

THERMOSTAT PRODUCT GUIDE

PTAC and VTAC SMART SOLUTIONS



GE APPLIANCES
a Haier company

AIR&WATER
SOLUTIONS

Zoneline® Perfect Control PTAC and VTAC with Inverter Technology



Maintaining indoor comfort is complex. Zoneline inverter models automatically adjust for rapid changes in temperature and humidity. The thermostat you use with a Zoneline inverter model greatly determines the level of performance an inverter can deliver. Choosing the right thermostat is **CRITICAL** for proper operation and performance.



Thermostats for Zonline® Perfect Control PTAC and VTAC with Inverter Technology

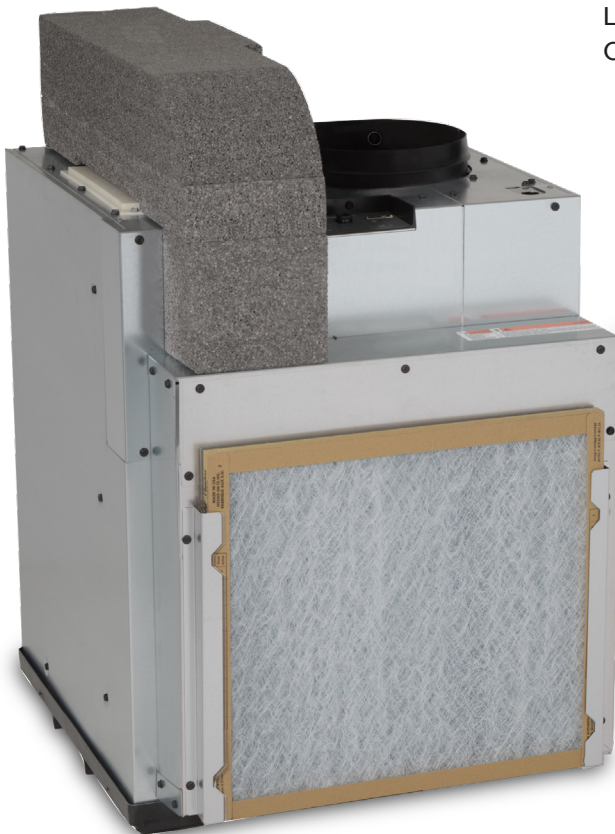
To precisely maintain indoor temperature and comfort, an inverter HVAC system needs to know what temperature is desired, what the actual room temperature is and what the room humidity level is.

ONLY a two-way communicating thermostat can provide this level of detail that inverter HVAC systems require for optimal performance.



RAK190V

Maintain 72 degrees
Location temperature = 73
Location humidity = 61% RH
Occupancy = Yes



Compressor adjusted accordingly
Fan speeds adjusted accordingly
Temperature setting
Mode of operation = cool
Targeting 60% RH
Temperature limits = setting 2

Inverter Compatible Thermostats

Two-way communicating thermostats by far provide the best efficiency, temperature and humidity control available for Zoneline inverter models. The RAK190V two-way communicating thermostat is the BEST option for Zoneline inverter technology.

Thermostat Feature Guide

A quick reference guide to PTAC & VTAC thermostat features.



	GE RAK190V	GE RAK150VF2	Verdant VX3TWGEAXMF	Verdant VX3TWGEA
Best inverter performance	✓			
Energy management	✓		✓	✓
Infrared Occupancy sensing	✓		✓	✓
Remote Management			✓	✓
Programmable occupancy detection schedule	✓		✓	✓
Programmable day and time				
Wireless communication signal			✓	✓
Wired power only	✓	✓		
Wired or battery powered			✓	✓
Heat pump capable	✓	✓	✓	✓
Two speed fan	✓	✓	✓	✓
Manual changeover only		✓		
Auto or manual changeover	✓		✓	✓
California lighting compliant	✓		✓	✓
Occupancy based makeup air	✓		✓	✓
Zoneline inverter compatible	✓	✓	✓	✓
Bacnet capable			✓	✓
RFID lock capable (additional fees apply)			✓	✓
PMS capable			✓	✓
SmarterHQ™ capable	✓			
Dry auxilliary contacts (2)	✓			

Fixed Speed Compatible Thermostats

These thermostats are compatible with Fixed speed models

Thermostat Feature Guide

A quick reference guide to PTAC & VTAC thermostat features.



