Installation Guide

Mounting

Location and Cover Removal (All)

Install the sensor on an inside wall where it can sense the average room temperature and be away from direct sunlight, heat sources, windows, air vents, and air circulation obstructions (curtains, furniture, etc.). It can be mounted on a hollow wall or (with a universal backplate HMO-6036) to a 2 x 4 inch handy box.

The cover is held to the black, back panel by three, small, round pegs that fit in the holes of the cover. The bottom peg is on a tab and snaps into the center bottom hole.

1. With a small Phillips screwdriver or hex wrench, press in and hold the tab button that snaps into the center hole on the bottom cover.
2. Carefully pull or pry the back panel from the front cover.

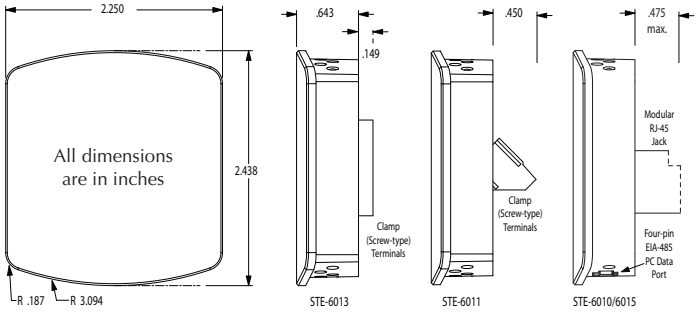
STE-6010/6013/6015 Only

Handy Box Installation (Recommended)

1. Mount a universal backplate HMO-6036 to the handy box using the two screws provided.
2. Remove the cover from the back panel.
3. Attach the back panel to the backplate using the two screws provided.
4. Attach the cable to the terminal block or jack according to the appropriate wiring diagram on the next page.
5. Replace the cover.

Hollow Wall Installation

1. Remove the cover from the back panel.
2. Using the back panel as a template, drill two holes for mounting screws (7/64 inches or 3 mm in diameter and 1.4 inches, 1-13/32 inches, or 35.6 mm apart) and cut a center hole (size needed is dependent on model) for the terminal block or jack.
3. Attach the back panel to the wall using two #6 self-threading screws. (Plastic anchors are recommended, and the size of the holes will then need adjusting.)
4. Attach the cable to the terminal block or jack according to the appropriate wiring diagram on the next page.
5. Replace the cover.



STE-6011 Only

Handy Box Installation (Recommended)

1. Mount a universal backplate HMO-6036 to the handy box using the two screws provided.
2. Remove the cover from the back panel.
3. Attach wires according to the STE-6011 wiring diagram on the next page.
4. Attach the back panel to the backplate using two screws.
5. Check that leads to the thermistor are straight and the thermistor is completely extended.
6. Replace the cover.

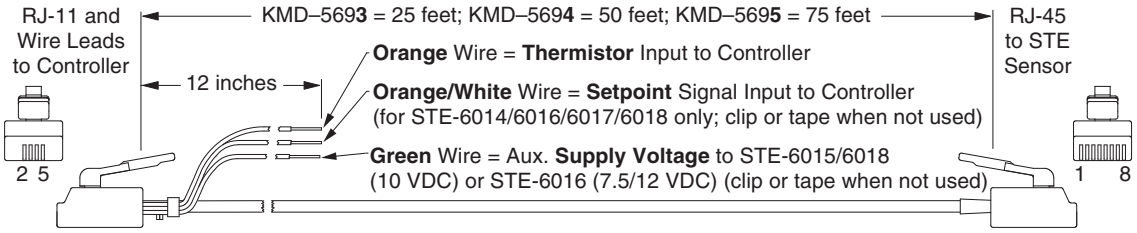
Hollow Wall Installation

1. Remove the cover from the back panel.
2. Use the back panel as a template to drill two holes for mounting screws (7/64 inches or 3 mm in diameter and 1.4 inches, 1-13/32 inches, or 35.6 mm apart) and to cut a center hole (7/8 inch or 20 mm) for the terminal block or jack.
3. Attach wires according to the STE-6011 wiring diagram on the next page.
4. Attach the back panel to the wall using two #6 self-threading screws. (Plastic anchors are recommended, and the size of the holes will then need adjusting.)
5. Check that leads to the thermistor are straight and the thermistor is completely extended.
6. Replace the cover.

Controller Connection

Connect wires as shown for the relevant model. (See the Models and Specifications section.)

