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MODEL 242L

DC Isolator

Operating Instructions

I. General

The Model 242L (two channels) DC Isolator provides isolated input channels for electrical contacts that are external to the module. Each isolated channel has a three-position toggle switch mounted on the front panel. The switch allows the channel to be configured to output a constant Call output, operate in a Normal state, or output a momentary Call output. Each channel has two Light Emitting Diode (LED) indicators; a red LED that indicates the channel's Call status and a red LED that indicates the channel's Fault status.

II. Front Panel Mounted Indicators and Controls

i. Channel Output LED

Each isolator channel has one red LED indicator labeled **OUT** that is used to provide an indication of the channel's Call output conditions. The table below lists the various Call output conditions and corresponding LED indications. When a channel's OUT LED is ON the channel is in a CALL state.

ii. Channel Fault LED

Each isolator channel has one red LED indicator labeled **FAULT** that indicates if a fault condition occurred. The fault condition occurs when the channel had been in a Call state for approximately 90 seconds (stuck ON). Once a fault is detected this LED remains on until AC power is removed from the unit for duration sufficient to extinguish the fault LED.

iii. Call / Norm / Test Switch

Each channel has a front panel mounted toggle switch. This three-position switch allows a channel to be set in:

CALL simulates a call signal going directly to the channel input. This position overrides the normal operation of the DC isolator.

NORM allows a channel to operate under normal conditions. The toggle switch must be in this position for the DC isolator to function properly.

TEST simulates a call signal going directly to the channel input overriding the normal operation, however, only momentarily. The toggle switch must be held in the TEST position because, once released, the toggle switch will return to the NORM position.

III. Clearing/ Resetting the Fault LEDs

To clear the fault LEDs, simply remove power from the card by pulling the card out far enough so that the pins of the card disconnect from the card slot. Wait until all the LEDs turn off. Then, immediately reinsert the card. With the switches in the normal position

and with no calls being initiated, all LEDs should remain off when power to the card (by its reinsertion) is restored.

IV. Channel Output States and Channel Input Voltages

The table below lists the output states of the isolator over the range of input voltages from 0 to 24 VDC.

	Input Voltage (V_{IN})	
	$0 < V_{IN} \leq 9$	$9 < V_{IN} < 24$
Channel Output	Call	No Call

i. Inverted Inputs

The inverted inputs change the “CALL” state from the normally closed contact to the normally open contact. The PC board 4-pin headers labeled J1 (channel 1) and J3 (channel 2) selects Normal or Inverted input. When the 2-pin shunt is on pins 3 and 4 Normal input is selected. When the 2-pin shunt is on pins 1 and 2 Inverted input is selected.

V. Installation

Each channel has a front panel mounted toggle switch to configure the test settings of the channel or to place the channel in the normal operating setting. In most instances, the toggle switches should be set to the NORM position when the isolator is first inserted into the card rack. The CALL and TEST positions of the toggle switches are designed for use after the DC isolator has been installed in the card rack.

VI. Pin Assignments

2 x 22 Card Edge Connector

Pin	Function	Pin	Function
A	Cabinet Logic GND	1	No Connection (No Pad)
B	Cabinet 24VDC	2	No Connection (No Pad)
C	No Connection (No Pad)	3	No Connection (No Pad)
D	Channel 1 Input	4	No Connection (No Pad)
E	Channel 1 Input Return	5	No Connection (No Pad)
F	Channel 1 Output, Collector (Drain)	6	No Connection (No Pad)
H	Channel 1 Output, Emitter (Source)	7	No Connection (No Pad)
J	Channel 2 Input	8	No Connection (No Pad)
K	Channel 2 Input Return	9	No Connection (No Pad)
L	Chassis Ground	10	No Connection (No Pad)
M	No Connection (No Pad)	11	No Connection (No Pad)
N	No Connection (No Pad)	12	No Connection (No Pad)
P	No Connection (No Pad)	13	No Connection (No Pad)
R	No Connection (No Pad)	14	No Connection (No Pad)
S	No Connection (No Pad)	15	No Connection (No Pad)
T	No Connection (No Pad)	16	No Connection (No Pad)
U	No Connection (No Pad)	17	No Connection (No Pad)
V	No Connection (No Pad)	18	No Connection (No Pad)
W	Channel 2 Output, Collector (Drain)	19	No Connection (No Pad)
X	Channel 2 Output, Emitter (Source)	20	No Connection (No Pad)
Y	No Connection (No Pad)	21	No Connection (No Pad)
Z	No Connection (No Pad)	22	No Connection (No Pad)



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