TT7S series Transmitters are designed for isolated and accurate temperature measurements and signal conditioning applications. Model TT7S10 is 2-wire Loop powered, Model TT7S11S is 4-wire Auxiliary powered and Model TT7S10-H is Head mount version of TT7S10. All the models are programmable for Thermocouples, Pt-100 RTD, mV and Resistance/Potentiometer. Output signal is standard 4-20mA in 2-wire and mA or Volts in 4-wire. Programming of the Transmitters is easy by means of user friendly mTRAN windows based configuration software.

TT7S Series Transmitters are built using the latest technology to deliver high performance in accuracy, resolution, stability and isolation. Zero/Span adjustments, sensor break detection/protection, Reverse output and Reverse Polarity protection are standard features across all models.

Software techniques like polynomial linearization and digital filtering gives linearized and stable output in harsh industrial conditions, high level of isolation between input and output prevents ground loop errors and protects costly measurement and control systems under fault conditions.

mTRAN a windows based software is used for configuring, calibration and monitoring the TT7S Transmitters.

**Features**
- Universal input (RTD, Thermocouple, Ohm, mV)
- 1.5 KV RMS Isolation between Input & Output
- Linearized Output
- Highly Accurate
- Fully Programmable for Input type & Range
- Fast Response time: <500 ms
- Digital Filter
- Windows based mTRAN software for Configuration, Calibration & Monitoring
- Reverse polarity protection
- Direct/Reverse output
- Sensor break detection
- Loop/Aux Powered models

**Applications**
- Power Plants
- Metal Industry
- Oil & Gas
- Chemical
- Glass Industry
- Cement
- Fertilizer
# TECHNICAL SPECIFICATIONS

## Input
- **Input Type**
  - RTD: Pt-100 3-Wire (3/4-Wire in TT7S11S)
  - Resistance/Potentiometer: 0-2500Ω
  - Input: 0.75mV/0-500mV DC
  - Input Impedance: >1MΩ
  - Sensor Break current: <1μA

## Output
- **Model**
  - TT7S10 & TT7S10-H
  - TT7S11S
  - TT7S11S-H
  - TT7S10-H

## Accuracy
- E, J, K, T, N, Pt-100, mV, Ω: 0.1% of FS
- B, R, S: 0.25% of FS

## CJC Error
- E, J, K, T, N: ±2 °C
- R, S: ±3 °C

## Stability
- ±0.1% per year

## Response time
- <500 msec

## Digital Filter
- 0-20 settable through software (2 default)

## CMRR
- >120 dB

## NMRR
- >20 dB

## Temp-co
- <150 ppm

## Supply
- **Model**
  - TT7S10 & TT7S10-H
  - TT7S11S
  - TT7S11S-H
  - TT7S10-H

## Isolation
- **Model**
  - TT7S10 & TT7S10-H
  - TT7S11S

## Physical
- **Model**
  - TT7S10 & TT7S10-H
  - TT7S11S
  - TT7S11S-H

## Environmental
- **Model**
  - TT7S10 & TT7S10-H
  - TT7S11S
  - TT7S11S-H

## Table-1: Input Ranges

<table>
<thead>
<tr>
<th>Model</th>
<th>Transmitter Type</th>
<th>Input type</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>TT7S10 &amp; TT7S10-H</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT7S11S</td>
<td></td>
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<tr>
<td>TT7S11S-H</td>
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<tr>
<td>TT7S10-H</td>
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</tbody>
</table>

## Ordering Code
- Option: TT7S5 - Configuration cable @ extra cost
- mTRAN Software: Website download

* Available in Aux Powered model TT7S11S only

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All specifications are subject to change without notice due to continuous improvements.
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