

°C	Series TH71A/H71A/T71A SHIMADEN Wall mounting type sensor (Temperature/Humidity)
%RH	
SHIMADEN	

SERIES TH71A
TEMPERATURE / HUMIDITY SENSOR



SERIES H71A HUMIDITY SENSOR



SERIES T71A TEMPERATURE SENSOR



COMMON SPECIFICATIONS

- ☐ **Material (Case and Base): Resin based plastic**
- ☐ **External Dimensions: 70 (H) x 110 (W) x 42 (D) mm**
- ☐ **Mounting Method: Wall mounting**
- ☐ **Mounting Measurement: 86.5mm 2-φ4 (Mounting screw space)**
- ☐ **RoHS directive supported**

Features

- The humidity detection section incorporates a relative humidity detector using a polymer humidity sensor and a linearizer, and linearized DC voltage or current output is obtained.
- Only built-in detection sections are available.
- The temperature detection section uses a platinum resistance thermometer, and the output signal can be selected from either DC voltage output or resistance output using a three-wire system.
- RoHS directive supported



Vertical Mounting Type

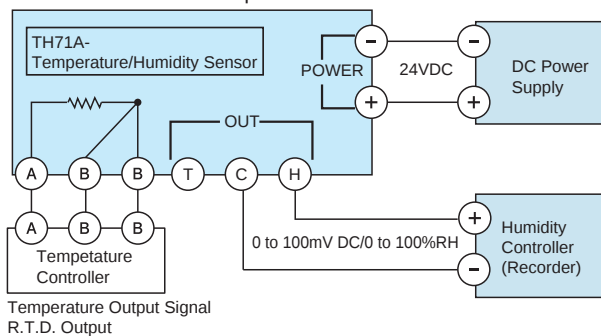
Horizontal Mounting Type

SPECIFICATIONS

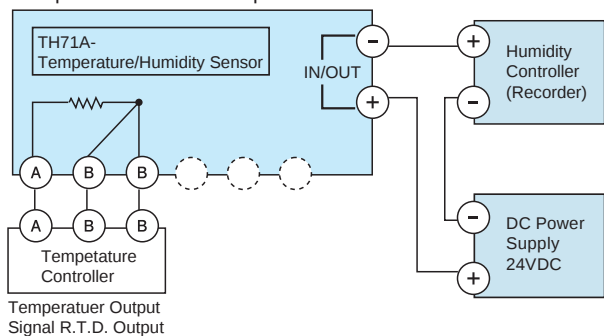
Humidity Sensing Element:	Marcromolecule humidity sensor
Operating Ambient Temperature Range:	0 to 50°C
Humidity Measuring Range:	0 to 100% RH (no dew condensation) (practical range: 20 to 90% RH)
Measuring Accuracy:	±3% RH (at 25°C)
Humidity Output Signal	See ordering information.
Temperature Sensing Element:	R.T.D. Pt100, Class B, 1mA
Temperature Measuring Range:	0 to 50°C
Power Supply:	24V DC±10%
Current Consumption:	Approx. 3mA: when temperature = resistance output and humidity = voltage output Approx. 22mA: when temperature = resistance output and humidity = current output
Applicable standards:	RoHS directive supported
Stock Temperature:	- 10 to 60°C
Insulation Between Terminal and Case:	500V DC 20MΩ
Weight:	Approx. 150g
Please do not use in the environment of the following gases.	
1. Organic gas: Alcohols, Aldehyde, Ketone, Glycol, etc.	
2. Inorganic gas: Sulfur dioxide, Hydrochloric Acid and Ammonia	
3. Salty gas	

