

The selection is detailed on page 5



# TSH20

## Temperature And Humidity Transmitter

### Product application

Temperature monitoring of storage space  
Heating, refrigeration and other air conditioning equipment  
Metallurgical manufacturing  
Temperature monitoring in the equipment room

### Product description

TSH20 temperature and humidity transmitter has 5 kinds of wall hanging/air pipe/water pipe/split/clamp, 5 kinds of installation methods, 3 kinds of output mode, using imported Heraeus A-level sensor, CE certification, with excellent anti-interference ability

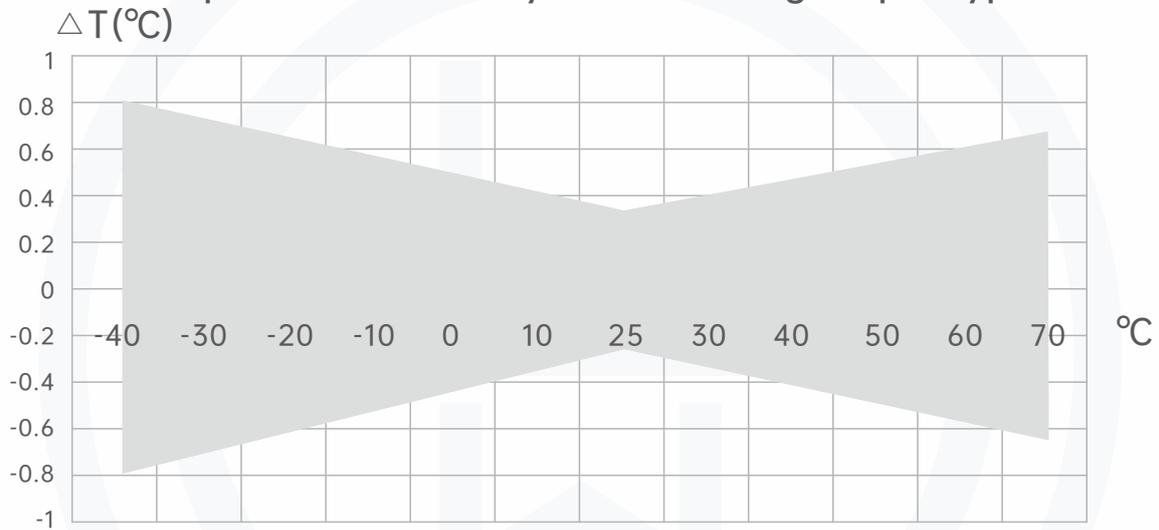
### Functional characteristics

Reliable performance, safe and easy to use  
High resistance stability  
Fast response, powerful protection function  
High precision, high stability, high reliability.

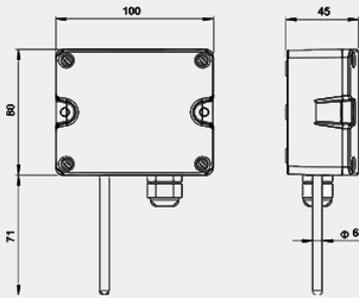
## Product parameter

Sensor	High precision thermal resistance, see selection table (resistance output type) /PT1000A class (analog output type)	
Exportation	Resistance value, see the selection table and thermal resistance index table /4~20MA or 0~10VDC,0~5VDC	
Thermal resistance	See selection table and thermal resistance index table	
Precision	Typical 0.2~0.5°C@0/25°C, see the selection table /0.3C@25C, see the accuracy curve	
Power source	Voltage type 15~35VDC/24VAC20%	Current type 18.5~35VDC(RL=500Q)85~35VDC(RL=Q)
Output load	(Analog output type): $\leq 500\Omega$ (current type), $\geq 2K\Omega$ (0~5V), $3K\Omega$ (0~10V)	
Housing material	PC housing, stainless steel probe ( $\Phi 6MM$ ) and casing	
Working environment	-40~70°C, 0~95%RH(non-condensing)	
Class of protection	IP65	

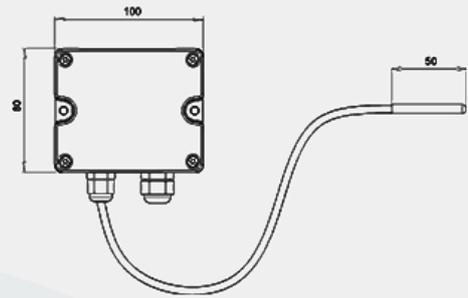
Temperature accuracy curve (analog output type)



