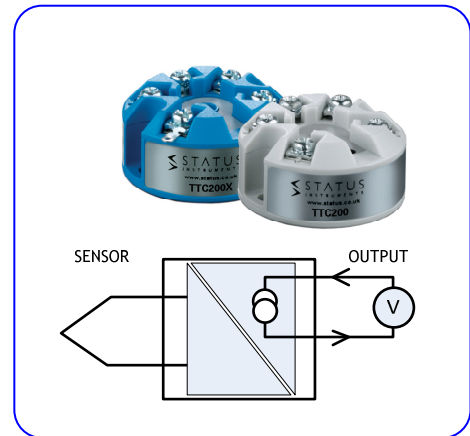


SMART THERMOCOUPLE TRANSMITTER

TTC200 TTC200X

- K, J, N, E, T, R, S, L, U, B, C(W5), D(W3), G(W) plus mV INPUTS
- ATEX AND IECEx APPROVED VERSION
- 22 SEGMENT USER LINEARISATION mV INPUT
- SENSOR OFFSET AND OUTPUT ALIGNMENT
- ISOLATED INPUT
- PROGRAMMABLE BURNOUT

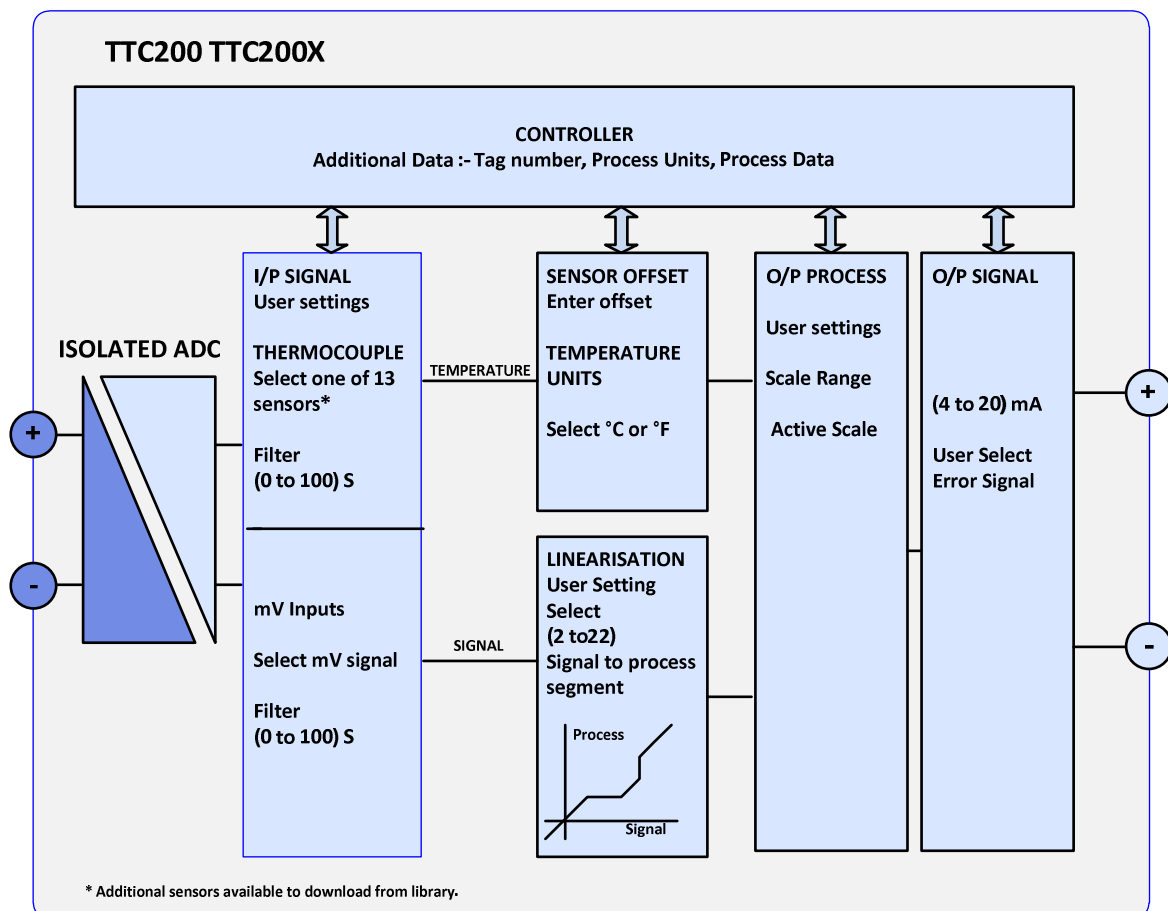


INTRODUCTION

The TTC200 “smart” in head temperature transmitter accepts thermocouple temperature sensors and converts the sensor output over a configured range to a standard industrial (4 to 20) mA transmission signal. Two versions are available; standard and ATEX / IECEx approved for hazardous areas.

PC configuration allows the user to select TC type, Range, Filter, units, linearization and Burnout direction, without requiring calibration equipment. Additionally, the user may read live process data when connected to the PC, this allows for sensor offset, and output alignment calibration, where the user can enter values to match the actual process and therefore reducing system errors.