TERMINAL ARRANGEMENT & WIRING EXAMPLE

Output Signal
Humidity Voltage Output
R.T.D. Output



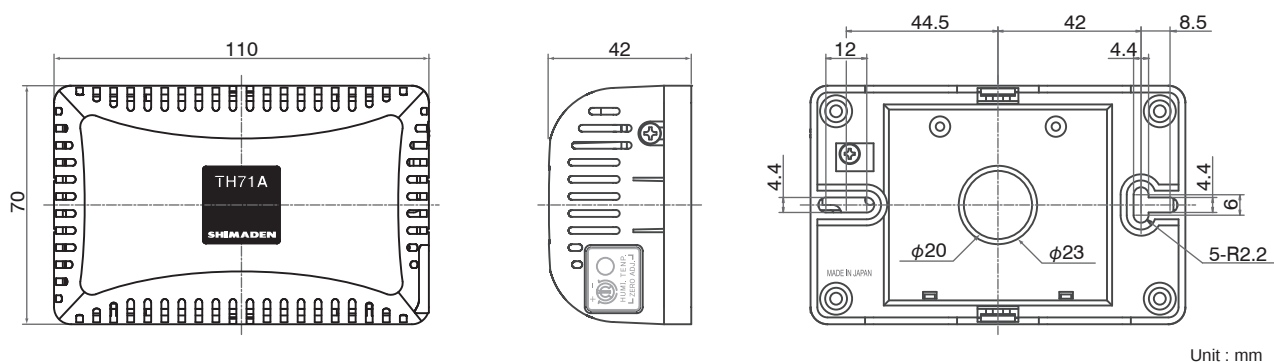
Output Signal
Humidity Current Output
Temperature R.T.D. Output



ORDERING INFORMATION

ITEMS	CODE	SPECIFICATIONS
SERIES	TH71A-	Temperature/Humidity Sensor (Sensing element self-contained type)
HUMIDITY OUTPUT SIGNAL	1	0 to 10mV DC/0 to 100%RH Output Resistance: 10Ω (linearized output)
	2	0 to 100mV DC/0 to 100%RH Output Resistance: 100Ω (linearized output)
	3	0 to 1V DC/0 to 100%RH Output Resistance: 1kΩ (linearized output)
	6	4 to 20mA DC/0 to 100%RH Load Resistance: 600Ω max.
	9	Others (Please consult before ordering)
TEMPERATURE OUTPUT SIGNAL	8	Pt100/DIN (three lead wire output) Class B
	9	Others (Please consult before ordering.)
MOUNTING DIRECTIONS (FACEPLATE DIRECTION ONLY)	1	Horizontal Direction
	2	Vertical Direction
REMARKS	0	Without
	9	With (Please consult before ordering.)

EXTERNAL DIMENSIONS & MOUNTING DRAWING



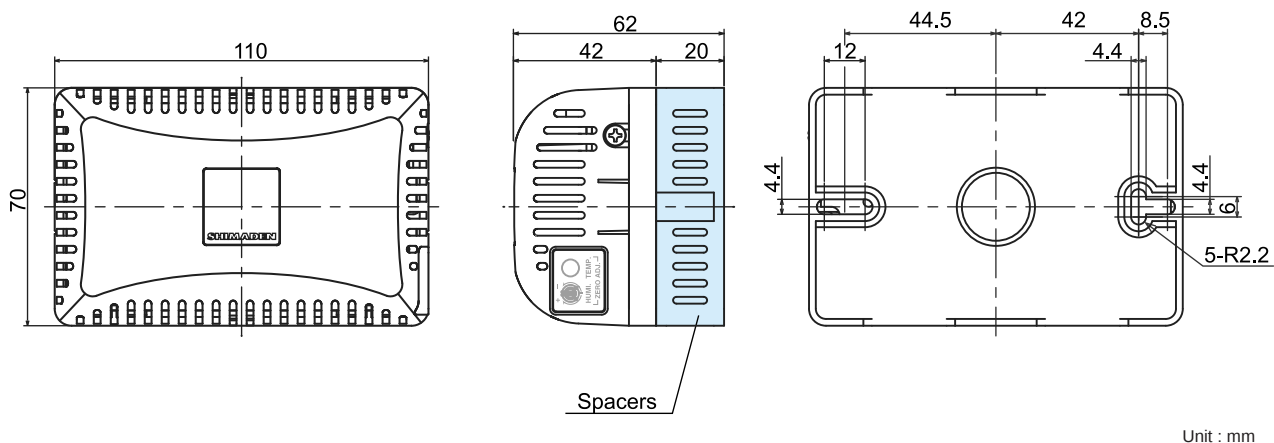
Spacers (sold separately)

