



Distributed Combination I/O
8 DI / 8 DO / 8 AI - Isolated

The rugged Distributed Combination I/O module (DCIO) provides eight isolated analog inputs – 300V dc channel-to-channel - as well as eight isolated discrete inputs and outputs.

Distributed DCIO modules can be wired back to any RTU or PLC supporting the DNP3 protocol using an RS-232, RS-485, fiber optic or Ethernet connection.

The DCIO, along with the Distributed Discrete I/O module (DDIO) provide security features to meet NERC CIP requirements, including strong passwords, user groups, encrypted protocols and firewall.

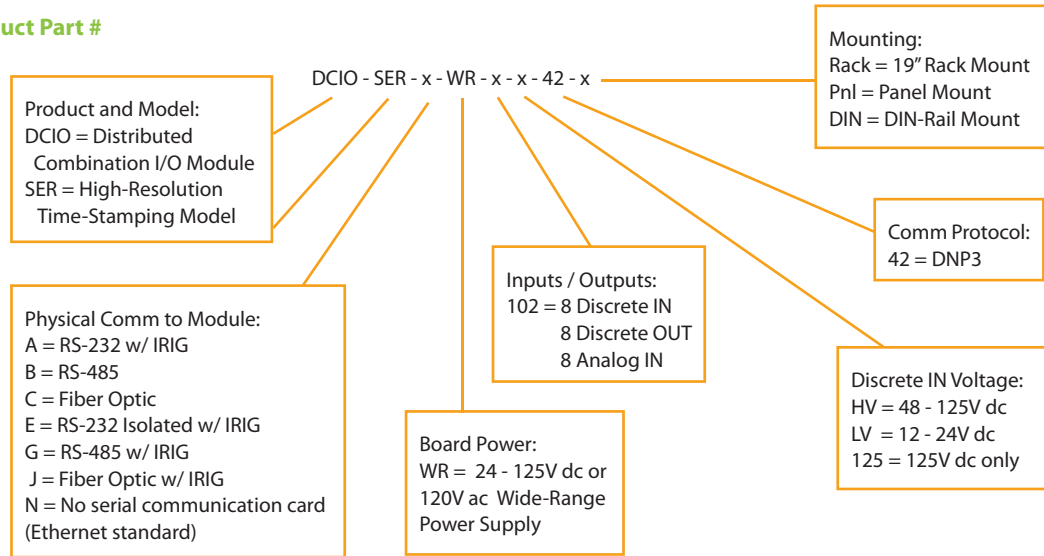
The DCIO also offers high resolution (1ms) time-stamping and an IRIG-B port in an enclosed package.

Customized input and output labels can be inserted into the front panel.



8 DI / 8 DO / 8 AI Distributed Combination I/O Module
Panel Mount (shown). 19" Rack Mount or DIN-Rail Mount available.

Product Part #



Environmental and Immunity

Operating Temperature Range: -20 to +55°C; Tested to IEEE C37.90.1, 2 and 3 surge

Comm. Protocol

DNP3 to module for status and control. Unsolicited Report-by-Exception (URBE) supported; Set Time on module supported; Serial baud rate set up to 57.6kb, Ethernet 10/100M Baud rate

Configuration

Simple Mode: Set address and comm parameters with DIP switches. Advanced Mode: Set advanced comm parameters through webpages served from module

Discrete Inputs/Outputs

8 in / 8 out @ 12, 24, 48 or 125V dc (+/- 20%).
Other configurations available by special order.
Input circuit draw: 2mA
Output relays: Heavy duty protective relay-grade 10A for direct connection to circuit breaker trip coils
Removable Phoenix Type Screw Terminals, 12 to 24AWG

