

Direct Interface to Thermocouples, RTDs, Strain Gages, Voltage, and Process Current Signals

Rugged, Compact, Low-Cost

High Accuracy, Low Drift

Input-to-Output Isolation

Mix-and-Match Modules as Needed

Smallest Signal Conditioning Module (1.105" × 1.65" × 0.40")

The DI-8B Series is a family of low-cost, high performance plug-in signal conditioners. With over 90 modules to choose from that interface to a wide variety of voltage, current, temperature, position, frequency, and strain measuring devices, it is easy to find a module to fit your signal conditioning data acquisition needs. One-fifth the size of competing products, DI-8B modules offer fully functional performance with superior specifications such as $\pm 0.05\%$ accuracy, $\pm 0.02\%$ linearity, three poles of filtering, 1000V Input-to-Output Isolation (when used with the DI-718B), 500V Channel-to-Channel Isolation (when used with the DI-718B), low output noise, and much more (see each module's datasheet for a complete list of specifications).



Seven DI-8B modules (four installed) shown with DI-718B Data Logger/Acquisition System and an SD memory card.

Features

Uniform Package

Each module is potted and identical in pinout and size (1.105" × 1.65" × 0.40").

High Performance

All modules feature $\pm 0.05\%$ calibrated accuracy, and $\pm 0.02\%$ non-linearity. Chopper based amplification assures a low drift of $\pm 1 \mu\text{V}/^\circ\text{C}$ and excellent long term stability.

Flexibility

The DI-8B Series can be easily tailored to the needs of many applications. These plug-in signal conditioners can be mixed and matched in any combination to adapt to even the most demanding applications. Each module features a simple pinout, plugs easily into instrument-mounted sockets, and is secured with a self-contained mounting screw.

Easy To Use

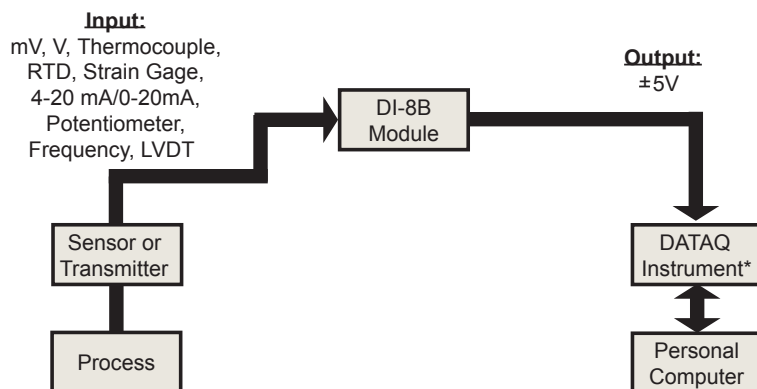
The DI-8B Series has no pots to adjust. Simply choose the module function and measurement range, install it in the instrument (the DI-718B), and then connect your input signals to the instrument. The instrument then becomes a direct sensor interface, providing a way to connect your input signals so the modules can output a perfectly conditioned, $\pm 5\text{V}$ signal (ideal for WINDAQ software).

On-board CJ Compensation

Each input connector of the DI-8B Series backplane is complemented by a cold junction compensation circuit, allowing the thermocouple modules to be located in any position.

Rugged Construction

All modules are hard-potted to protect the internal circuitry from moisture and other contaminants.



*DI-718B Series accepts DI-8B modules

Ordering Guide

Each DI-8B module is a single channel, isolated analog input designed for a specific measurement. The modules filter, isolate, amplify, and convert input signals to a high-level analog signal suitable for A/D conversion. Over 90 modules address the full spectrum of industrial measurements.

Key Features

- Convenient, flexible, mix-and-match approach.
- Full isolation reduces noise and protects you and your equipment from large, common mode voltages.
- Small size 1.105" × 1.65" × 0.40".

Common Specifications

- 1000V Input-to-Output Isolation.
- 500V Channel-to-Channel Isolation.
- 240 VAC input protection.
- 160db common mode rejection.

Voltage Input Modules (3Hz BW)

MODEL NO.	Input Range
DI-8B30-01	±10mV
DI-8B30-02	±50mV
DI-8B30-03	±100mV
DI-8B31-01	±1V
DI-8B31-02	±5V
DI-8B31-03	±10V
DI-8B31-07	±20V
DI-8B31-09	±40V
DI-8B31-12	±60V

Current Input Modules (3Hz BW)

MODEL NO.	Input Range
DI-8B32-01	4 to 20mA
DI-8B32-02	0 to 20mA

Isolated True RMS Input Modules

MODEL NO.	Input Range
DI-8B33-01	0mV to 100mV
DI-8B33-02	0V to 1V
DI-8B33-03	0V to 10V
DI-8B33-04	0V to 150V
DI-8B33-05	0V to 300V