Product Outline

In the case the sensor is subject to the influence of humidity/temperature from the wall surface on which the sensor is mounted, the spacer lifts up the sensor by 20 mm from the wall surface, contributing to more precise measurements

CODE	QTS001
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External dimensions of the TH71A/T71A/H71A series sensors with spacers



Features

- Wall-mounted resistance thermometer for general air conditioning
- RoHS directive supported



Vertical Mounting Type

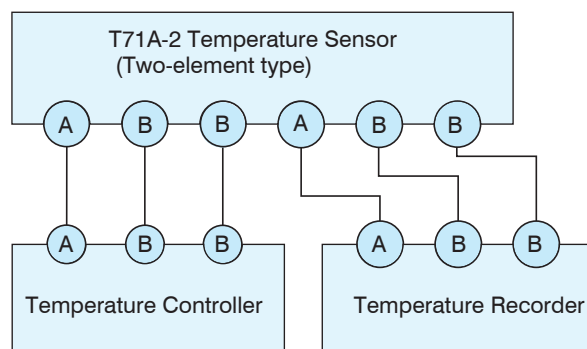
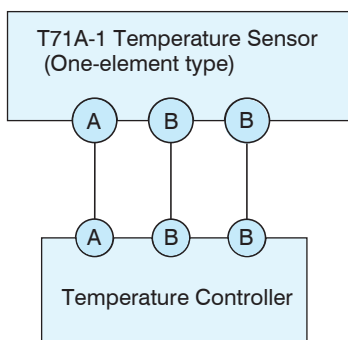


Horizontal Mounting Type

SPECIFICATIONS

Sensing Element:	R.T.D., Pt100
Applicable Temperature Range:	-10 to 60°C
Applicable standards:	RoHS directive supported
Insulation Between Terminal and Case:	500V DC 20MΩ
Weight:	Approx. 100g
Please do not use in the environment of the following gases.	
1. Organic gas: Alcohols, Aldehyde, Ketone, Glycol, etc. 2. Inorganic gas: Sulfur dioxide, Hydrochloric Acid and Ammonia 3. Salty gas	

