Room Humidity Sensor
Room Temperature/Humidity Sensor

■ Overview

This product is an electronic room sensor.
It is attached to the wall in the room to measure the relative humidity and temperature.
The humidity sensor (Model HY7045T1000) and temperature/humidity sensor (Model HTY7045T1100, HTY7045T1P00) are available.
This product is a highly accurate and reliable sensor using a resistance temperature detector (Pt100) as temperature sensing element and a polymer capacitive humidity detector as humidity sensing element developed by Azbil Corporation.
With a wide measurement range and excellent stability, it can be applied to various indoor applications including air conditioning for general buildings.

■ Features

- Wide temperature and/or humidity sensing range with high accuracy
- Excellent long-term stability
- High environmental resistance
- Quick response and high repeatability
- Compact (thin) and lightweight

IMPORTANT
- The measuring accuracy of this product is the value when it is shipped from the factory.
  Even if it is used in normal air, the output may be shifted depending on the operating environment. Periodical inspection is recommended.
- Corrosive gases or organic solvents may cause shift in humidity output or damage the product.
  if the product is used in an environment different from the ordinary air, please contact Azbil Corporation.

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Safety Precautions

Please read instructions carefully and use the product as specified in this manual.
Be sure to keep this manual nearby for quick reference.

Restrictions on Use

This product was developed, designed, and manufactured for general air conditioning use.

Do not use the product in a situation where human life may be at risk or for nuclear applications in radiation controlled areas. If you wish to use the product in a radiation controlled area, please contact Azbil Corporation.

Particularly when the product is used in the following applications where safety is required, implementation of fail-safe design, redundant design, regular maintenance, etc., should be considered in order to use the product safely and reliably.

- Safety devices for protecting the human body
- Start/stop control devices for transportation machines
- Aeronautical/aerospace machines

For system design, application design, instructions for use, or product applications, please contact Azbil Corporation.

Azbil Corporation bears no responsibility for any result, or lack of result, deriving from the customer's use of the product.

■ Recommended Design Life

It is recommended that this product be used within the recommended design life.

The recommended design life is the period during which you can use the product safely and reliably based on the design specifications.

If the product is used beyond this period, its failure ratio may increase due to time-related deterioration of parts, etc.

The recommended design life during which the product can operate reliably with the lowest failure ratio and least deterioration over time is estimated scientifically based on acceleration tests, endurance tests, etc., taking into consideration the operating environment, conditions, and frequency of use as basic parameters.

The recommended design life of this product is shown in the following table.

The recommended design life assumes that maintenance, such as replacement of the limited life parts, is carried out properly.

For maintenance, refer to ■ “Maintenance” in this manual.

Product	Recommended design life
Room humidity sensor Room temperature/humidity sensor	8 years

■ Warnings and Cautions

⚠WARNING	Alerts users that improper handling may cause death or serious injury.
⚠CAUTION	Alerts users that improper handling may cause minor injury or material loss.

■ Signs

 Electric shock	Alerts users to possible hazardous conditions caused by erroneous operation or erroneous use. The symbol inside △ indicates the specific type of danger. (For example, the sign on the left warns of the risk of electric shock.)
 Disassemble	Notifies users that specific actions are prohibited to prevent possible danger. The symbol inside ⃠ graphically indicates the prohibited action. (For example, the sign on the left means that disassembly is prohibited.)
 General	Instructs users to carry out a specific obligatory action to prevent possible danger. The symbol inside ● graphically indicates the actual action to be carried out. (For example, the sign on the left indicates general instructions.)

⚠ WARNING	
 Electric shock	Before wiring or maintenance, be sure to turn off the power to this product. Failure to do so may result in electric shock or device failure.

⚠ CAUTION	
 General	Use this product under the operating conditions (for temperature, humidity, power, vibration, shock, mounting location, atmosphere, etc.) listed in the specifications. Failure to do so may cause fire or device failure.
 General	Take anti-lightning surge measures based on regional and building characteristics. Lightning may cause fire or critical damage to this product if protective measures are not taken.
 General	Provide a power circuit breaker for the power source to this product. The product does not have a power switch.
 General	For the sake of safety, installation and wiring must be performed by qualified personnel in accordance with all applicable safety standards. Failure to do so may cause fire or electric shock.
 Prohibition	Do not put a load or weight on this product. Doing so may damage the product.
 General	All wiring must comply with applicable codes and ordinances. Otherwise there is a danger of fire.

⚠ CAUTION	
 Prohibition	Do not disassemble or modify this product. Doing so may cause device failure or electric shock.
 General	If more than the rated power voltage is accidentally applied to this product, replace the product with a new one for your safety. Failure to do so may cause device failure or cause overheat.
 General	After wiring, attach the cover. Failure to do so may result in electric shock or device failure.
 General	To connect the wires to the product, use crimp terminal lugs with insulation. Failure to do so may cause short circuit leading to fire or device failure.
 General	When installing the product, be sure to connect the wires securely. Failure to do so may result in measurement error or cause overheating or device failure.

IMPORTANT
- Do not use transceivers or low-power wireless devices near this product. Doing so may cause radio wave interference and malfunction of the product.

■ Model Numbers

● Room humidity sensor

Model number	Power supply	Humidity output	Temperature output	Output wire connection	Company logo
HY7045T1000	24 V DC/AC common	1–5 V	– – – – –	Lead wire output	Yes
HY7045T1000-1					No

● Room temperature/humidity sensor

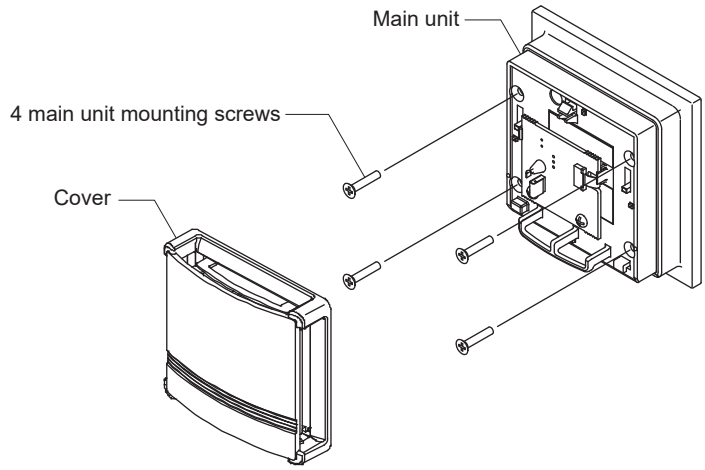
Model number	Power supply	Humidity output	Temperature output	Output wire connection	Company logo
HTY7045T1100	24 V DC/AC common	1–5 V	1–5 V	Lead wire output	Yes
HTY7045T1100-1					No
HTY7045T1P00			RTD (Pt100)		Yes
HTY7045T1P00-1					No

RTD: resistance temperature detector

Accessories

This product consists of the cover and main unit.
The following items are shipped with this product.