STE-6010/6015



RJ-11	RJ-45	Color
(Lead)	8	Orange
	7	N.C.
(Lead)	6	Green
3	5	Blue
4	4	Blue/White
5	3	Green/White
	2	N.C.
(Lead)	1	Orange/White

(*Cables crossed, 20 AWG*)

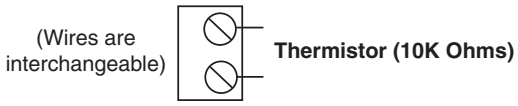
Connecting any of the STE-6010/6015 to a controller requires a special cable with (on the sensor end) an RJ-45 connector and (on the controller end) an RJ-11 connector with additional wires for controller inputs. Purchasing pre-assembled cables from KMC is more **cost-effective** and **reliable** than creating custom cables in the field. Use one of the following cables:

- KMD-569**3** = 25 feet
- KMD-569**4** = 50 feet
- KMD-569**5** = 75 feet

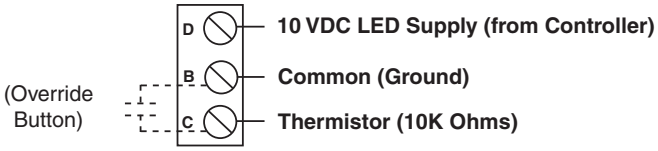
The additional **orange** wire is for the **thermistor** input to the controller.

The additional **green and the orange/white** wires should be **clipped or taped back** since they are not used with an STE-6010/6015. (*The additional orange/white wire is for the STE-6014/6016/6017/6018 setpoint signal input to the controller, and the additional green wire is for auxiliary supply voltage to the STE-6015/6018/6016.*)

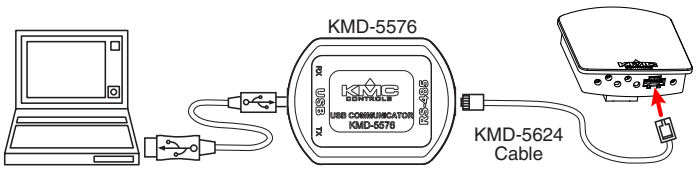
STE-6011



STE-6013



PC Port Connection



At the bottom of the STE-6010/6015 case is an EIA-485 (formerly RS-485) computer port. This port provides a temporary connection to the digital network for network setup or troubleshooting.

To use the port to connect to a computer, a means of converting the EIA-485 signal to a USB or EIA-232 (formerly RS-232) signal will be needed. The exact connection depends on the computer and the operator workstation software. (See also the instructions included with those devices and software.)

- For **USB** (to WinControl or BACstage), use a KMD-5576 USB Communicator (see the illustration above).
- For **EIA-232 to BACstage**, use a third-party interface.
- For **EIA-232 to WinControl**, use a KMD-5559 CommTalk and KMD-5624 cable (or equivalent interface).

To access the network through the STE's port:

1. Connect the keyed, flat end of the KMD-5624 interface cable (included with the KMD-5576 but not the KMD-5559) to the port on the sensor.
2. Connect the other end of the cable to the interface device that converts the EIA-485 signal into an EIA-232 or USB signal.
3. Connect the suitable cable from the interface device to the computer's serial or USB port. Install any required software and configure the port as necessary.

Controller Configuration

Overview

Ensure that the corresponding 10,000 ohm pull-up resistors on the controller are selected (switched On). Consult the controller's setup instructions for information on switching on the pull-up resistors.

Controller configuration instructions are given for both WinControl and BACstage. See the relevant software section.

BACstage Software

Thermistor Input (All)

1. In the BACstage software main menu, select *Objects* > *Inputs*.
2. Click *Edit*.
3. Type in a name in the *Description* field (up to 32 characters) and/or *Label* field (up to 16 characters).

NOTE: No two labels or descriptions in a controller can be identical.

4. Select *Object Type: Analog* if it is not the default.
5. Select *Device Type: KMC10K Type II*.
6. Select *Units: °F* or *°C*.
7. Click *End Edit*.
8. Click *Yes* for "Send Update Notification Now?"
9. In the BACstage software main menu, select *Device* > *Device Tables* > *KMC10K Type II Table*.
10. Click *Edit*.
11. Click *Defaults* (values will fill in).
12. Click *End Edit*.
13. Click *Yes* for "Send Update Notification Now?"
14. Click *OK*.

Override Input (STE-6013/6015 only)

1. In the BACstage software main menu, select *Objects* > ***Binary*** *Values*.
2. Click *Edit*.
3. Type in a name in the *Description* field and/or *Label* field.
4. Click in the *Units* column and select *Off/On* (or *No/Yes*, *Stop/Start*, *Disabled/Enabled*, *Inactive/Active* according to preference).
5. Click *End Edit*.
6. Click *Yes* for "Send Update Notification Now?"
7. Click *OK*.