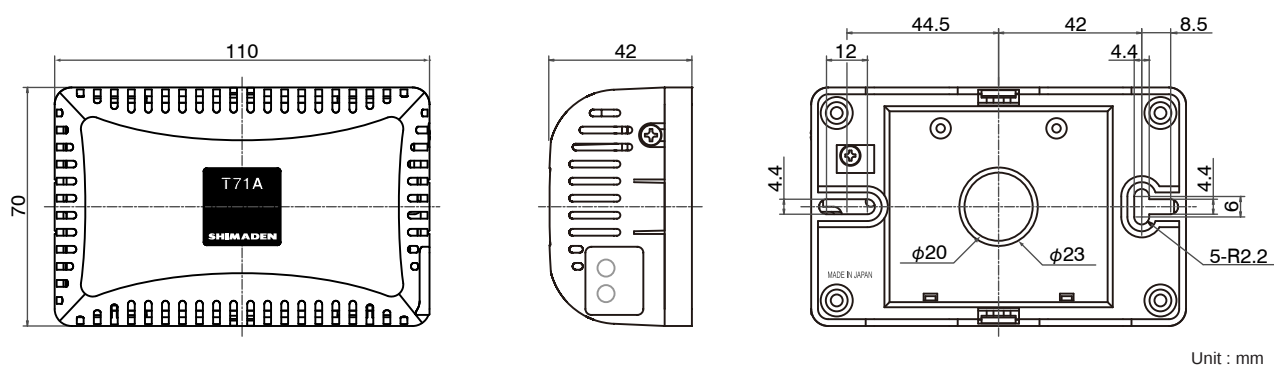
TERMINAL ARRANGEMENT & WIRING EXAMPLE



ORDERING INFORMATION

ITEMS	CODE	SPECIFICATIONS	
SERIES	T71A-	Temperature Sensor	
NUMBER OF ELEMENT	1	1	(One element)
	2	2	(Two element)
STANDARD	F	Pt100 /DIN (New JIS)	
CLASS	S	Class B	
	Q	Class A	
	X	Others (Please consult before ordering.)	
MOUNTING DIRECTIONS (FACEPLATE DIRECTION ONLY)	1	Horizontal Direction	
	2	Vertical Direction	
REMARKS	0	Without	
	9	With (Please consult before ordering)	

EXTERNAL DIMENSIONS & MOUNTING DRAWING



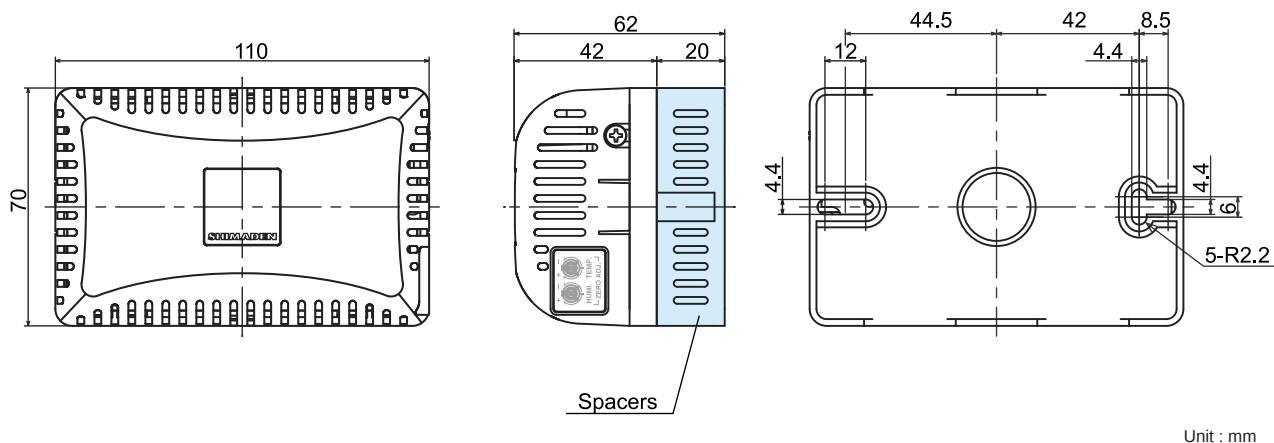
SPACERS (sold separately)

Product Outline

In the case the sensor is subject to the influence of humidity/temperature from the wall surface on which the sensor is mounted, the spacer lifts up the sensor by 20 mm from the wall surface, contributing to more precise measurements

CODE	QTS001
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External dimensions of the TH71A/T71A/H71A series sensors with spacers



Features

- The humidity detection unit incorporates a relative humidity sensor using polymer technology and a linearizer, providing linearized DC voltage or current output.
- The detection unit can be selected as either built-in or external.
- RoHS directive supported

