



Temperature Transmitter

Datasheet

ATO-ST500

SUP-ST500 is a head mount temperature transmitter with a single input. The single input accepts thermocouples, RTD, resistance or voltage source. All inputs are linearized and converted in to an industrial standard 4 to 20 mA output for transmission to your system.SUP-ST500is the choice for your monitoring applications.

FEATURES

■ Highlights

- Can convert all inputs to 4-20 mA
- Input: thermocouples, RTD, resistance or voltage
- Configuration directly via PDA or PC
- Built-in Cold Junction Compensation
- Available with screw-in temperature probe



TECHNICAL DATA

■ Specifications

Accuracy	≤0.1%FS
Power supply	12-40V
Signal input	RTD TC resistance mV
Signal output	4-20mA 1-5V(customized)
Digital communication	Hart protocol
Response time	≤1s
Working temperature	-40-85
Ingress protection	4g^2-150Hz
Cold Junction Compensation	Build-in
Configuration	PAD or PC

■ *RTD temperature probes*

Description	Measuring range °C		Minimum measuring range	Connection type
PT100	-200	850	10K	Three-wire
Cu50	-50	150	10K	Three-wire

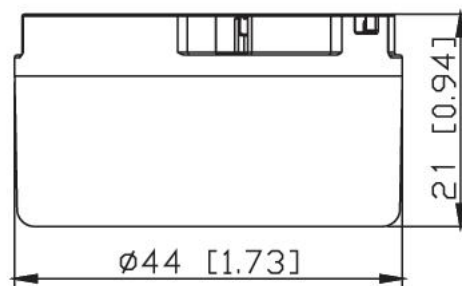
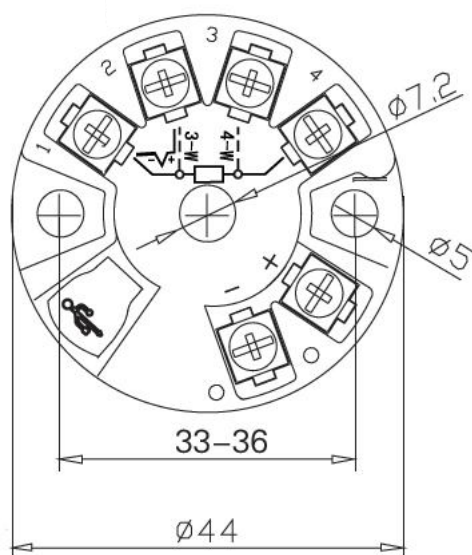
■ *Thermocouples*

Description	Measuring range °C		Connection type	Minimum measuring range
B	400	1820	Two-wire	500K
E	-100	1000	Two-wire	50K
J	-100	1200	Two-wire	50K
K	-180	1372	Two-wire	50K
N	-180	1300	Two-wire	50K
R	-50	1760	Two-wire	500K
S	-500	1760	Two-wire	500K
T	-200	400	Two-wire	50K

■ *RTD temperature probes*

Description	Measuring range Ω		Minimum measuring range	Connection type
Resistance transmitter	0	4500	500K	Two-wire

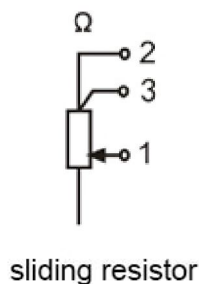
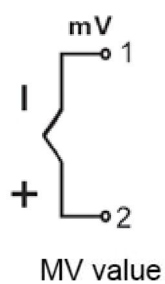
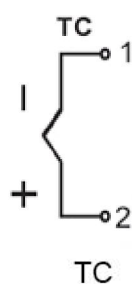
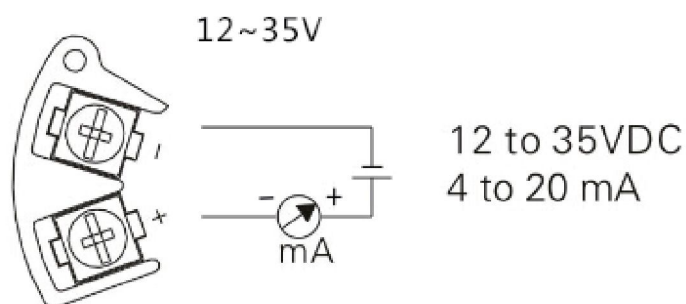
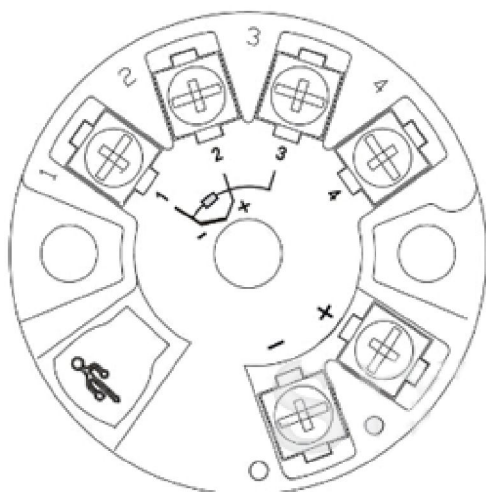
Block Diagram



: Mm(in)

Wiring

■ **Note:** When mounting on a sensor head, do not overtighten the screws.
Take necessary measure to avoid corrosion or damage of cables and wires.



CONFIGURATION INTERFACE

■ Function

- Install the driver
- Connect the transmitter with PC, open the software
- Choose the sensor type and temperature unit
- Set the temperature range accordingly
- Click ok or amend if need modify and then finish
- Other parameters are default and no need to set normally

■ Fenster

The screenshot shows the 'Intelligent temperature transmitter programming software' window. It features a menu bar (File(F), Tool(T), Help(H)) and a toolbar with icons for Online, Search, Reset, Information, and Stop. The main interface is divided into several panels:

- Current fine tuning:** Includes input fields for 4mA and 20mA, buttons for Detection, Modify, Reset, and Exit.
- Sensor settings:** Includes a dropdown for Input Type (set to Pt100), fields for Zero (0.0) and Full (600.0), Offset (0.000), Unit (°C), Wiring (3 wire), and Damping (0.0). Buttons for Read and Modify are present.
- Active migration:** Includes buttons for Adjust zero and Adjust full.
- Constant current output:** Includes radio buttons for 4mA, 8mA, 12mA, 16mA, 20mA, 20.8mA, and an 'Other current' field. Buttons for Send and Exit control are at the bottom.
- Alarm Output:** Includes an 'Output current value' field and buttons for 3.8mA and 21.0mA. Buttons for Read and Modify are at the bottom.
- Device Information:** Includes fields for Date (1/1/2000), Station, Description, Message, and Assembly. Buttons for Read and Modify are at the bottom.

At the bottom of the window, there is a status bar showing 'Ready...' and a 'Start' button.