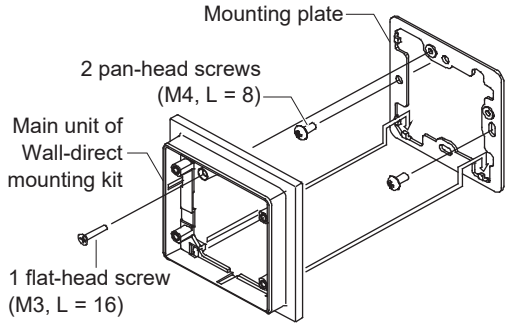
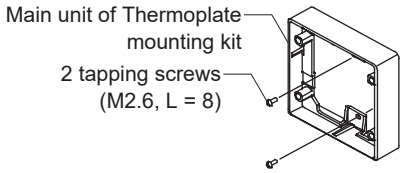
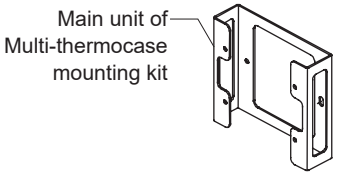
- Main unit mounting screws (M3 flat-head screw, L = 16 mm) : 4 pcs
- AI-7545JE, *Room Humidity Sensor (Model HY7045) Room Temperature/Humidity Sensor (Model HTY7045) Installation Instructions*: 1 pc



● Optional parts

This product is used with the dedicated mounting kit (optional parts) , auxiliary devices, etc.

Dedicated mounting kits

Model number	Item	Contents	
83165803-001	Wall-direct mounting kit		Wall-direct mounting kit: 1 pc Mounting plate: 1 pc Screws supplied with the product M4 pan-head screws, L = 8: 2 pcs M3 flat-head screw, L = 16: 1 pc
83165803-011	Thermoplate mounting kit		Thermoplate mounting kit: 1 pc Screws supplied with the product M2.6 tapping screws, L = 8: 2 pcs
83165803-021	Multi-thermocase mounting kit		Mounting screws are included in the Multi-thermocase (optional parts) .

Auxiliary devices

Model number	Item	Remarks	
QY1100C	Thermoplate for individual room control	Rotary switch	
QY1100D			
DY2000A1022	Thermoplate	For 1 sensor, lengthwise	
DY2000A1023		For 1 sensor, crosswise	
DY2000A2023		For 2 sensors, crosswise, mounting on the outlet box	
DY2000A2024		For 2 sensors, crosswise, mounting on the switch box	
DY2000A3022		For 3 sensors, crosswise	
DY2000A1021	Thermoplate for open wiring	For 1 sensor, square	Thermoplate for open wiring is used for open wiring installation.
DY2000A2021		For 2 sensors, crosswise	
DY2000A3021		For 3 sensors, crosswise	
TY1100Z	Multi-thermocase	—	
83104506-020	Safe keeping cover	10 pcs	

■ Specifications

● Room humidity sensor

Item	Specification
Measuring range	0–100 % RH
Measuring accuracy	± 3 % RH (20–80 % RH, 15–35 °C)
Output signal	1–5 V DC (linear characteristic for 0–100 % RH) , minimum 50 kΩ input impedance of the controller in connection
Time constant	40 sec max. (at 0.15 m/s air velocity)

● Room temperature/humidity sensor

Item			Specification
Measuring range	Temperature		0–50 °C
	Humidity		0–100 % RH
Measuring accuracy	Temperature	RTD (Pt100, 3-wire)	± 0.3 °C (0–50 °C) Note: Applied current: 1 mA, air velocity: 0.15 m/s down flow
		Voltage output (1–5 V)	± 0.3 °C (15–35 °C) ± 0.4 °C (10–15 °C, 35–50 °C) Note: Air velocity: 0.15 m/s down flow
	Humidity		± 3 % RH (20–80 % RH, 15–35 °C)
Output signal	Temperature	RTD (Pt100, 3-wire)	100 Ω / 0 °C RTD (Pt100) , conforming to JIS C 1604 Class A, 3-wire
		Voltage output (1–5 V)	1–5 V DC (linear characteristic for 0–50 °C) , minimum 50 kΩ input impedance of the controller in connection
	Humidity		1–5 V DC (linear characteristic for 0–100 % RH) , minimum 50 kΩ input impedance of the controller in connection
Time constant	Temperature		4.5 min max. (at 0.15 m/s air velocity)
	Humidity		40 sec max. (at 0.15 m/s air velocity)

JIS: Japanese Industrial Standards

● Common specifications

Item			Specification		
Power supply			24 V AC, -15/+10 % (50/60 Hz) 24 V DC ±10 %		
Power consumption			24 V AC: 1.0 VA max. 24 V DC: 200 mW max.		
Insulation resistance			500 V DC, 20 MΩ min. (between case and terminals)		
Withstand voltage			When applying 500 V AC for 1 min, leakage current: 1 mA max. (between case and terminals)		
Environmental conditions			Rated operating conditions	Marginal operating conditions	Transportation/ storage conditions
	When measuring temperature	Ambient temperature	0–50 °C	0–60 °C	-20–70 °C
		Ambient humidity	0–100 % RH (without condensation)		5–95 % RH (without condensation) (60 °Ctd or less)
	When measuring humidity	Ambient temperature	15–35 °C	0–60 °C	-20–70 °C
		Ambient humidity	20–80 % RH (without condensation)	0–100 % RH (without condensation)	5–95 % RH (without condensation) (60 °Ctd or less)
	Vibration		1.96 m/s² max. (10–150 Hz)		9.8 m/s² max. (10–150 Hz)
	Air velocity		0.1–0.5 m/s	0–5 m/s	-
Color	Cover, base		Pale gray (BN-85, Japan Paint Manufacturers Association in 2003)		
Main materials	Cover, base		PC resin		
Weight			Approx. 110 g		
Connection			Lead wire (0.75 mm^2, length 300 mm)		

■ Dimensions

● Main unit

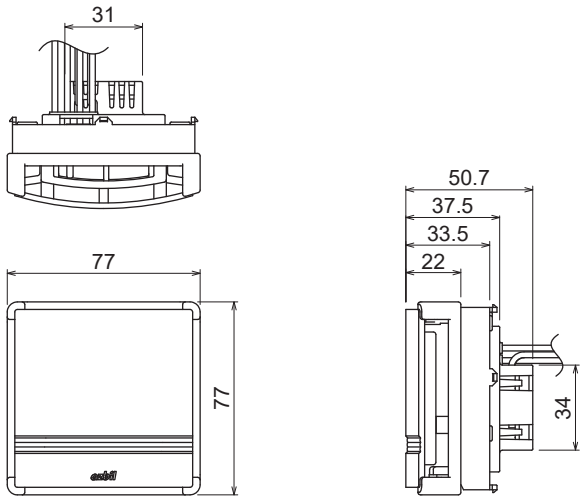


Figure 1. Main unit (mm)