	GE RAK190V	GE RAK180W1	GE RAK160W2	GE RAK149P2A	GE RAK149F2A	HOTPOINT RAK148H2A
Energy management	✓	✓				
Infrared Occupancy sensing	✓	✓				
Remote Management	✓	✓	✓			
Programmable occupancy detection schedule	✓					
Programmable day and time				✓		
Wireless communication signal		✓	✓			
Wired power only	✓			✓	✓	✓
Wired or battery powered		✓	✓			
Heat pump capable	✓	✓	✓	✓	✓	✓
Two speed fan	✓	✓	✓	✓	✓	✓
Manual changeover only				✓	✓	✓
Auto or manual changeover	✓	✓	✓			
California lighting compliant						
Bacnet capable						
RFID lock capable (additional fees apply)						
PMS capable						
SmarterHQ™ capable	✓					
Dry auxilliary contacts (2)	✓					

PROJECTED SPECIFICATIONS-SUBJECT TO CHANGE

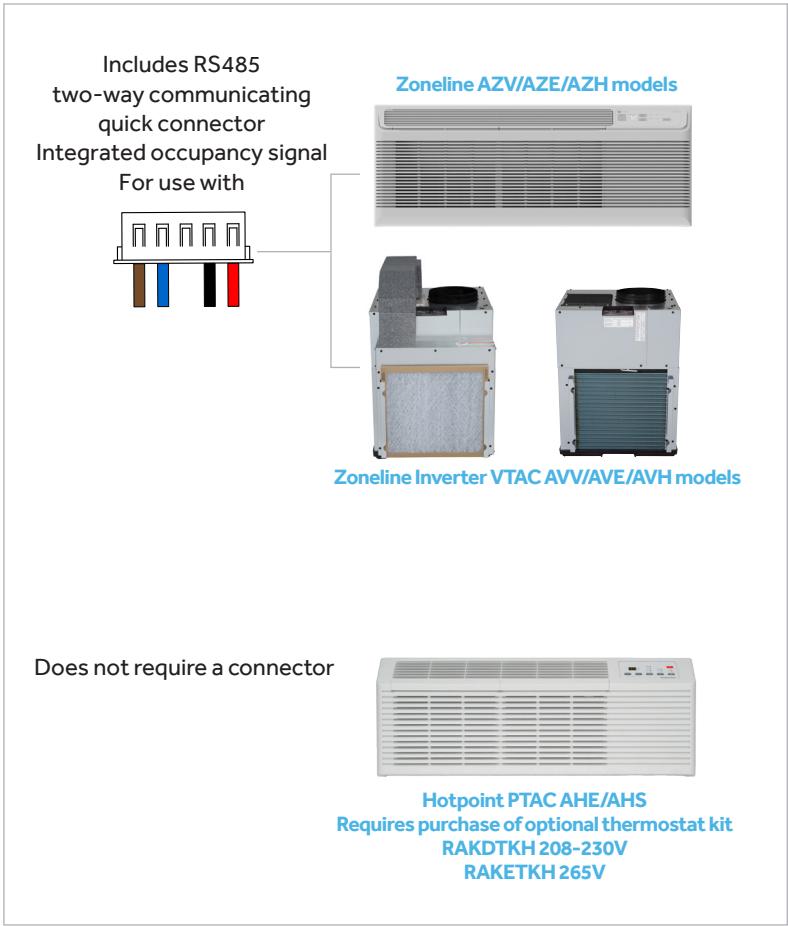
Contact us @ zoneline.requests@geappliances.com

