Digital PLUG-IN Isolating Transmitter!

- Supports Virtually All Thermocouple Types
  - Improved Accuracy – Linear to Temperature
  - Pin-For-Pin Compatible w. Existing Plug-In Models
  - Greatly Enhance Your Process – Upgrade Now!

DIN Versions Available
Lifetime Warranty
American Made

API 4130 GL (HA)

Tech Specs
- 0.25% (standard) or 0.1% High Accuracy (HA)
- 3-Way Isolation
- Non-Interactive Zero & Span Adjustments
- 4-20mA, 0-10VDC, others available
- Custom Configurations Possible

800-942-0315
sales@api-usa.com

www.api-usa.com

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Thermocouple to DC Isolated Transmitters, Microprocessor-Based

**API 4130 G L**

**Input:** Thermocouples J, K, T, E, R, S, N, B, C, D, G, M, P

**Output:** 0-1 V to 0-10 V, ±1 V to ±10 V, 0-1 mA to 25 mA, 4-20 mA

- Convert Temperature to DC Output
- Zero and Span Output Calibration Potentiometers
- Automatic Temperature Compensation
- Input and Output LoopTracker LEDs
- Output Test Button
- Built-In Loop Power Supply for Output

**Applications**
- Convert Output From Thermocouple Sensor for PLC Input, Control and/or Validation
- Interface an Thermocouple with Panel Meters, PLCs, Recorders, Data Acq., DCS, & SCADA Systems

**Thermocouple Input Types, Factory Set**
Specify thermocouple type and temperature range in °F or °C

**Full ANSI temperature ranges**
Linearization: 41-55 segment or up to 14th order polynomial

**Cold Junction Compensation**
Automatic for specified thermocouple

**T/C Burnout Protection**
Upscale burnout protection standard
B option: Downscale burnout protection
NB option: None

**T/C Current**
Less than 10 µA, including burnout sense

**LoopTracker**
Variable brightness LEDs indicate I/O loop level and status

**Status LED**
Yellow LED indicates I/O errors

**DC Output Range**
Factory range: specify output type and range
Voltage: 0-1 VDC to 0-10 VDC, 10 mA max
Bipolar voltage: ±1 VDC to ±10 VDC
Current: 0-1 mADC to 0-25 mADC, 4-20 mADC

**20 V compliance, 1000 Ω at 20 mA**

**Calibration**
Multi-turn zero and span potentiometers for output
±15% of span adjustment range typical

**Output Loop Power Supply**
20 VDC nominal, regulated, 25 mADC, max. ripple <10 mVrms
EXTSUP option: Unpowered mA output

**Output Test**
Sets output to test level when pressed
Test level factory set to approx. 50% of span
Call factory for custom setting

**Output Zero and Span**
Less than 10 mVrms

**Accuracy**
±0.25% of span typical, 16-bit analog output
HA option: ±0.1% of span typical, 18-bit analog output

**Ambient Temperature Range and Stability**
~10°C to +60°C operating ambient
Better than ±0.04% of span per °C stability

**Response Time**
300 milliseconds typical

**Isolation**
2000 V rms minimum

**Full isolation: power to input, power to output, input to output**

**Installation Environment**
IP 40, requires installation in panel or enclosure
Use with API 006 or API 008 FS socket
Socket mounts to 35 mm DIN rail or can be surface mounted
UL 508C pollution degree 2 environments or better

**Power**
Standard: 115 VAC ±10%, 50/60 Hz, 2.5 W max.
A230 option: 230 VAC ±10%, 50/60 Hz, 2.5 W max.
P option: 85-265 VAC 50/60 Hz, 60-300 VDC 2.5 W typ.
D option: 9-30 VDC, 2.5 W typical

**Description**
The API 4130 G L accepts a thermocouple input and provides an optically isolated and linearized DC voltage or current output. The thermocouple type, temperature span (°C or °F), and DC voltage or current output are factory configured. Automatic cold-junction compensation and uppercase burnout protection are standard, downside burnout protection is optional.

The API 4130 G L features a thermocouple connection block on the side of the module. This allows direct temperature compensation at the T/C termination point eliminating cold junction errors.

The input is amplified, and then passed through an optocoupler to the output stage. Microprocessor-based linearization uses 41 to 55 segments or up to a 14th order polynomial depending on the sensor type. The low noise 16-bit (18-bit with HA option) analog output is isolated and can be set up for common voltage and milliamp output types.

Full 3-way isolation (input, output, power) makes this module useful for ground loop elimination, common mode signal rejection, and noise pickup reduction.

**Sink/Source Output Options**
The API 4130 G L has a 20 VDC loop excitation supply for the output. This power supply can be used to power a passive mA device. Order the API 4130 G L EXTSUP for an unpowered mA output for devices that are powered externally.

**LoopTracker**
API exclusive features include LoopTracker LEDs (green for input, red for output) that vary in intensity with changes in the process input and output signals. They provide a quick visual picture of your process loop at all times and can greatly aid in saving time during initial startup and troubleshooting.

**Output Test**
An API exclusive feature includes an output test button to provide a fixed output (independent of the input) when held depressed. The output test greatly aids in saving time during initial startup and/or troubleshooting. The test output level is factory set at 50% of output span.

**Mounting**
The API 4130 G L plugs into an industry standard 8-pin octal socket sold separately. Sockets API 008 and finger-safe API 008 FS allow either DIN rail or panel mounting.

**Options**
- Add to end of model number

<table>
<thead>
<tr>
<th>Model</th>
<th>Input</th>
<th>Output</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>API 4130 G L</td>
<td>Factory configured</td>
<td>Factory configured</td>
<td>115 VAC</td>
</tr>
<tr>
<td>API 4130 G L A230</td>
<td>Specify thermocouple type and temperature range in °F or °C</td>
<td>specify output range in volts or mA</td>
<td>230 VAC</td>
</tr>
<tr>
<td>API 4130 G L P</td>
<td></td>
<td></td>
<td>85-265 VAC or 60-300 VDC</td>
</tr>
<tr>
<td>API 4130 G L D</td>
<td></td>
<td></td>
<td>9-30 VDC</td>
</tr>
</tbody>
</table>

**Options—add to end of model number**
- HA: High accuracy, ±0.1% span
- B: Downscale T/C burnout protection
- NB: No T/C burnout protection
- EXTSUP: Open collector output when a sinking output is required for an external loop supply
- U: Conformal coating for moisture resistance

**Accessories—order as separate line item**
- API 006: 8-pin socket
- API 008 FS: 8-pin finger-safe socket
- API CLP1: Module hold-down spring for high vibration or mobile applications

**Quick Link**
api-usa.com/4130

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