The 6013 input module has eight channels, each with programmable gain instrumentation amplifier, low pass filter and sample and hold. The high level outputs are multiplexed and digitized to 16 bits then output to the 6000 data bus. A ninth reference temperature channel conditions the output of the temperature sensor in the Model 6084 thermocouple reference junction. Each channel has a wideband analog output.

The 6013 may be configured for use with voltage, thermocouple and current transducers. It provides ±12/15 Volt power for transducers with integral electronics. Versions are available for current loop, high voltage and 28 Volt powered transducers.

Voltage substitution is provided for channel gain calibration utilizing an external voltage standard. A calibration attenuator enables the voltage standard to be used on its highest accuracy ranges and provides a post-attenuator output for calibration and verification.

Using Pacific’s PI660 software zero and gain calibration and correction are automatic.

The four-pole, low-pass filter uses an easily changed plug-in module to set bandwidth. Either the wideband or filtered output may be digitized and sent to the 6000 data bus. Two programmable alarms each with upper and lower limits are checked each time the outputs are digitized.

### SPECIFICATIONS

**INPUT**
- Configuration: 8 channels, differential, 2 wire with shield.
- Protection: ±50 Volts differential, ±30 Volts common mode.

**VOLTAGE**
- Range: ±2 mV to ±10 Volts (±200mV to ±100V with optional attenuator).
- Attenuator: 100:1, ±0.2% (6013-HV).
- Impedance: 50 Megohms, shunted by 1,000 pf (1Megohm with attenuator).

**THERMOCOUPLE**
- Configuration: Differential, 2 wire with shield.

**CURRENT LOOP (6013-I)**
- Loop Power: 28 Volts, 0 to 20mA.
- Termination: 200 Ohm, ±0.1%

**TRANSducer POWER**
- Voltage: Regulated ±12 or ±15 Volts jumper selectable per channel (6013). 28 Volts (6013-24V).
- Current: 50 mA per channel, limited to 200 mA maximum per 8-channel module.

**AMPLIFIER**
- Gain: Programmable 1-5000, in 1, 2, 3, 5, 10 steps, with ±0.05% accuracy.
- Gain Stability: ±0.01%, ±0.005%/°C.
- Bandwidth: 1 kHz (-3dB).
- Linearity: ±0.01% for gains < 1,000, ±0.02% for gains 1,000 and higher.
- Common Mode: 80 dB plus gain in dB to 110 dB, DC to 60Hz.
- CM Voltage: ±10 Volts.
- Zero: Automatic to ±1 µV RTI, ±0.5 mV RTO.
- Zero Stabilty: ±5 µV RTI, ±1 mV RTI, ±1 µV/°C RTI, ±0.2 mV/°C RTO. Short term: ±2 µV RTI, ±0.4 mV RTO for 8 hours.
- Source Current: ±10mA, ±1mA/°C.
- Noise (10 Hz): 0.1 µV rms, RTI. 0.5 mV rms, RTO.
- Noise (1kHz): 1.0 µV rms, RTI. 0.5 mV rms, RTO.
- Recovery: 800 µs to ±0.1% for 10X overload to ±10 V
- Monitor Output: ±3.0 Volts full scale, unfiltered.

**FILTER**
- Type: Four-pole, low-pass Butterworth.
- Frequency: 4Hz to 1kHz, 10 Hz supplied. Alternate filter characteristics and frequencies are available.

### FEATURES

- Voltage, thermocouple & DC-LVDT inputs
- Optional thermocouple reference junction box
- Gains 1 to 5,000 with 0.05% accuracy
- Automatic zero & gain calibration
- Four-pole, low-pass filter
- Up to 10 kS/s per channel with 16-bit resolution
- Two alarms with programmable upper & lower limits

### MODEL 6013

**FEATURES**

- Voltage, thermocouple & DC-LVDT inputs
- Optional thermocouple reference junction box
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**4080 Pike Lane Concord, CA 94520 Tel (925) 827-9010 Fax (925) 827-9023 Plsales@pacificinstruments.com**