

# XI Low Cost 4~20mA Isolator Series

## XI-P Input Powered Isolators



**XI-P1**  
One Isolator

**XI-P2**  
Dual Isolators

**XI-P4**  
Quad Isolators

**Features:**

- No Power Supply Needed - Input Powers Transmitter.
- Ideal for isolating a typical 4~20mA loop.
- Input to Output Isolation 1kV.
- High Accuracy.
- Reverse Polarity Protected.
- Compact DIN Rail Mount Enclosure.
- Available with 1, 2 or 4 Transmitters per enclosure.
- Easy to Install.
- Low Cost.

[www.intech.co.nz/xi-p](http://www.intech.co.nz/xi-p)

## XI-L Loop Powered Isolators



**XI-L1**  
One Isolator

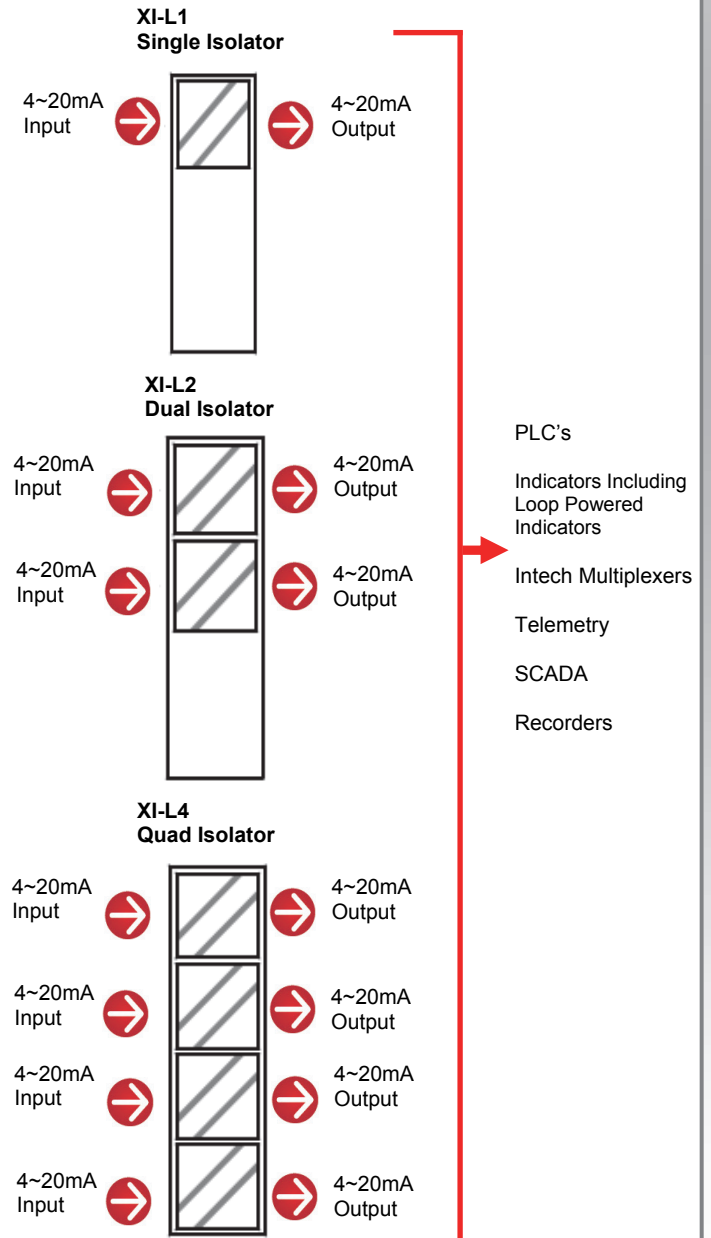
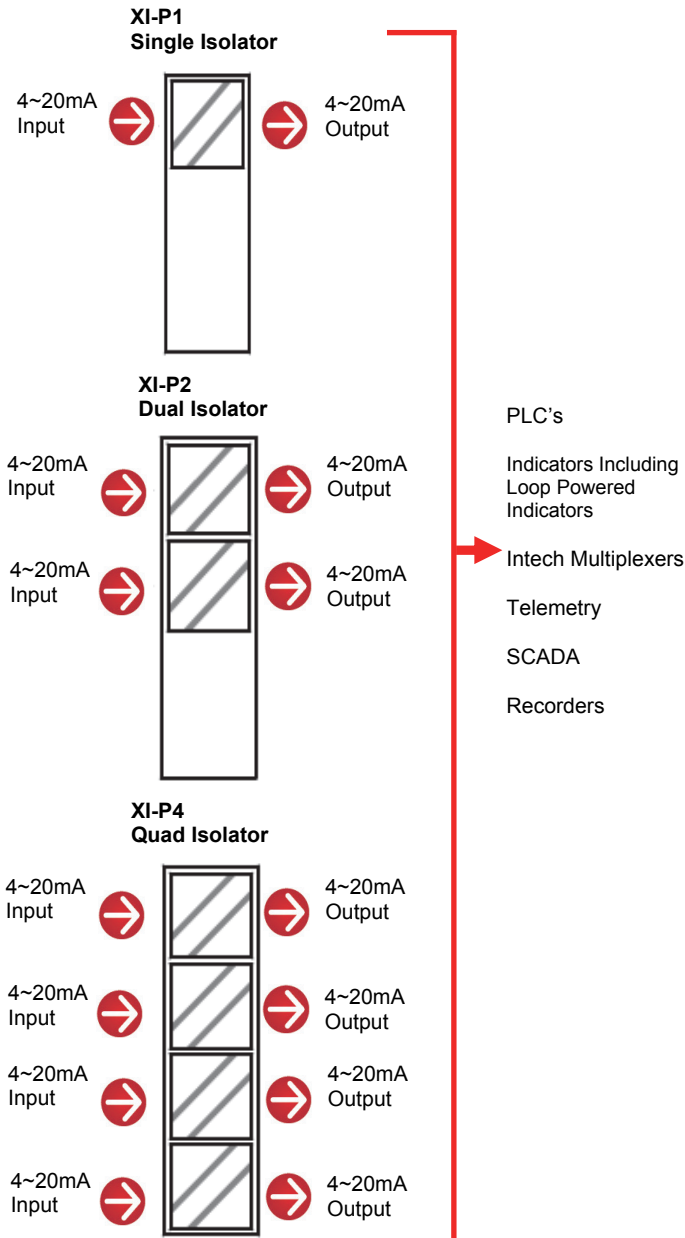
**XI-L2**  
Dual Isolators

