



## TT7S00-HR 2-wire Transmitter Pt-100 input

TT7S00-HR is low cost Analog Linearized non-isolated 2-wire Head mount Transmitter, solder pads selection and potentiometer adjustments makes the Transmitter suitable for multi-range applications; the electronics is rated to withstand high temperature, protected by potting and housed in a rugged enclosure for reliability.

The Transmitter is sized for DIN B sensor heads with ergonomically placed terminals and potentiometers for ease of wiring and adjustments, the output is fully linear to temperature and load independent, with just 6.5V drop across the output, large loads can be connected in the loop.

For sensor break the unit can be configured for upscale or down scale output, sensor lead wires are compensated for up to 15 ohms per lead in 3W connection

TT7S00-HR is the most cost effective transmitter for Pt-100 input where Isolation between Input and Output is not required, the electronics is optimized to give the best performance at a very low cost, the PCBs are machine soldered for utmost reliability, every unit undergoes a stringent quality and calibration check and supplied with a test report each.

Masibus has 39 years of design experience and is known for delivering quality Instrumentation products cost effectively.

### Features

- Multi-Range design
- Output Linear to Temperature
- Analog Linearized for 0.1% Linearity
- Sized for DIN B heads and bigger
- Sensor break selection for upscale or downscale
- Protected Electronics rated to withstand high temperature
- Flat and compact housing
- Most cost effective
- Machine soldered Printed Circuit Boards
- Automated Testing and calibration check

### Applications

#### As a Pt-100 Transmitter in

- Power Plants
- Metal Industry
- Oil & Gas
- Chemical
- Glass Industry
- Cement
- Fertilizer
- Research
- Pulp & Paper
- Food & Beverages

# TECHNICAL SPECIFICATIONS

Input	
<b>Input Type</b>	
Pt100 ( $\alpha = 0.00385$ ), 3-wire connection	Adjustable to specific ranges within: -50 to +550 °C
Sensor current	~1.1 mA
Max. sensor wire resistance	15Ω / wire
Sensor break detection, Selectable	Upscale ~25 mA, downscale ~3 mA
<b>Adjustments</b>	
Zero	-50 to +50 °C
Span, Selectable	50 to 500 °C
Span, Fine adjustment	±10 %
Response time 10-90%	≤ 0.2 s
<b>Accuracy</b>	
Linearity	±0.1 % of span
Calibration	±0.1 % of span
Temperature Influence	< 150 PPM / °C
Sensor Wire Influence	±0.005 °C/Ω
Supply Voltage Influence	±0.02 % of span/V
Supply Ripple Influence, 50/60 Hz, 4 Vp-p	±0.05 % of span
Long Term Stability	±0.1 % of span/year

Output	
Current Output	4 - 20 mA
Linearity	Temperature Linear
Current Limitation	~ 25 mA
Permissible Load (Ω)	Rload = (Supply Voltage - 6.5)/0.025

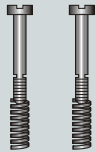

Power Supply	
Supply Voltage	6.5 to 32 VDC
Permissible Ripple	4 Vp-p @ 50/60 Hz
Polarity Protection	Yes

Physical	
Enclosure Material	Poly Carbonate
Mounting	DIN B-head or larger
Connection, Single/stranded wires	≤2.5 mm <sup>2</sup> , AWG 14
Weight	40 g
Protection	IP20

Environmental	
Operating Temperature	0 to +85 °C
Storage Temperature	-40 to +100 °C
Humidity	30 to 95% (Non-condensing)

## Accessories (Optional-On request)

### Mounting Kit

Head Mounting	Rail Mounting
m-MK-FH-00-1	m-MK-RC-00-1
	

### Ordering Code

Model	Range Setting	
TT7S00-HR	X	
	S	Standard without Range Setting & without calibration certificate
	M	Customer Specified Range Setting & Calibration Certificate (Option)

Specify **Input Range** at the time of Ordering for range setting option

Example:

TT7S00-HR-M-XX-XXX

For input range: -50 to 200 °C

Specify: TT7S00-HR -M- (-50) - 200 °C

#### Head Office:

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All specifications are subject to change without notice due to continuous improvements.  
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#### Masibus Representative: