

Honeywell

INNCOM e7 Thermostat Installation Instructions

FOR ALL UNITS IN CARTON. DO NOT THROW AWAY!

INSTALLATION INSTRUCTIONS



CAUTION

Disconnect the power supply before beginning installation to prevent electrical shock or equipment damage. All wiring must comply with local codes and ordinances.

- Read instructions carefully. Failure to follow them could damage the product or create a hazard.
- Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
- Installer must be a trained, experienced service technician.
- After installation is complete, check product operation as indicated in instructions.
- For variations of these systems, refer to the installation instructions of the controlled equipment.

INSTALLATION

Location

Select a location about 1.5m (5ft.) above the floor with good air circulation at average temperature. Do not mount thermostat where it may be affected by:

- Drafts or dead spots behind doors or in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes or chimneys.
- Unheated (un-cooled) areas behind the thermostat.
- If RF equipped, do not install near other RF sources/transmitters.
- When the thermostat is equipped with PIR, consider view angle, range characteristics, and mounting position for proper coverage.

Mounting

The INNCOM e7 thermostat is typically mount on a standard double-gang (4 x 4) junction box. The installation kit provides a Smart Wall Mounting Plate and an optional Spacer Ring. The optional Spacer Ring is only required when a standard double-gang (4 x 4) junction box is not available, or when more space is required for wiring.

If mounted on a single-gang box, the right side (keypad side) of the e7 overlaps the wall area to the right. A low-voltage mounting plate, mud ring, or low-voltage caddy may be used for mounting 24 volt applications.

To mount the e7, complete the following steps:

1. Position the optional spacer ring (if used) and Smart Wall Mounting Plate as shown in Fig. 1.
2. Ensure the optional spacer ring (if used) and Smart Mounting Plate are oriented with the raised arrow pointing UP. Snap them together, ensuring all 4 corner snap hooks are attached, then attach them to the junction box using the supplied screws.
3. Use wire nuts to connect the Power and HVAC wiring harness to the power and valve/fan control signal wires within the electrical box. See the pre-defined commissioning document for application-specific wire connections.
4. To connect the unit to the input power and the relays to the loads, plug the pre-wired power and HVAC signal harness connector into the female receptacle at the back of the e7 (H1). When using mixed voltage, voltage separation must be maintained. Line voltage must reside in the left side of the gang box. Low voltage must reside in the right side of the gang box.
5. Hook the tabs at the top rear of the e7 housing into the matching depressions at the top of the Smart Mounting Plate and rotate the bottom of the housing toward the wall until it snaps into place.
6. Secure the housing to the Smart Mounting Plate with the two small captive screws at the bottom of the housing.
7. Apply power to the e7 by closing the applicable supply breaker. After connecting power, wait 5 seconds. values will begin appearing on the LCD display.

