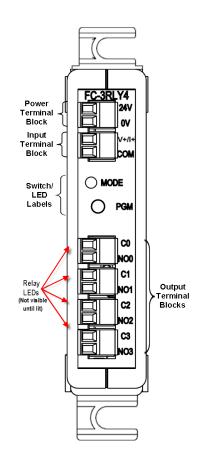
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FC-3RLY4 Dimensions

Wiring Connections

Power Terminal Block				
Faceplate Label	Description			
24V	24VAC/VDC ±10% (Class 2)			
OV	0V			

Input Terminal Block			
Faceplate Label	Description		
V+ / I+	Voltage + / Current In		
сом	Input Common		

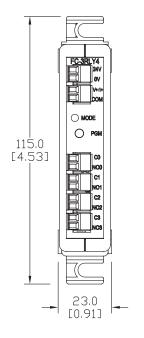


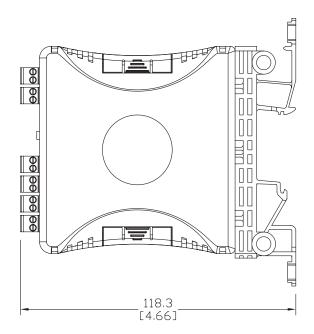
Switch	/LED Labels			
Faceplate Label	Description			
MODE	Diagnostic LED flashing indication			
PGM	Pushbutton switch input to initiate programming, etc.			

Output Terminal Block				
Faceplate Label	Description			
CO/NOO				
C1/N01	Common # /			
C2/NO2	Normally Open #			
C3/NO3				

Dimensions

mm [inches]





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FC Series Accessories





FC-35MM

Description

Universal terminal block replacements for the FC Series signal conditioners. Each packcage includes enough terminal blocks to replace all the terminal blocks on any FC Series signal conditioner according to the following table:

FC Series Terminal Blocks				
FC Series Model	Terminal Block Replacement Part Number	Package Includes		
FC-11	FO 51/14	(2) 2-pole blocks (2) 3-pole blocks (1) 4-pole blocks		
FC-33				
FC-R1	FC-5MM			
FC-T1		()		
FC-ISO-C				
FC-ISO-D		(6) 2-pole blocks (2) 3-pole blocks (2) 4-pole blocks (1) 5-pole blocks		
FC-B34				
FC-35B	FC-35MM			
FC-P3		(1) 6-pole blocks		
FC-3RLY2		(2) 8-pole blocks		
FC-3RLY4				

Note: Depending on the model, some terminal blocks in the package may be unused.

Universal Signal Conditioners				
Part No.		Rated Torque (N·m)	Weight (Lbs)	Price
<u>FC-5MM</u>	Terminal block, replacement, 5mm. Package of 5. For use with FC Series signal conditioners.	0.5	0.1	\$18.00
<u>FC-35MM</u>	Terminal block, replacement, 3.5mm. Package of 14. For use with FC Series signal conditioners.	0.2	0.1	\$33.00

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