Inverter/Fixed Speed Thermostat

RAK190V

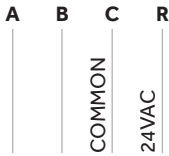
REASON TO QUOTE

- Best inverter performance
- Two-way communication operation
- Onboard temperature sensing
- Onboard humidity sensing
- Infrared occupancy sensing
- Programmable occupancy detection schedule
- Integrates with SmartHQ
- Occupancy based energy management
- Occupancy based Makeup air (if applicable)



Using local control logic for fixed speed models

Two-Way Communication



Power

24VAC Hard wire only includes thermostat connectors (communicating and low voltage)

Works With

Standard 18 gauge thermostat wire

Network Capabilities

SmartHQ Management
AZVS/AVV (requires subscription)
AZES/AZHS (requires module and subscription)

Integration Capabilities

Does not integrate with door locks
PMS systems or BACnet systems

Signals (for use with fixed speed models)

B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	Switched based on occupancy	Switched based on occupancy

Inverter Thermostat

RAK150VF2

REASON TO QUOTE

- Economical
- Low voltage control
- Compatible with Zonline Inverter models



Includes 8 wire
low voltage control
quick connector
For use with



Zonline Inverter PTAC AZV models



Zonline Inverter VTAC AVV models

Signals

B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2
REVERSING VALVE (HEAT ACTIVE)									
INDOOR FAN - LOW									
INDOOR FAN - HIGH									
STAGE 1 COMPRESSOR									
STAGE 2 COMPRESSOR									
HEAT-ELECTRIC									
24VAC COMMON									
24VAC HOT									
								• Switched based on occupancy	• Switched based on occupancy

• not applicable on this model

Power

24VAC Hard wired only 8 pin 8 wire harness included

Works With

Hard wired installations
Requires 8 wires

Network Capabilities

No network options

Integration Capabilities

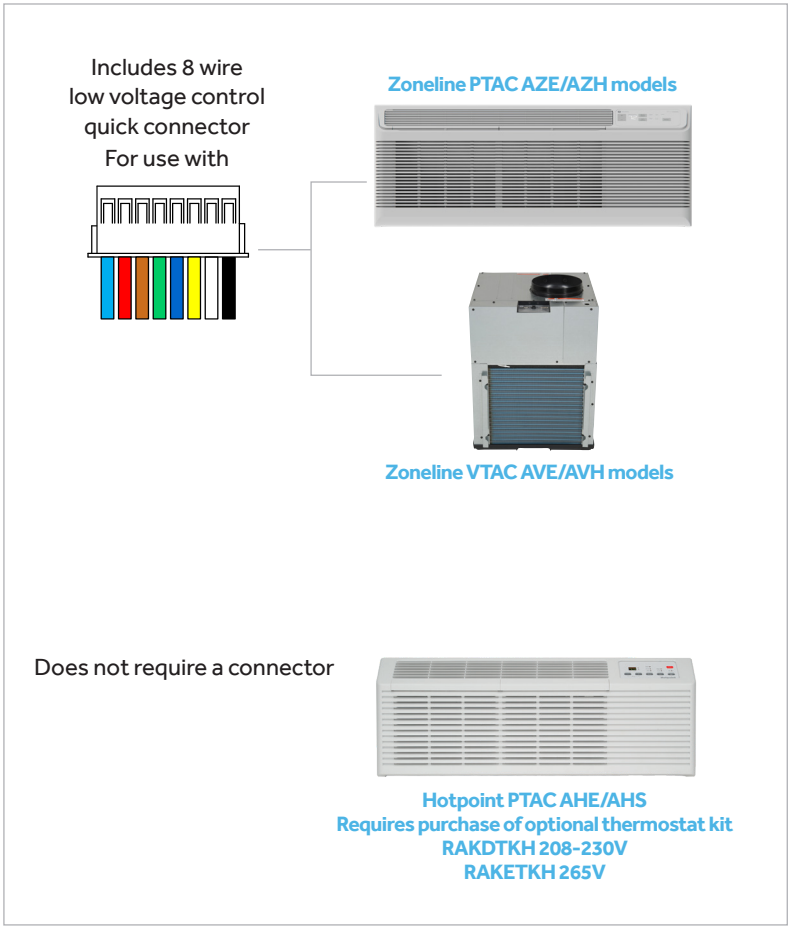
Does not integrate with door locks
PMS for BACnet systems