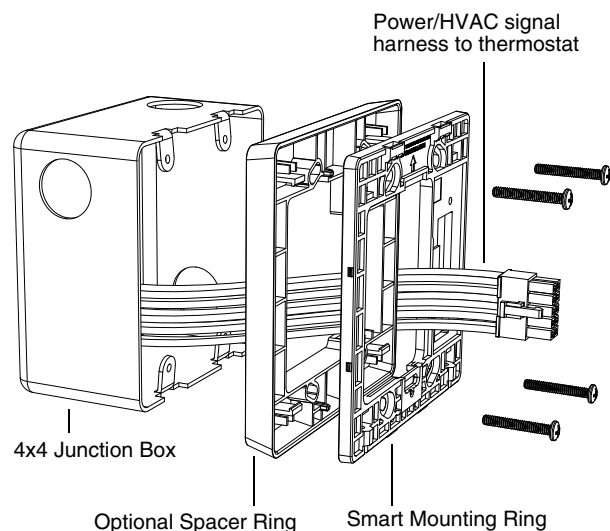


Fig. 1. e7 Exploded View Assembly Reference

WIRING

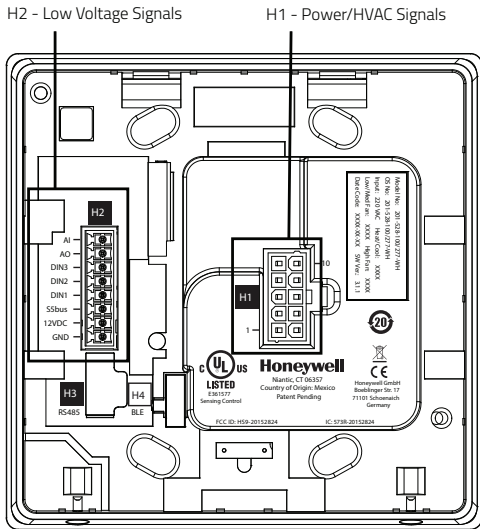


Table 3. H2 Low Voltage Signals

Pin	Signal	Typical Function
1	GND	Ground
2	VEE	12 VDC
3	S5bus	Communications
4	DIN1	Entry Door, 2 transitions to active
5	DIN2	Balcony Door/Window, 2 transitions to active
6	DIN3	External PIR/Motion Sensor, 2 transitions to active
7	AO	0-10 V VFD Fan
8	AI	Remote Thermistor

Wiring Diagrams

Before getting started on an installation, use the templates at the back of this guide to identify the wires/signals coming out of the 4 x 4 box and figure out what wires are connected to which wires on the thermostat. This provides a quick and easy cheat sheet to capture property specific wiring requirements.

NOTE: If the HVAC configuration for your application is not shown here, refer to the document: *e7 Wiring Configurations* found online at:

https://pages1.honeywell.com/e7_Install_Instructions.html

Table 1. H1 Red Connector: 24 VAC Power/HVAC Signals

Pin	Color	Typical Function
1	Green	Ground
2	Red	24 VAC
3	Black	Common
4	Blue	High Fan
5	Brown	Medium Fan or Second Stage Heat
6	Yellow	Cold Water Valve (FCU) or Compressor Signal (Heat Pump)
7	White	Hot Water Valve (FCU) or Reversing Valve (Heat Pump)
8	Grey	Valve Power
9	Violet	Fan Power
10	Orange	Low Fan

Generic FCU: 24 VAC

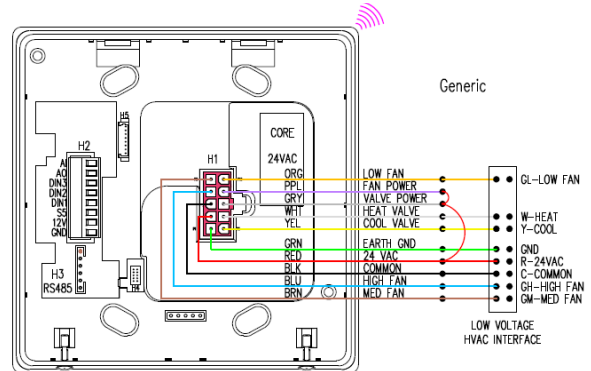
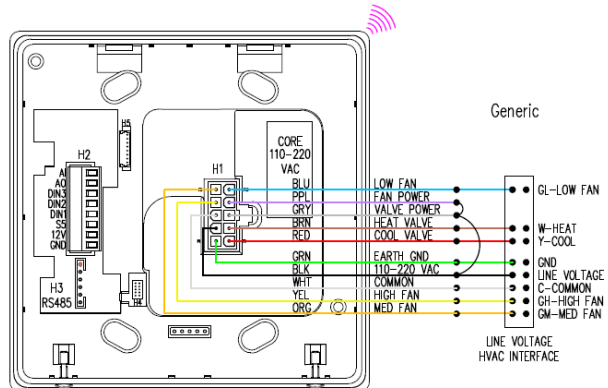


