

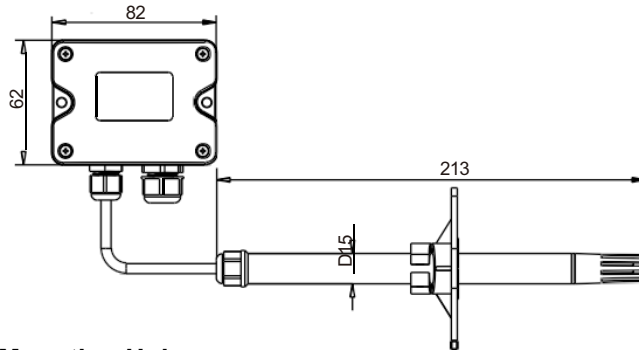
# STH 8R Remote Mount T+RH Transmitters

STH 8RC (4-20 mA) / STH 8RV (0-5 VDC) /  
STH 8RD (RS485 MODBUS)

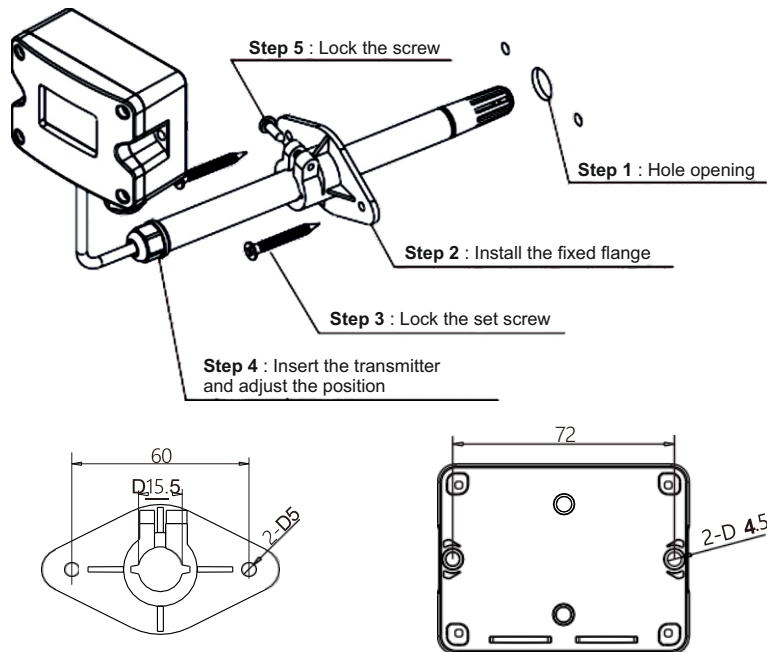
## Installation Manual



### ► Dimensions (mm)

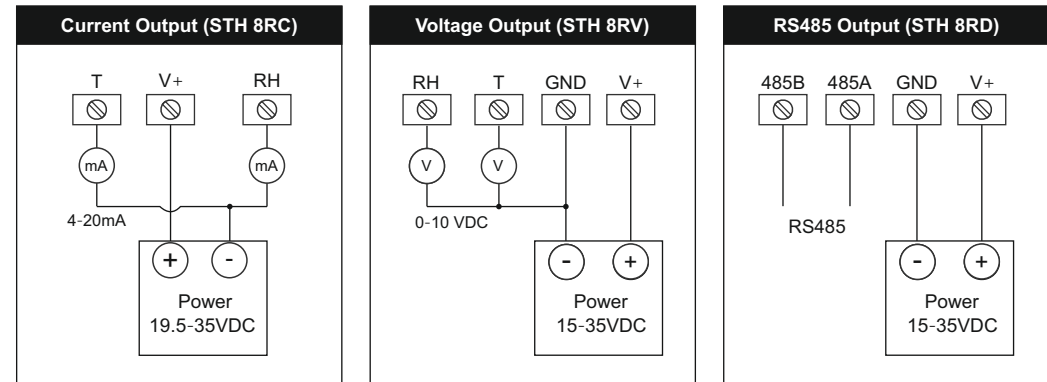


### ► Installation & Mounting Holes



1. The probe is recommended to be installed with flange accessories, and the insertion depth can be adjusted.
2. Fix the mounting flange on the air duct with two screws.
3. The screw on the flange can lock the inserted probe.
4. The opening of the air duct is  $\phi 15.5\text{mm}$ . After the probe is installed, the air duct should be sealed to avoid air leakage.

