

## SC-FREQCON



The SC-FREQCON is a frequency to analogue converter which can be configured using switches to perform any frequency to analogue converting function.

The range of frequency input available is 0–250kHz and any offset can be introduced on the input. The input can be averaged over a period between 0 and 45 seconds with a quickstep option available to respond quickly to sudden changes in input frequency.

Typical applications include the conversion and linearisation of the frequency output from a turbine meter, or the conversion of an optical sensor on rotating machinery to a 4-20mA output of r.p.m.

The operational status of the unit is indicated by the front panel LED. The unit can be powered by any supply from 12- 36 Vdc and 12-32Vac.

### 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
Max tTerminal Torque	0.4Nm

### Ordering Information

Part No.: SC-FREQCON

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ISO9001 CERTIFIED

cynergy3-sc-freqcon-v2



Made in the UK

## Frequency To Analogue Converter

- 0 – 250kHz User - Configurable Input Stage
- Isolated 4-20mA or Voltage output
- Very High Accuracy
- Wide Range of Input Types
- Low Cost of Ownership
- Ultra-Compact, only 12.5mm Wide

### General Specifications

The inputs types and ranges included below are our standard ones. Please contact our sales department for details on any application not specified below.

2-Wire Proximity  
Volt Free Contact  
Open Collector NPN or PNP  
5V Logic TTL  
24V Logic  
Inductive / Magnetic Pickup

### Outputs

#### DC Current (Source or Sink) and Voltage

0-20mA, 4-20mA, 0-10mA into 750 $\Omega$  maximum.

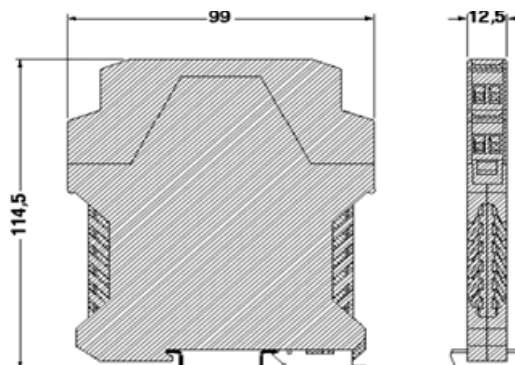
0-1V, 0-10V, 1-5V into a minimum 100k $\Omega$

### Technical Specifications

Parameter	Min	Typ	Max	Comments
Supply Voltage	12V	24V	36V	
Supply Current (mA)		110	134	Max with 22V supply at 24mA
Input Voltage Logic 0	-30V		+0.1V	
Input Voltage Logic 1	+0.1V		+30V	
Frequency Resolution			1.333 $\mu$ S	
Overall Accuracy		$\pm$ 0.01%	$\pm$ 0.06%	Input to Analogue Output
Input Accuracy		$\pm$ 0.01%		
Temp Coefficient			$\pm$ 50ppm/ $^{\circ}$ C	
Load Resistance Error			$\pm$ 5ppm/ $\Omega$	0 < RL < 750 $\Omega$ (mA output)
Time Constant (10-90%)		50mS	60mS	
Operating Ambient	0 $^{\circ}$ C		55 $^{\circ}$ C	
Relative Humidity	0%		90%	
Isolation Voltage	1kV			
Surge Voltage	2.5kV for 50 $\mu$ S		Transient of 10kV/ $\mu$ S	

### 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 an ambient temperature of 20 $^{\circ}$ C. The Time Constant is dependent on which processing options are been selected and the applied frequency.



### Connection Details

1. Power supply -ve
2. Power supply +ve
7. Input Ground
9. Frequency Input +ve
10. +8V or +24V Transmitter supply
4. Output -ve
5. Output +ve

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