

## ADC315X Three Input Multiplier

- Suitable for SIL 1, 2 & 3 applications
- Suitable for any process input
- Supply voltages: 115Vac  $\pm 20\%$   
240Vac  $\pm 20\%$   
24Vdc  $\pm 2.5V$   
48Vdc  $\pm 5V$
- RFI Protection to IEC61000-4-3 available
- AMELEC Standard 10 year warranty

### Technical Specifications

#### Inputs

Any current or voltage drive that can be converted into a 400mV span in a pi network, mixed inputs are acceptable. All inputs share a common 0V (or -ve). For this application input 1 & 2 are 4-20mA signals from the outputs of the ADM231's. The third input is 0-10V

#### Output

Any standard process current or voltage  
Current source up to 20mA. Drive voltage 24Vdc  
Voltage source up to 10V. Max current 20mA  
For this application the output is 4-20mA.

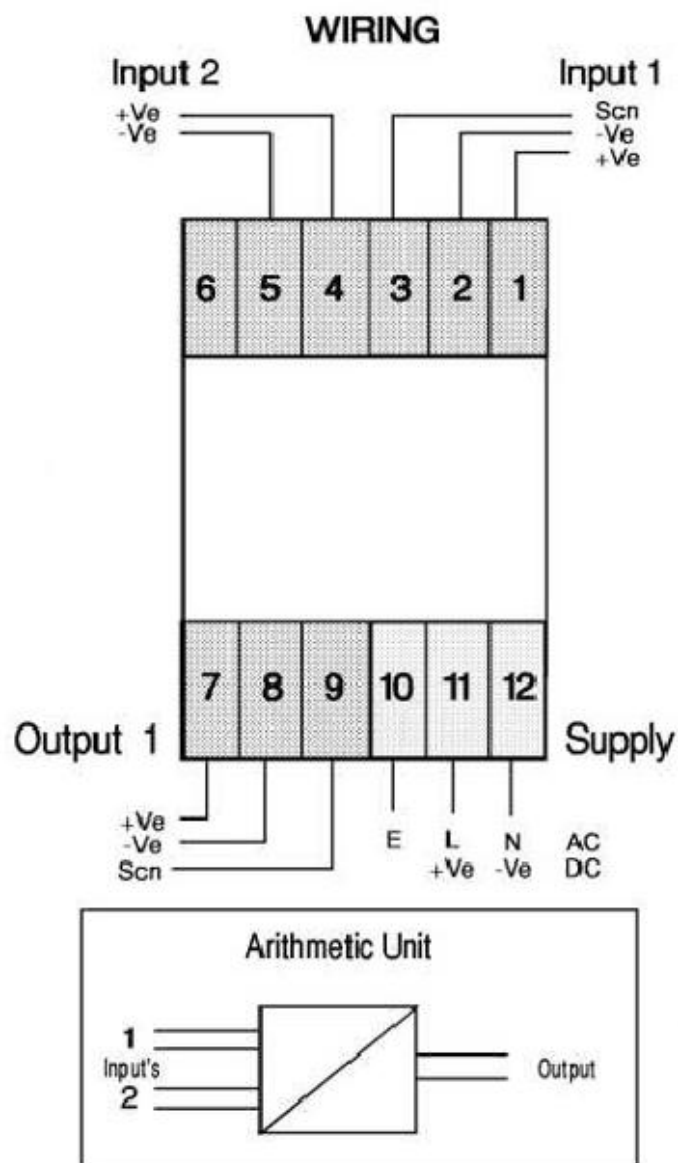
#### Function: Multiplier

Equation:  $\text{Output} = (\text{Input 1} + 2) \times \text{Input 3}$

The inputs and outputs are scaled so that the output is at maximum when all inputs are at maximum. The two 4-20mA signals are summed in a single shunt resistor on the 1<sup>st</sup> input of the multiplier. The operation of this summing function relies on the isolated outputs of the ADM231's driving this unit. Linearity  $\leq \pm 0.1\%$  of full span.

#### Calibration note:

The front fascia zero and span controls on the ADC315X control the output signal. The scaling inputs are factory set. The ADC315X zero and span controls can be used to adjust the Input 1 & 2 part of the equation. Adjustment of span control on the ADP452EP, the 0-10V signal being generated from the ADP452EP unit will alter the scaling between Input (1 + 2) and Input 3.



#### Environmental Conditions

Storage Temperature: -40 to +70°C  
Operating Ambient: -15 to 55°C  
Relative Humidity: 5 – 95% RH

#### Isolation

1000V RMS\*. Inputs(s)/Output/Supply/Earth  
\*(500Vdc if RFI option (K) is specified)

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