Fixed Speed Thermostats

RAK149F2A

REASON TO QUOTE

- Economical option
- Two fan speeds
- Low voltage control



SIGNALS

B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT		
								Switched based on occupancy	Switched based on occupancy

• not applicable on this model

Power

24VAC Hard wired only
8 pin 8 wire harness included

Works With

Hard wired installations
Requires 5-7 wires (function dependent)

Network Capabilities

No network option

Integration Capabilities

Does not integrate with door locks
PMS systems or BACnet systems

Fixed Speed Thermostats

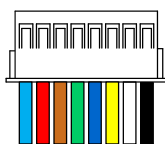
RAK149P2A

REASON TO QUOTE

- Economical
- Programmable day and time
- Two fan speeds
- Low voltage control



Includes 8 wire
low voltage control
quick connector
For use with



Zonline PTAC AZE/AZH models



Zonline VTAC AVE/AVH models



Does not require a connector



Hotpoint PTAC AHE/AHS
Requires purchase of optional thermostat kit
RAKDTKH 208-230V
RAKETKH 265V

Signals

B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2
REVERSING VALVE (HEAT ACTIVE)									
INDOOR FAN-LOW									
INDOOR FAN-HIGH									
STAGE 1 COMPRESSOR									
• STAGE 2 COMPRESSOR									
HEAT-ELECTRIC									
24VAC COMMON									
24VAC HOT									
• Switched based on occupancy									
• Switched based on occupancy									

• not applicable on this model

Power

24VAC Hard wired only
8 pin 8 wire harness included

Works With

Hard wired installations
Requires 5-7 wires (function dependent)

Network Capabilities

No network option

Integration Capabilities

Does not integrate with door locks
PMS systems or BACnet systems

Inverter/Fixed Speed Thermostat

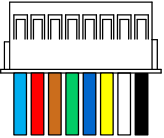
VX3TWGEA

REASON TO QUOTE


- Lighting control
- Occupancy based energy management
- Occupancy based Makeup air (if applicable)
- Marriott GRMS requirement
- 2-stage cooling operation
- Low voltage control



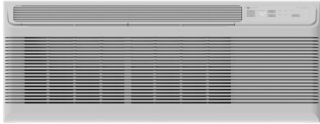
Includes 8 wire low voltage control quick connector
For use with




And occupancy signal connector



Zonline AZV/AZE/AZH models




Zonline VTAC AVV/AVE/AVH models



Does not require a connector

Hotpoint PTAC AHE/AHS
Requires purchase of optional thermostat kit
RAKDTKH 208-230V
RAKETKH 265V



Signals

B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	Switched based on occupancy	Switched based on occupancy

• not applicable on this model

Power

24VAC Wired or Battery (if using wireless accessories power must be wired)
Includes thermostat connector

Works With

Wireless control card (included with thermostat)

Network Capabilities

If networking is desired use VX3TWGEAXMF

Integration Capabilities

For integration capabilities use VX3TWGEAXMF

Notes

Does not provide optimal performance when paired with an inverter model

Inverter/Fixed Speed Thermostat

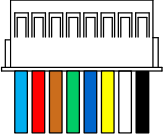
VX3TWGEAXMF

REASON TO QUOTE

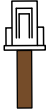
- Network Ready
- Lighting control
- Occupancy based energy management
- Occupany based Makeup air (if applicable)
- Marriott GRMS requirement
- 2-stage cooling operation
- Low voltage control



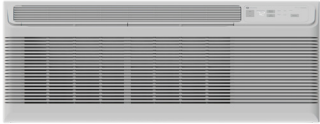
Includes 8 wire low voltage control quick connector
For use with