Linearized 2- or 3-wire RTD Modules (3Hz BW)

MODEL NO.	Type	Input Range
DI-8B34-01	100Ω Pt	-100°C to +100°C (-148°F to +212°F)
DI-8B34-02	100Ω Pt	0°C to +100°C (+32°F to +212°F)
DI-8B34-03	100Ω Pt	0°C to +200°C (+32°F to +392°F)
DI-8B34-04	100Ω Pt	0°C to +600°C (+32°F to +1112°F)

Linearized 4-wire RTD Modules (1kHz BW)

MODEL NO.	Type	Input Range
DI-8B35-01	100Ω Pt	-100°C to +100°C (-148°F to +212°F)
DI-8B35-02	100Ω Pt	0°C to +100°C (+32°F to +212°F)
DI-8B35-03	100Ω Pt	0°C to +200°C (+32°F to +392°F)
DI-8B35-04	100Ω Pt	0°C to +600°C (+32°F to +1112°F)

Strain Gage Input Modules

MODEL NO.	Type	Bandwidth	Input Range
DI-8B38-01	Full	8kHz	±10mV, 3mV/V 100 to 10k
DI-8B38-02	Full	8kHz	±30mV, 3mV/V 300 to 10k
DI-8B38-05	Full	8kHz	±20mV, 2mV/V 300 to 10k
DI-8B38-31	Full	3Hz	±10mV, 3mV/V 100 to 10k
DI-8B38-32	Full	3Hz	±30mV, 3mV/V 300 to 10k
DI-8B38-35	Full	3Hz	±20mV, 2mV/V 300 to 10k

Voltage Input Modules (1kHz BW)

MODEL NO.	Input Range
DI-8B40-01	±10mV
DI-8B40-02	±50mV
DI-8B40-03	±100mV
DI-8B41-01	±1V
DI-8B41-02	±5V
DI-8B41-03	±10V
DI-8B41-07	±20V
DI-8B41-09	±40V
DI-8B41-12	±60V

Potentiometer Input Modules (3Hz BW)

MODEL NO.	Input Range
DI-8B36-01	0 to 100Ω
DI-8B36-02	0 to 500Ω
DI-8B36-03	0 to 1kΩ
DI-8B36-04	0 to 10kΩ

Current Input Modules (3Hz BW)

MODEL NO.	Input Range
DI-8B42-01	4 to 20mA
DI-8B42-02	4 to 20mA

Frequency Input Modules (3Hz BW)

MODEL NO.	Input Range
DI-8B45-01	0 to 500Hz
DI-8B45-02	0 to 1kHz
DI-8B45-03	0 to 3kHz
DI-8B45-04	0 to 5kHz
DI-8B45-05	0 to 10kHz
DI-8B45-06	0 to 25kHz
DI-8B45-07	0 to 50kHz
DI-8B45-08	0 to 100kHz

Linearized Thermocouple Input Modules (3Hz BW)

MODEL NO.	Type	Input Range
DI-8B47J-01	J	0°C to +760°C (+32°F to +1400°F)
DI-8B47J-02	J	-100°C to +300°C (-148°F to +572°F)
DI-8B47J-03	J	0°C to +500°C (+32°F to +932°F)
DI-8B47J-12	J	-100°C to +760°C (-148°F to +1400°F)
DI-8B47K-04	K	0°C to +1000°C (+32°F to +1832°F)
DI-8B47K-05	K	0°C to +500°C (+32°F to +932°F)
DI-8B47K-13	K	-100°C to +1350°C (-148°F to +2462°F)
DI-8B47K-14	K	0°C to +1200°C (+32°F to +2192°F)
DI-8B47T-06	T	-100°C to +400°C (-148°F to +752°F)
DI-8B47T-07	T	0°C to +200°C (+32°F to +392°F)

Ordering Guide (continued)

DC LVDT Input Modules (1kHz BW)

MODEL NO.	Input Range
DI-8B43-01	-1V to +1V
DI-8B43-02	-2V to +2V
DI-8B43-03	-3V to +3V
DI-8B43-04	-4V to +4V
DI-8B43-05	-5V to +5V
DI-8B43-11	-1V to +1V
DI-8B43-12	-2V to +2V
DI-8B43-13	-3V to +3V
DI-8B43-14	-4V to +4V
DI-8B43-15	-5V to +5V

Voltage Input Modules (20kHz BW)

MODEL NO.	Input Range
DI-8B50-01	±20mV
DI-8B50-02	±50mV
DI-8B50-03	±100mV
DI-8B51-01	±1V
DI-8B51-02	±5V
DI-8B51-03	±10V
DI-8B51-07	±20V
DI-8B51-09	±40V
DI-8B51-12	±60V



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DI-8B modules are designed and manufactured by Dataforth Corporation.
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