



- **Analog or Digital Outputs**
- **Models Available for:**  
**Thermocouple**  
**RTD, Process Voltage**  
**& Current Strain,**  
**Frequency/Pulse,**  
**AC Voltage and Current**
- **Up to 1800 Vdc Isolation**
- **iDRN Series Provide:**  
**0-10 Vdc, 4-20 mA**  
**or 0-20 mA Output**
- **iDRX Series Provide:**  
**RS-485 Output (ASCII Serial**  
**Protocol and MODBUS**  
**Serial Protocol)**
- **Free Setup and**  
**Configuration Software**
- **Factory Setup and**  
**Configuration Available**  
**at No Charge (for iDRN**  
**Analog Output Models)**

The **iD Series** signal conditioners combine the accuracy of laboratory instrumentation with the performance required by demanding industrial applications. The **iD Series** signal conditioners are ideal for those applications in Data Acquisition, Test & Measurement, Process Control, and Industrial Automation where accuracy, performance, and reliability are critically important.

The **iD Series** signal conditioners mount on a 35 mm DIN rail, and operate on any voltage between 10 to 32 Vdc power. (A matching 24 Vdc 850 mA switching power supply is also available.) The **iD Series** feature seven (7) models designed for each of the most widely measured signal inputs: Process (DC) Voltage and Current; Strain Gage; Thermocouples; RTD's; AC Voltage; AC Current; Frequency / Pulse.

The devices feature three-way isolation of up to 1800 V between the signal inputs, outputs, and power supply.

The **iD Series** devices are designed to work directly with a variety of sensors and transducers; no other components are necessary. For sensors such as RTD's, strain gages, and some process transducers, precise stable excitation is provided directly from the **iD** module.

### ANALOG OUTPUT MODEL

The output of **iDRN** can be user set for 0 to 10 V, 4 to 20 mA or 0 to 20 mA. Input scaling and configuration of other operating parameters is accomplished by connecting to a standard RS-232 port of a personal computer and using the free Windows-based setup software. Once configured the settings may be stored in non-volatile memory and the unit can be disconnected from the PC.

### DIGITAL OUTPUT MODEL

The **iDRX** is a digital signal conditioner which communicates over an RS-485 communication link using either a simple, straightforward ASCII Serial Protocol or MODBUS Serial Protocol. Up to 32 modules may be connected to a single RS-485 port stretching up to 4,000 ft. without repeaters.

### ETHERNET CONNECTION

The Optional **EIT-D-485** iServer module can connect up to thirty-two (32) **iDRX** RS-485 Signal Conditioners to an Ethernet network and the Internet using standard TCP/IP protocol. The **EIT-D** iServer can also be used as a simple Serial to Ethernet "bridge" or converter to connect a single **iDRN** RS-232 device to an Ethernet network and the Internet.

### OPC SERVER

NEWPORT offers an optional OPC Server (OLE for Process Control) to integrate the **iDRX** with OPC-Client data acquisition, process control and industrial automation software available from NEWPORT, Iconics, Intellution and Wonderware, among others.

### FREE SETUP and CONFIGURATION

If an **iDRN** signal conditioner is not going to be connected to a computer, it can be ordered preconfigured by the factory at no extra charge. The user can select the input types, ranges and output scale, and NEWPORT will program the instruments to those specific requirements in our calibration lab prior to shipment. For custom factory setup and scaling of the **iDRN** model, please specify the "FS" option.



