

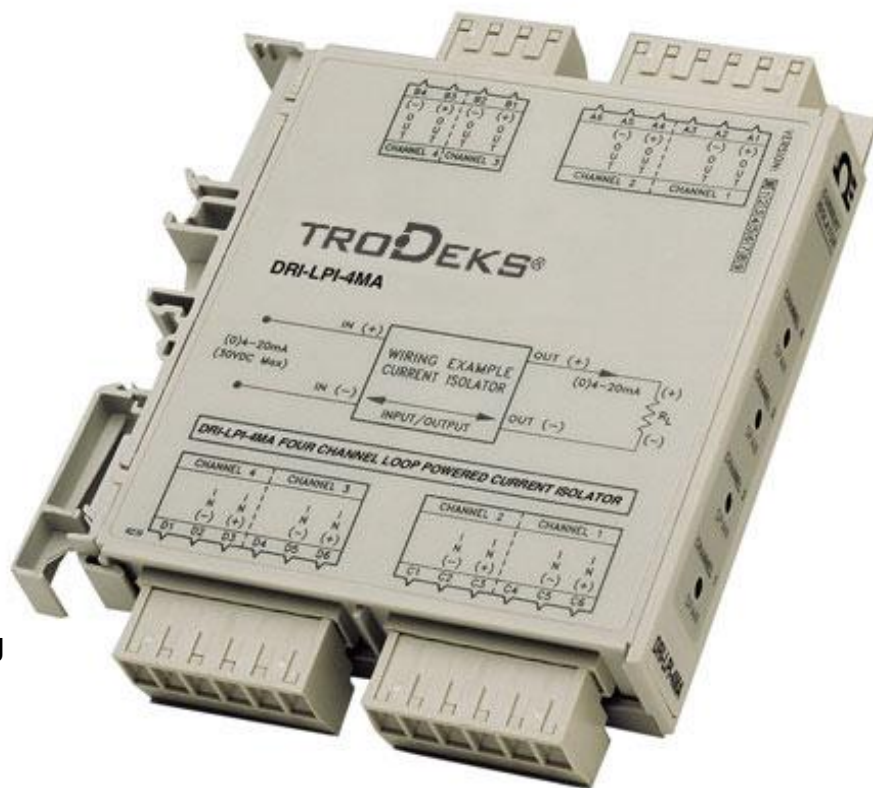
Input Loop Powered DIN Rail Multi-Channel Isolators



DRI-LPI Series



- ✓ Up to 4 Loop Isolators in a Single Package
- ✓ Prevents Ground Loops
- ✓ High Density DIN Rail Mounting
- ✓ Provides up to 4 Isolated DC Current Outputs in Proportion to the Input Currents
- ✓ ASIC Technology



DRI-LPI-4MA shown smaller than actual size.

The DRI-LPI Series are DIN rail mount, loop-powered isolators with single (DRI-LPI-MA), dual (DRI-LPI-2MA) or quad (4) channel (DRI-LPI-4MA) capability. Each channel accepts a 0 to 20 mA or 4 to 20 mA input and outputs a proportional 0 to 20 mA or 4 to 20 mA signal. The DRI LPI Series provides 1800 Vdc signal isolation from input to output and channel to channel.

All DRI-LPI Series modules feature plug-in screw terminals for easy installation and low Mean-Time-To-Repair (MTTR). Two or more modules can slide together and interlock for solid, high density mounting. This is accomplished by removing either the foot or the adjacent unit's faceplate (for right-hand side or left-hand side mounting, respectively). The module to be attached will easily slide on to the side of the mounted unit.

Loop-powered isolators are used to isolate process signals transmitted between field instrumentation, programmable logic controllers (PLC), distributed control systems (DCS) and data acquisition systems (DAS). Outputs from these systems can also drive one or more isolator channels of the DRI-LPI Series. Field devices such as flow, level or temperature transmitters can also drive a DRI-LPI Series isolator channel. The 1800 Vdc isolation capability prevents ground loops from causing errors in 4 to 20 mA current signals and can reduce susceptibility to radio frequency interference (RFI). Isolation also provides protection from high voltages and current spikes which can damage expensive supervisory control and data acquisition (SCADA) equipment, such as a PLC or DCS.

The DRI-LPI Series operates as a loop-powered isolator, with each channel deriving its power from the input loop current, 0 to 20 mA or 4 to 20 mA. The effective load of a DRI-LPI Series isolator channel on a loop is 300 Ω plus the output load resistance. For example, if the load on an output of the DRI-LPI Series is 500 Ω , then the current loop connected to the input would need to drive 300 Ω plus 500 Ω (i.e. 800 Ω) at a maximum current of 20 mA, or 800 Ω x 20 mA which equals 16.0V.

The DRI-LPI Series is protected from reverse input polarity and output short circuit. A span pot is provided for each channel in order to calibrate the output to the load.