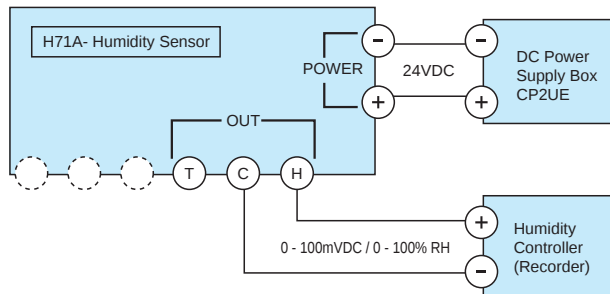


SPECIFICATIONS

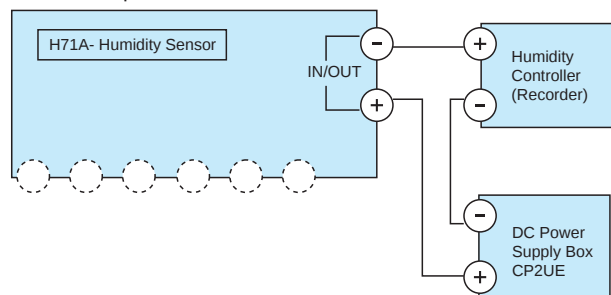
Humidity Sensing Element:	Macromolecule humidity sensor
Operating Ambient Temperature Range:	0 to 50°C
Humidity Measuring Range:	0 to 100% RH (practical range 20 to 90% RH)
Measuring Accuracy:	±3% RH (20-90% RH at 25°C)
Humidity Output Signal	See ordering information.
Input/Output signal line	Maximum 300m (when using 0.75mm ²) However, this does not apply when the temperature output signal is a resistive output.
Power Supply:	24V DC±10%
Current Consumption:	Approx. 3mA/Voltage output/Approx. 22mA/Current output
Applicable standards:	RoHS directive supported
Stock Temperature:	- 10 to 60°C
Insulation Between Terminal and Case:	500V DC 20MΩ
Weight:	Approx. 150g
Please do not use in the environment of the following gases.	
1. Organic gas: Alcohols, Aldehyde, Glycol, etc. 2. Inorganic gas: Sulfur dioxide, Hydrochloric Acid and Ammonia 3. Salty gas	

