



STRAIN

UNIVERSAL STRAIN GAUGE TRANSMITTER

- Isolated Bridge Excitation Voltage
- User configurable Isolated Output
- Switchable 110/240 Vac Supply or 24Vdc supply option
- 1500V 3-Port Isolation
- Remote Calibration Feature



Description

The STRAIN Universal Strain Gauge transmitter is suitable for use with the majority of strain gauges, load cells and pressure transducers. The unit provides a high stability excitation voltage which is isolated from both the high level output and the power supply.

Front panel mounted trim pots allow adjustment of the output zero and span settings and output monitoring terminals allow the output to be measured without breaking the instrument loop. This is especially useful for the initial calibration and set-up of the bridge and measuring system.

The output required may be user-reconfigurable using internal switches if requested at point of order. The options include 0-10V dc, 0-20mA and 4-20mA. The power supply requirement is also user selectable between 110 and 240 Vac. A 24Vdc powered unit is also available.

The unit is housed in a compact DIN rail mounting enclosure.

General Specifications

Recommended operating Conditions

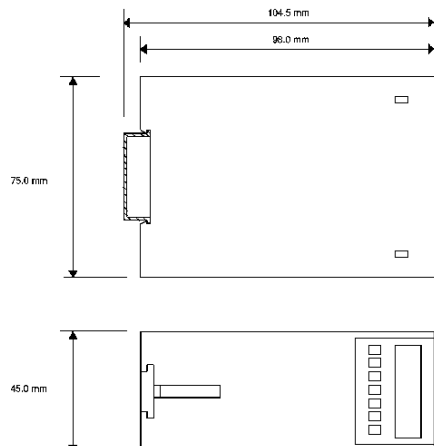
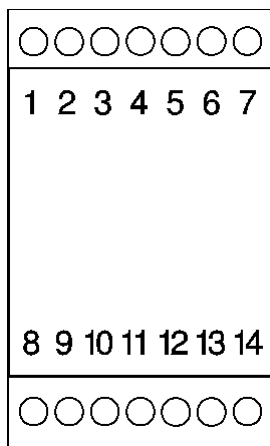
Bridge Supply Current	28mA into 350 Ω
Bridge Excitation Voltage	10 Vdc, others available
Output Resistance	0-600 Ω for mA o/p

Environment Conditions

Storage Temperature	-40 to 100 \equiv C
Operating Ambient	0 to 55 \equiv C
Relative Humidity	0-90% RH

Performance Characteristics

Parameter	Min	Typ	Max	Comments
Supply Voltage AC Version		115V/230V		±10% Voltage switch selectable
Supply Current AC Version		50 / 25 mA		Upscale Output
Supply Voltage DC Version	21.6V	24V	26.4V	
Supply Current DC Version		150mA		Upscale output
Bridge Excitation Voltage		10V		Others Available.
Bridge Output Signal	1mV/V		4mV/V	Others Available
Output Linearity Error			±0.1%	
Temp Coefficient		±100ppm/°C		
Load Resistance Error			-10ppm/Ω	0 < R _L < 600Ω
Time Constant (10-90%)		30ms		
Operating Ambient	-15°C		60°C	
Relative Humidity	0%		90%	
Isolation Voltage	1kV			Signal input to output
Surge Voltage	2.5kV for 50μS			Transient of 10kV/μS
Notes	<p>Absolute maximum ratings indicate sustained limits beyond which damage to the device may occur.</p> <p>Device is protected against reverse polarity connection.</p> <p>Accuracy figures based on an ambient temperature of 20°C. Device incorporates a non-resettable thermal cut-out in the mains input.</p> <p>IMPORTANT: Mains input should be protected by a 100mA anti-surge fuse (T100mA) with a voltage rating of 250Vac and a breaking capacity of 35A at 250Vac placed in series with the live connector.</p>			



Installation Data

Mounting	DIN Rail TS32/35
Orientation	Any
Connections	Screw Clamp with pressure plate
Conductor size	0.5-4.0mm
Insulation Stripping	12mm
Weight	Approx 340g
Max Terminal Torque	0.4Nm

Connection Details

1. Not Used	8. Bridge Cal Resistor
2. Not Used	9. Bridge Cal Resistor
3. Output -ve	10. Bridge Output -ve
4. Output +ve	11. Bridge Output +ve
5. Earth	12. Not Used
6. PSU (Neutral / DC -ve)	13. Bridge Excitation -ve
7. PSU (Live / DC +ve)	14. Bridge Excitation +ve

Ordering Information

Please supply:

Part Number:	STRAIN - (AC or DC)
Power Supply:	e.g. 115Vac, 24Vdc
Bridge Excitation:	e.g. 10V
Bridge Output Signal:	e.g. 4mV/V
Output Type:	e.g. mA, Volt
Output Range:	e.g. 4-20mA, 0-10V