Specifications

Number of Channels:

DRI-LPI-MA: 1 channel

DRI-LPI-2MA: 2 channel

DRI-LPI-4MA: 4 channel

INPUT

Range: 0 to 20 mA, 4 to 20 mA; 30 Vdc max each channel

Voltage Drop: 6V (300 Ω), plus output load

OUTPUT

Range: 0 to 20 mA, 4 to 20 mA

Drive: 10V or 500 Ω max @ 20 mA, 100 Ω minimum

Output Accuracy: Better than $\pm 0.2\%$ of full-scale, including linearity, hysteresis and repeatability, maximum



Linearity: 0.1% of span typical, from 4 to 20 mA at 250 Ω load
Stability: $\pm 0.02\%/^{\circ}\text{C}$ of span max for full-scale and zero
Load Regulation: $\pm 0.1\%$ of span, typical per 10 Ω change
Common Mode Rejection Ratio: > 100 dB (DC to 60 Hz)
Isolation: 1800 Vdc, input-to-output and channel-to-channel
ESD Susceptibility: Capable of meeting IEC 801-2 level 3 (8 kV)
Response Time: 50 msec typical, 100 msec max (10 to 90%, each channel)

Temperature:

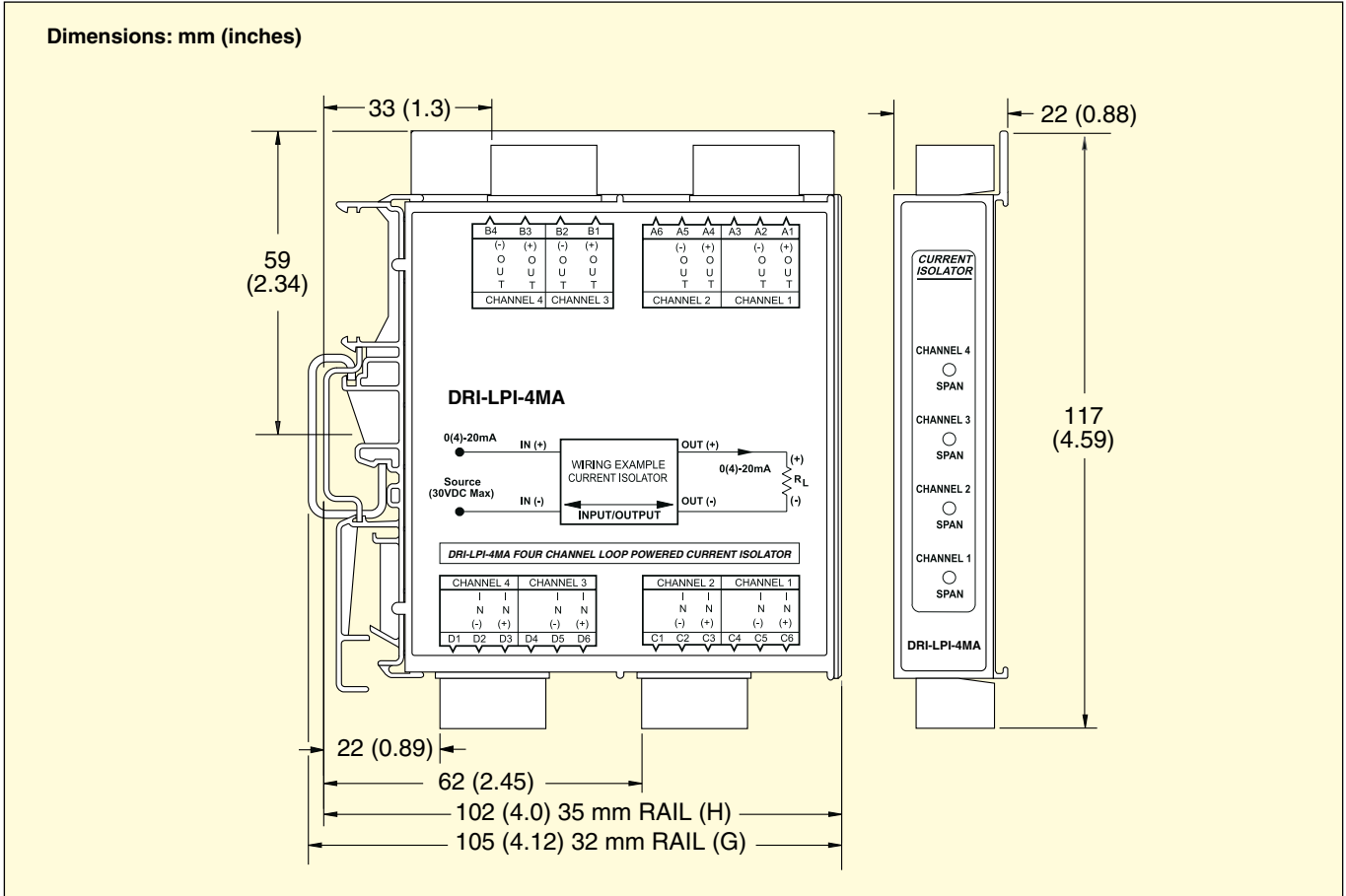
Operating: -40 to 80°C (-40 to 176°F)

Storage: -40 to 80°C (-40 to 176°F)

Humidity (Non-Condensing): 25 to 95% RH @ 40°C (104°F)

Wire Terminals: Socketed screw terminals for 12 to 22 AWG

Weight: 154 g (0.34 lb)



To Order

Model No.	Description
DRI-LPI-MA	Single channel input loop powered DIN rail isolator
DRI-LPI-2MA	2 channel input loop powered DIN rail Isolator
DRI-LPI-4MA	4 channel input loop powered DIN rail isolator
RAIL-35-1	35 mm DIN rail, 1 m (3.3') length
RAIL-35-2	35 mm DIN rail, 2 m (6.6') length