TERMINAL ARRANGEMENT & WIRING EXAMPLE

Output Signal
Voltage Output



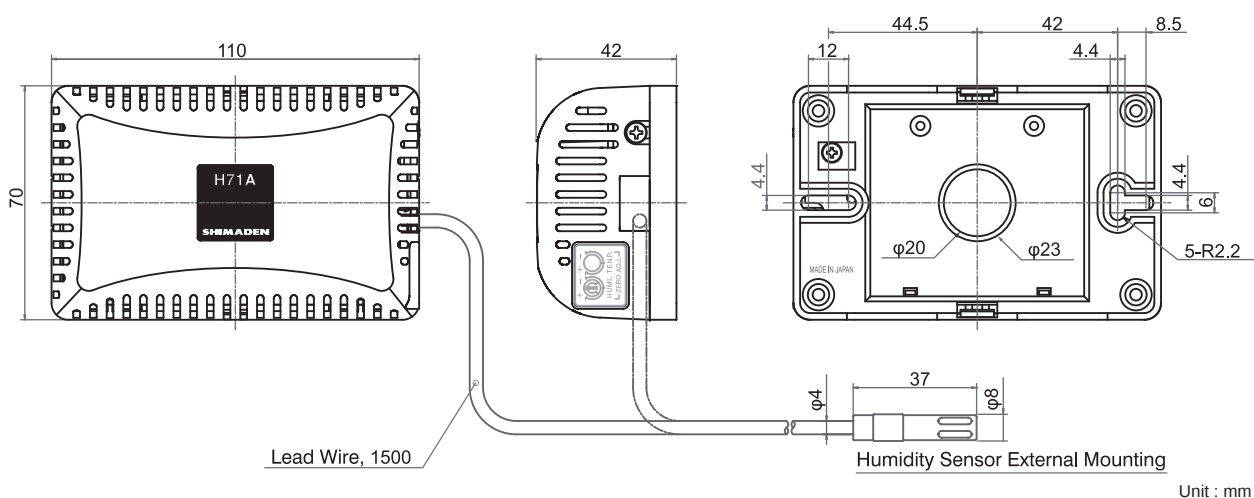
Output Signal
Current Output



ORDERING INFORMATION

ITEMS	CODE	SPECIFICATIONS	
SERIES	H71A-	Humidity Sensor	
TYPE OF HUMIDITY SENSOR	1	Self-contained type	
	2	Probe type (with lead 1.5m)	
HUMIDITY OUTPUT SIGNAL	1	0 to 10mV DC/0 to 100%RH Output Resistance: 10Ω (linearized output)	
	2	0 to 100mV DC/0 to 100%RH Output Resistance: 100Ω (linearized output)	
	3	0 to 1V DC/0 to 100%RH Output Resistance: 1kΩ (linearized output)	
	6	4 to 20mA DC/0 to 100%RH Load Resistance: 600Ω max.	
	9	Others (Please consult before ordering.)	
MOUNTING DIRECTIONS (FACEPLATE DIRECTION ONLY)	1	Horizontal Direction	
	2	Vertical Direction	
REMARKS	0	Without	
	9	With (Please consult before ordering)	

EXTERNAL DIMENSIONS & MOUNTING DRAWING



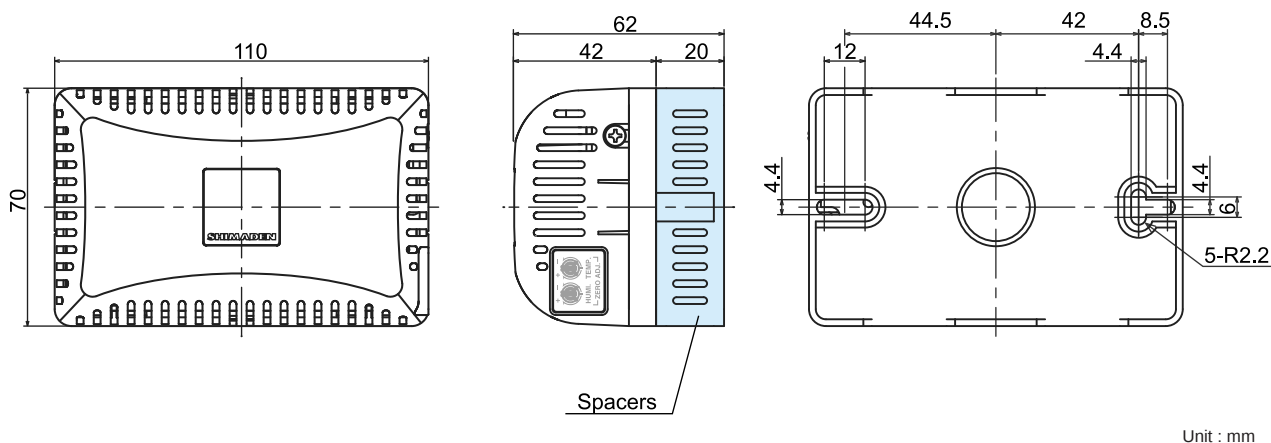
SPACERS (sold separately)

Product Outline

In the case the sensor is subject to the influence of humidity/temperature from the wall surface on which the sensor is mounted, the spacer lifts up the sensor by 20 mm from the wall surface, contributing to more precise measurements

CODE	QTS001
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External dimensions of the TH71A/T71A/H71A series sensors with spacers