And occupancy signal connector




Zonline AZV/AZE/AZH models



Zonline VTAC AVV/AVE/AVH models



Does not require a connector



Hotpoint PTAC AHE/AHS
Requires purchase of optional thermostat kit
RAKDTKH 208-230V
RAKETKH 265V

Signals										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN- HIGH	STAGE 1 COMPRESSOR	STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	Switched based on occupancy	Switched based on occupancy	
•not applicable on this model										

Power

24VAC Wired or Battery (if using wireless accessories power must be wired)
Includes thermostat connector

Works With

Wireless control card (included with thermostats)

Network Capabilities

Requires ZXOLU (one per property)

Integration Capabilities

Door lock integration (requires ZXOLDLICOM adder one/property)
BACnet (requires ZXOLBACCOM adder one/property)
PMS (requires ZXOLPMSCOM Adder one/property)

Notes

Does not provide optimal performance when paired with an inverter model

Fixed Speed Thermostat

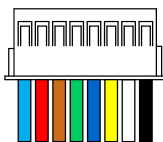
RAK180W1

REASON TO QUOTE

- GE branded
- Occupancy based energy management
- Low voltage control



Includes 8 wire
low voltage control
quick connector
For use with



Zonline PTAC AZE/AZH models



Zonline VTAC AVE/AVH models



Does not require a connector



Hotpoint PTAC AHE/AHS
Requires purchase of optional thermostat kit
RAKDTKH 208-230V
RAKETKH 265V

Signals

B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	• STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	Switched based on occupancy	• Switched based on occupancy

• not applicable on this model

Power

24VAC Wired or Battery (if using wireless accessories power must be wired)
8 pin 8 wire harness included

Works With

Wireless control card (included with thermostat)

Network Capabilities

Requires OLKITNTWK (one per property, up to 1,000 rooms with one building)
XMF (one per thermostat)

Integration Capabilities

Does not integrate with door locks PMS systems or BACnet systems

Fixed Speed Thermostat

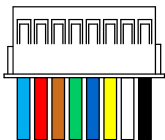
RAK160W2

REASON TO QUOTE

- Economical wireless option
- Low voltage control



Includes 8 wire
low voltage control
quick connector
For use with



Zonline PTAC AZE/AZH models



Zonline VTAC AVE/AVH models



Does not require a connector



Hotpoint PTAC AHE/AHS
Requires purchase of optional thermostat kit
RAKDTKH 208-230V
RAKETKH 265V

Signals

B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2
REVERSING VALVE (HEAT ACTIVE)									
INDOOR FAN-LOW									
INDOOR FAN-HIGH									
STAGE 1 COMPRESSOR									
• STAGE 2 COMPRESSOR									
HEAT-ELECTRIC									
24VAC COMMON									
24VAC HOT									
							Switched based on occupancy		
								Switched based on occupancy	

• not applicable on this model

Power

24VAC Wired or Battery (if using wireless accessories power must be wired)
8 pin 8 wire harness included

Works With

Wireless control card (included with thermostats)

Network Capabilities

OLKITNDTWK (one per property)
XMF (one per thermostat)



Allows remote temperature control and monitoring (does not have occupancy detection use for energy management)

Integration Capabilities

Does not integrate with door locks
PMS systems or BACnet systems

Contact us @ zonline.requests@geappliances.com

Available Accessories



RAK180W1



RAK160W2

Quote Model	Description	Notes Contact your sales rep for pricing
OLKITNTWK	Network connection kit	1/property
XMFB	Enables remote management	1/thermostat for RAK180W1 ONLY
XMFNOS	Enables remote management	1/thermostat for RAK160W2 ONLY
X9RFAOS	Wireless occupancy sensor	Primarily for separate room occupancy sensing
X9RFDWS	Wireless door and window sensor	Used to control heating/cooling based on door or window status
X9RFRTS	Wireless temperature sensor	Used to average temperatures in separate rooms
VXWPTW	Oval wall plate	Used to cover oversized wall openings



VX3TWGEA

(for non networked applications)

VX3TWGEAXMF

(for networked applications)