● Main unit and Thermoplate mounting kit

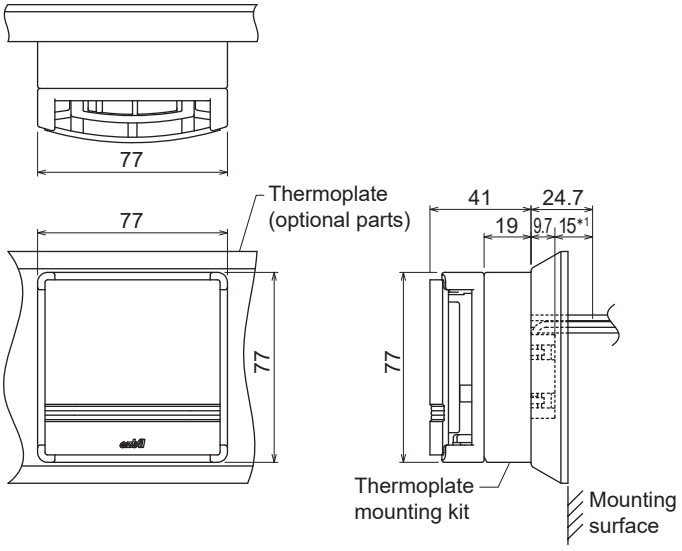


Figure 4. Dimensions when mounted on the Thermoplate mounting kit (mm)

● Main unit and Wall-direct mounting kit

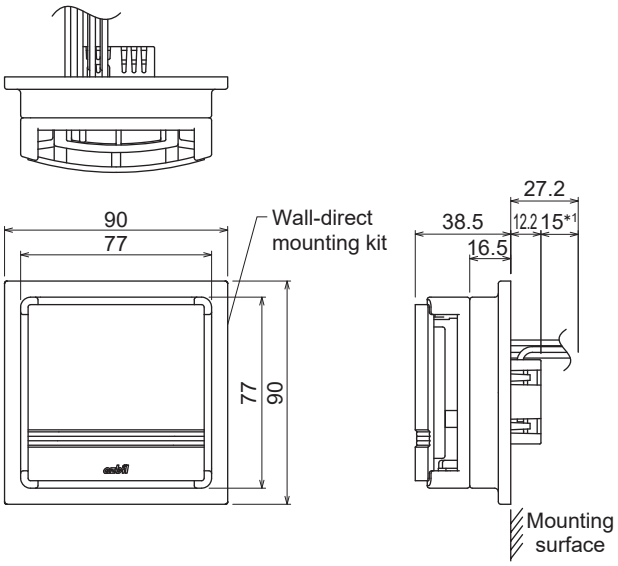


Figure 2. Dimensions when mounted on Wall-direct mounting kit (mm)

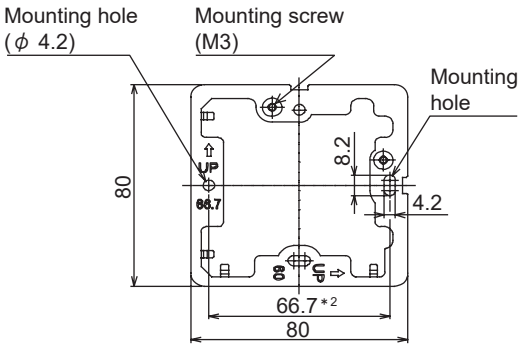


Figure 3. Surface of the mounting plate (mm)

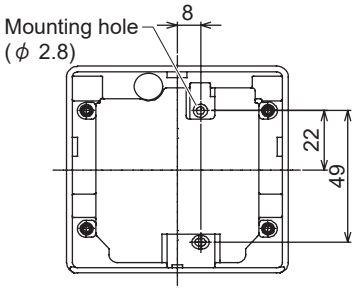


Figure 5. Surface of Thermoplate mounting kit (mm)

*1 When installing, secure more than 15 mm clearance for wiring between the back of the main unit and the wall.

*2 JIS outlet box and box cover are used, mounting dimension 66.7 mm (JIS C 8340 (1999))

● **Main unit and Multi-thermocase mounting kit**

The main unit shown below is one whose cover is detached.

If it is mounted in the Multi-thermocase (optional parts) , the cover of the main unit is not used.

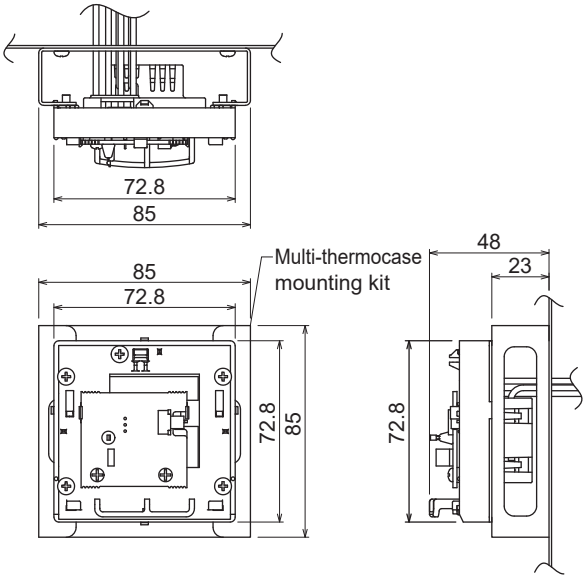


Figure 6. Dimensions when mounted in the Multi-thermocase mounting kit (mm)

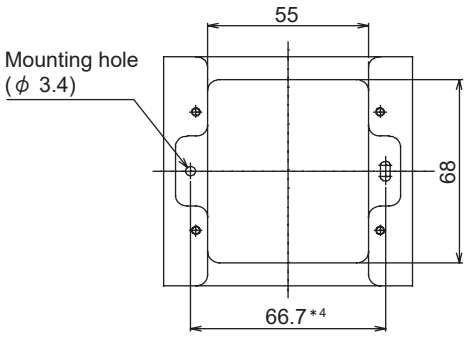


Figure 7. Surface of the Multi-thermocase mounting kit (mm)

*4 Mounting plate of the Multi-thermocase and mounting dimensions

■ Installation

For installing the sensor, specialized skills such as for instrumentation work, electrical work, etc. are required. Persons with the specialized skills should install the sensor reading this manual.

⚠ CAUTION

General

Use this product under the operating conditions (for temperature, humidity, power, vibration, shock, mounting location, atmosphere, etc.) listed in the specifications.
Failure to do so may cause fire or device failure.

⚠ CAUTION

General

For the sake of safety, installation and wiring must be performed by qualified personnel in accordance with all applicable safety standards.
Failure to do so may cause fire or electric shock.

● **Installation location**

IMPORTANT
- Installation location of the sensor largely affects temperature/humidity control.
  Carefully select the location.
- If the sensor is used in the following special environments, please contact Azbil Corporation.
  - In a chemical atmosphere such as an organic solvent, the output value may be shifted.
  - Corrosive gas, organic solvent, and other chemicals contained in the atmosphere can cause measuring error of the sensor, shorten its service life, or damage it.

Install the sensor on a wall in the following conditions.

- Representative temperature and humidity in the room/zone can be measured (approx. 1.5 m high above the floor) .
- Ambient air velocity is about 0.1–0.5 m/s.
- There is enough maintenance space left in front of the sensor.

● **Prohibited installation location**

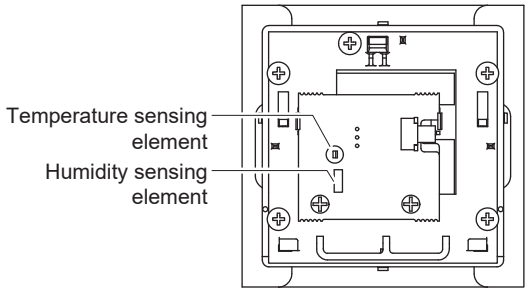
Do not install the sensor on a wall in the following conditions.

