



API DPI-2

Twin Pack Dual Channel

DIN Loop Powered Isolator

Two Inputs: 4-20 mADC

Two Outputs: 4-20 mADC

- 2 Fully Independent Loop Powered Isolators
- 1000 Ω Output Drive Capability
- Calibration Unaffected by Change in Load
- Compact 22.5 mm Wide DIN Style Case
- Output LoopTracker® LED

Applications

- Isolate 4-20 mA Process Signals
- Isolate Two Independent Loops
- Eliminate Ground Loops, Reduce Noise Effects

Specifications

Inputs

Channel A: 4 to 20 mADC

Channel B: 4 to 20 mADC

Input Voltage Burden

See graph on back

Outputs

Channel A: 4 to 20 mADC

Channel B: 4 to 20 mADC

Output Load Capability

Up to 1000 Ω with 20 V compliance at 20 mA depending on the supply voltage of the input loop

Change in Load Effect

Less than $\pm 0.08\%$ of span for load changes from 0 Ω to 1000 Ω

Output Zero and Span

Multiturn potentiometers to compensate for load and lead variations, $\pm 10\%$ of span adjustment range typical

LoopTracker®

Continuous indication of current flow in the output loop
LED brightness varies with current level over 4-20 mA range

Accuracy

Combined effects of linearity, hysteresis, and repeatability
 $\pm 0.1\%$ span per $^{\circ}\text{C}$ maximum

Response Time

60 milliseconds typical

Common Mode Rejection

Negligible output effect for 50/60 Hz common mode signals

Isolation

1200 V_{RMS} minimum, input to output

Ambient Temperature Range

-10°C to $+60^{\circ}\text{C}$ operating

Temperature Stability

Better than $\pm 0.2\%$ of span per $^{\circ}\text{C}$

Case Material

Polycarbonate

Gray UL #94V-1 housing and black UL #94V-2 terminals



Models and Options

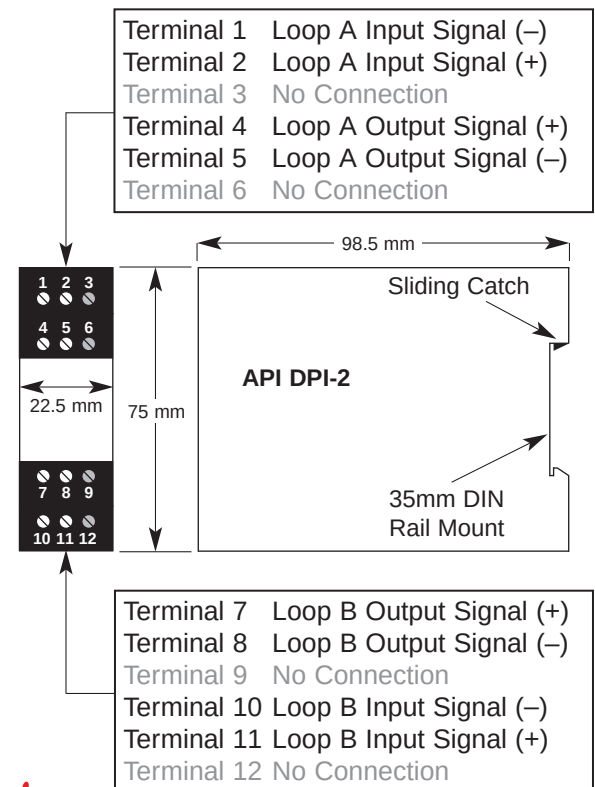
API DPI-2 Loop-powered 4-20 mA isolator, 2 channel

Option—Specify on Order

U Conformal coating for moisture resistance

Accessories—See other side

Electrical Connections & Dimensions



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API DPI-2 DIN Loop Powered Isolator

FUNCTIONAL DESCRIPTION

The API DPI-2 is a 2 channel loop-powered isolator that accepts two separate 4-20 mA inputs and provides two independent, linear, and isolated 4-20 mA outputs. The API DPI-2 provides a cost effective, drop-in solution for eliminating the ground loops and noise problems commonly found in process loops.

Each channel of the API DPI-2 is a two-wire transmitter that derives its operating power from the input loop eliminating the need for external power supplies and additional power wiring. Due to the unique design, the calibration and linearity of the API DPI-2 is unaffected by output load changes from 0 to 1000 Ω .

