SERIES **8161**

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DIN Rail Mount Signal Conditioner

For Strain Gage Load Cells and Reaction Torque Sensors

- Operates from 12 to 28 VDC Power
- Provides Wheatstone Bridge Excitation
- ± 5 or ± 10 Volts Output Signal
- 4 to 20 mA Current Output Signal
- Built-in, Switch Actuated, Shunt Calibration

Series 8161
DIN Rail Mount Signal Conditioner

The **Series 8161** DIN rail mount signal conditioner provides DC voltage excitation for strain gage sensors, such as load cells and reaction torque sensors, and provides conditioned output signals for test, measurement, and process control requirements. The unit is ideally suited for installation in control panels or systems, which utilize DIN rail mounting schemes to accommodate a high density of instrumentation, or where space is at a premium. Fabricated skid systems, with fixed conditioning and control requirements will benefit from the unit's ease of setup and tamper free architecture. Recessed potentiometers and switches facilitate all setup adjustments.

Two, concurrent outputs offer the ability to conduct measurements and control processes while simultaneously monitoring or recording. User-adjustable, analog voltage and current mode outputs are provided. Additionally, a built-in shunt calibration resistor with recessed pushbutton actuation is provided to simplify the test system setup.

As with all PCB® instrumentation, this equipment is complemented with toll-free applications assistance, 24-hour customer service, and is backed by a no-risk policy that guarantees satisfaction or your money refunded.

PCB PIEZOTRONICS INC.
FORCE / TORQUE DIVISION

Total Customer Satisfaction Guaranteed

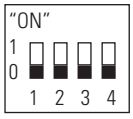
Specifications

Performance	
Frequency Range	0 to 1000 Hz
Voltage Output Adjustments	
Course Span (potentiometer)	± 0.05 to 5 mV/V
Fine Span (potentiometer)	± 20%
Course Zero (potentiometer)	± 60%
Fine Zero (potentiometer)	± 10%
Current Output Adjustments	
20 mA Fine (potentiometer)	± 20%
4 mA Fine (potentiometer)	± 10%
Non-Linearity	± 0.01% FS
Output 1	± 5 or ± 10 Volts @ 5 mA (jumper selectable)
Output 2	4 to 20 mA
Environmental	
Operating Temperature	+32 to +158 °F (0 to +70 °C)
Electrical	
Power Required	10 to 28 VDC
Excitation Voltage	5 or 10 VDC jumper selectable @ 30 mA max
Physical	
Mounting	35 mm DIN Rail
Dimensions (w x h x d)	0.69 x 3.53 x 2.27 in (18 x 89 x 58 mm)

Switch Positions for Input Signal Range Adjustment

Sensitivity (mV/V) Vexc = 5 VDC	Sensitivity (mV/V) Vexc = 10 VDC	SW2 Settings 1 2 3 4
7.0 to 11.0	3.5 to 5.5	0 0 0 1
4.6 to 7.0	2.3 to 3.5	0 0 1 0
3.0 to 4.6	1.5 to 2.3	0 1 0 0
2.0 to 3.0	1.0 to 1.5	1 0 0 0
1.5 to 2.0	0.75 to 1.0	1 0 1 0
1.0 to 1.5	0.50 to 0.75	1 1 0 1
0.9 to 1.0	0.45 to 0.50	1 1 1 1

SW2 1 = SW "ON"



Accessories Also Available:

Series 8315-01
Sensor Cable, PC Connector to Pigtails

Series 8311-01
Sensor Cable, PT Connector to Pigtails

How to order

Base Model

8161– DIN Rail Mount Strain Gage Signal Conditioner

Calibrated Output Signal

- **0** Voltage
- **1** Current

Output Signals (internal jumper selectable)

- **1** ± 10 Volts and 4 to 20 mA
- **5** ± 5 Volts and 4 to 20 mA

Bridge Excitation (internal jumper selectable)

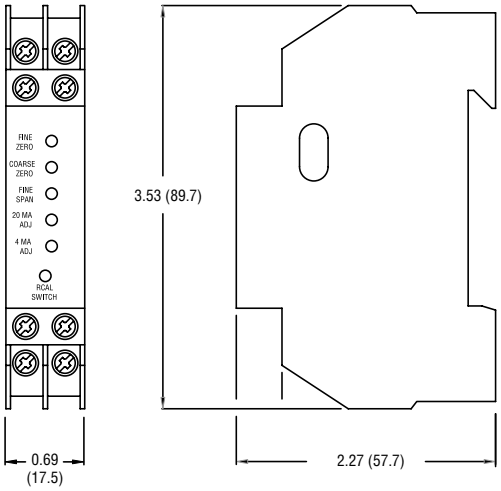
- **1** 10 VDC
- **5** 5 VDC

Version Code

- **A** Initial Release

Example

8161– 0 1 1 A Strain gage signal conditioner with ± 10 Volts and 4 to 20 mA output signals, 10 VDC bridge excitation, and calibrated in voltage.



Series 8161
Dimensions shown are in inches (millimeters)

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The Force/Torque Division of PCB® Piezotronics, Inc. specializes in the development, application, and support of piezoelectric and strain gage force sensors, load cells, strain sensors, and torque sensors for a wide range of research, test, measurement, monitoring, and control requirements. This product focus, coupled with the strengths and resources of PCB, permits the Force/Torque Division to offer exceptional customer service, 24-hour technical assistance, and a **Total Customer Satisfaction** guarantee.

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