

# SC-DUALCON3

## Isolating Signal Converter - 2 Outputs



The SC-DUALCON3 Isolating Signal Converter can accept a wide range of inputs including 4-20mA, thermocouple, RTD and voltage signals. The units produce two high level DC outputs of either voltage or current.

Full 3 port isolation is standard as is an isolated transmitter supply which can be used to power any standard 2-wire 4-20mA transmitter.

The input type and range can be user selected using simple DIL switches inside the unit. All RTD and Thermocouple inputs can be fully linearised.

Non-interactive zero and span controls make adjustment of the unit quick and simple.

Other features include optional inversion of the input signal, on either one or both of the outputs

The unit operates from any supply from 90 to 264 Vac

For specials such as averaging of the input signal, custom linearisation etc please contact the sales office.

- Universal Configurable Input
- 2 Configurable Outputs, full 3-port isolation
- 90-264Vac power supply
- Selectable mA or Voltage output
- Isolated Transmitter Supply
- Very High Accuracy, Low Cost
- Only 17.5mm Wide on DIN rail

### Inputs

#### DC/AC Current & Voltage

0-20mA, 4-20mA, 0-10mA into 15Ω

0-1V, 0-10V, 1-5V into 1MΩ

Min & Max Full Scale Ranges are:

DC Current	0 - 1mA	0 - 5A
Bipolar DC Current	±5mA	±10mA
DC Voltage	0 - 1V	0 - 300V*
Bipolar DC Voltage	±5V	±10V
2 Wire Pot	0 - 125Ω	0 - 1kΩ
3 Wire Pot	0 - 1kΩ	0 - 100kΩ

\* Note: For input voltages greater than 60Vdc a Divider unit must be specified.

#### Thermocouples

Types E,J,K,N,R,S,T,B linearised or non-linearised. Ranges: Wide range of inputs. Cold junction compensation (can be turned off). Upscale or downscale t/c burnout options

#### Resistance Thermometers

2, 3 or 4 wire PT100 or PT1000, linearised or non-linearised. Ranges: Wide range of inputs. Upscale or downscale RTD burnout options.

### Technical Specifications

Parameter	Min	Typ	Max	Comments
Supply Voltage (Vac)	90		264	50 or 60 Hz
VA Rating		4.7VA±10%		20mA in & out & transmitter supply
Volt Drop (mA input)		0.3		At 20mA Input
Input Impedance (Volt)		1MΩ	100MΩ	Dependant on range (typ=10V)
Input Impedance (mA)		15Ω		Dependant on range (typ=20mA)
Output Linearity Error		±0.01%	±0.05%	
Temp Coefficient			±50ppm/°C	
Load Resistance Error			±5ppm/Ω	0 < RL < 750Ω
Time Constant (10-90%)	25mS	60mS		Selectable fast/normal response
Operating Ambient	0°C		55°C	
Relative Humidity	0%		90%	
Isolation Voltage <sup>see note</sup>	1kV			
Surge Voltage	2.5kV for 50µS			Transient of 10kV/µS

#### Notes

Absolute maximum ratings indicate sustained limits beyond which damage to the device may occur. Device is protected against reverse polarity connection.

Accuracy figures based on 110Vac supply, 2 x 4-20mA outputs with 250Ω load and an ambient 20°C. SC-DUALCON3 does NOT provide safety isolation when the input is connected to the mains.

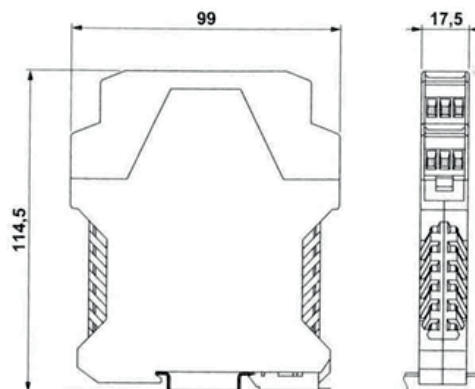
#### Connection Details

1. Power supply -ve	
2. Power supply +ve	
4. Process Input -ve T/C -ve RTD -ve	
5. Process Input +ve T/C +ve RTD +ve	
3. Trans supply +ve RTD 4 <sup>th</sup> wire	
6. T/C Shield RTD 3 <sup>rd</sup> wire	
10. Output 2 -ve	7. Output 1 -ve
12. Output 2 +ve	9. Output 1 +ve

Cynergy3 Components Ltd.  
7 Cobham Road  
Ferndown Industrial Estate  
Wimborne, Dorset BH21 7PE  
Telephone +44 (0) 1202 897969  
Email:sales@cynergy3.com

ISO9001 CERTIFIED

SC-DUALCON3 2017



#### Installation Data

Mounting	DIN Rail TS35
Orientation	Any
Connections	Screw Clamp with pressure plate
Conductor Size	0.5-4.0mm
Insulation Stripping	12mm
Weight	Approx 115g

#### Ordering Information

Part No.: SC-DUALCON3



Made in the UK