

ADC313K Process Signal Selector / Isolator

- Suitable for SIL 1 & SIL 2 rated safety instrumented system (SIS) loop applications (IEC61508-2) as 1oo1 architecture (HFT:0)
- Non-Smart / Non-uProcessor based, Type A instrument
- Supply voltage options:
 - 115Vac $\pm 20\%$
 - 240Vac $\pm 20\%$
 - 24Vdc $\pm 10\%$
 - 48Vdc $\pm 10\%$
 - 110Vdc $\pm 10\%$
- **RFI protection to IEC61000-4-3:2006/A2:2010**
20MHz-3GHz/5.25GHz $\leq 10\text{V/m}$, 80MHz-1GHz/5.6GHz $\leq 30\text{V/m}$
(889MHz/1.75GHz $\leq 40\text{V/m}$)
- Amelec standard 10 year Warranty

TECHNICAL SPECIFICATION

INPUT (Channels 1 & 2)

DC Current or Voltage can be specified in the range of:

Current up to 100mA max (Passive input port)
Voltage up to 150Vdc max
Typical input: 2 x 4-20mA (impedance 20 Ω , max 400mV loop drop)
Note: Inputs share a Common internal 0V as standard.

OUTPUT

Open/Closed Contact from Remote selector switch determines which input channel is routed through as the isolated repeat output
DC current or voltage specified in the range of:
Current up to 22mA max Source configuration (Internally powered)
Voltage up to 20Vdc max
Typical output range: 4-20mA (Source port, max load 1200 Ω)
Current up to 100mA max in Sink configuration (externally powered)

CONTROLS

15 turn potentiometers for output loop calibration.
(Zero $\pm 25\%$, Span $\pm 50\%$)

INDICATOR

Power ON: LED, Amber.

PERFORMANCE

Accuracy/Linearity: $< \pm 0.1\%$
Response time: Typically $< 100\text{ms}$ (0-100% span step change)
Supply regulation: AC supply $\pm 20\%$, DC supply $\pm 10\%$
Supply consumption: $< 3\text{VA}$

PROTECTION

Isolation: 500Vdc: Input(s)/Output/Supply/Earth
Internal Fuse.
Input over range: up to typically 300%.
Input open circuit response: Downscale drive as standard
RF Immunity: 20MHz-3GHz/5.25GHz $\leq 10\text{V/m}$,
(80MHz-1GHz/5.6GHz $\leq 30\text{V/m}$, 889MHz/1.75GHz $\leq 40\text{V/m}$)

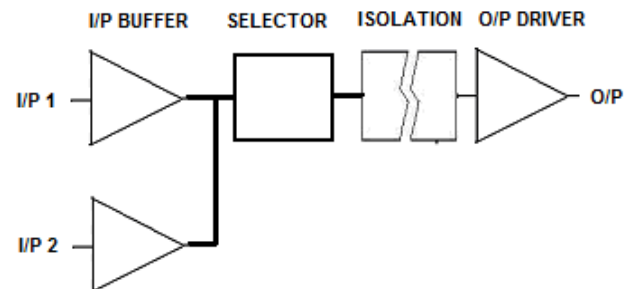
TERMINATION

Input +	1
Input -	2
Scn	3
Input 2 +	4
Input 2 -	5
Scn	6
OUTPUT +	7
OUTPUT -	8
Scn	9
Earth	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 (Generic Industrial levels)

MOUNTING / DIMENSION

Enclosure: 50w x 75h x 182d mm
Mounting: DIN Rail (TS35) as standard
Seismic / Surface keyhole plate option available
(seismic mounting plate Dims: 50w x 130h mm)
Weight $< 500\text{g}$

ADD ON / OPTIONS

J : Input injection jack socket
P : Test point (input &/or Output monitoring)
DI : A 3½ digit display of the input or output, scaled to suit