

ADM239K Two Input Arithmetic Unit

- Suitable for SIL 1, SIL 2 & SIL 3 rated safety instrumented system (SIS) loop applications (EN 61508-2)
- Non-Smart / Non-uProcessor based, Type A instrument
- Supply voltage options:
 - 115Vac $\pm 20\%$
 - 240Vac $\pm 20\%$
 - 24Vdc $\pm 10\%$
 - 48Vdc $\pm 10\%$
- RFI Protection to EN 61000-4-3:2006/A2:2010
- AMELEC Standard 10 year warranty

Technical Specifications

Input(s)

Any DC voltage or current drive that can be terminated in a PI network to produce a 400mV span.

The inputs share a common internal 0V, however an Isolated version 'X' option is available on request if required.

Typical Inputs

2 x 4-20mA (impedance 20 Ω), 2 x 0-10Vdc (impedance 1M Ω)

Output

Any standard process current source up to 20mA, or voltage source up to 10Vdc. (Current Sink output option available, with 30Vdc max external loop supply).

Typical Output

4-20mA (max load 550 Ω), 0-10Vdc (min load 500 Ω)

Typical Equations

$A+B \sim (A+B)/2 \sim A-B \sim 3A-B$

Performance

Linearity/Accuracy: $\leq \pm 0.1\%$ span

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

Isolation: 500Vdc Input(s)/Output/Supply/Earth

Input over range: typically up to 300%

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

RF Immunity: 20MHz-3GHz/5.25GHz $\leq 10\text{V/m}$

(80MHz-1GHz/5.6GHz $\leq 30\text{V/m}$, 889MHz/1.75GHz $\leq 40\text{V/m}$)

Environmental Conditions

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

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

Relative Humidity: 5 – 95% RH (Non-Condensing)

EMC: 2014/30/EU, EN 61326-1:2013 (Generic Industrial levels)

Enclosure Dimensions

50w x 75h x 182d mm, Din Rail mounting (TS35)

(Rear Surface/Seismic mounting plate option Dims: 50w x 130h mm)

