

ADM231X-3 Three way Process Signal Splitter / Isolator / Converter

- Suitable for SIL 1, SIL 2, & SIL 3 rated (EN 61508-2) Safety Instrumented System (SIS) loop applications
- Supply voltage options: 12Vdc / 24Vdc / 48Vdc $\pm 10\%$
- RFI Protection to EN 61000-4-3:2006/A2:2010 available ('K' option)
- Amelec standard 10 year warranty
- Non-Smart / Non-uProcessor based, Type A instrument

APPLICATION

- Signal Isolator / Splitter
- Signal converter / isolator to resolve incompatibility.

TECHNICAL SPECIFICATION

INPUT

DC current / voltage can be specified in the range of:

Current up to 100mA max (Passive port)

Voltage up to 200Vdc max

Typically: 4-20mA (impedance 20 Ω), 0-10V (impedance 1M Ω)

OUTPUTS

Different mA / Voltage ranges may be specified for each output channel.

DC current or voltage specified in the range of:

Current: up to 100mA max in Sink configuration (Externally powered)

Current: up 22mA max in std Source configuration (Internally powered)

Voltage: any up to 10Vdc max.

Typical outputs: 4-20mA (Source ports, max loads 500 Ω)

CONTROLS (For Each Output Channel)

Zero/Span: 15-turn calibration potentiometers ($\pm 20\%$ span)

INDICATOR

Power ON: LED, Amber.

PERFORMANCE

Linearity: $< \pm 0.1\%$

Response time: Typically $< 200\text{ms}$ (0-100% step change)

Accuracy: $< \pm 0.1\%$

Input O/C response: Downscale drive/ 0mA

Supply consumption: $< 3\text{VA}$

PROTECTION

Isolation 1000V RMS*

Input /Output1/Output 2/Output3/Supply/Earth

(*500Vdc when 'K' option RFI Protection is specified)

Internal Fuse.

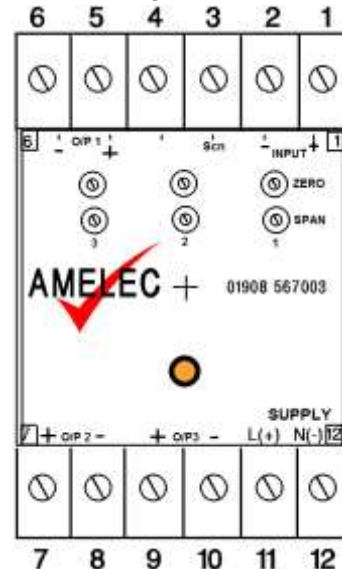
Input over range up to typically 300%.

Output limited at 120%

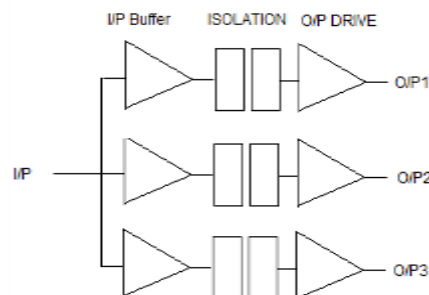
TERMINATION

Input +	1
Input -	2
Scn	3
	4
OUTPUT 1 +	5
OUTPUT 1 -	6
OUTPUT 2 +	7
OUTPUT 2 -	8
OUTPUT 3 +	9
OUTPUT 3 -	10
Live / +	11
Neutral / -	12

FRONT VIEW



FUNCTION BLOCK DIAGRAM



ENVIRONMENTAL CONDITION

Storage Temperature: -40 to +70 $^{\circ}\text{C}$

Operating Ambient: -15 to +55 $^{\circ}\text{C}$

Relative Humidity: 5 to 95% RH (Non-condensing)

EMC: 2014/30/EU, EN 61326-1:2013 (controlled EM)

MOUNTING / DIMENSION

Enclosure: 50w x 75h x 110d mm

Mounting: Din Rail (TS35) / Surface (by Corner Fixing holes)

Weight $< 200\text{g}$

ADD ON / OPTIONS

HS: High Speed Response time ($< 20\text{ms}$)

DI: LCD Digital Display for local monitoring

M: 24Vdc @22mA two-wire Input loop Excitation

J : Input injection Jack socket

P: Test Point

K: Higher level of RFI protection (20-1000MHz, up to 30V/m)