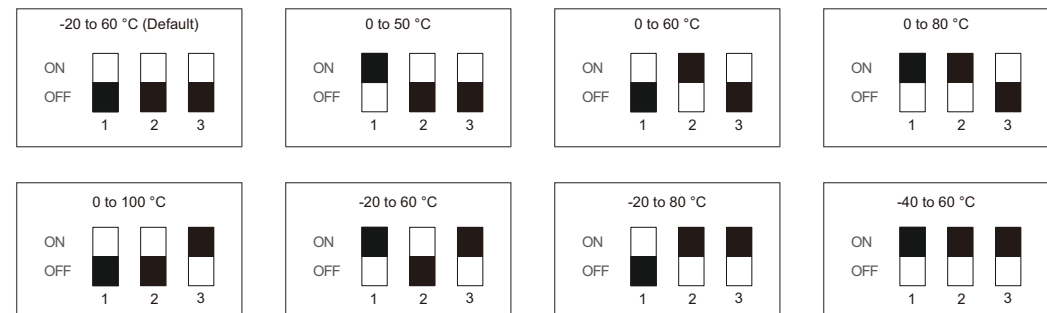
### ► Wiring Instructions



1. Open the top cover, connect the power cable and the signal wires to the bottom box through the waterproof cable gland.
2. Make connections as per the above figures and fix the top cover back to its original position.
3. Pay attention to the sealing between the waterproof cable gland and the bottom box (with a sealing ring), and the sealing between the upper cover and the bottom box (with a sealing ring), so that the overall protection level meets IP65.

### ► Temperature Range Setting

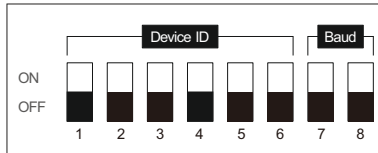
For the Voltage (STH 8RV) and Current (STH 8RC) versions, the output signal can be programmed to match seven different temperature ranges using a set of 3 DIP switches as shown below. Note that the working temperature range is  $-20$  to  $60^\circ\text{C}$ . The range setting is for mA / V signal output proportionality only. The default DIP setting is for  $-20$  to  $60^\circ\text{C}$ .



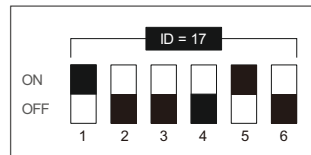
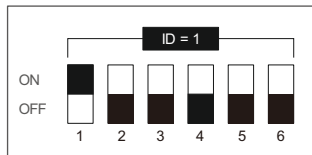
**Note :** Power cycle the device for the changes to take effect.

## ► RS485 Parameter Settings

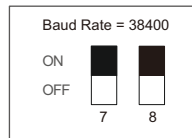
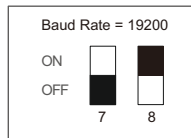
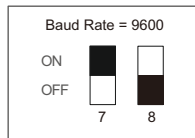
For the MODBUS output model (STH 8RD), a set of eight DIP switches is provided for the manual setting of device ID and the Baud Rate. The first 6 switches (1 to 6) are used for device ID while the last 2 switches (7 & 8) are used for Baud Rate setting.



For Device ID, switches 1 to 6 represent binary digits with switch-1 as LSB and switch-6 as MSB. The switch ON & OFF positions are treated as 1 & 0, respectively. The settable ID range is 1 to 63. The examples below show IDs set to 1 and 17.

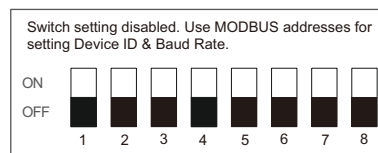


Use switches 7 and 8 for setting the baud rates to 9600, 19200, and 38400 as shown below.



### Notes :

1. Power cycle the device for the changes to take effect.
2. A fixed None Parity is used.
3. For setting the Device ID and the Baud Rate using MODBUS addresses, set all 8 DIP switches to OFF positions as shown below.



## ► MODBUS Register Addresses

Applicable for MODBUS output model (STH 8RD) only. Make sure that the 8 DIP switches are set to OFF positions.

Parameter	Address	R/W	Description	Default
Baud Rate	3	R/W	1 = 9600 bps, 2 = 19200 bps, 3 = 38400 bps, 4 = 115200 bps	9600 bps
Slave ID	4	R/W	1 to 255	1
Temperature (16 Bit Signed Integer)	1	R	0.1 °C Resolution. Examples : 0x00C4 = 19.6 °C 0xFFBE = -6.6 °C	NA
Humidity (16 Bit Signed Integer)	2	R	0.1% Resolution. Example : 0x0134 = 30.8%	NA
Temperature (32 Bit Float)	6	R	0.01 °C Resolution. Examples : 0x41200000 = 10.00°C 0xC1A00000 = -20.00°C	NA
Humidity (32 Bit Float)	8	R	0.01% Resolution. Example : 0x41200000 = 10.00%	NA
Sensor Status	10	R	0 = OK, 1 = Fault	NA

**PPI**

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