

## | SC-DUALCON6

### ISOLATING SIGNAL CONVERTER - 2 OUTPUTS



The SC-DUALCON6 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 linearized.

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 16 to 36 Vdc or 16 to 32Vac.

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

### Features

- Universal Configurable Input
- 2 Configurable Outputs, full 3-Port isolation
- 16-36Vdc, 18-32Vac 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:

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

## SPECIFICATIONS

### Technical

Parameter	Min	Typ	Max	Comments
<b>Supply Voltage</b>	16V	24V	36Vdc/32Vac	
<b>Supply Current (mA)</b>		45	120	For 24Vdc supply (260mA for 50mS on start-up)
<b>Volt Drop (mA input)</b>		0.3		At 20mA input
<b>Input Impedance (Volt)</b>		1MΩ	100MΩ	Dependent on range (Typ=10V)
<b>Input Impedance (mA)</b>		15Ω		Dependent on range (Typ=20mA)
<b>Output Linearity Error</b>		±0.01%	±0.05%	
<b>Temp Coefficient</b>			±50ppm/°C	
<b>Load Resistance Error</b>			±5ppm/Ω	$0 < R_L < 750\Omega$
<b>Time Constant (10-90%)</b>	25mS	60mS		Selectable fast/normal response
<b>Operating Ambient</b>	0°C		55°C	
<b>Relative Humidity</b>	0%		90%	
<b>Isolation Voltage*</b>	1kV			
<b>Surge Voltage</b>	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 24Vdc supply, 2 x 4-20mA outputs with 250Ω load and an ambient 20°C. SC-DUALCON6 does NOT provide safety isolation when the input is connected to the mains.

## Outputs

### DC Current and Voltage

0-20mA, 4-20mA, 0-10mA into 750Ω  
0-1V, 0-10V, 1-5V into a minimum 100kΩ

Others available up to a maximum of:  
Current: 0-20mA. Voltage: 0-20Vdc

## Installation Data

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

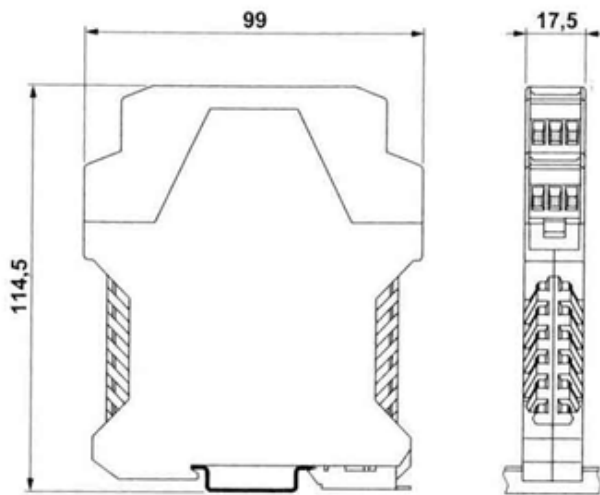
## Connection Details

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		
12. Output 2 +ve		
7. Output 1 -ve		
9. Output 1 +ve		



## DIMENSIONS

All dimensions are in millimeters.





Please supply  
**Part Number** SC-DUALCON6

Made in the UK

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