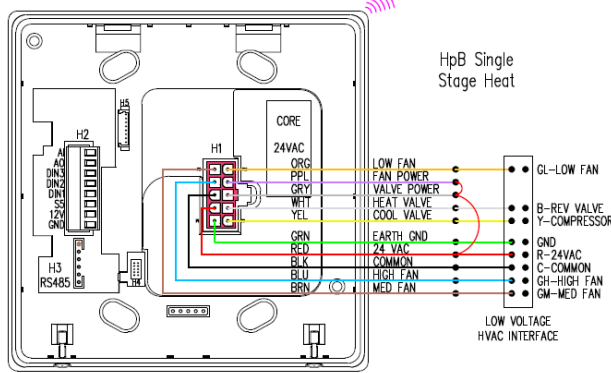
Table 2. H1 White Connector: 100-277 VAC Power/HVAC Signals

Pin	Color	Typical Function
1	Green	Ground
2	Black	Line
3	White	Neutral
4	Yellow	High Fan
5	Orange	Medium Fan or Second Stage Heat
6	Red	Cold Water Valve (FCU) or Compressor Signal (Heat Pump)
7	Brown	Hot Water Valve (FCU) or Reversing Valve (Heat Pump)
8	Grey	Valve Power
9	Violet	Fan Power
10	Blue	Low Fan

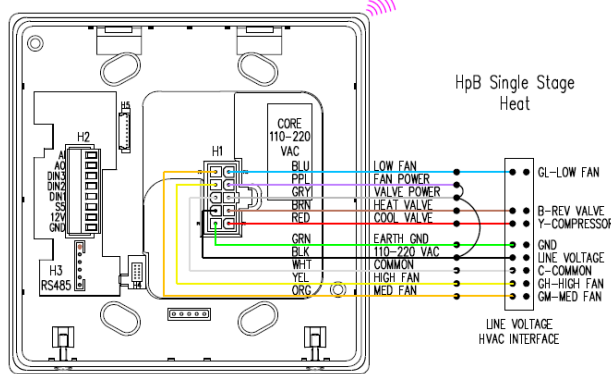
Generic FCU: 100-277 VAC



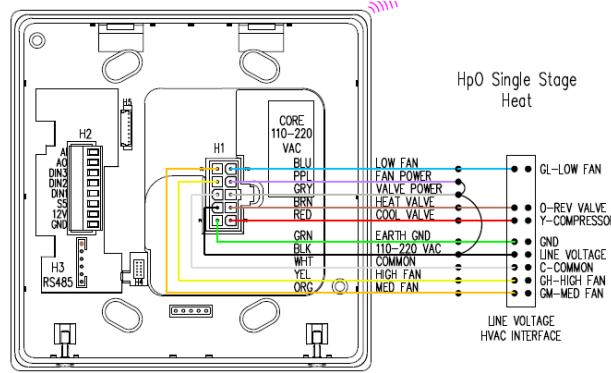
HpB Single-Stage Heat: 24 VAC



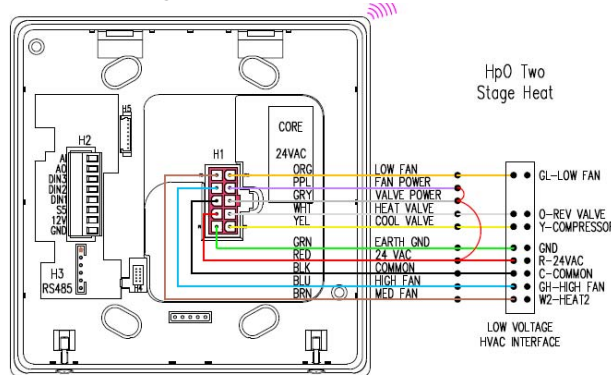
HpB Single-Stage Heat: 100-277 VAC



HpO Single-Stage Heat: 100-277 VAC



HpO Two-Stage Heat: 24 VAC



INITIAL SETUP

Before going through the initial setup sequences, ensure the thermostat is mounted and connected to the Smart Wall Plate.

NOTE: Prior to completing Initialization Mode, or pushing the thermostat configuration from engINN, the thermostat is configured with factory defaults to disable any call for heat, cool, or low, medium and high fan speeds to protect the HVAC equipment.