- Heat (generated by office device or equipment, for example) stays on.
- Air circulation is interfered (by furniture or door, for example) .
- Temperature and/or humidity sensing is affected by draft, downdraft, and hot/cold air from water pipes/ducts.
- Sensing is affected by weather conditions (including sunlight and outdoor air) .
- There is vibration.
- Dew condensation occurs in the sensor.
- Water drops on the sensor.

- Corrosive gas, organic solvent, or other chemicals is contained in the atmosphere.
- Chemicals or oils adhere.
  When they adhered, wipe them immediately with a dry soft cloth.
  If chemicals or oils remain on the case, chemical cracks may be made on it.
- Do not install the sensor outdoors or in a duct.
- Do not horizontally install the sensor directly on a ceiling surface.

● Notes for installation

IMPORTANT • Do not touch the temperature and humidity sensing elements on the PCB assembly (Fig. 8) when removing/attaching the cover and when installing the main unit. Measuring accuracy may drop.



Note: The temperature/humidity sensor is illustrated as an example.
For the humidity sensor, only the humidity sensing element is affected.

Figure 8. Temperature/humidity sensing elements

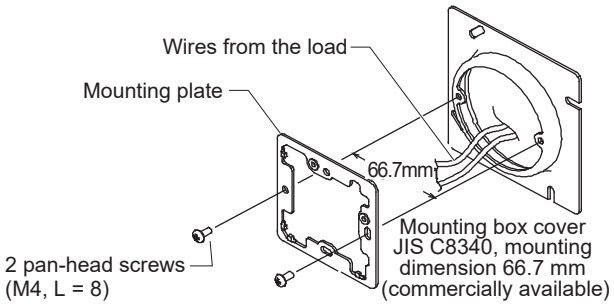
- Use the dedicated mounting kit (optional parts) suitable for your application.
- Do not allow any refuse such as an electric wire scrap to get inside the sensor.
- Do not get a cable caught between the sensor and the mounting surface.
- When attaching the cover, carefully handle the sensor not to damage the temperature/humidity sensing elements.
- Be aware that if the sensor is horizontally installed not only on the ceiling surface, sufficient ambient air velocity may not be obtained.
- If air infiltrates to the rear side of the sensor from the inside of the installed wall through the outlet box, shut off the air by sealing the outlet box.
- After installation, leave the sensor well so that it adapts to ambient conditions (atmospheric environment).

● Installation procedure

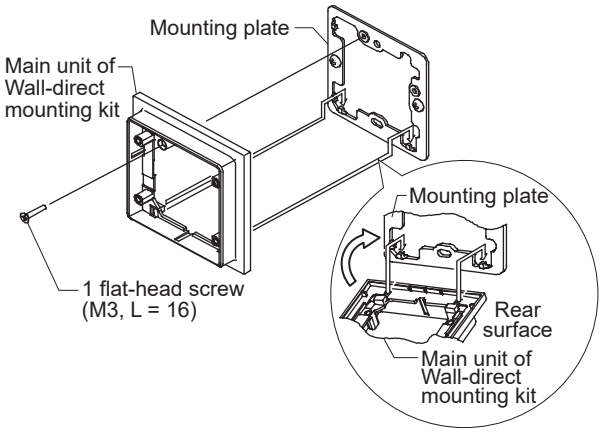
There are several methods for installing the sensor, Wall-direct mounting, Thermoplate for open wiring mounting,Thermoplate mounting, and Multi-thermocase mounting.

Wall-direct mounting

(1) Attach the mounting plate of Wall-direct mounting kit to the outlet box cover (JIS C8340:1999, mounting dimension for outlet box 66.7 mm) on the mounting surface.
Use the 2 screws (M4, pan-head, L = 8) supplied with the sensor.

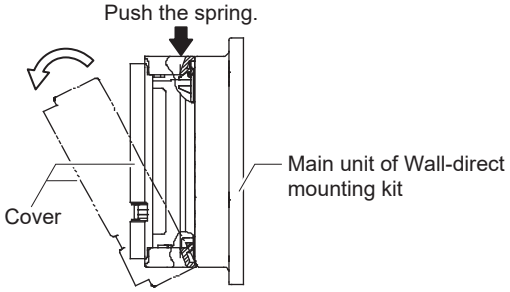


(2) Attach the main unit of the Wall-direct mounting kit to the mounting plate.
Use the 1 screw (M3, flat-head, L = 16) supplied with the sensor.



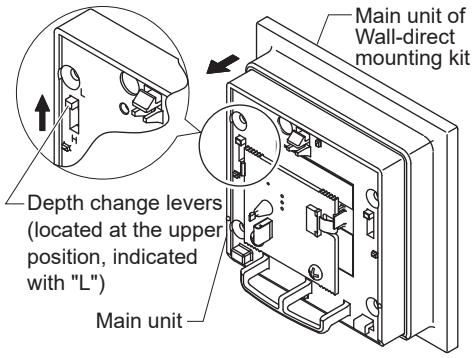
(3) Connect the lead wires of the main unit and the wires from the load.
Refer to Figs. 17 and 18 in ■ “Wiring.”

(4) Detach the cover of the main unit.
Push the spring, located inside the top of the main unit, using a thin rod to remove the cover.

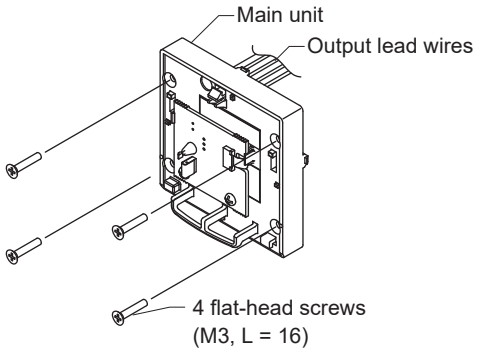


IMPORTANT • Do not touch the temperature and humidity sensing elements on the PCB assembly (Fig. 8) when removing/attaching the cover and when installing the main unit.
Measuring accuracy may drop.

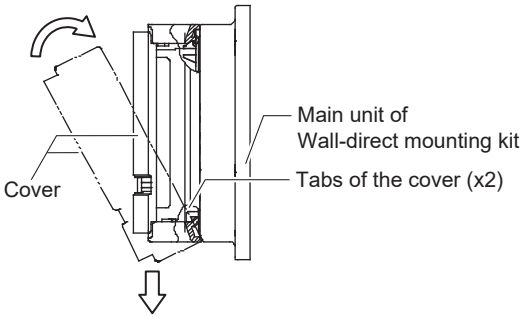
(5) Set the depth change levers on the both sides of the main unit to the upper position (indicated with "L") .



(6) Attach the main unit to the main unit of the Wall-direct mounting kit.
Use the 4 screws (M3, flat-head, L = 16) supplied with the sensor.

