



LP-TR Pt100 TEMPERATURE TRANSDUCER



The LP-TR temperature transducer converts the resistance value of a platinum resistance element into a load independent dc current or voltage signal. The three wire method of measurement employed ensures that balanced cable resistance values can be accommodated without affecting the accuracy of the reading. The circuitry employed corrects the non-linear response of the Pt100 to yield a signal proportional to temperature.

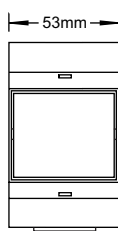
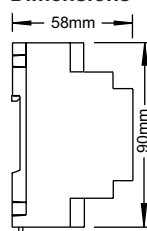
The unit conforms to the requirements of Class B resistance thermometers according to DIN 43760 Class B. Electrically the unit conforms to IEC 60688.

There is galvanic isolation between the input sensor, output and power supply circuits.

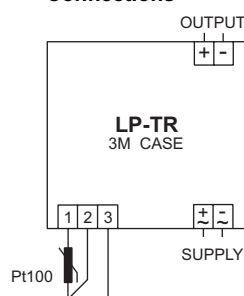
Specifications

| | | |
|-----------------------|---|--|
| Input | Pt100 sensor with three lead compensation (or two lead sensor with no compensation) Standard ranges (other ranges on request) | : -50 to +50°C, 0 - 50°C, 0 - 100°C : 0 - 200°C, 0 - 400°C, 0 - 600°C |
| | Sensing current | : 1.2mA |
| Outputs | Cable resistance | : <100Ω per leg matched |
| | Load independent dc current or voltage | : 0 - 5V dc >2k load : 0 - 10V dc >2k load : 0 - 10mA dc <1500Ω load : 0 - 20mA dc <750Ω load : 4 - 20mA dc <750Ω load |
| | Ripple | : <1% pk to pk of full span |
| | Load influence | : <0.25% of full span for specific load range |
| Aux. Supply | | : 24V, 110V, 230V or 240V ac ±20%, 1.5VA : 24V dc ±20% or 110V/125V dc (88V-138V) 2W |
| Accuracy | Class B to DIN 43760 | : ±(0.3 + 0.005t)°C ie effectively Class 0.5 |
| | Accurate range | : 0 - 120% |
| | Drift | : <±0.5% over the range 0°C to +60°C |
| Isolation | Galvanic isolation between input, output and auxiliary power supply circuits | |
| | Between input and output circuits | : 2kV rms 50Hz for 1 minute |
| | Impulse | : 5kV 1.2/50μsec waveform |
| | Between the auxiliary supply and input/output circuits | : 4kV rms 50Hz for 1 minute |
| Temperature | Operating | : 0°C to +23°C to +60°C |
| | Storage | : -25°C to +70°C long term : -55°C to +85°C short term |
| EMC Compliance | | : AS/NZS 61000.6.3:2012 |

Dimensions



Connections



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