WinControl Software

Thermistor Input (All)

1. In the WinControl software main menu, select *Control* > *Inputs*.
2. Click *Edit*.
3. Type in a name in the *Description* field (up to 20 characters) and/or *Label* field (up to 8 characters).

NOTE: No two labels or descriptions in a controller can be identical.

4. Click *Units* (which opens the Configure Inputs screen).
5. Select *Type: Analog* if it is not the default.
6. Select *Deg F* (or *C*) *KMC10K Type II*.
8. Optionally, change *Format* from 0 to the desired number of temperature decimal places.
9. Optionally, change the *Average* to the desired number of thermistor readings averaged before displaying the result.
10. Click *OK*.
11. Click *End Edit*.
12. Click *OK*.

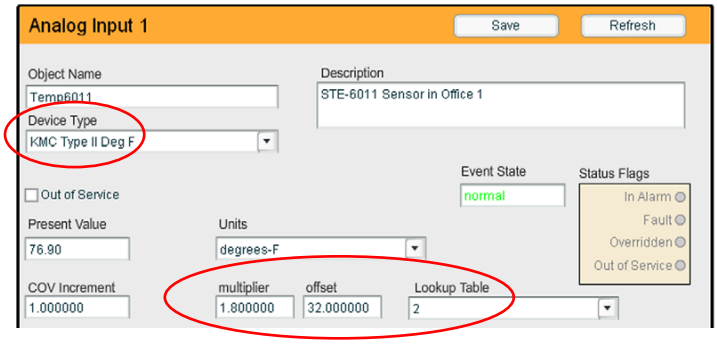
Override Input (STE-6013/6015 only)

1. In the WinControl software main menu, select *Control* > *Setpoint/Variables*.
2. Click *Edit*.
3. Type in a name in the *Description* field and/or *Label* field.
4. Click *Units* (which opens the Configure Variables screen).
5. Select *Type: Digital*.
6. Select *Off/On* (or *No/Yes*, *Stop/Start*, *Dis/Enabled* according to preference).
7. Click *OK*.
8. Click *End Edit*.
9. Click *OK*.

BAC-A1616BC BACnet Building Controller

Select the 10K ohm pull-up resistor jumper position for the corresponding input. (See the Installation section of the BAC-A1616ABC Building Controller Installation and Operation Guide for the correct jumper position.)

Because the Building Controller has a 0–12 VDC total input range, different tables are required than in other (0–5 VDC) KMC controllers. Download the CSV table files from www.kmccontrols.com and import the needed tables as described in the Tables section of the BAC-A1616ABC Building Controller Installation and Operation Guide. (You must log-in to see the zipped tables in Support > Technical > Tables on the web site.)



1. In the desired Analog Input setup screen of the web page interface, select KMC Type II Degree Fahrenheit or KMC Type II Degree Celsius.
2. Select the Lookup Table for the Type II Thermistor.
3. For the Fahrenheit scale, the multiplier is 1.8 and the offset is 32. For Celsius, the multiplier is 1 and the offset is 0.
4. Click *Save*.

Accessories

HMO-6036	Universal Backplate
KMD-569**x**	STE-6010/6014/6015/6016/6017/6018 to Controller Cable with RJ-45 to RJ-11 Connectors (-569**3** = 25 ft.; -569**4** = 50 ft.; -569**5** = 75 ft.)
KMD-5624	PC Data Port (EIA-485) Cable
KMD-5576	EIA-485 to USB Communicator
SP-001	Flat blade & hex end screwdriver

Models and Specifications

STE-6010/6011

STE-6013/6015

Model Number	Interface Features		Cable Connections		
	Override Button	LED Status Indicator	Screw Clamp Terminals	RJ-45 Connector	EIA-485 Data Port
STE-6010-10				X	X
STE-6011-10			X		
STE-6013-10	X	X	X		
STE-6015-10	X	X		X	X

Connections Clamp (screw-type) terminals or modular RJ-45 jack

Sensor

Type	Type II thermistor
Accuracy	± 0.36° F (± 0.20° C)
Resistance	10,000 ohms @ 77° F (25° C)

Front Button (STE-6013/6015) One momentary push button, shunts temperature sensor to signal override condition

Power Requirement (LED Indicator on STE-6013/6015) 10 VDC (12 VDC max); 5 mA max. current draw at 12 VDC

Environmental Limits

Operating	34° to 125° F (1.1° to 51.6° C)
Shipping	–40° to 140° F (–40° to 60° C)
Humidity	0 to 95% RH non-condensing

NOTE: For additional specifications, see the STE-6000 Series Room Temperature Sensors/Transmitters Data Sheet.

Maintenance

Careful installation will also ensure long-term reliability and performance. Remove dust as necessary from holes in top and bottom. Clean with a soft, damp cloth and mild soap.

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