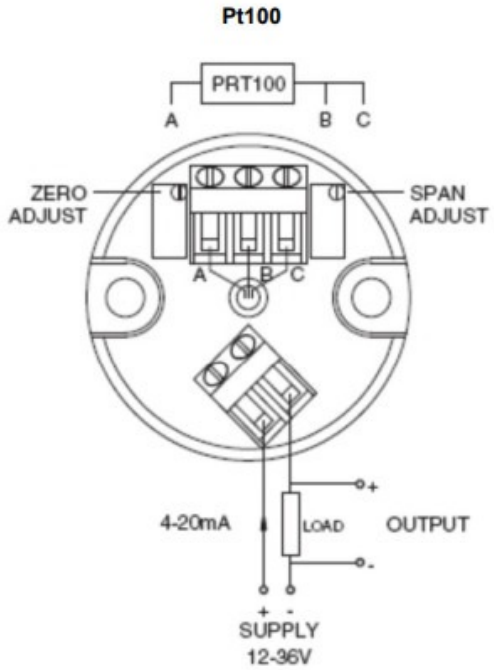
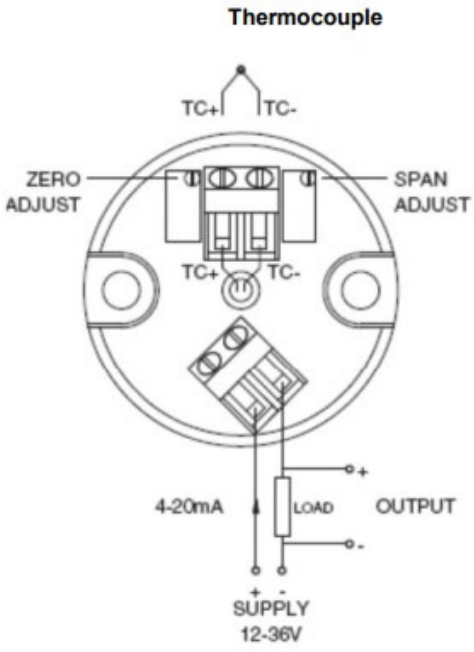
300TX High Accuracy Thermocouple or Pt100 Temperature Transmitter







Labfacility are the UK's leading manufacturer of Temperature Sensors, Thermocouple Connectors and associated Temperature Instrumentation and stockings of Thermocouple Cables. The Company has been trading since 1971 and is ISO9001 accredited.

LABFACILITY
TEMPERATURE & PROCESS TECHNOLOGY

Datasheet

The 300TX is a 4-20mA temperature transmitter which can be housed in a probe terminal head suitable for a DIN standard block. With ranges for thermocouple and Pt100 sensors, the units offer an exceptionally wide range of span adjustment which reduces the need for stockholding different temperature ranges. A novel feature is the non-interactive span and zero potentiometer action which is time saving and convenient when calibrating or re-scaling.

- 4-20mA, 2 wire loop
- Low cost
- High accuracy
- In-head mounting, DIN standard fixing
- Pt100 or thermocouples type J, K
- High reliability
- Non-interactive span & zero pots for calibration
- Permits virtually unlimited length of cable run in low-cost copper
- More expensive thermocouple extension cable not required
- Rugged construction
- Effective input ‘noise ‘rejection
- CE compliant
- RoHS compliant

Specification:

Ranges Thermocouple to IEC 584

Type J 0-300°C
Type K 0-200°C
Type K 0-1100°C

PT100 to IEC751, 3 wire

0 to 100°C
0 to 200°C
(Junctions/ sensors must be insulated from sheath)

Output

4-20mA loop powered, max 30mA.
Directly proportional to mV input for thermocouples. Directly proportional to temperature for Pt100.

Loop supply

12-36V dc; reverse connection protected.

Accuracy

Thermocouple ranges ±0.2% of span (linear to mV input)
Pt100 ranges ±0.1% of span (linear to temperature input)

Zero drift

±0.02% of span per °C

Span drift

±0.02% of span per °C

Supply voltage effect

±0.03% change of span over 12 to 36 voltage change

Cold junction

Better than 2°C over ambient

compensation

temperature range of 0 to 50°C; rejection ratio better than 25:1

Sensor open circuit detection & indication

Upscale; output current between 23 and 27 mA. Separate, independent alarms should be used if required for process safety.

Load capability

(Vs –12)/0.02 Ohm; Vs = 12 to 36Vdc

Ambient operating Temperature

0 to 70 °C

Storage temperature

-20 to 100 °C

Zero adjustment potentiometer

±20% of span, 25 turns Span adjustment potentiometer down to 50% of span for thermocouple input and 30% of Span for PRT100 input, 25 turns.
The transmitter can be easily ranged and calibrated by

means of the multi-turn zero and span adjusters in conjunction

with either a mV source or standard resistance input.

For example, a type K-thermocouple which has a working

temperature range of 0 to 1100°C can be easily calibrated to

operate between 0 to 600°C, where 4mA and 20mA represent

0 and 600°C respectively.

Mechanical

Head mounting, dia.42mm, height 32mm, 2 mounting holes 32mm between centres

Specifications