The API DPI-2 is designed to mount on industry-standard DIN rails. The narrow 22.5 mm DIN style housing allows for side-by-side mounting of multiple modules for maximum I/O density with as many as 36 channels (18 modules) in a 19-inch rack.

UNIQUE FEATURES

API exclusive features includes a **LoopTracker®** LED for each channel. The red LoopTracker LEDs vary in intensity with changes in the output signal.

Monitoring the state of these LEDs can provide a quick visual picture of your process loop at all times and saves time during initial startup and/or troubleshooting.

OPERATION & CALIBRATION

The API DPI-2 is factory calibrated and should not require re-calibration in the field for loads up to 1000 Ω . Each channel is totally independent from the other and each input is optically isolated from its corresponding output.

Should re-calibration (fine-tuning) be desired, independent Zero and Span controls for each channel are accessible through the top of the unit.

RELATED PRODUCTS

The following products are also available for similar applications. Refer to the appropriate data sheets for details.

API DLPI-1 and API DLPI-2 Loop-Powered Alarms

Single or dual channel loop-powered alarm trips. Field programmable limits with selectable alarm configuration. DIN style case.

API DPI-2 Dual Loop-Powered Isolator

Like API LPI-2, but DIN style case.

API LPI-1 Loop-Powered Isolator

4-20 mADC input and output. Powered by the input loop, plug-in style

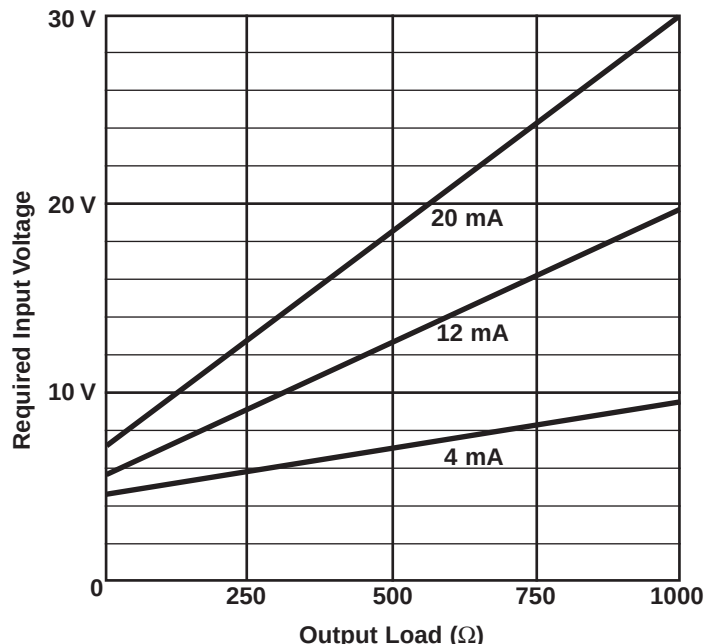
API LPI-2 Dual Loop-Powered Isolator

Same as API LPI-1, but dual channel

ACCESSORIES

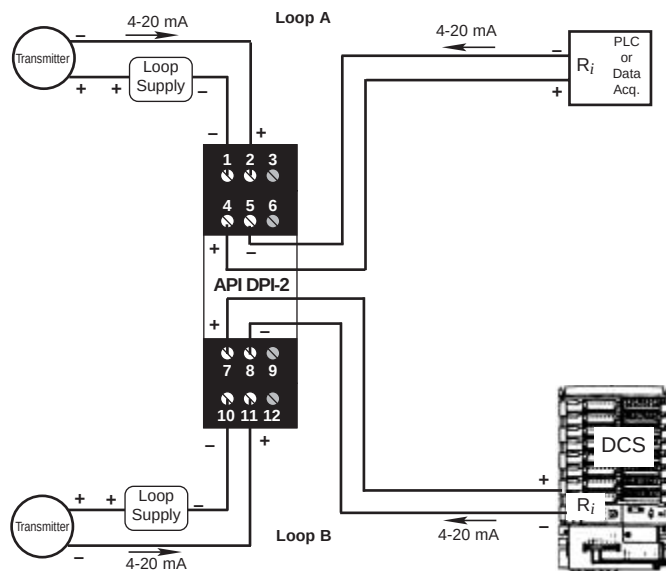
API TK36 DIN rail, 35 mm W x 39" L, aluminum

INPUT BURDEN VOLTAGE CHART



NOTE: The required input voltage is for one channel only.

WIRING EXAMPLE



API maintains a constant effort to upgrade and improve its products. Specifications are subject to change without notice. Consult factory for your specific requirements.