

## ADC314 Three Input Arithmetic / Summator / Averager Unit

- Suitable for SIL1 & SIL2 rated (EN 61508-2) safety instrumented system (SIS) loop applications, as 1oo1 architecture (HFT:0)
- Non-Smart / Non-uProcessor based, Type A instrument
- Supply voltage options: 115Vac ±20%  
240Vac ±20%  
24Vdc ±10%  
48Vdc ±10%
- RFI Protection to EN61000-4-3 available ('K' option)
- AMELEC Standard 10 year warranty

### Technical Specifications

#### Up to 3 x Inputs

Any current or voltage (DC) drives that can be terminated in a PI network to produce 400mV spans.  
Current up to 100mA max input (passive port),  
Voltage ranges up to 150Vdc max (impedance ≥1MΩ).  
Typical Inputs: 4-20mA (impedance 20Ω) or 0-10Vdc (impedance 1MΩ). Inputs share a common internal 0V as std.

#### Output

Any standard process current or voltage in the range of;  
Current source up to 22mA max, with drive voltage 24Vdc (Current Sink option available, 30Vdc max external drive)  
Voltage source up to 20Vdc max output.  
Typically: 4-20mA (max load 550Ω) or 0-10Vdc (min load 500Ω)

#### Typical equations

Adder = A+B+C (Each input = 1/3)  
Adder/Averager = (A+B+C)/3

#### Performance

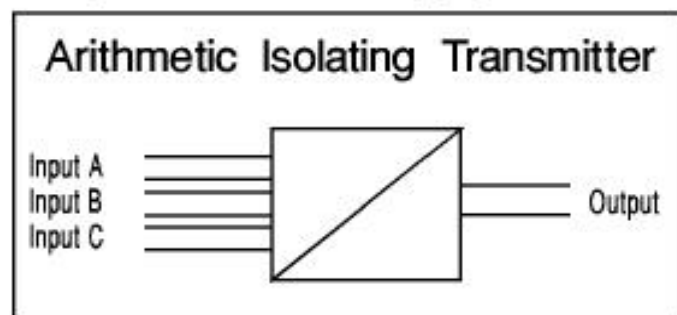
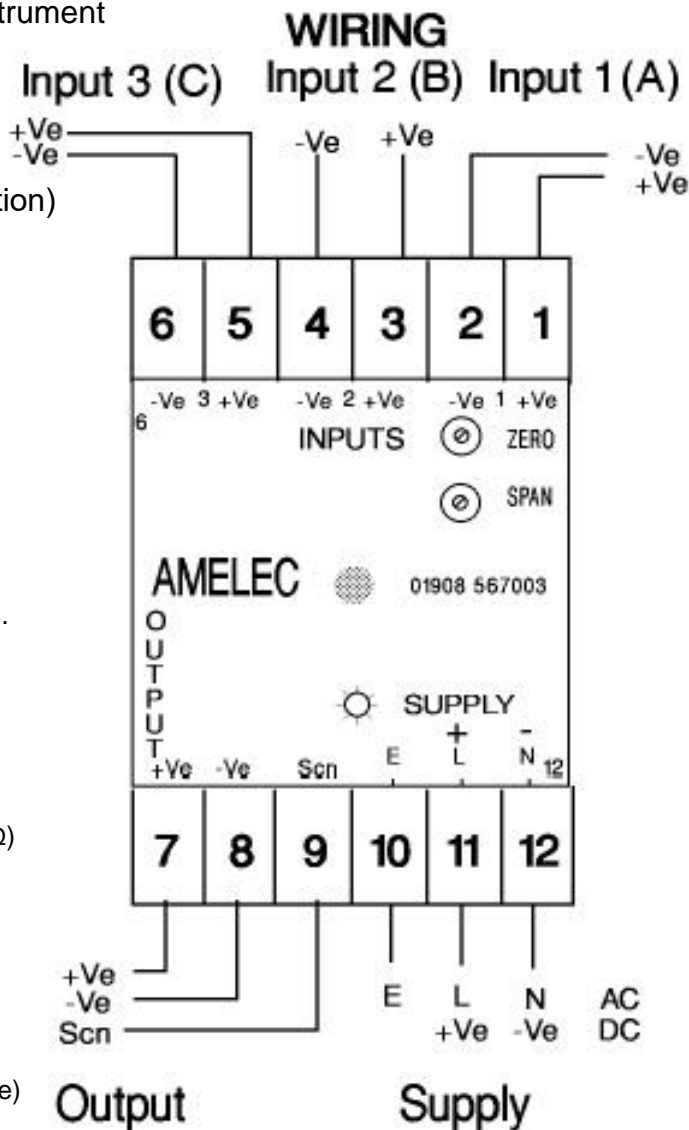
Accuracy/Linearity: <±0.1% Span  
Response Time: typically <100mS (0-100% input step change)  
Supply consumption: <3VA

#### Protection

Isolation: 1000V RMS\* Inputs/Output/Supply/Earth.  
\*(500Vdc when 'K' option RFI protection is specified)  
Internal Fuse  
Input over range: up to typically 300%  
Input Open Circuit response: Downscale drive

#### Environmental Conditions

Storage Temperature: -40 to +70°C  
Operating Ambient: -15 to +55°C  
Relative Humidity: 5 – 95 RH (Non-Condensing)  
EMC: 2014/30/EU , EN 61326-1:2013 (controlled EM)  
(\*'K' option: EMC/EMI/RFI protection to the highest Generic Industrial Standards Test levels)



**Mounting:** Either Din Rail (TS35) **or** Surface by corner fixing holes as standard

**Dimensions:** 50w x 75h x 110d mm  
(K option= 182d mm)

Tel: 01908-567003    Email: [sales@amelec-uk.com](mailto:sales@amelec-uk.com)    Visit: [www.amelec-uk.com](http://www.amelec-uk.com)    Fax: 01908-566735

**AMELEC Instruments, Cochran Close, Crownhill, Milton Keynes, MK8 0AJ**