



Model Number  
4010

## PERFORMANCE SPECIFICATIONS

DOC NO  
PS4010

### 3 Channel DC Signal Conditioner Amplifier

REV C, ECN 9669, 03/05/13



- DESIGN TO BE USED WITH BRIDGE TYPE OR DIFFERENTIAL ACCELEROMETERS AND PRESSURE TRANSDUCERS
- VARIABLE GAIN ADJUSTMENT
- SHUNT CALIBRATION CAPABILITY
- MULTIPLE EXCITATION LEVEL SETTINGS

#### Supplied Accessories:

- 1) Accredited calibration certificate (ISO 17025)
- 2) Power Cord, 6 FT.

#### Notes:

- [1] In the interest of constant product improvement, we reserve the right to change specifications without notice.  
[2] Model 4010 has been CE tested for compliance to EN61326 for EMC emissions and immunity and EN61010-1:2001 for Product Safety.

#### PHYSICAL

Weight, Max (with out power cord)

3.4 lbs.

Case Material

Iridited Aluminum

#### Input Specifications

Input Range, Differential

0 to  $\pm 10$  Vdc or peak Vac, 9-pin D-sub connector for each bridge sensor  
>1 Megohm

Input Impedance, Minimum

$\pm 10$  Vdc or peak Vac, inclusive of signal 50V peak without damage

Common Mode Input Range

70db minimum, 200 $\Omega$  or less imbalance, DC to 60kHz, gain>100

Common Mode Rejection

20db minimum, 200 $\Omega$  or less imbalance, DC to 60kHz, gain=1

Autozero Adjustment Range

$\pm 10$  mVdc for gain <1000

$\pm 100$  mVdc for gain  $\leq 100$

$\pm 1$  mVdc for gain  $\leq 10$

$\pm 10$  mVdc for gain <1

Autozero Accuracy

Within  $\pm 50$ mV

#### Output Specifications

AC/DC Voltage

Single ended, short circuit protected, isolated from power ground

Output Impedance, Maximum

0.2 $\Omega$

Linear Output

10 Vpeak

Current Output, Minimum

10mA

Output DC Bias Temp Stability

$\pm 5$ uV/ $^{\circ}$ C RTI or  $\pm 0.1$ mV/ $^{\circ}$ C RTO whichever is greater

Output DC Bias Time Stability

$\pm 20$ uV RTI or  $\pm 5$ mV RTO whichever is greater for 24 hrs., after 1hr. warm-up

Excitation Voltage

0 to 12 Vdc, front panel selectable for each channel

Excitation Voltage Accuracy

$\pm 1\%$  (0 to 10 Vdc),  $\pm 5\%$  (12 Vdc)

Excitation Current

30mA maximum per channel, short circuit protected

Noise & Ripple

1mVrms maximum, 10 Hz to 50 kHz, with 1kohm load

#### Transfer Characteristics

Gain Range

0.00 to 999.9

Resolution

For  $0 \leq \text{gain} < 10$ , 0.00 to 9.99

For  $10 \leq \text{gain} < 100$ , 10.00 to 99.99

For  $100 \leq \text{gain} < 1000$ , 100.00 to 999.9

Accuracy

$\pm 5\%$  of full scale (max), DC to 1kHz, filters disabled

Linearity

$\pm 0.1\%$  of full scale, best fit straight line at 1kHz reference

Noise

20 uVrms RTI plus 1mVrms RTO, whichever is greater DC to 50kHz, with a 1kohm source resistance unit (with 10kHz internal low pass filter enabled)

Frequency Response

DC to 150kHz (full power bandwidth), -3db referenced to 1kHz

Filter

Plug in module (optional)

Crosstalk Between Channels

80 db RTI

#### Power Requirements

Voltage

100/115/ 230V  $\sim$ .50/60 Hz, rear panel switch selectable

Current

0.1/0.1/0.05 A

Isolation

No isolation channel to channel or signal ground to case ground

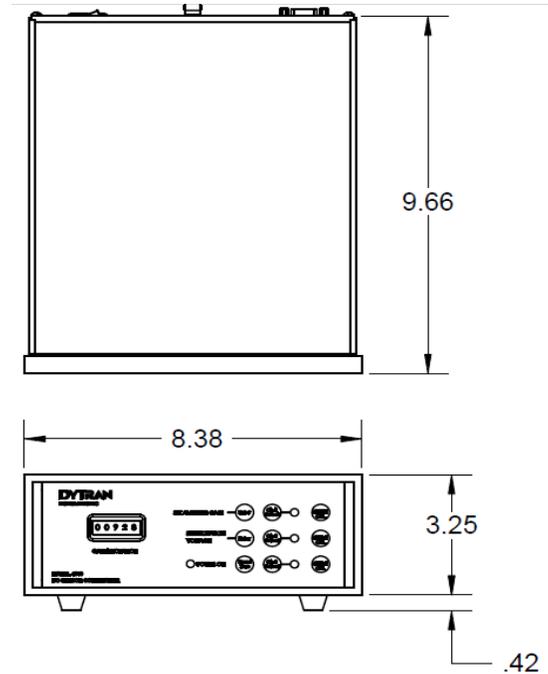
#### Environment Specification

Operating Temperature

0 to +50  $^{\circ}$ C

Humidity

95% RH, Non-Condensing



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-4010 for more information.



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