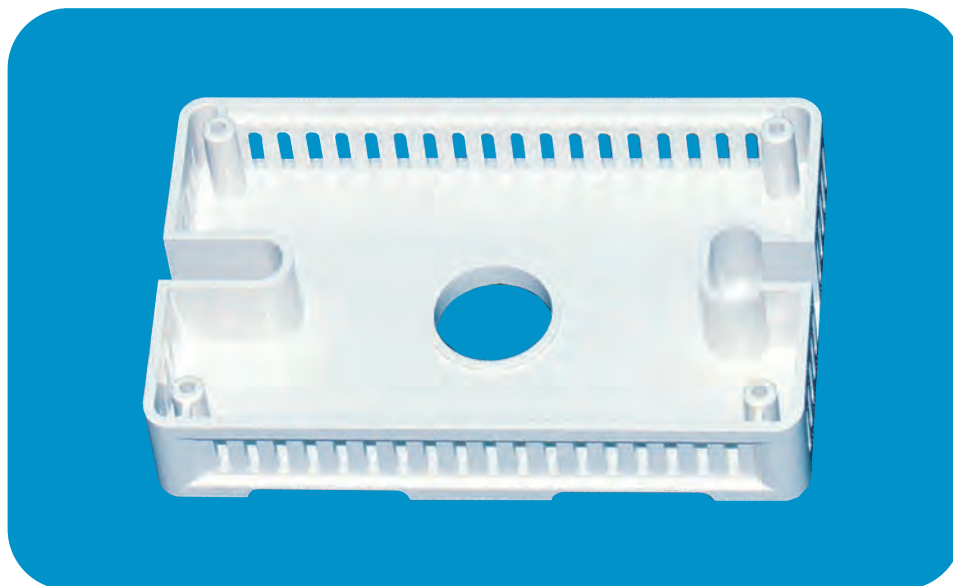


SPACERS FOR TH71A/T71A/H71A

SPACERS (Sold Separately)

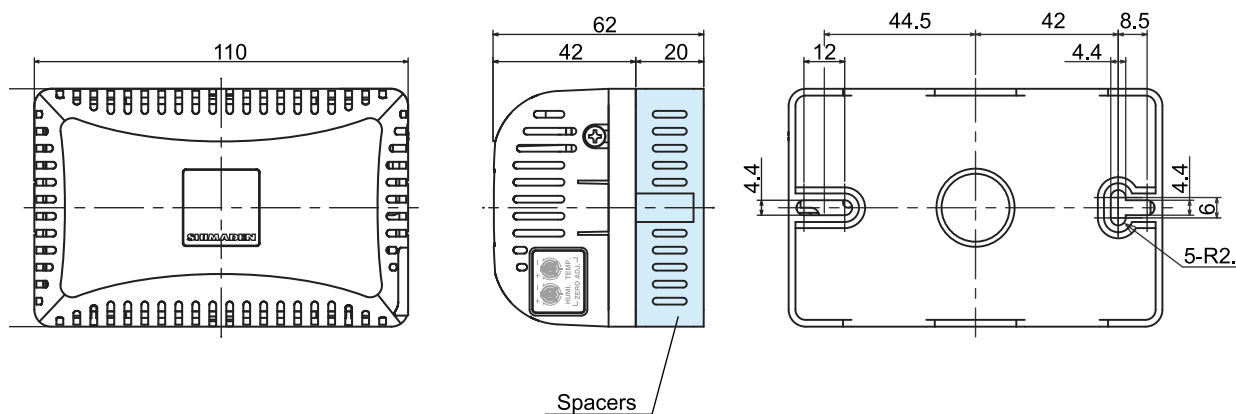
Product Outline

- Spacers for TH71A/T71A/H71A (sold separately)
- In the case the sensor is subject to the influence of humidity/temperature from the wall surface on which the sensor is mounted, the spacer lifts up the sensor by 20 mm from the wall surface, contributing to more precise measurements.



CODE : QTS001

External dimensions of the TH71A/T71A/H71A series sensors with spacers



Unit : mm

- The contents of this material are subject to change without notice.



WARNING

- * Be sure to follow the instruction manual when operating this device.
- * This device is designed for industrial use to control temperature, humidity and other physical values. Avoid using it for control of devices upon which human life is dependent.
- * If the possibility of loss or damage to your system or property as a result of failure of any parts of the process exists, proper safety measures must be made before the instrument is put into use so as to prevent the occurrence of trouble.

Head Office & Saitama Factory
ISO 9001/ISO14001 Certification Obtained

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