**Mounts to  
35 mm  
DIN rails**

# iD Series

**Thermocouple**



**RTD**



**ac Voltage & ac Current**



**Strain/Bridge**



**Process**



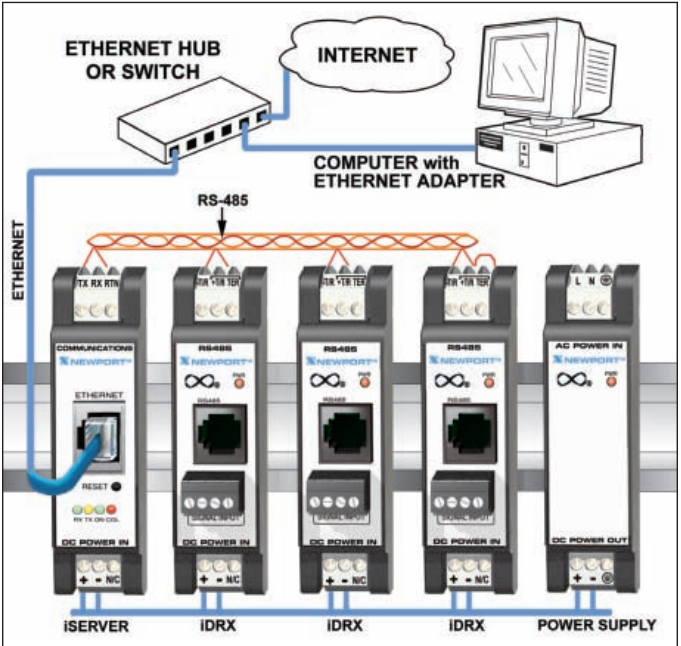
**Frequency Pulse**



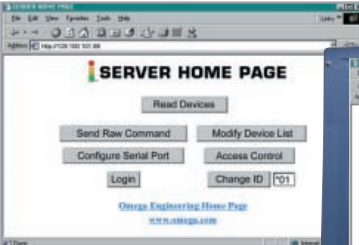
Input	Thermocouple	RTD	ac Voltage	ac Current	Process	Strain/Bridge	Frequency Pulse
Model No.	iDRN/iDRX-TC	iDRN/iDRX-RTD	iDRN/iDRX-ACV	iDRN/iDRX-ACC	iDRN/iDRX-PR	iDRN/iDRX-ST	iDRN/iDRX-FP
<b>Input Type</b>	Thermocouple temperature sensor	RTD Temperature sensor Pt100, 500, 1000 ohm	ac Voltage	ac Current	dc Millivolt, Volt, and Current	Millivolt	NAMUR Contact closure low level open collector
<b>Input Range</b>	J, K, T, E, R, S, B, N, J DIN thermocouple full range	$\alpha = 385, 392$ Full range of RTD 2, 3 or 4-wire	Full Scale Range: 400 mV to 400 V	Full Scale Range: 10 mA to 5 A	Full Scale Range: $\pm 400$ mV to $\pm 10$ V 0 to 20 mA	0 to 30 mV 0 to 100 mV $\pm 100$ mV	Full Scale Range: 20K to 200 M pulses 0 to 50 KHz
<b>Accuracy</b>	$\pm 1^\circ\text{C}$	$\pm 0.5^\circ\text{C}$	0.2%	0.2%	0.1% FS	0.2% FS	0.1% FS
<b>Resolution</b>	0.1 $^\circ\text{C}$	0.1 $^\circ\text{C}$	10 to 14 Bit	10 to 14 Bit	12 to 15 Bit	13 to 15 Bit	15 to 19 Bit
<b>Excitation</b>	N/A	N/A	N/A	N/A	14 Vdc @ 25mA	10 V @ 30 mA	5, 8.2, 12.5 Vdc @ 25 mA
<b>Output</b>	iDRX Series: 2-wire (half duplex) RS-485 iDRN Series: 0 to 10 V @ 10 mA max; 0 to 20 mA or 4 to 20 mA						

## EIT-D iServer

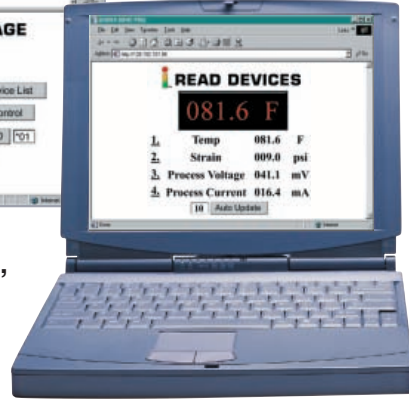
- Connects industrial serial devices with RS-232 or RS-485 to an Ethernet network and the Internet
- Web based interface for easy configuration and access without any special software