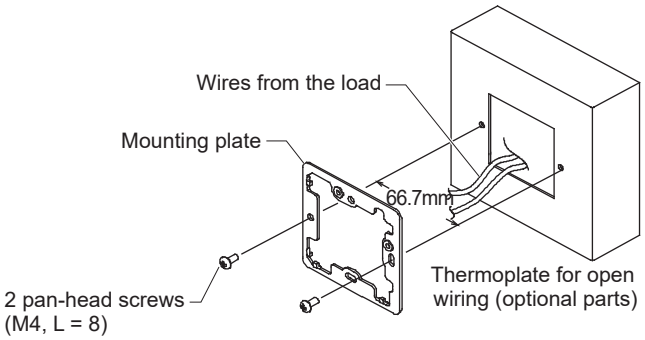


(7) Attach the cover back to the main unit.
Engage the tabs (x2) located on the lower part of the cover with the slots (x2) on the lower part of the main unit. Then fix the cover with the spring, located on the top of the main unit of the sensor.

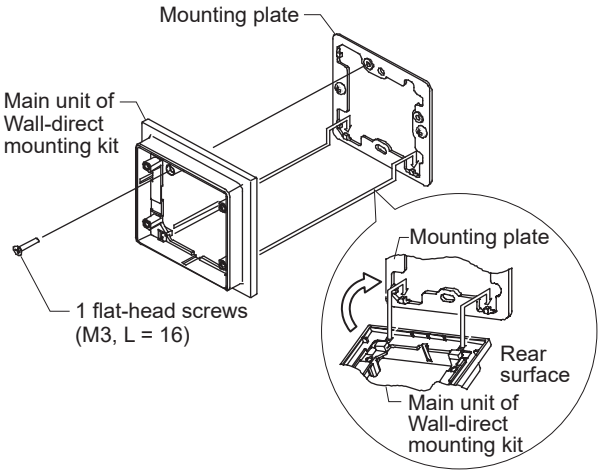


Thermoplate for open wiring mounting

(1) Attach the mounting plate to Thermoplate for open wiring.



(2) Attach the main unit of the Wall-direct mounting kit to the mounting plate.



(3) Connect the lead wires of the main unit and the wires from the load.
Refer to Figs. 17 and 18 in ■ “Wiring.”

(4) Detach the cover of the main unit.
Refer to step (4) in Wall-direct mounting.

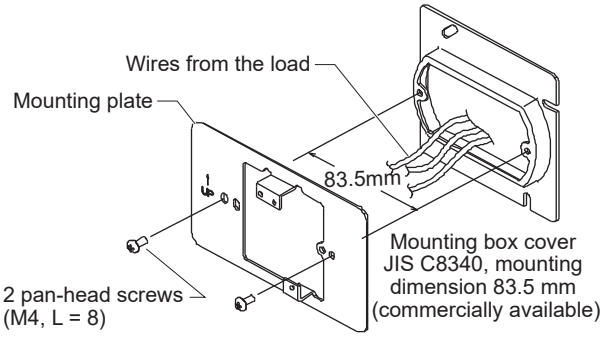
(5) Set the depth change levers on the both sides of the main unit to the upper position (indicated with "L") .
Refer to step (4) in Wall-direct mounting.

(6) Attach the main unit to the main unit of the Wall-direct mounting kit.
Use the 4 screws (M3, flat-head, L = 16) supplied with the sensor. Refer to step (6) in Wall-direct mounting.

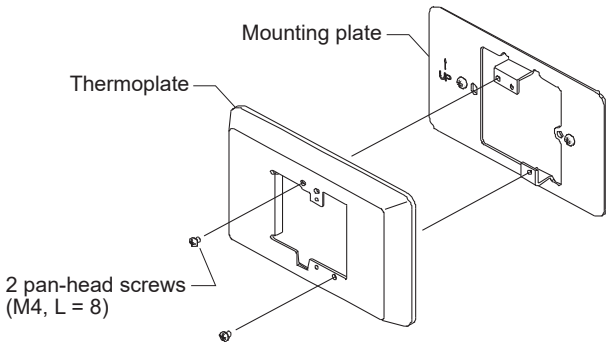
(7) Attach the cover back to the main unit.
Refer to step (7) in Wall-direct mounting.

Thermoplate mounting

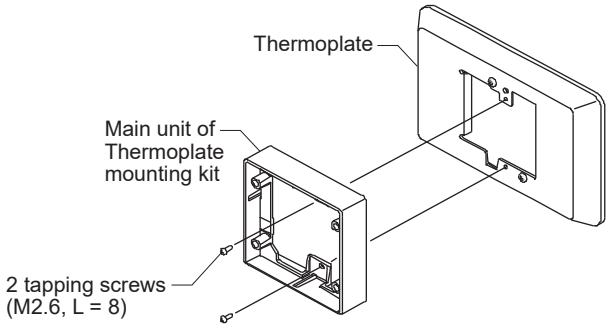
(1) Attach the mounting plate of Thermoplate to the outlet box cover (JIS C8340:1999, mounting dimension for switch box 83.5 mm) on the mounting surface.



(2) Attach the Thermoplate to the mounting plate.



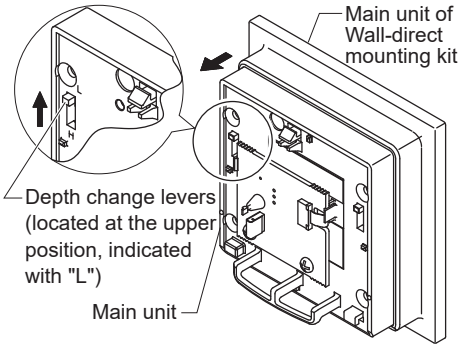
(3) Attach the main unit of the Thermoplate mounting kit to the Thermoplate.



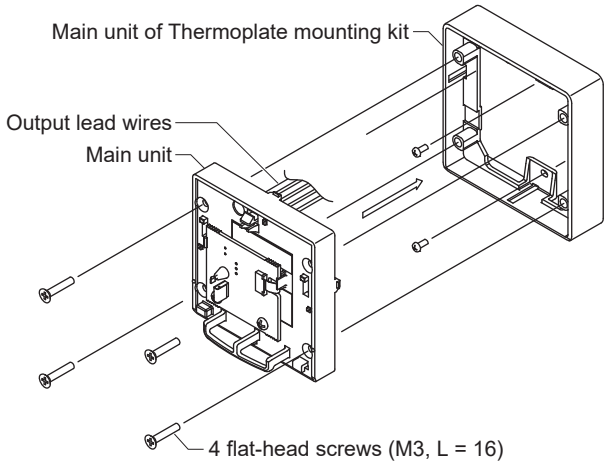
(4) Connect the lead wires of the main unit and the wires from the load.
Refer to Figs. 17 and 18 in ■ “Wiring.”

(5) Detach the cover of the main unit.
Refer to step (4) in Wall-direct mounting.

(6) Set the depth change levers on the both sides of the main unit to the upper position (indicated with "L") .



(7) Attach the main unit to the Thermoplate mounting kit.
Use the 4 screws (M3, flat-head, L = 16) supplied with the sensor.



(8) Attach the cover back to the main unit.
Refer to step (7) in Wall-direct mounting.