Mechanical

10 Million no load operations

Make

30A @ 180V dc per IEEE C37.90

Breaking Capacity

(10,000 operations) .3A at 125V dc per IEC 60255-0-20:1974

Cyclic Capacity

(2.5 cycles/second) .3A at 125V dc per IEC 60255-0-20:1974



Distributed Combination I/O

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Analog Inputs

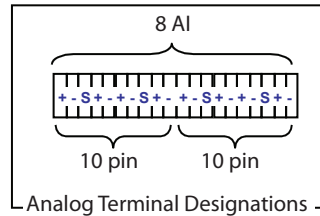
- +/- 2mA for "-1mA to +1mA" and "0 to 1mA" applications
- +/- 20mA for "4 to 20mA" applications
- +/- 10V for "0 to 10V", "0 to 5V" applications

Analog Inputs Selection

- Inputs individually selectable per point
- Inputs selection with individual slide switch

Analog Specifications

- Input Impedance
 - 0-10V: 10KΩ
 - 0-1mA: 500Ω
 - 4-20mA: 50Ω
- Overall accuracy
 - + / - .2% V
 - + / - .2% A
- Temperature Coefficient
 - + / - 100ppm per degree C



Overload Range

- 0-10V: -12.5V to +12.5V
- 0-1mA: -2.5mA to +2.5mA
- 4-20mA: 0mA to 25mA

Isolation

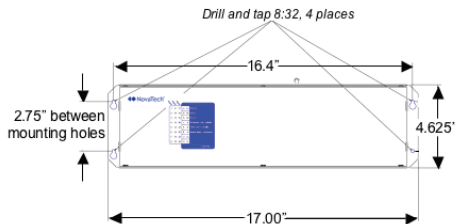
- Channel to channel: 300V dc
- Input to chassis: 3000V dc

Rejection

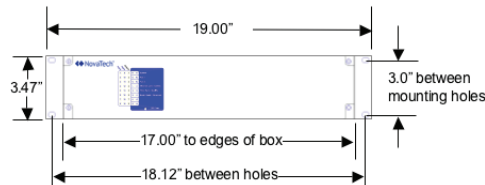
- Minimum common mode rejection of 115dB
- Minimum differential mode rejection (60Hz) of +60dB

Dimensions and Mounting

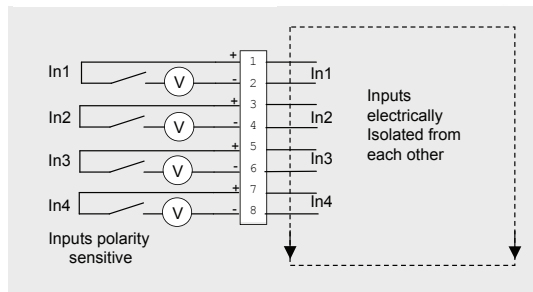
Dimensions for panel and DIN-rail mounting:
(17.00" wide x 4.625" high x 3.50" deep)



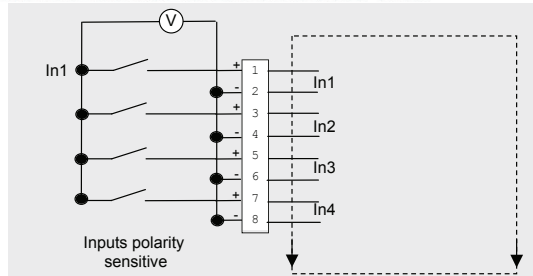
Dimensions for 19" rack mounting:
(19" wide x 3.47" high x 7.00" deep)



Discrete Circuit Diagram



Input circuit showing independent and isolated circuits

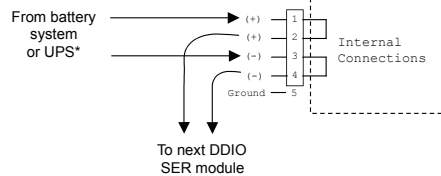


Input circuit showing bussed connections for providing wetting voltage

DC Power Input

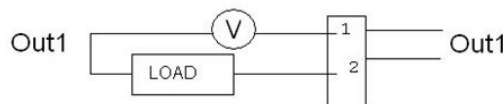
18VDC to 145VDC
(24VDC or 125VDC nominal)

Also Supports
115VAC nominal



*Module internally fused

Circuit Diagram – Outputs



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