**XI-L4**  
Quad Isolators

**Features:**

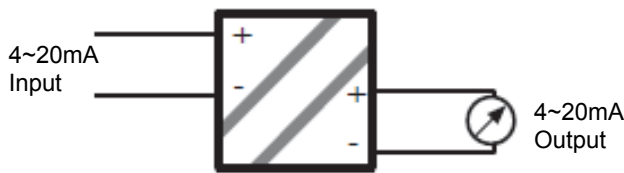
- Input to Output Isolation 1kV.
- Input Resistance 50Ω.
- High Accuracy 0.1%.
- Reverse Polarity Protected.
- Compact DIN Rail Mount Enclosure.
- Available with 1, 2 or 4 Transmitters per enclosure.
- Easy to Install.
- Low Cost.

[www.intech.co.nz/xi-l](http://www.intech.co.nz/xi-l)



# XI - Isolator Series

Typical Hookup XI-P



## XI-P Input Powered Isolators

### Ordering Information:

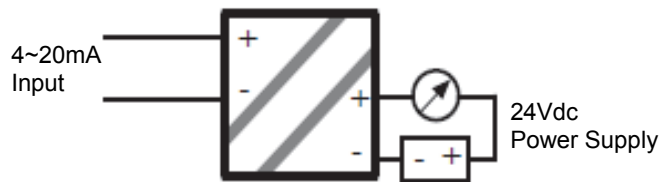
- XI-P1** One Unit per Enclosure.  
**XI-P2** Two Units per Enclosure.  
**XI-P4** Four Units per Enclosure.

### XI-P Specifications:

Note: Specifications unless stated otherwise are based on a XI-P with a 250R load on the output.

