Product Page

Anderson Devices

manderson@andersondevices.com
408-357-0089
Andersondevices.com

Contact Information

PSR-248-NC Installation Instructions

CAUTION: RISK OF ELECTRIC SHOCK – MORE THAN ONE DISONNECT MAY BE REQUIRED TO DEENERGIZE THE DEVICE BEFORE SERVICING.

WARNING: THE BOARD MUST BE MOUNTED ON A SOLID, VERTICAL SURFACE. EXCESSIVE / VIOLENT VIBRATION MAY CAUSE RELAYS TO ACTIVATE WITHOUT CAUSE IF MOUNTED IN ANOTHER POSITION.

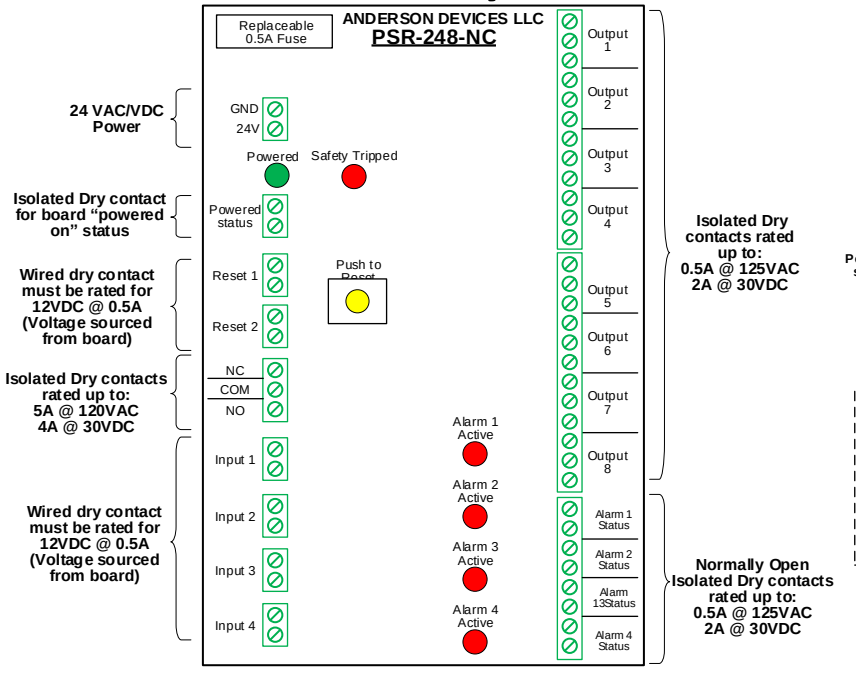
CAUTION: NOT FOR USE IN FIRE / LIFE SAFETY SYSTEMS.

Installation Notes: This board must be mounted to a vertical, steady surface. The board can be installed with the terminals facing left/right or up/down. If mounted parallel to the ground, excessive / sudden vibration may cause some of the relays to activate without cause.

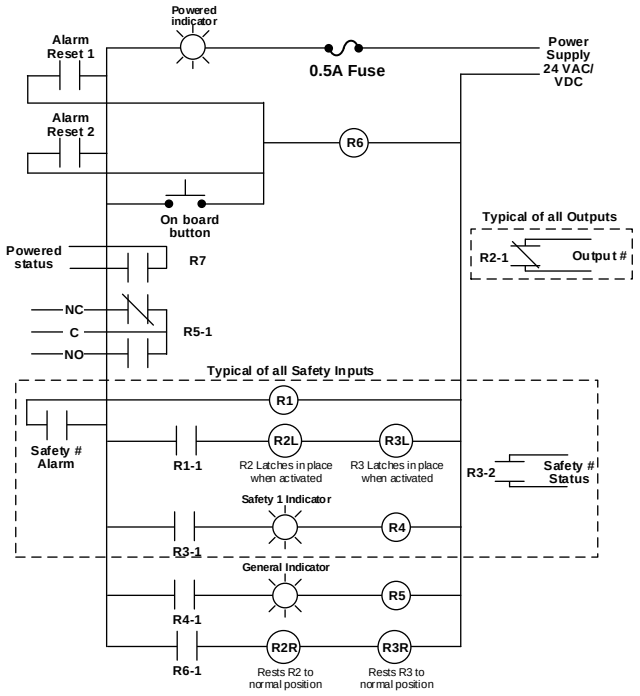
Specifications:

Expected Relay Life:	10 Million Cycles Min Mechanical
Operating Temperature:	-40°F to 160°F
Humidity Range	5% to 95% (noncondensing)
Over Current Protection:	0.5A glass fuse (3GA)
Time to Operate:	Trip 5 ms Min time between trip & rest 10 ms
Power Input:	24 VAC@ 0.2A, 24VDC @ 0.15A
Alarm Status:	Green LED on = Powered Red LED on = Safety Activated
Dimensions:	4.75" x 6.00" x 1.75"
Mounting Options	Din rail mount snap track
Ingress Protection:	IPX0
Polution Degree:	2

General Layout



General Circuit Logic



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Purpose:

- The PSR-248-NC is a latching relay logic board designed to be installed in a rooftop HVAC unit & prevent internal pressure issues. The PSR-248-NC has (2) reset terminals, (4) input & (8) output contacts.
- It is expected that the inputs are dry contacts and the outputs are wired to VFDs.

Power:

- Connect to terminal marked 24V & GND
- 24 VAC @ 0.2A, 24VDC @ 0.15A
- Powered Status contact will be closed when board is powered.
    - Rated for 0.5A @ 60V (Resistive)

Fuse Replacement:

- In the event of an over current event, the on board fuse will protect the components from failure.
- Replace blown fuse with 0.5A (3GA) 5mm x 20mm glass fuse
- To replace fuse, remove power, remove non-operational glass fuse and replace with noted fuse.

Reset & Alarm Contacts:

- When the board is powered, these contacts are wet and expect a dry contact input.
- Connect contact marked “Reset #” or “Input #" to external dry contacts.
- External dry contact must be able to handle 12 VDC @ 0.5A
- WARNING – Do not apply external voltage to these inputs. Voltage is sourced from the board.

Output Contacts:

- Connect contacts marked “Output #” to controllers / VFDs. Can be wired NO or NC.
- Output contacts are rated to handle 0.5A @ 125VAC or 2A @ 30VDC (Resistive)

Status Contacts:

- Connect contacts marked “Alarm # Status” to DDC controllers for alarm feedback.
- Output contacts are rated to handle 0.5A @ 125VAC or 2A @ 30VDC (Resistive)

Master (High Amperage) Relay

- Dry contact rated at 4A @ 120VAC (NO) and 3A @ 30VDC (NC) / 10A @ 30VDC (NO) (Resistive)
- Connect “Com” contact to voltage source.
- Connect “NC” contact to normal indicator / normal equipment operation.
- Connect “NO” contact to alarm indicator / alarm equipment operation.

Mounting Options:

- DIN Rail snap track – DIN rail size options: 32mm x 15mm, 35mm x 7.5mm, & 22.4mm x 6.9mm

Normal Operation:

- If no alarm conditions exist, the outputs will be in there normal positions, the safety alarm status contacts will be open, the corresponding alarm status & master alarm red LEDs will be off and the master relay will be in the normal position. If board is powered, the “powered” relay will stay closed.

Alarm Operation:

- If an alarm condition exists, the outputs will be in their set position, the corresponding safety alarm status contacts will be closed, the corresponding safety status & master alarm red LEDs will be on and the master relay will be in the powered position. If board is powered, the “powered” relay will stay closed.
- **The board will latch in alarm operation until one of the reset options are activated.**
- Reset options: 1) Press the on board reset button, 2) Dry contact closure across one of the Reset terminals.

Conditions of Acceptability:

- This product was evaluated employing IPX0 ingress protection. The need for additional ingress protection is to be provided by end use application enclosure.
- This product requires the end use application to provide an adequate electrical and fire enclosure.
- Not intended for use in altitudes above 2,000 meters.