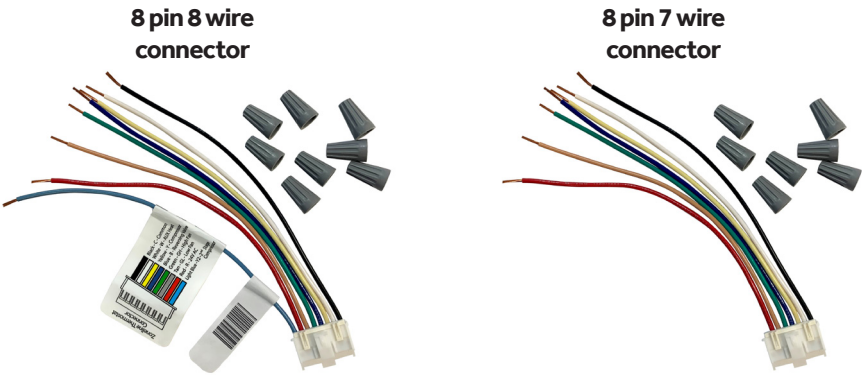
Quote Model	Description	Notes Contact your sales rep for pricing
ZXOLU	Network connection kit	1/property
ZBU	Zigbee/BLE adder	Used for door lock integration
ZXAOSVER	Wireless occupancy sensor	Primarily for separate room occupancy sensing
ZXDWSVER	Wireless door and window sensor	Used to control heating/cooling based on door or window status
ZXTWSVER	Wireless temperature sensor	Used to average temperatures in separate rooms
ZXWPTW	Rectangular wall plate	Used to cover oversized wall openings
ZXOLDLICOM	Door lock integration	One time fee
ZXOLPMSCOM	Property management integration	One time fee
ZXOLBACCOM	BACnet integration	One time fee

Thermostat Connectors and Kits

Zonline PTACs and VTACs require a thermostat connector for wall thermostat operation. All Zonline and GE branded thermostats come with connectors for this purpose. If using a third-party thermostat with a Zonline product, thermostat connectors will need to be ordered for connectivity. Use the table below to identify the correct connector for your application.

NOTE: Zonline models will resume inclusion of thermostat connectors in early 2025.

Model	Description	Notes Contact your sales rep for pricing
RAKTK8W1	Qty 1 8 pin 8 wire connector	Required for Y1, Y2 low voltage control applications
RAKTK8W10	Qty 10 8 pin 8 wire connector	Required for Y1, Y2 low voltage control applications
RAKTK8PA1	Qty 1 8 pin 7 wire connector	For use with single stage cool low voltage applications
RAKTK8PA10	Qty 10 8 pin 7 wire connector	For use with single stage cool low voltage applications



New AHE and AHH Hotpoint PTACs require a thermostat connection kit to be used with a wall thermostat. Use the table below to identify the correct kit for your application.

Model	Description	Notes Contact your sales rep for pricing
RAKDTKH	208-230V thermostat connection kit	Required for use of wall thermostat with Hotpoint PTACs
RAKETKH	265V thermostat connection kit	Required for use of wall thermostat with Hotpoint PTACs



No visual difference in 208-230V and 265V kits

Definitions To Know

Two-Way Communicating Definition

Information is shared between the thermostat and unit to provide Precise, Perfect Control of Zonline Inverter models.

Energy Management Thermostat

Temperature setbacks are enabled/disabled based on room occupancy to save energy while rooms are vacant.

PMS

(Property Management System) is a comprehensive software application used to cover objectives like coordinating the operational functions of the front office, sales and planning, reporting etc.

NOTE: PMS integration requires a Network Connection Kit, an XMF thermostat, and a one time configuration fee (ZXOLPMSCOM).

API

(Application Programming Interface) is a way for two or more computer programs to communicate with each other.

BACnet

A communication protocol for building automation and control networks that use the ASHRAE, ANSI, and ISO 16484-5 standards protocol.