Multi-thermocase mounting

When attached to the Multi-thermocase, remove the cover of the main unit.

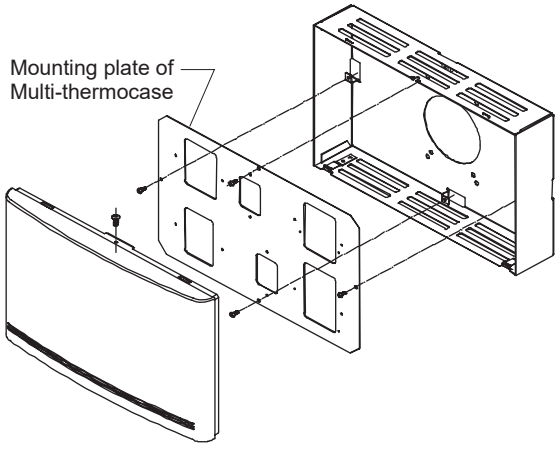
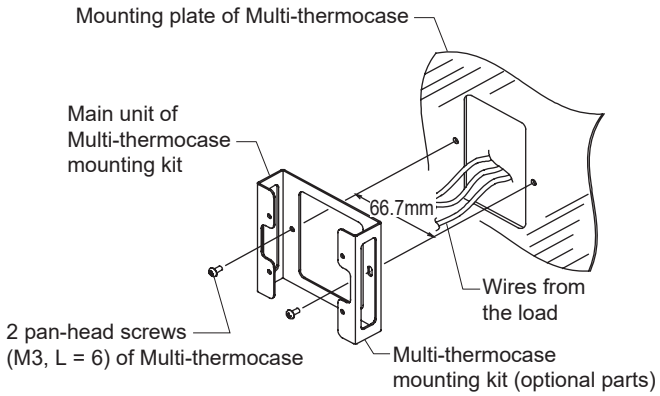


Figure 9. Multi-thermocase

(1) Attach the main unit of the Multi-thermocase mounting kit to the mounting plate of the Multi-thermocase.

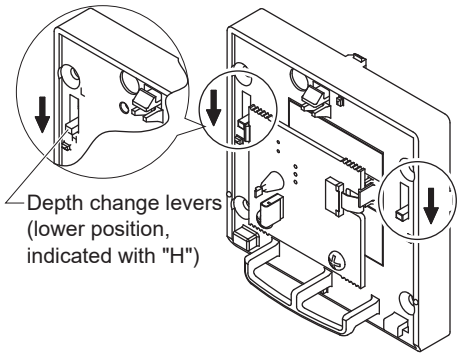


(2) Connect the lead wires of the main unit and the wires from the load.
Refer to Figs. 17 and 18 in ■ “Wiring.”

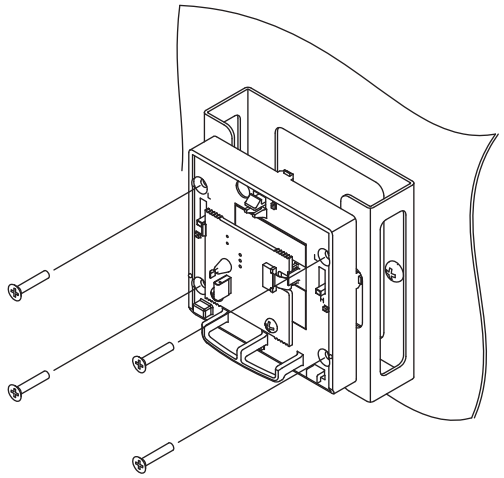
(3) Detach the cover of the main unit.
Refer to step (4) in Wall-direct mounting.

(4) Set the depth change levers on the both sides of the main unit to the lower position (indicated with "H”) .

IMPORTANT • When attaching to the Multi-thermocase, set the depth change levers on the both sides of the main unit to the lower position (indicated with "H”) .



(5) Attach the main unit to the Multi-thermocase mounting kit.
Use the 4 screws (M3, flat-head, L = 16) supplied with the sensor.



● **Protection form heat radiation, heat conduction, etc.**

To protect the measuring accuracy from disturbances, change the the position (height) of the temperature/humidity sensing elements as described below.

(1) Remove 4 mounting screws of the sensor.

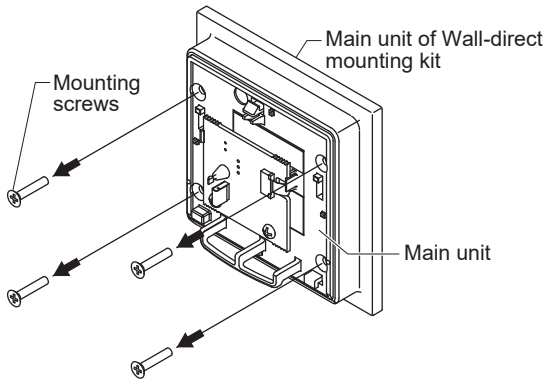


Figure 10

(2) Raise the main unit from the Wall-direct mounting kit. 9 mm max. can be raised.

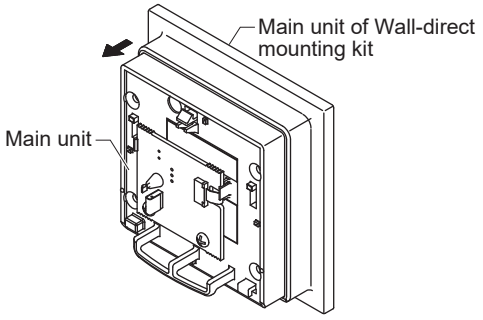
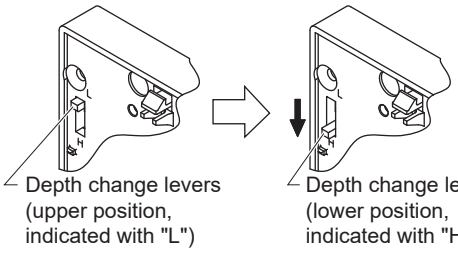


Figure 11

(3) Set the depth change levers down, located on the both sides on the main unit.

Note: The levers are factory-set at the upper "L" position.



(4) Attach the main unit to the main unit of the Wall-direct mounting kit with the 4 mounting screws.

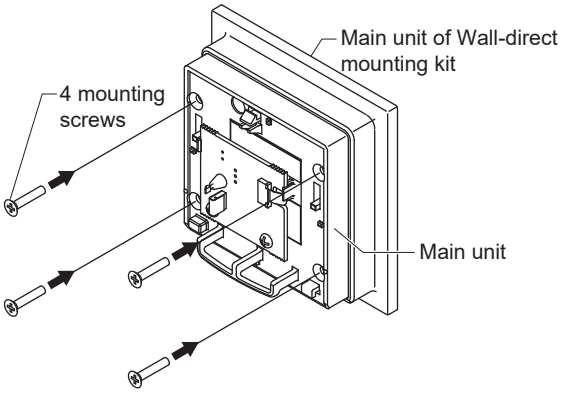


Figure 12

The main unit should protrude from the wall as shown in Figure 13.

Notes:

- Effect of the countermeasure for disturbances varies depending on its environment installed.
- Also in the case of Thermoplate mounting, install the sensor in the same procedure.

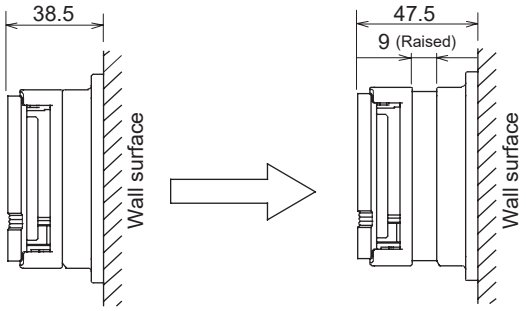


Figure 13

■ Wiring

For wiring the sensor, specialized skills such as for instrumentation work, electrical work, etc. are required. Persons with the specialized skills should install the sensor reading this manual..

⚠ WARNING	
Electric shock	Before wiring or maintenance, be sure to turn off the power to this product. Failure to do so may result in electric shock or device failure.

⚠ CAUTION	
General	For the sake of safety, installation and wiring must be performed by qualified personnel in accordance with all applicable safety standards. Failure to do so may cause fire or electric shock.
General	All wiring must comply with applicable codes and ordinances. Otherwise there is a danger of fire.

IMPORTANT • After wiring, attach the cover. Failure to do so may result in measurement error.

● Wiring diagrams

Lead wire connection type

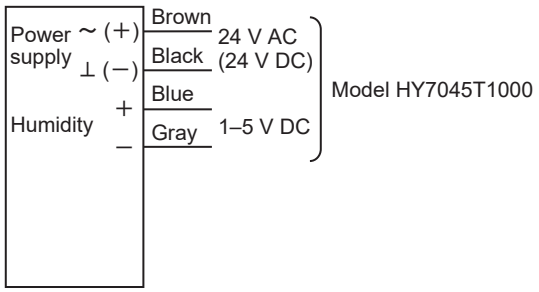


Figure 14. Wiring diagram (Room humidity sensor, 24 V AC/DC common power supply type)

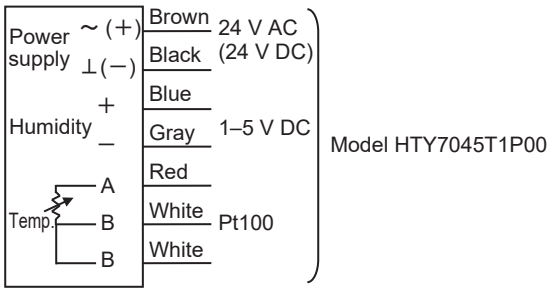


Figure 15. Wiring diagram (Room temperature/humidity sensor, 24 V AC/DC common power supply type)

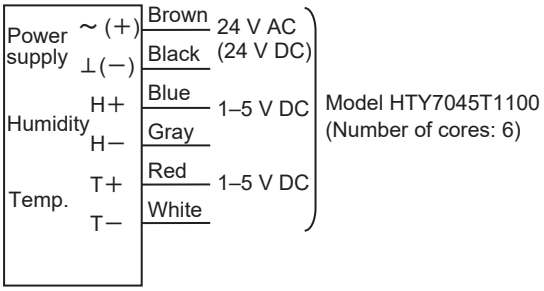


Figure 16. Wiring diagram (Room temperature/humidity sensor, 24 V AC/DC common power supply type, temperature output: 1–5 V DC type)

● Notes for wiring

IMPORTANT
- Do not connect the lead wires for temperature and humidity outputs to the power supply lines.
  Doing so may cause smoke, burnout, or device failure. Make sure all the wires are correctly connected before supplying power
- Do not share the 24 V AC transformer with other products.

For power supply wiring and temperature/humidity output wiring, 1.25 mm^2 or greater shielded multi-core cables (CVV-S) are recommended.
1.25 mm^2 or greater IV cable is also connectable. Be sure to ground the shielding on the controller side.
The maximum cable length is 100 m.
For the wiring length, refer to the Specifications/ Instructions of the controllers to which the sensor is connected.

● Power supply wiring method

Connect the sensor as described below.

When installing the sensor newly

- DC power supply

IMPORTANT
- 24 V DC power supply can be shared. However, wire the brown wire (+), blue wire (+), black wire (-), and gray wire (-) as illustrated in Fig. 17.

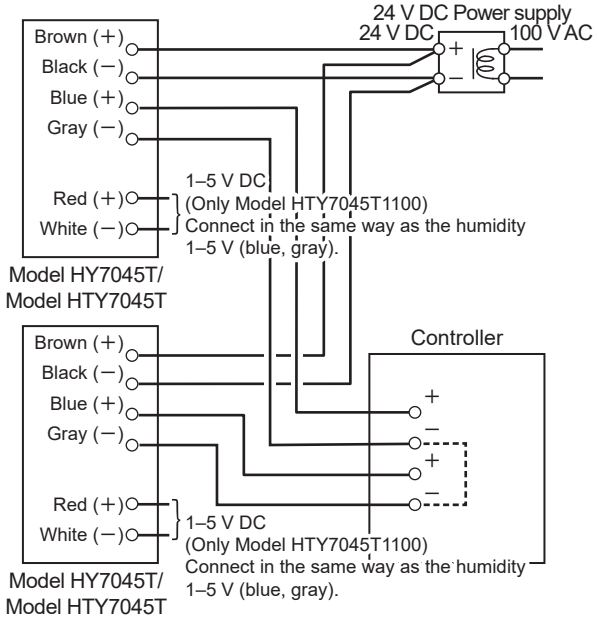


Figure 17

- AC transformer (24 V AC power supply)

IMPORTANT
- The AC transformer (24 V AC) cannot be shared.
  The same number of AC transformers (24 V AC power supply) as the sensors are required.

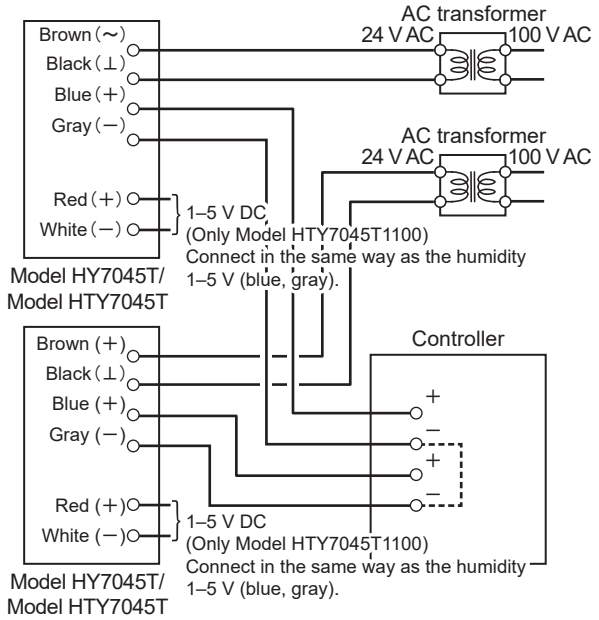


Figure 18

When replacing the existing sensor

IMPORTANT • If two or more sensors are used, the same number of AC transformers (24 V AC power supply) as the sensors are required.
Do not share the 24 V AC transformer.