If required the desired range can be specified at the time of order, removing the need for user configuration. If the range is not specified then the transmitter will be shipped with the default range of (0 to 1000) °C type K.



SMART THERMOCOUPLE TRANSMITTER

SPECIFICATION @20 °C

THERMOCOUPLE mV INPUT

Standard TC
mV
Thermal Drift
Cold Junction

Types K, J, E, N, T, R, S, L, U, B, C (w5), D (W3), G (W), library
(-100 to 200) mV ± 0.02% of full scale.
Thermocouple offset 0.1 °C/°C, span 0.05 °C/°C
Range (-40 to 85) °C, Accuracy ± 0.05 °C/°C

OUTPUT

Type
Range
Accuracy
Loop Effect
Max output load
Loop Supply

Two wire (4 to 20) mA current Loop
(4 to 20) mA ; Upscale burnout 21.5 mA ; Downscale Burnout 3.8 mA
(mA Out/ 2000) or 5 uA which ever is the greater, Drift 1 uA/°C
± 0.2 uA/ V
TTC200 [(Vsupply-10)/20] K Ohms (Example 700 Ohms @ 24 V)
(10 to 30) VDC

SUPPLY

(10 to 30) VDC, < 1W Full Power

GENERAL

Response time
Isolation
Connections

Start up 5 seconds, Update 160 mS, Response 500 mS, Warm up 2 minutes.
Input to output 500 V dc.
Screw terminals 2.5 mm Maximum

USER INTERFACE

Type
Baud rate
Equipment

USB 2.0
1200 baud
PC running windows XP or later, USB configurator.

USER INTERFACE FUNCTIONS

Scaling
Filter
User Linearisation (Profile)
Process Units
Temperature units
Tag Number
Process Output
User offset
Active scaling

User signal to process value scaling, for simplified setup.
Adjustable time constant (0 to 100) Seconds.
(2 to 22) segments mV to process.
4 Characters (signal input only)
°C or °F (TC inputs only)
20 Characters
Range in process units
Enter sensor offset (Temperature mode only).
Set output process range against active sensor input

ENVIRONMENT

Operating Ambient
Storage Ambient
Configuration Ambient
Installation Enclosure

TTC200(-40 to 85) °C ; (10 to 90) % RH (non condensing)
TTC200X Refer to user manual
(-50 to 90) °C ; (10 to 90) % RH (non condensing)
(10 to 30) °C
>= IP65.

APPROVALS

CE BS EN 61326

MECHANICAL

Style
Diameter

Head mounted terminal block
43 mm diameter; 21 mm height Weight 31 g (encapsulated)

THERMOCOUPLE TYPES

Accuracy ±0.1 % of full scale ± 0.5 °C (plus sensor error)
K (-200 to 1370) J (-100 to 1200) E (-200 to 1000) N (-180 to 1300)
L (-100 to 600) U (0 to 600) B (0 to 1800) C - D - W (0 to 2300)

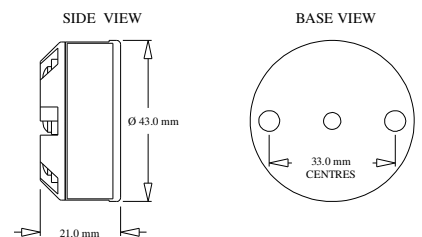
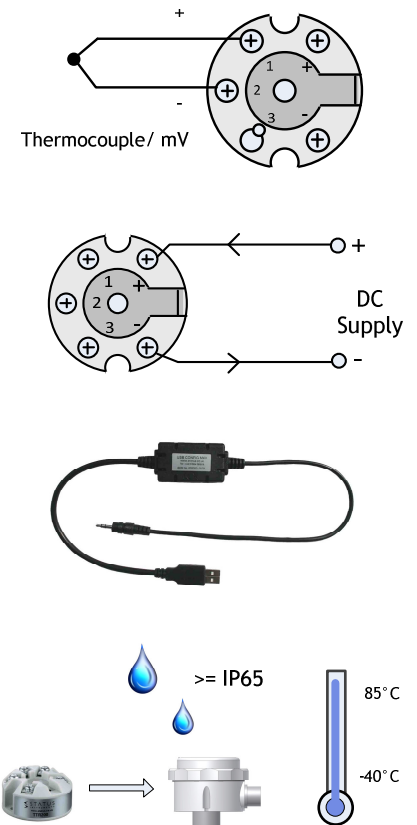
Accuracy ±0.2 % of full scale ± 0.5 °C (plus sensor error)
T (-200 to 400)

Accuracy ± 0.1 % of full scale plus ± 0.5 °C (range 800 to 1600)
R (0 to 1760), S (0 to 1760)

mV

Accuracy ± 0.02 % of full scale (-100 to 200) mV

TTC200 connection



TTC200X ATEX /IECEx VERSION



Please refer to user manual document D2505_01 available at www.status.co.uk for details of the TTC200X ATEX / IECEx specification and the special conditions for safe use.