Get Internet E-mail Notification of Alarm Status on your cell phone or PDA



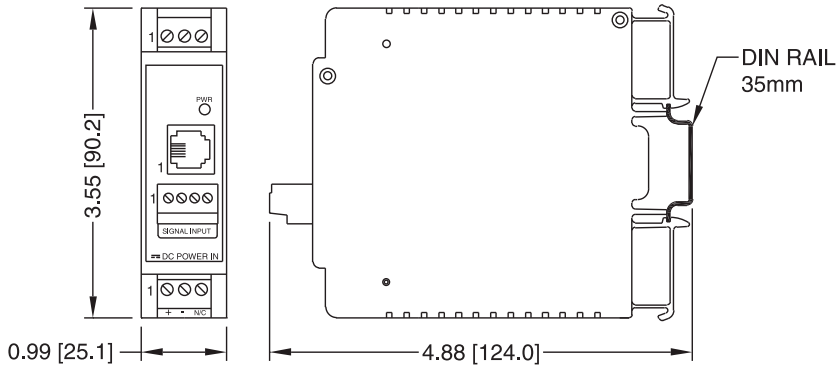
Access Vital Information Anytime, Anywhere, on the World Wide Web



iDRX modules connected to Ethernet using an EIT-D-485

**COMMON SPECIFICATIONS:**

- Input Power Supply:** 10 to 32 Vdc
- iDRX Output:** 2-wire (half duplex) RS-485 (NEWPORT® ASCII Serial Protocol and Modbus Serial Protocol)
- iDRN Output:** 0 to 10 V @ 10 mA max; 0 to 20 mA or 4 to 20 mA, 10 V compliance
- Isolation:** 1800 V peak
- Typical Step Response to 99%:** 1 second
- Operating Ambient:** -5 to 55°C (23 to 131°F)
- Storage Temperature Range:** -40 to 85°C (-40 to 185°F)
- Mounting:** 35 mm DIN rail



NOTE: DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN [ ].

- iDRN-PS-1000 Power Supply**
- ✓ 24 Vdc Supply for iDRN/iDRX Modules
  - ✓ Switching Supply Powers up to 7 Units

**To Order (Specify Model Number)**

Model No.	Description
iDRN-TC	Signal conditioner with analog output for thermocouple sensors
iDRN-RTD	Signal conditioner with analog output for RTD temperature Sensors
iDRN-FP	Signal conditioner with analog output for frequency/pulse inputs
iDRN-PR	Signal conditioner with analog output for process signals
iDRN-ACV	Signal conditioner with analog output for AC voltage inputs
iDRN-ST	Signal conditioner with analog output for strain gages and bridge transducers
iDRN-ACC	Signal conditioner with analog output for AC current inputs
iDRX-TC	Digital signal conditioner with RS-485 output for thermocouple sensors
iDRX-RTD	Digital signal conditioner with RS-485 output for RTD temperature sensors
iDRX-FP	Digital signal conditioner with RS-485 output for frequency/pulse inputs
iDRX-PR	Digital signal conditioner with RS-485 output for process signals
iDRX-ACV	Digital signal conditioner with RS-485 output for AC voltage input
iDRX-ST	Digital signal conditioner with RS-485 output for strain gages and bridge transducers
iDRX-ACC	Digital signal conditioner with RS-485 output for AC current input
-FS	Factory setup and scaling
<b>Accessories</b>	
EIT-D	Internet server RS-232 serial interface without I/Os, serves one iDRN unit
EIT-D-485	Internet server RS-485 serial interface with three I/Os, serves 32 iDRX units
iDRN-PS-1000	Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA (power 7 units)
CAT-285	Bi-directional RS-232-RS-485 converter for iDRX series
DB9-RJ12	DB9 to RJ12 connector adapter, includes 2.1 m (7') RJ12 cord
DB25-RJ12	DB25 to RJ12 connector adapter, includes 2.1 m (7') RJ12 cord
RJ12T	RJ12"™ split connector for RS-485 instruments, includes 2.1 m (7') RJ12 cord
RAIL-35-2	35 mm DIN rail, 2 m (6.5') length
OPC-SERVER LICENSE	OPC server for signal conditioners

Each unit supplied with complete operator's manual.  
**Ordering Example:** iDRN-PR signal conditioner with analog output for process signals, and DB9-RJ12 connector adapter.  
 iDRN-TC,FS signal conditioner w/analog output for temp. with factory scaling of T/C type K, FFF.F, degree C.