If replacing the existing products with the sensors (including mixture of existing sensors), please check whether the AC transformer (24 V AC) is shared or not.

Note: For the DC power supply, it is the same as installing newly. (Fig. 17.)

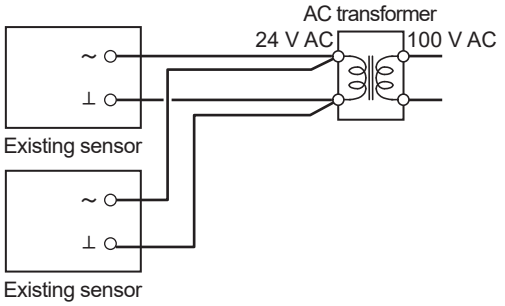


Figure 19. Wiring before replacement

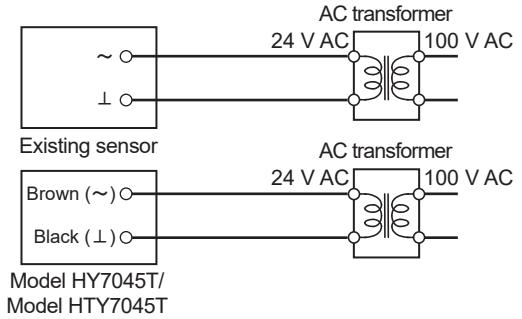


Figure 20. Wiring after replacement

● Notes for wiring power

When supplying power to the sensor via the AC transformer (24 V AC power supply), be sure to follow the instructions below.

IMPORTANT • If the common line (-) of the controller is non-insulated type, do not share the AC transformer (24 V AC power supply) for the humidity sensor or temperature/humidity sensor.

- If the AC transformer (24 V AC power supply) is shared, a loop will be made in the circuit and the sensor may fail.

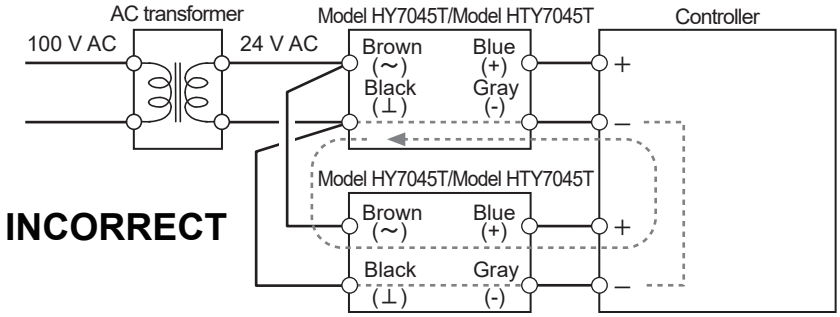


Figure 21. A loop is made in the circuit

- If the AC transformer (24 V AC power supply) is shared, and if the wires are incorrectly connected between the 1 brown wire (~) and the 2 black wire (⊥) or between the 1 black wire (⊥) and the 2 brown wire (~) as illustrated below, a short circuit will be made in the circuit through the common line and the sensor may fail.

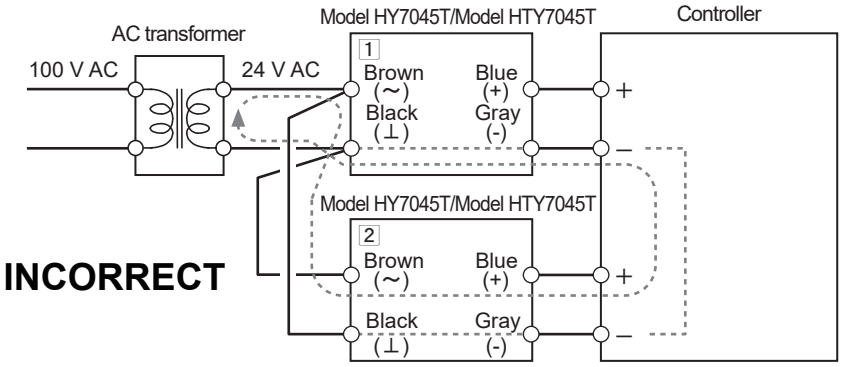


Figure 22. Incorrectly wired

● Note for signal wiring

Because of the induction current flowing from the humidity sensor or the temperature/humidity sensor to the controller input circuit or an inadequate time constant of the controller, the system may be affected by an electrical noise.
In order to suppress noise, check the following items.

- Use a controller, which receives signals from the sensor, with a low pass filter (40 dB or higher noise rejection ratio in the normal mode).
- If the noise rejection ratio is insufficient, provide an isolator on the controller input signal.
  No problem will occur for connecting the sensor to Azbil's controller.

IMPORTANT • When the sensor gets faulty, a room may be over humidified due to decline of its output.
Please take a countermeasure at the controller side.
• Corrosive gas, organic solvent, and other chemicals contained in the atmosphere can cause measuring error of the sensor, shorten its service life, or damage it.
if the sensor is used in an environment different from the ordinary air, please contact Azbil Corporation.

■ Handling

- Do not install equipment (such as office equipment, humidifier) near this product, which generates heat or steam.
- Reconfirm that the wiring is done correctly.

■ Maintenance

The temperature/humidity sensor is inspected and its accuracy is tuned when it is shipped from the factory.
No field adjustment is required.
The sensor should be inspected as described below.

● Regular inspection

According to the amount of dust in the air and the condition of dirt, determine the cycle for inspection and check the sensing accuracy.
Check if the cover is clogged and clean it.

● Troubleshooting

Check the sensor according to table 1, if there is an abnormality, take necessary countermeasures. If the abnormality cannot be recovered after taking the countermeasures, please contact Azbil Corporation.

Table 1. Troubleshooting

Abnormal conditions	Possible causes	Countermeasures
No output Unstable output	Disconnected wires	Redo wiring.
	Power supply voltage	Secure the power supply voltage described in this manual.
	Damaged sensing element	Replace the sensor.
Measurement errors	Installation location/environment	Secure the installation location/environment described in this manual.
	Contamination or damage on the sensing element	Replace the sensor.

● Safe keeping

If the sensor is installed in an animal breeding facility or an operating room, and when the room is fumigated, attach the safe keeping cover (sold separately) over the sensor.

- Before removing the cover, check that fumigants are dried out.
  If fumigants remain on the case of the sensor, chemical cracks may be made on it.
- When removing the cover, pull it slowly and straightly.
  Do not apply excessive force, up and down, left and right, on the cover, or suddenly pull the cover out. Otherwise, the latch on the cover may be damaged.

■ Disposal

Dispose of this product as industrial waste in accordance with your local regulations.
Do not reuse all or any part of the product.

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CE This product complies with the following harmonised standards of the Electromagnetic Compatibility Directive (EMCD) and the Restriction of Hazardous Substances Directive (RoHSD) .

EMCD: EN 61326-1 Class B, Table 1 (for use in a basic electromagnetic environment)

RoHSD: EN 50581

Azbil Corporation
Building Systems Company

https://www.azbil.com/

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Specifications are subject to change without notice.