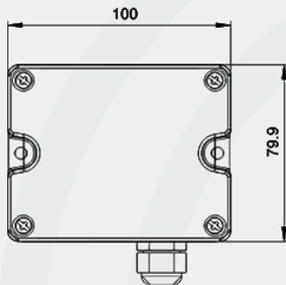
## Size specification



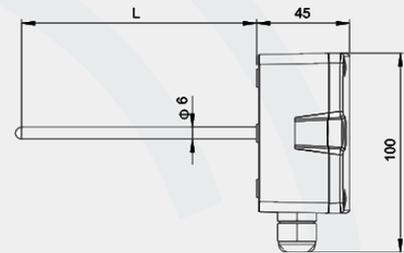
TSH20-A wall hanging type dimensions



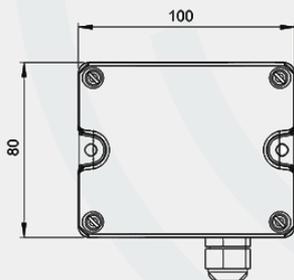
TSH20-D subbody outline size diagram



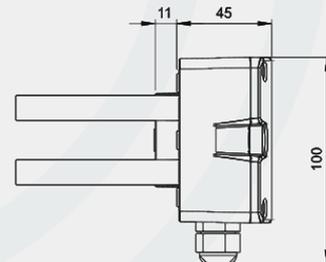
TSH20-B pipe type dimensions



TSH20-C pipe type dimensions

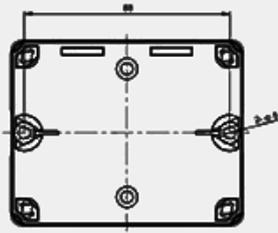


TSH20-E clamp type dimensions

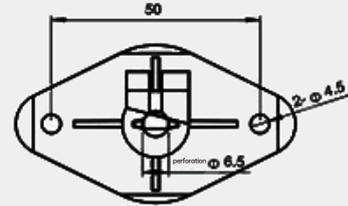


TSH20-E clamp type dimensions

### Installation guide

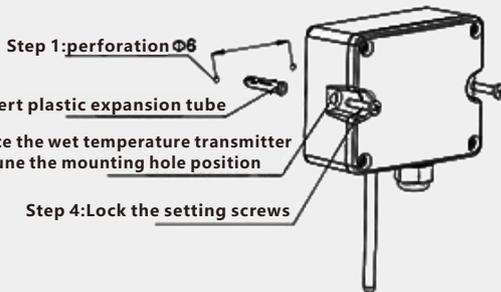
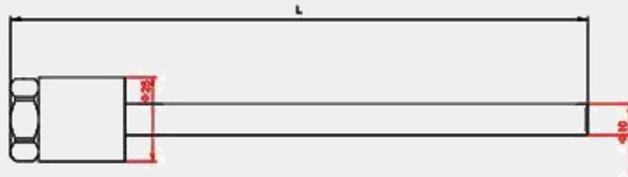


TSH20-A/TSH20-D wall mounting openings

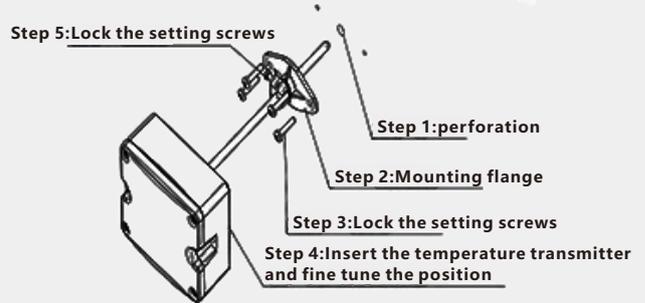


TSH20-B flange installation holes

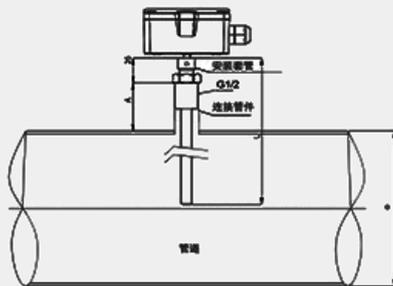
TSH20-C stainless steel casing mounting holes