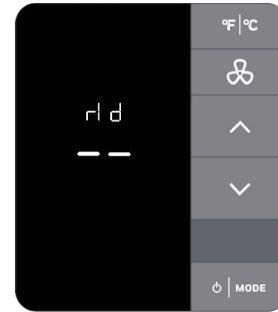
When properly connected, the thermostat will proceed into INTIALIZATION MODE and display rid.



When not properly connected to the Smart Wall Plate, the unit will display the alert message SWp and the alert icon will illuminate until the Smart Wall Plate is connected.

If you see SWp on the display, most likely the unit is not connected or properly seated on the Smart Wall Plate. Unscrew the captive screws and re-seat the thermostat. Once properly connected, the display will start up as noted. Take care not to over-tighten the screws and note any irregularity on the wall surface that may lead to an insecure connection between the Smart Wall Plate and thermostat.

SETUP ROOM ID



- Once rid is displayed, press MODE. The default Room ID value (65535) is displayed and will begin scrolling across the screen one numerical setting at a time, from highest to lowest (left most to right most value). Note that the five-digit number is comprised of three fields: highest digit, middle two digits, lowest two digits. Three settings must be made.
- Scrolling will stop at the highest digit first. Use the UP/DOWN arrow buttons to change this value (range is 0-6). Press FAN to continue.
- Set the next two values in the sequence using the UP/DOWN arrow buttons (range is 0-99). Press FAN to continue. Repeat this step for the lowest two values (range is 0-99) and press FAN. Press MODE to accept the value.
- The new ID number scrolls across the display. The unit beeps when the value is stored to memory. Once the scrolling is completed, Press the DOWN arrow button to display HVAC (HAC) menu.

SETUP HVAC TYPE



1. After HAC is displayed, press MODE.
2. Set the HVAC type desired using the UP/DOWN arrow buttons to choose one of the following options:
 - 00: Not Defined.
 - FC4: 4 pipe fan coil unit (also applicable to 2-pipe without a changeover - cold water only with electric heat).
 - FW2: 2 pipe fan coil unit with back-up electric heat (requires a pipe temperature sensor to detect seasonal water temperature change over).
 - FC2: 2 pipe fan coil unit without back-up electric heat (requires a pipe temperature sensor to detect seasonal water temperature change over).
 - PAC: PTAC unit.
 - HbW: Heat Pump B with W2 assist (default compressor signal (Y) is cooling, reverse valve and compressor signals (B + Y) required concurrently for heating. When applicable, 2nd stage heat signal (W2) is engaged in addition to compressor and reversing valve (B+Y+W2). Use this HVAC type also for Heat Pumps B without 2nd stage heat.
 - HpB: Heat Pump B with W2 replace (default compressor signal (Y) is cooling, reverse valve and compressor signals (B + Y) required concurrently for heating. When applicable, 2nd stage heat signal (W2) is engaged by itself, releasing the compressor (Y) and reversing valve (B) signals.
 - HoW: Heat Pump O with W2 assist (default compressor signal (Y) is heating, reverse valve and compressor signals (O + Y) required concurrently for cooling. When applicable, 2nd stage heat signal (W2) is engaged in addition to the compressor (O+W2). Use this HVAC type also for Heat Pumps O without 2nd stage heat.
 - HpO: Heat Pump O with W2 replace (default compressor signal (Y) is heating, reverse valve and compressor signals (O + Y) required concurrently for cooling, when applicable, 2nd stage heat signal (W2) is engaged by itself, releasing the compressor (Y) signal.
3. Press FAN to accept the value. The unit *beeps* to confirm the value has been set.
4. The display will show --. Press the DOWN arrow button to display the Fan speed (FAN) menu, then press MODE.

