



The rugged NovaTech Distributed Discrete I/O Module (DDIO) can help reduce wiring and costs in substation monitoring and control applications. Its hardened design, small form factor, and distributed communications capability allow it to be installed virtually anywhere in the substation.

Distributed DDIO modules can be wired back to any RTU or PLC supporting the DNP3.0 protocol using an RS232, RS485, fiber optic or Ethernet connection.

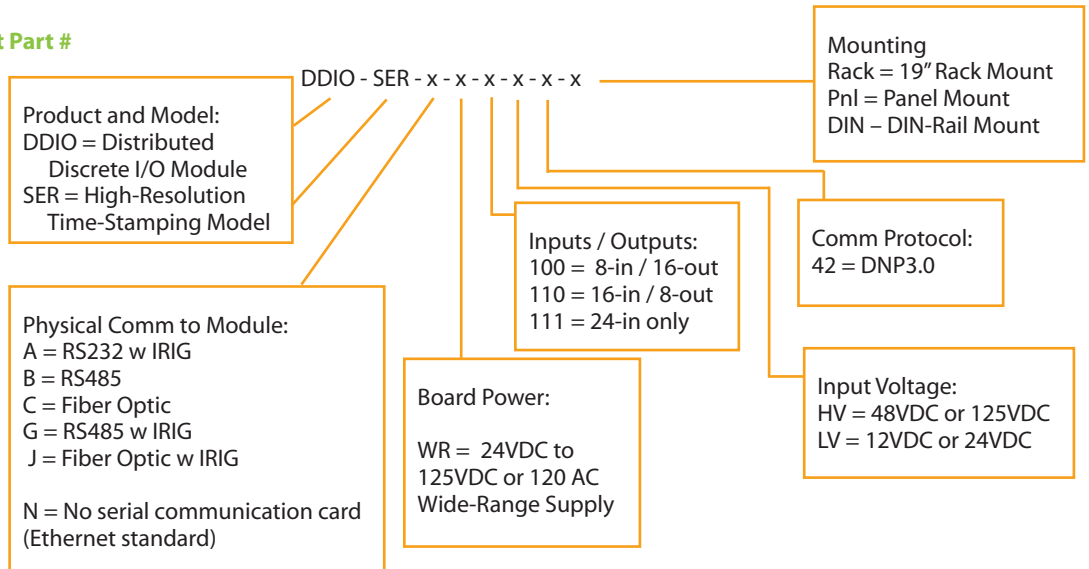
Combinations of up to 24 inputs or outputs are provided to meet specific requirements.

The DDIO also offers high resolution (1mS) time-stamping, an IRIG-B port, and independent input circuits in an enclosed package.



16 in / 8 out Distributed Discrete I/O Module, Panel or DIN-rail mount

**Product Part #**



- Inputs/Outputs** 16 in / 8 out, 8 in / 16 out or 24 in @ 12, 24, 48 or 125VDC, +/- 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 24 AWG
- Environmental and Immunity** Operating Temperature Range: -20 to +70 °C; Designed to withstand IEEE C37.90.1, 2 and 3 surge
- Comm. Protocol** DNP3.0 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 10/100MBaud
- Configuration** Simple Mode: Set address and comm parameters with DIP switches. Advanced Mode: Set advanced comm parameters through web pages served from module

**Contact:**

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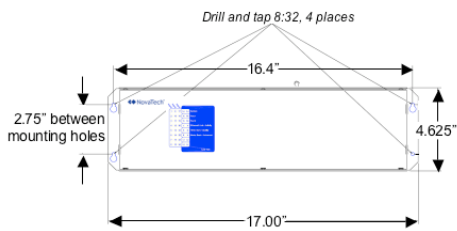


**Physical Ports**

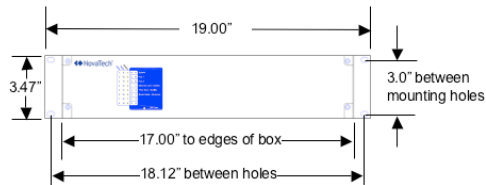
	Physical Ports on DDIO Module				
	Built-In RS232 DB9F	Built-In Ethernet Port RJ45 Style 10/100 BaseT	RS485 Type B Screw Terminals Two-Wire or Four-Wire or Fiber Optic Type C ST Connector	RS232 Type A DB9F or RS485 Type G Screw Terminals Two-Wire or Fiber Optic Type J V-Pin Connector	IRIG-B or 1PPS Screw Terminal
Data Communications to DNP 3.0 Master		X	(using NTP)	X	
Time Synchronization		X (using NTP)		X	X
Online Diagnostics	X	X			
Configuration		X			

**Dimensions and Mounting**

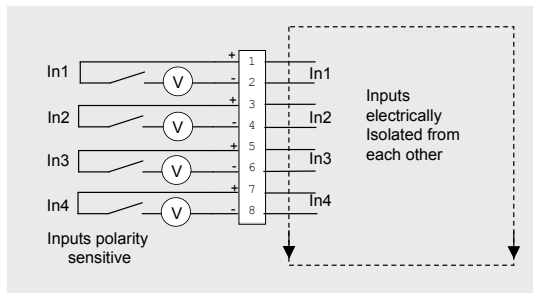
Dimensions for panel and DIN-rail mounting:  
(17.00" wide x 4.625" high x 3.50" deep)



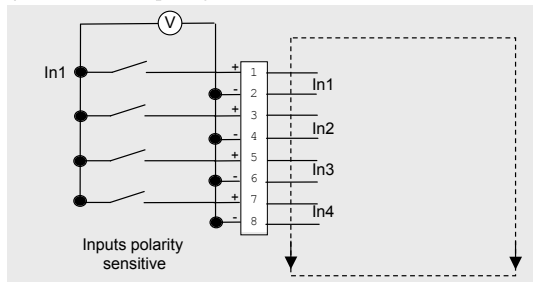
Dimensions for 19" rack mounting:  
(19" wide x 3.47" high x 7.00" deep)



**Circuit Diagram**



Input circuit showing independent and isolated circuits



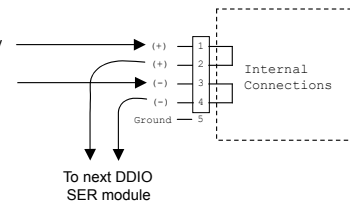
Input circuit showing bussed connections for providing wetting voltage

**DC Power Input**

19VDC to 145VDC  
(24VDC or 125VDC nominal)

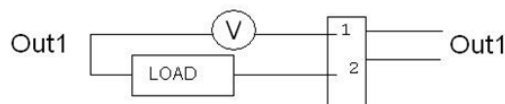
Also Supports  
115VAC nominal

From battery  
system  
or UPS\*



\*Module internally fused

**Circuit Diagram – Outputs**



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