

**DESCRIPTION**

The SI239 is loop powered isolator used to measure DC voltages and process currents plus a range of optional inputs. Input/output isolation of 2kVrms is achieved by transformer coupling of power supply and signal. The SI239 accepts a wide range of dc voltage and current input signals as well a supporting reverse and direct action mode at no extra cost. Standard output is 4-20mA with a minimum supply voltage of 8V. This enables the SI239 to be used in 12V battery supply systems or in automotive applications. Other factory set output configurations are 10 - 50mA loop powered and 0 - 10mA, 0 - 20mA or voltage output in 3-wire connection. Double surge protection is standard with all Series 200 loop powered transmitters to prevent failure due to spikes induced by DC switched inductive loads. Final calibration is trimmed using the front accessible zero and span 15-turn trim adjustments. A front mounted L.E.D. and a test socket verify module function and assist in calibration checks without disconnection of output wires.



**General Specifications**

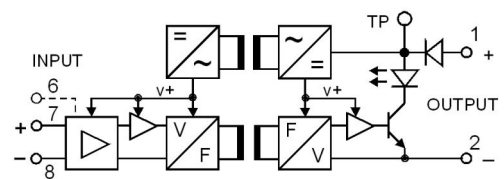
Size: 23.5W x 71.5H x 109D (mm).  
 Mounting: Clip for 35mm DIN-Rail.  
 Housing material: ABS.  
 Connection: Screw terminals.  
 Weight: 0.120 kg.  
 Protection class: IP40.  
 Cal. accuracy: <0.2%.  
 Linearity: <0.2%.  
 Long term drift: <0.10%.  
 Ambient operating range: -10...+65°C.  
 Temperature drift error: 0.02% per °C.  
 Supply voltage: 8 - 40V continuous (50V 30 seconds).

Load for 4 - 20mA output: 
$$RL_{max} = \frac{SupplyVoltage - 8V}{0.02A} \Omega$$

Load change effect: 0.1% up to RL max.  
 Response time: 500ms. (custom filtering on request).  
 Input impedance: >500kΩ up to 10MΩ voltage inputs.  
 Overload continuous: 500% of rated input.  
 Front Zero adjust: +20/ -10% typical.  
 Front Span adjust: ±25% typical.  
 Internal Offset Adjust: ±50%.  
 Noise immunity: 130dB CMRR.  
 Input/output isolation: >2kV rms.

Electromagnetic compatibility: Complies with AS/NZS 4251.1 (EN 50081.1)

**Block Diagram**



For link selectable process signal inputs refer to SI231.

For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

