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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# SC420i

## Loop Powered Isolator



- Powered from 4-20mA input
- Low Voltage Drop
- High Accuracy
- 1kV Isolation
- High Noise Immunity
- Low Cost Solution

### General Specifications

#### Recommended Operating Conditions

Input Current	0(4)-20mA
Output Current	0(4)-20mA
Output Resistance	0-600Ω.
Overload Capacity	±50mA Input Current

#### Environmental Conditions

Storage Temperature	-40 to 100 °C
Operating Ambient	-15 to 70 °C
Relative Humidity	0-90 % RH

#### Other Considerations

The voltage drop across the device at 20mA input is:  $V_d = 3.2 + (R_L \times 0.02)$

### Technical Specifications

Parameter	Min	Typ	Max	Comments
Supply Voltage				Loop Power
Input Current	4mA		20mA	
Full Scale Volt Drop <sup>see note</sup>		3.2V	3.5V	At 20mA Input
Output Linearity Error			±0.1%	
Temp Coefficient			90ppm/°C	
Load Resistance Error			-200nA/Ω	0 < R <sub>L</sub> < 600Ω
Time Constant (10-90%)			30ms	
Operating Ambient	-15°C		70°C	
Relative Humidity	0%		90%	
Isolation Voltage	1kV			
Supply Voltage				Loop Power
Input Current		-50mA	0-20mA	+50mA
Full Scale Volt Drop <sup>see note</sup>		3.2V	3.5V	At 20mA Input
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 0-20mA input, 250Ω load resistance, and an ambient temperature of 20°C.

Add volt drop due to load:  $0.02 \times R_L$  e.g. 250Ω load total volt drop =  $3.5 + (0.02 \times 250) = 8.5V$

The SC420i loop powered isolator is a 0(4)-20mA direct current isolator. The isolator derives its power from the input signal and therefore requires no external power supply.

The output of the isolator can be connected to any potential within 1kV of the input negative terminal while transients of 2.5kV can be withstood.

The isolator is typically used to enable two control and instrumentation devices, e.g. PLC and local chart recorder, with non-isolated inputs, to monitor the same transmitter output simultaneously.

Alternatively the isolator can be used to isolate signals from non-isolated transmitters or as a noise reduction device.

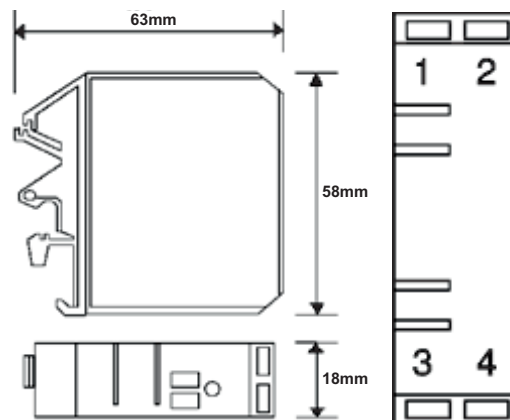
The device is housed in an ultra-compact DIN rail mounted enclosure, only 18mm wide.

### 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 50g

### Ordering Information

Part No.: Sc420i 4-20mA In 4-20mA Out



### Connection Details

1. Output Channel +ve
2. Output Channel -ve
3. Input Channel +ve
4. Input Channel -ve

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ISO9001 CERTIFIED

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