SETUP FAN SPEED



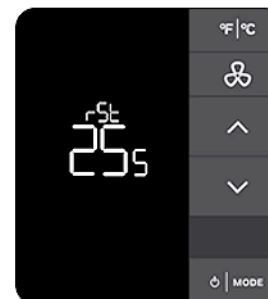
1. Once FAN is displayed, use the Up/DOWN arrow buttons to choose the fan speed:
 - 00: Not Defined
 - Lo: Low Speed (single speed)
 - LH: Low / High
 - LMh: Low / Medium* / High
 - *For heat pump models utilizing reversing valve, medium heat and medium fan speed will not be available.*
2. Press FAN to execute the setting, the unit *beeps* to confirm it is set.

EXIT INITIALIZATION MODE



When setup is complete, exit INITIALIZATION MODE by pressing the F/C key. Str is displayed, indicating the setup values are stored in memory, the unit reboots and begins operating the HVAC equipment as configured.

RESETTING INITIALIZATION MODE



If the user needs to return to the settings made in INITIALIZATION MODE, do the following:

1. Enter SERVICE MODE: Press and hold F/C, Press and hold MODE, Press and hold FAN, Release all three buttons.
2. Use the UP/DOWN arrow buttons to display rst, then press MODE.
3. Use the DOWN button to select 255.
4. Press FAN.
5. The unit will reset, clear all previous values, and enter INITIALIZATION MODE again.

CONTRACTOR MODE



Contractor mode allows conditioning a space during the construction phase to a defined set temperature and locking out the key pad to prevent tampering. To configure this mode, do the following:

1. Enter SERVICE MODE: Press and hold F/C, Press and hold MODE, Press and hold FAN, Release all three buttons.
2. Use the UP/DOWN arrow buttons to select ctr.
3. Use the UP/DOWN arrow buttons to select the target temperature (range: Off - 80 degrees F).
4. Press FAN to continue. Once FAN is pressed, the display scrolls the set temperature and the unit *beeps* to confirm the value has been set.
5. Press F/C to exit SERVICE MODE. The unit displays the target and measured temperature, and the alert icon. Any key press to change set temperature, fan speed or mode are locked out.



EXIT CONTRACTOR MODE

1. Enter SERVICE MODE (Step 1 in the previous section).
2. Use the UP/ DOWN arrows to display - - then press FAN to turn off CONTRACTOR MODE.
3. Press F/C to exit SERVICE MODE.

Property Specific Configurations

Once initial setup is completed, the e7 can support a range of expanded Integrated Room Automation System functionality. This additional functionality is deployed using Honeywell's software tools INNtool and engINN. Training for INNtool and engINN for system design and commissioning is now included in the Level 2 and Level 3 classes.

INNCOM Authorized Systems Integrators should contact their respective E&ES Regional Support Teams to inquire about enrolling in upcoming training sessions. If you have already received training or you are a Honeywell employee supporting the INNCOM business, you can download the software here: <https://www.inncom.com/login>

If you are a contractor who has purchased an e7 thermostat for a customer installation without additional labor and support from Honeywell, and you need to make changes to the default HVAC configuration of the thermostat to meet your customers need, please do the following:

1. Make sure you have a Windows based laptop, access to the internet and the supplied PC-503 commissioning tool and USB cable on hand. You will be asked to download and install a USB driver, and the engINN application. Honeywell will also send you a “.inproj” file which will be used by engINN to push the advanced configuration to your thermostat, to your email address.
2. Call our 24/7/365 technical support at 1-860-739-4468, Option #2 for instructions.

REGULATORY COMPLIANCE

UL Listing

This device meets UL 60730-2-9, CAN/CSA-E60730-9 Standard for Automatic Electrical Controls - Part 2-9: Particular Requirements for Temperature Sensing Control

Federal Communications Commission (FCC)

