

## ADC313XK 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 from 1mA span, up to 100mA max (Passive input port)  
Voltage from 0.4V span, up to 150Vdc max  
Typical input: 2 x 4-20mA (impedance 20 $\Omega$ , max 400mV loop drop)  
**Note:** Inputs will have a Common internal 0V as std.

#### 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 $\Omega$ )  
Current up to 100mA max in Sink configuration (externally powered)

#### CONTROLS

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

Volt free contacts. (Wetted by 24Vdc @ 10mA Max)  
Other voltage or current available on request.  
Open contact= Input 1 selected, Closed = Input 2 selected

#### INDICATOR

Power ON: LED, Amber.

#### PERFORMANCE

Accuracy/Linearity:  $< \pm 0.1\%$   
Response time: Typically  $< 100\text{ms}$   
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 std  
RF Immunity: 20MHz-3GHz/5.25GHz  $\leq 10\text{V/m}$ ,  
(80MHz-1GHz/5.6GHz  $\leq 30\text{V/m}$ , 889MHz/1.75GHz  $\leq 40\text{V/m}$ )

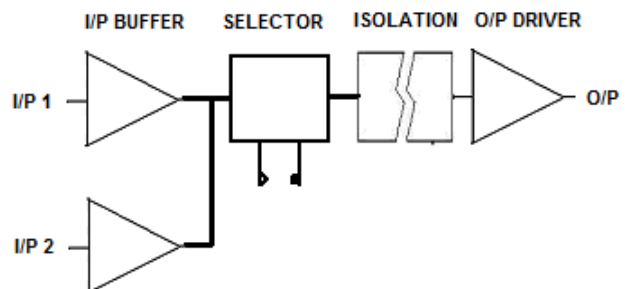
#### TERMINATION

Input +	1
Input -	2
Input 2 +	3
Input 2 -	4
Input Select	5
V Free Contact	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 °C  
Operating Ambient: -15 to +55 °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