

Model Number DOC NO PERFORMANCE SPECIFICATIONS 4010 PS4010 3 Channel DC Signal Conditioner Amplifier REV D, ECN 13281 02/28/17



• DESIGN TO BE USED WITH BRIDGE TYPE OR DIFFERENTIAL ACCELEROMETERS AND PRESSURE TRANSDUCERS

VARIABLE GAIN ADJUSTMENT

SHUNT CALIBRATION CAPABILITY

MULTIPLE EXCITATION LEVEL SETTINGS

PHYSICAL

Weight, Max (with out power cord) 3.4 lbs.

Case Material Iridited Aluminum

Input Specifications

Input Range, Differential 0 to ± 10 Vdc or peak Vac, 9-pin D-sub connector for each bridge sensor

Input Impedance, Minimum

Common Mode Input Range ± 10 Vdc or peak Vac, inclusive of signal 50V peak without damage Common Mode Rejection 70db minimum, 200Ω or less imbalance, DC to 60kHz, gain>100 20db minimum, 200Ω or less imbalance, DC to 60kHz, gain=1

Autozero Adjustment Range ± 10 mVdc for gain <1000

± 100 mVdc for gain ≤100 ± 1 mVdc for gain ≤10 ± 10 mVdc for gain <1

Autozero Accuracy Within ±50mV

Output Specifications

AC/DC Voltage Single ended, short circuit protected, isolated from power ground

Output Impedance, Maximum 0.2Ω Linear Output 10 Vpeak Current Output, Minimum 10mA

Output DC Bias Temp Stability ± 5uV/°C RTI or ±0.1mV/°C RTO whichever is greater

Output DC Bias Time Stability ± 20uV RTI or ±5mV 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 ±1% (0 to 10 Vdc), ±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

For $0 \le \text{gain} < 10,0.00 \text{ to } 9.99$ Resolution For 10 ≤ gain < 100,10.00 to 99.99

For 100 ≤ gain < 1000,100.00 to 999.9 ±.5% of full scale (max), DC to 1kHz, filters disabled

Linearity ±0.1% of full scale, best fit straight line at 1kHz reference 20 uVrms RTI plus1mVrms RTO, whichever is greater DC to 50kHz, with a 1kohm Noise

source resistance unit (with 10kHz low pass filter enabled [3]) DC to 150kHz (full power bandwidth), -3db referenced to 1kHz

Filter Characteristics Optional [3] Crosstalk Between Channels 80 db RTI

Power Requirements

Frequency Response

Accuracy

Isolation

Voltage 100/115/ 230V ~,50/60 Hz, rear panel switch selectable Current

No isolation channel to channel or signal ground to case ground

Environment Specification

Operating Temperature 0 to +50 °C

Humidity 95% RH. Non-Condensing

Supplied Accessories:

1) Accredited calibration certificate (ISO 17025)

2) Power Cord, 6 FT.

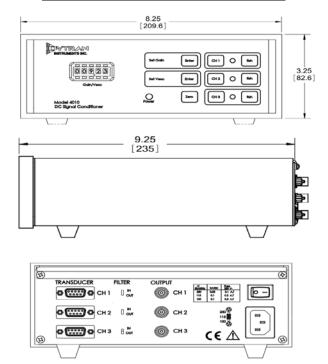
Notes:

[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 EN61326-1:2013 for EMC emissions and immunity and EN61010-1:2010 for Product Safety.

[3] Optional 2-Pole high pass and low pass filters available for purchase under 4198A Series

Model	Corner Frequency	Filter
4198A1	1kHz	Low Pass 2-Pole
4198A2	5kHz	Low Pass 2-Pole
4198A3	10kHz	Low Pass 2-Pole
4198A4	20kHz	Low Pass 2-Pole
4198A5	50kHz	Low Pass 2-Pole
4198A6	100kHz	Low Pass 2-Pole
4198A7	1Hz	High Pass 2-Pole
4198A8	5Hz	High Pass 2-Pole
4198A9	10Hz	High Pass 2-Pole
4198A10	100Hz	Low Pass 2-Pole







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