Changes or modifications not expressly approved by Honeywell International, Inc. could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with minimum distance of 20cm between the radiator and your body. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Tout changement ou modification n'ayant pas été expressément approuvé par Honeywell International, Inc. pourrait annuler l'autorisation de l'utilisateur d'utiliser l'équipement. Cet équipement a subi des tests prouvant sa conformité aux limites prescrites pour les appareils numériques de classe B, selon la partie 15 des règlements de la FCC. Ces limites ont été conçues pour fournir une protection raisonnable contre les interférences nuisibles

lorsque l'appareil est utilisé dans un environnement résidentiel. Cet équipement génère, utilise et peut émettre de l'énergie radioélectrique et, s'il n'est pas installé et utilisé conformément aux instructions, peut causer des interférences nuisibles aux communications radio. Toutefois, il n'y a aucune garantie que ces interférences ne puissent survenir dans une installation donnée. Si cet équipement cause des interférences nuisibles à la réception de signaux de radio ou de télévision, ce qui peut être déterminé en l'éteignant et en l'allumant, l'utilisateur peut essayer de corriger ces interférences par les mesures suivantes :

- Réorienter ou déplacer l'antenne réceptrice.
- Augmenter la distance entre l'équipement et le récepteur.
- Brancher l'équipement sur un circuit différent de celui sur lequel le récepteur est branché.
- Consulter le détaillant ou un technicien expérimenté en radio/télévision pour de l'aide.

Cet équipement a subi des tests prouvant sa conformité aux limites prescrites pour les appareils numériques de classe A, selon la partie 15 des règlements de la FCC. Ces limites ont été conçues pour fournir une protection raisonnable contre les interférences nuisibles lorsque l'appareil est utilisé dans un environnement commercial. Cet équipement génère, utilise et peut émettre de l'énergie radioélectrique et, s'il n'est pas installé et utilisé conformément aux instructions, peut causer des interférences nuisibles aux communications radio. L'utilisation de cet équipement dans une zone résidentielle est susceptible de causer des interférences nuisibles auquel cas l'utilisateur sera tenu de corriger ces interférences à ses propres frais Cet équipement est conforme aux limites d'exposition aux rayonnements FCC et IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps. Cet appareil ne doivent pas être placés à côté de ou fonctionner en conjonction avec toute autre antenne ou transmetteur.

Industry Canada (IC)

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

WEEE Directive 2012/19/EC Waste Electrical and Electronic Equipment Directive



The correct disposal of end-of-life equipment will help prevent potential negative consequences for the environment and human health. Dispose of the packaging and this product in an authorized collection or recycling center. Do not dispose of the unit with domestic refuse. Do not incinerate.

e7 100-277VAC HVAC Wiring Harness Template

Use this sheet to write down your wiring connections

Low Fan	BLU	_____	<input type="text"/>
Fan Power	PPL	_____	<input type="text"/>
Valve Power	GRY	_____	<input type="text"/>
Heat Valve	BRN	_____	<input type="text"/>
Cool Valve	RED	_____	<input type="text"/>
Earth Ground	GRN	_____	<input type="text"/>
24VAC	BLK	_____	<input type="text"/>
Common	WHT	_____	<input type="text"/>
High Fan	YEL	_____	<input type="text"/>
Medium Fan	ORG	_____	<input type="text"/>

e7 24VAC HVAC Wiring Harness Template

Use this sheet to write down your wiring connections

Low Fan	ORG	_____	<input type="text"/>
Fan Power	PPL	_____	<input type="text"/>
Valve Power	GRY	_____	<input type="text"/>
Heat Valve	WHT	_____	<input type="text"/>
Cool Valve	YEL	_____	<input type="text"/>
Earth Ground	GRN	_____	<input type="text"/>
24VAC	RED	_____	<input type="text"/>
Common	BLK	_____	<input type="text"/>
High Fan	BLU	_____	<input type="text"/>
Medium Fan	BRN	_____	<input type="text"/>

The material in this document is for information purposes only. The content and the product it describes are subject to change without notice. Honeywell makes no representations or warranties with respect to this document. In no event shall Honeywell be liable for technical or editorial omissions or mistakes in this document, nor shall it be liable for any damages, direct or incidental, arising out of or related to the use of this document. No part of this document may be reproduced in any form or by any means without prior written permission from Honeywell. Copyright © 2018 by Honeywell International, Inc. All Rights Reserved.