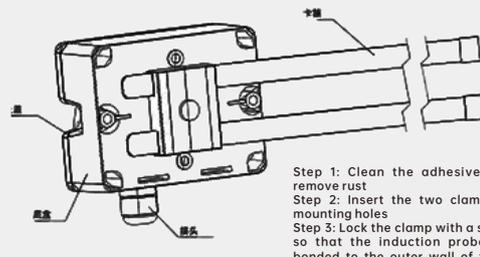
TSH20-A/TSH20-D Installation diagram



TSH20-B installation diagram



TSH20-C Installation diagram



Step 1: Clean the adhesive parts and remove rust  
 Step 2: Insert the two clamps into the mounting holes  
 Step 3: Lock the clamp with a screwdriver, so that the induction probe is tightly bonded to the outer wall of the pipeline under test

TSH20-E Installation diagram

### Installation precautions

1. The TSH20-B is recommended to be installed with flange accessories and the insertion depth is adjustable. Fix the mounting flange on the air duct with four screws. The screws on the flange can lock the insertion probe and TSH20-B. The opening of the air duct is 7MM, and the opening must be sealed at last.
2. When mounting TSH20-A/TSH20-D on a wall, the probe should face down vertically. Outdoor installation should choose a suitable location, away from the factors that affect the measurement, such as cold, heat, etc., and should avoid direct sunlight or rain, if necessary, should be installed separately sunshade or protective cover. Drill two fixing holes on the installation plane according to the dimensions of the mounting holes in the bottom box (see the figure above), and secure the bottom box using two screws.
3. The TSH20-C shall be installed using the installation sleeve, the connecting pipe (tube) is G1/2 and welded to the pipe, and the installation sleeve is tightened to ensure the pressure seal of the pipe. Insert the probe into the bottom of the casing and secure it with a set screw.
4. The TSH20-E is specially designed for the measurement of circular pipelines and is installed with cable ties for the pipeline under test. The cable tie should be tightened so that the sensor probe is tightly fitted to the outer wall of the pipeline under test (to ensure the best temperature sensing measurement performance, the fitting site must be clean and rust free).
5. Open the top cover of the installation box, install a waterproof connector, and connect the power and signal cables to the bottom box through the waterproof connector. Connect cables according to the wiring diagram. When assembling the waterproof joint with the bottom box, it should be ensured that the seal is good (with a sealing ring). The installation of the top cover and the bottom box should also ensure that the seal is sealed (with sealing rings), so that the overall protection level of the housing reaches IP65.

## TSH20-Selection composition

Selection example **TSH20**

1.Product model	<b>A</b>	Wall-mounted temperature transmitter
	<b>B</b>	Air tube type temperature transmitter
	<b>C</b>	Water tube type temperature transmitter
	<b>D</b>	Split type temperature transmitter
	<b>E</b>	Clamp-type temperature transmitter
2.Temperature output	<b>G</b>	0~10VDC(Three-wire)
	<b>H</b>	4~20mA(Second line)
	<b>I</b>	0~5VDC(Three-wire)
	<b>O</b>	PT1000, ±0.2°C@0°C
	<b>P</b>	PT100, ±0.2°C@0°C
	<b>Q</b>	NTC20K, ±0.3°C@25°C
	<b>R</b>	Ni 1000, ±0.5°C@25°C
	<b>S</b>	NTC10K-II,±0.2°C@25°C
	<b>T</b>	NTC10K-III,±0.3°C@25°C
	<b>U</b>	NTC10K-A,±0.3°C@25°C
3.Temperature range	<b>J</b>	0-50°C
	<b>K</b>	-20-60°C
	<b>L</b>	There is no
	<b>T()</b>	Other scope
4.Probe length	<b>N</b>	65mm
	<b>O</b>	100mm
	<b>X</b>	150mm
	<b>Y</b>	200mm
	<b>T()</b>	Other length

## Instructions:

TSH20 wall-mounted temperature transmitter temperature output 0~10VDC(three wire) temperature range 0~ 50°C, probe length 65mm

## Product certification

Compliance and approval; Ludwig temperature transmitters meet key standards and certifications for process measurement technology; This guarantees the highest reliability in such Settings;