



Model 242

DC Isolator

The Reno A&E Model 242 is optically isolated from the input using an Opto-isolator. Each isolated channel is equipped with a test switch that allows for a simulation of a valid input signal. Each channel has two light-emitting diodes (LED): a red LED (OUT) that indicates a call and a red LED (FAULT) that indicates fault status.

Front Panel Controls: Each channel has a 3-position toggle switch allowing the 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.

Front Panel LED Indicators: Each channel is equipped with two front panel LEDs:

The red CALL LED, when on, indicates that a channel is in the call state. When off, it indicates the channel is in a no call state. The CALL LED is on when one of the following three conditions occur: 1) a call from the isolated DC input is received while the toggle switch is in the NORM position. 2) The toggle switch is set in the CALL position. 3) The toggle is held in the TEST position.

The red FAULT LED, when on, signifies a previous call was present for approximately 90 seconds. The DC isolator is reset by cycling DC power off or by pulling the DC isolator card from the rack slot until the fault LED goes dark and then immediately reinserting the card.

DC Inputs Operation: When the DC voltage falls to less than 8VDC for more than 6 msec, a call is detected and passed to the output via an Opto-isolator. Regardless of input signal duration, the signal to the output is a minimum of 100 msec in duration. When a DC voltage on the input rises to above 12 VDC, the call state is cleared.

Inverted DC Inputs changes the input "CALL" state from the normally closed contact to the normally open contact. The PC board 4-pin headers labelled J1 (channel1) and J3 (channel2) 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.



Procurement Specifications for
Model 242
DC Isolator

AC Line Voltage: 89 to 135 VAC

AC Line Frequency: 47 Hz to 63 Hz

AC Input Power: $\leq 2.5W$

Fuse Protection: The DC Input is protected with a 600 mA poly fuse.

Channel Input Voltage: 0 to 24 VDC

Channel Input Current: 21.8 mA delivered to external electrical contact at closure

Call State Voltage: 0 to 8 VDC

No Call State Voltage: 12 to 24 VDC

Response Time: minimum 6 msec for activation and deactivation

Channel Output Voltage: Open Collector; 30 VDC max.

Channel Output Current: ≤ 100 mA

Output Time: minimum of 100 msec for call state.

I/O Isolation Resistance: ≥ 1000 Mega-ohms

I/O Isolation Voltage: ≥ 3000 VAC

Operating Temperature: $-40^{\circ}C$ to $+85^{\circ}C$

Circuit Board: is 0.062 inch thick FR4 material with 2 Oz. Copper. All holes are plated through. Circuit boards and components are conformal coated with polyurethane



Procurement Specifications for

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Size: 4.5 in. (11.43 cm) high x 1.12 in. (2.85 cm) wide x 6.88 in. (17.46 cm) deep excluding handle. Handle adds 1.00 in. (2.54 cm) to the depth dimension.

Connector: 2 x 22 contact card edge connector with 0.0156-inch (0.396 cm) contact center. Key slots located between pins B/2 and C/3 and M/11 and N/12.

Weight: 9.02 oz. (256 gm)