

API 4058G - 441/442 Bridgesensors Load Cell Signal Conditioners



API 4058G Bridgesensor



441/442 Bridgesensor



STANDARD FEATURES

API 4058G Bridgesensor:

- User-selectable input/output ranges and excitation voltages
- Convenient setup via rotary and slide switches
- Excitation voltage at 115 mA (10V) drives four 350-ohm load cells
- LED input/output signal indicators
- Selectable voltage or current outputs
- Functional test pushbutton

441/442 Bridgesensor:

- Input/output ranges and excitation voltage are selectable by easy-access rotary switches
- Non-interactive zero and span control
- Offset switch allows cancelling or "taring" of non-zero deadweights
- Excitation voltage of 115 mA (10V) drives up to four 350-ohm bridges
- Input/output LoopTracker™ LEDs show input/output status
- Functional test push-button with fixed level output to facilitate setup and troubleshooting
- Full isolation (input/output power) eliminates the effects of ground loops and noise

API 4058G SPECIFICATIONS

INPUT/OUTPUT RANGES:

See table on next page. Other switch-selectable ranges possible. See calibration instructions for more complete information, or consult factory.

INPUT IMPEDANCE:

1 Megohm minimum

OUTPUT CAPABILITY:

Voltage: ± 10 VDC; ± 10 mA
Current: 25 mA DC; 20 V compliance

ZERO/SPAN CONTROLS:

Top-accessible, multi-turn
Range: $\pm 15\%$ of span typical

EXCITATION:

10 VDC maximum @ 115 mA nominal; switch-selectable, 0-10 VDC in 1 Volt increments; fine adjust; $\pm 2.5\%$ via multi-turn

EXCITATION STABILITY:

$\pm 0.1\%$ per degree Celsius

RESPONSE TIME:

70 mS standard

COMMON MODE REJECTION:

Better than .02% of span per degree Celsius

OPERATING TEMPERATURE RANGE:

14 to 140°F (-10 to 60°C)

POWER:

Standard: 115 VAC, $\pm 10\%$, 50/60 Hz, 2.5 W max
Optional: 230 VAC, $\pm 10\%$, 50/60 Hz, 2.5 W max
12 VDC versions available; consult factory for availability

APPROVALS:

Model API 4058G: UL listed; consult factory for numbers

WEIGHT:

Approximately 2 lb (0.9 kg)

DIMENSIONS:

1.75 W x 2.75 H x 2.38 in D (not including socket)

WARRANTY:

One-year limited warranty

BRIDGESENSOR 441/442 SPECIFICATIONS

INPUT/OUTPUT RANGES:

See table on next page. Other switch-selectable ranges possible.

INPUT IMPEDANCE:

200K ohm typical

OUTPUT CAPABILITY:

Voltage: ± 10 VDC; ± 10 mA
Current: 25 mA DC; 20 V compliance

ZERO/SPAN CONTROLS:

Top-accessible, multi-turn, non-interactive
Range: $\pm 15\%$ of span typical

EXCITATION:

Switch-selectable, 0-10 VDC
in 1 Volt increments
Fine adjust: $\pm 5\%$ via multi-turn potentiometer

EXCITATION CURRENT CAPABILITY:

120 mA DC @ 10 VDC excitation; drives up to four 350-ohm load cells @ 10 VDC

EXCITATION STABILITY:

$\pm 0.1\%$ per degree Celsius

RESPONSE TIME:

70 mS standard; faster responses available

SENSE LEAD COMPENSATION:

Better than 0.01% per 1 ohm change in leadwire resistance

LEADWIRE RESISTANCE:

10 ohm max for 10 VDC excitation/350-ohm bridge

COMMON MODE REJECTION:

100 dB minimum

ISOLATION:

2000V RMS minimum

OPERATING TEMPERATURE RANGE:

14°F to 140°F (-10°C to 60°C)

POWER:

441: 115 VAC, $\pm 10\%$, 50/60 Hz, 2.5 W max
441 Optional: 230 VAC, $\pm 10\%$, 50/60 Hz, 2.5 W max
442: 9-30 VDC @ 200 mA typical

DIMENSIONS:

1.75 W x 2.75 H x 2.38 in D (not including socket)

WARRANTY:

Lifetime