Input	4~20mA or 0~20mA. Must be inserted in a current loop. Maximum Current $\leq 50\text{mA}$ . Output Current tracks Input Current.
	Minimum XI-P Loop Resistance @ 20mA is 200 $\Omega$ (4V) with 0 $\Omega$ Output load. Maximum XI-P Loop Resistance @ 20mA is 800 $\Omega$ (16V) with 600 $\Omega$ Output load.
Output	4~20mA or 0~20mA. Output Current tracks Input Current. Output Load = Input Effective Loop Resistance - 200 $\Omega$ (4V). Minimum Output Load = 0 $\Omega$ at 20mA (0V). Maximum Output Load = 600 $\Omega$ at 20mA (12V).
Accuracy	$\leq \pm 0.15\%$ Typical at 250 $\Omega$ Output Load. $< \pm 0.1\%/100\Omega$ Typical for Output Load $< 250\Omega$ . $< -0.1\%/100\Omega$ Typical for Output Load $> 250\Omega$ .
EMC Emissions Compliance	EN 55022-A.
EMC Immunity Compliance	EN 50082-1.
Safety Compliance	EN 60950.
Linearity & Repeatability	$< \pm 0.1\%$ FSO Typical.
Ambient Drift	$< \pm 0.01\%/C$ FSO Typical.
Noise Immunity	125dB CMRR Average (1.0kVdc Limit.)
R.F. Immunity	$< 1\%$ Effect FSO Typical.
Isolation Test Voltages	-Between Input and Output: 1000Vdc for 1min. -Between the separate XI-P transmitters: 1000Vdc for 1min.
Response Time	100msec Typical. (From 10 to 90% 25msec Typical.)
Operating Temperature	0~70°C.
Storage Temperature	-20~80°C.
Operating Humidity	5~85%RH Max. Non-Condensing.
Mounting	35mm Symmetrical Mounting Rail.
Dimensions	L=100, W=22.5, H=100mm.

Typical Hookup XI-L



## XI-L Loop Powered Isolators

### Ordering Information:

- XI-L1** One Unit per Enclosure.  
**XI-L2** Two Units per Enclosure.  
**XI-L4** Four Units per Enclosure.

### XI-L Specifications:

Input	4~20mA.
Input Resistance	50 $\Omega$ .
Output	2 wire 4~20mA. (Loop Powered.)
Output Load Resistance	800 $\Omega$ @ 24Vdc. (50 $\Omega$ /V Above 8Vdc.)
Power Supply	8~33Vdc.
Supply Voltage Sensitivity	$< \pm 0.005\%/V$ FSO.
Maximum Output Current	Limited to $< 28\text{mA}$ .
EMC Emissions Compliance	EN 55022-A.
EMC Immunity Compliance	EN 50082-1.
Safety Compliance	EN 60950.
Accurate to	$< \pm 0.1\%$ FSO Typical.
Linearity & Repeatability	$< \pm 0.1\%$ FSO Typical.
Ambient Drift	$< \pm 0.01\%/C$ FSO Typical.
Noise Immunity	125dB CMRR Average (1.0kVdc Limit.)
R.F. Immunity	$< 1\%$ Effect FSO Typical.
Isolation Test Voltages	-Between Input and Output: 1000Vdc for 1min. -Between the separate XI-L transmitters: 1000Vdc for 1min.
Response Time	100msec Typical. (From 10 to 90% 25msec Typical.)
Operating Temperature	0~70°C.
Storage Temperature	-20~80°C.
Operating Humidity	5~85%RH Max. Non-Condensing.
Mounting	35mm Symmetrical Mounting Rail.
Dimensions	L=100, W=22.5, H=100mm.

### Dual Output Signal Isolators:

Use the XI-L2 dual channel model. Wire the 4~20mA input in series through both inputs on the transmitter, and the 2 outputs are totally isolated. The outputs are loop powered so you need a separate 24Vdc power supply for each channel.

**Product Liability.** This information describes our products. It does not constitute guaranteed properties and is not intended to affirm the suitability of a product for a particular application. Due to ongoing research and development, designs, specifications, and documentation are subject to change without notification. Regrettably, omissions and exceptions cannot be completely ruled out. No liability will be accepted for errors, omissions or amendments to this specification. Technical data are always specified by their average values and are based on Standard Calibration Units, unless otherwise specified. Each product is subject to the 'Conditions of Sale'.

**Warning: These products are not designed for use in, and should not be used for patient connected applications. In any critical installation an independent fail-safe back-up system must always be implemented.**

Note: Further ranging and installation information is supplied with each unit, and is available upon request.

### Quality Assurance Program:

The modern technology and strict procedures of the ISO9001 Quality Assurance Programme applied during design, development, production and final inspection grant long term reliability of the instrument.

This instrument has been designed and built to comply with EMC and Safety Standards requirements.