NOTE: BACnet integration requires a Network Connection Kit, an XMF thermostat and a one time set up fee (ZLOUBACCOM).

GRMS

(Guest Room Management System) is the automation system of the hotel room. It manages information sent by the commands, allowing to operate many functions: Light management (ON/OFF or dimmer) Openings (curtains, rolling, shutters and so on) HVAC system.

NOTE: There is no standard for what a GRMS controls or includes. The most important thing to know is, if the GRMS being quoted includes door lock integration (all Marriott GRMS require door lock integration) See door lock intergration.

RFID

Technology is used in the hospitality industry to allow room access based on key card identification recognized by the door lock.

NOTE: RFID is used in the door lock intergration for communication from the key card to the door lock. The door lock then uses Zigbee or BLE to communicate door status to the thermostat. Functionality requires a Network Connection Kit, and an XMF thermostat.

Zigbee

Low power mesh network.

NOTE: Zigbee functionality requires a Network Connection Kit, and an XMF thermostat.

BLE

Technology is used for creating mesh networks.

NOTE: BLE functionality requires a Network Connection Kit, and an XMF thermostat.

Occupancy Based MUA

MUA (damper and fan) is operated based on the occupancy status, determined by the thermostat. The thermostat uses an aux relay to communicate status to MUA equipped PTAC and VTAC.

Door Lock Integration

Thermostat operation based on the door lock activation/status (Occupancy).

NOTE: Functionality requires a ZXOLU connection kit, an XMF thermostat, ZBU adder and ZXOLDLICOM.

NOTE: Door lock integration only available on VX3 and ZX3 thermostats.

Auto Changeover Thermostat

Refers to the thermostat being switched from heat to cool as the air crosses a certain temperature. Auto changeover thermostats switch from heat to cool automatically while manual changeover thermostats require heat or cool mode selection.

Deadband

A temperature range in which neither heating nor cooling system turns on. The deadband prevents the thermostat from activating heat and cooling in rapid succession. This conserves energy by providing a range of temperatures requiring no energy consumption.

Wireless Control Card

Paired with a wireless thermostat and plugs directly into the HVAC unit. The control card allows you the flexibility of placing the wireless thermostat anywhere in the room for ideal temperature control and occupancy detection.

Quote Guidance

Hilton Connected Room Currently (4/28/23) Hilton no longer has a connected room initiative.

Marriott GRMS quote guidance

VX3TWGEAXMF or ZX3TWGEAXMF (1 per room)

ZXOLU (1 site controller)

ZBU (Zigbee chip, 1 for each thermostat)

ZXOLDLICOM (door lock integration fee, one per site)

If PMS is noted on schedule add **ZXOLPMSCOM (one time fee per property)**

If BMS is noted on schedule add **ZXOLBACCOM (one time fee per property)**

NOTE: you do not require an occupancy sensor at front door for Marriott lighting applications. The door lock feature provides the occupancy hit for lighting.

Energy Management Thermostat Quote the Job Checklist

Thermostats

- _____ RAK190V - Two Way Communication, Energy Management, Occupancy Sensing, Wired
Wired Thermostat (5 wires recommended or 8 wires)
- _____ VX3TWGEA -Energy Management, Occupancy Sensing, Wireless Thermostat

Specification Request Note

Capable thermostats	
On board infra red occupancy sensing	Standard on RAK190V and Verdant VX3
Programmable occupancy detection schedule	Standard on RAK190V and Verdant VX3
Automatically turn off guest room ventilation/MUA	Standard on RAK190V and Verdant VX3
Two speed fan selectable	Standard on RAK190V and Verdant VX3
Provide setbacks based on occupancy	Standard on RAK190V and Verdant VX3
Setbacks based on rental status	Verdant (requires PMS integration)



VX3TWGEA

(for non networked applications)

VX3TWGEAXMF

(for networked applications)

