Industrial Interface *The Signal Conditioning People*

ISOCON

3 –PORT ISOLATING SIGNAL CONVERTER

- Universal input/output- user selectable
- Frequency Input
- Dual input Maths Unit
- Custom linearisation options
- Wide range AC or DC Supply
- Isolated Transmitter Supply
- Very High Accuracy, Low Cost
- Only 12.5mm Wide on DIN rail

Description

The new **ISOCON** Isolating Signal Converter can accept a wide range of inputs including 4-20mA, thermocouple, RTD and voltage signals. The units produce a high level DC output 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, an optional second analogue output (see Dualcon data sheet) and an optional Relay alarm output.

The unit is supplied with two power supply options, either wide ranging ac or dc. The ac version operates from any supply from 90 to 264 Vac and the dc version operates from 12 to 36 Vdc.

For specials such as custom linearisation, frequency input and maths functions etc please contact the sales office.

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: 0-10Vdc

Inputs

Standard Ranges are shown below - contact Sales for others.

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

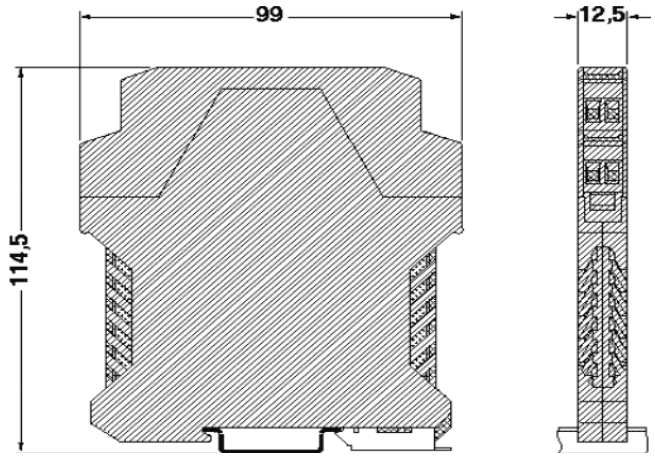
Frequency Input
Wide range of freq inputs to 250kHz. Specify FREQCON-6

Dual Input Maths Module
2 inputs, +,-, average,hi,lo,squareroot Specify MATHSCON-6

Custom Linearisation
31 point user linearisation Specify ISOLIN-6

Tel: 01202 480 303
Email: sales@coulton.com
Coulton Instrumentation Ltd
www.coulton.com
Fax: 01202 480 808

Parameter	Min	Typ	Max	Comments
Supply Voltage	12	24V	36Vdc/32Vac	90 to 264 for ac input version
Supply Current (mA)		45	85	For 24 V dc supply (260mA for 50mS on start up)
Input Impedance (Volt)		1M Ω		Dependent on range (Typ=10V)
Input Impedance(mA)		15 Ω		Dependent on range (Typ=20mA)
Volt drop (mA input)		0.3		At 20mA input
Output Linearity Error		±0.01%	±0.05%	
Temp Coefficient			±50ppm/ºC	
Load Resistance Error			+/-5ppm/ Ω	$0 < R_L < 750\ \Omega$
Time Constant (10-90%)	25mS (fast)	60ms (normal)		Selectable fast/normal response
Operating Ambient	0ºC		55ºC	
Relative Humidity	0%		90%	
Isolation Voltage see note 1	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. Accuracy figures based on 24Vdc supply, 4-20mA output with 250Ω load and 20ºC ambient. Device is protected against reverse polarity connection. ISOCON does NOT provide safety isolation when the input is connected to the mains.			



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 95g

Connection Details

1.	Power Input -ve		
2.	Power Input +ve		
4.	Process Input -ve	T/C -ve	RTD -ve
5.	Process Input +ve	T/C +ve	RTD +ve
3.	Trans supply +ve		RTD 4th Wire
6.		T/C Shield	RTD 3rd Wire
10.	Output -ve		
12.	Output +ve		

Ordering Information

Please supply:

Part Number:	ISOCON
Input Type:	e.g mA, Volt, T/C, RTD
Input Range:	e.g 4-20, 0-10, 0-500ºC
Output Type:	e.g mA, Volt
Output Range:	e.g 4-20mA, 0-10V
Power Supply:	-6 (DC) or –3 (AC)
Isolation:	Full 3-Port
Options:	FREQCON-6 MATHSCON-6 ISOLIN-6

Tel: 01202 480 303
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