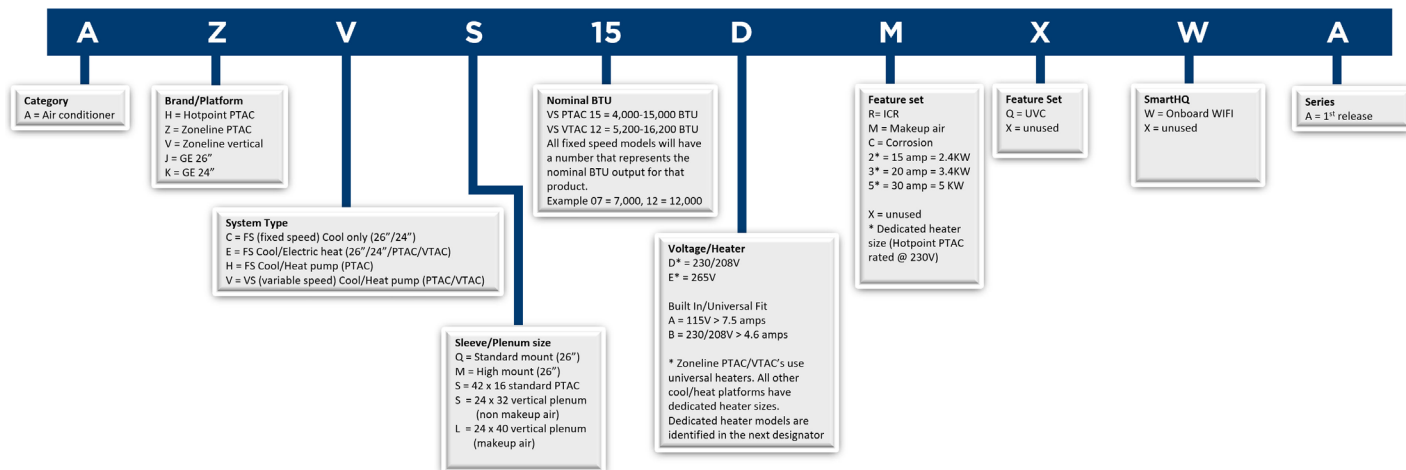
Additional cost for all accessories

Quote Model	Description	Notes Contact your sales rep for pricing
ZXOLU	Network connection kit	1/property
ZXAOS*	Wireless occupancy sensor	Primarily for entry lighting and separate room occupancy sensing
ZXDWS*	Wireless door and window sensor	Used to control heating/cooling based on door or window status
ZXTWS*	Wireless temperature sensor	Used to average temperatures in separate rooms
ZBU	Zgbee/BLE adder	Used for door lock integration
ZXWPTW	Rectangular wall plate	Used to cover oversized wall openings
ZXOLDLICOM	Door lock integration	One time fee
ZXOLPMSCOM	Property management integration	One time fee
ZXOLBACCOM	BACnet integration	One time fee

*Must hard wire power to thermostat (receiver is placed in battery compartment)

● These integrations require ZXOLU network connection kit

Nomenclature and Help Playlist



Reference our Zonline air conditioner help playlist for additional support
@ https://www.youtube.com/playlist?list=PLX8_V2wHGuhkV8K4fGL-VYJeDYCgqorfN


Zonline Air Conditioner Help
by GE Appliances
Playlist • 30 videos • 9,548 views
Tips to assist you throughout the life of your GE Zonline air conditioner, including demonstration of features. ...more

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- GE Zonline Air Conditioner - Wall Thermostat Setup**
GE Appliances 38K views 4 years ago
- GE Zonline PTAC – How to access fault codes**
GE Appliances 44K views 4 years ago
- GE Zonline PTAC – How to Replace the Main Board**
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GE Appliances 27K views 4 years ago
- GE Zonline Air Conditioner – Adjust Digital Fan Speed**
GE Appliances 8.5K views 4 years ago
- GE Zonline Air Conditioner – Occupancy Mode**
GE Appliances 6.7K view 4 years ago

Register/Enroll

Sign up for access to our Air and Water Learning academy to learn more about GE Appliances PTAC and VTACs.



ENGLISH ▾

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Please insert your username and password to proceed

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👁

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