



RESIDENTIAL & LIGHT COMMERCIAL

# CONTROLS GUIDE

COMPATIBLE WITH N<sub>V</sub>-SERIES & P-SERIES PRODUCTS



kumo touch™



## kumo cloud®



### MANAGE YOUR COMFORT FROM ANYWHERE WITH kumo cloud

- ▶ Easy to configure zoning
- ▶ Fahrenheit or Celsius
- ▶ Program & Control
  - On/Off
  - Mode & Set Temperature
  - Fan Speed & Vane Control
- ▶ Error push notifications
- ▶ Filter push notifications
- ▶ High and low push temperature alarms
- ▶ Compatible with Google Home and Amazon Alexa smart assistants
- ▶ Compatible software platforms:
  - iOS 9.0 or later
  - Android 4.4 or later
  - Fire OS 4.4 or later



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- ▶ **Autochangeover:** System mode is determined using a patent pending algorithm calculating the difference between the room temperature and set point plus weighted consideration for zone priority.
  - Adjustable Minimum Run Time after a changeover event
  - Adjustable Maximum Wait Time before a changeover event

### WIRELESS INTERFACE 2

#### SPECIFICATIONS

- ▶ Allows for Trane®/Mitsubishi Electric indoor units to communicate with kumo cloud app and web service
- ▶ Wireless connection via Wi-Fi network
- ▶ Connected to indoor unit via CN105
- ▶ One Wireless Interface required per connected indoor unit
- ▶ Dimensions: 1.82" H x 0.69" W x 2.92" D
- ▶ Radio protocol: IEEE 802.11 b/g/n - via Wi-Fi network
- ▶ Internet access required for initial setup and scheduling
- ▶ Contains a CN105 connection to allow for kumo cloud and MHK2 RedLINK™ Wireless Remote Controller to be used on the same indoor unit



PAC-USWHS002-WF-2

### kumo station®



TAC-WHS01HC-E

#### SPECIFICATIONS

- ▶ 4 outputs to control auxiliary heat, \*\*humidifier, \*\*dehumidifier, ERV or HRV\*
- ▶ Controls 1 or 2 stages of supplemental heat\*
- ▶ Wireless Interface 2 required to connect to kumo cloud®
- ▶ 24 VAC power supply required. Supplied by others
- ▶ Compatible with kumo cloud 2.6 or later

\*Ducted indoor unit fan interlock may be required. Check Install Manual for details.  
\*\*Requires Wireless Temperature and Humidity Sensor

### WIRELESS TEMPERATURE AND HUMIDITY SENSOR FOR kumo cloud

#### SPECIFICATIONS

- ▶ One wireless remote sensor per Wireless Interface 2
- ▶ Connects via Bluetooth Low Energy with Wireless Interface 2
- ▶ Specified open range 33 feet (10 m)
- ▶ Battery powered (1 year battery life)
- ▶ Push notifications when battery is low through kumo cloud app



PAC-USWHS003-TH-1

### OUTDOOR AIR TEMPERATURE SENSOR

#### SPECIFICATIONS

- ▶ Used with kumo station to control backup heat and heat pump staging
- ▶ Wire length 60 ft (18.3 m) in the box
- ▶ Wire length can be a maximum of 200 ft (60.9 m) with field supplied 18/2AWG wire
- ▶ Operating Ambient Temperature Range: -40° F to 120° F (-40° C to 49° C)



C7089U1006/U

### IT EXTENDER

#### SPECIFICATIONS

- ▶ Extends CN105 connection an additional 50 feet
- ▶ For use with kumo station, Wireless Interface 2, and USNAP Interface



PAC-WHS01IE-E

## Wireless Controllers

### kumo touch™

- ▶ Wireless RedLINK remote controller and receiver
- ▶ Large, backlit, easy-to-read touchscreen display
- ▶ Fahrenheit or Celsius
- ▶ Dual set point control with system change over
- ▶ Both controller and receiver enabled with RedLINK™ 3.0 reliability
- ▶ Works with Wireless Interface 2 on all CITY MULTI, P-Series and Nv-Series indoor units

### SPECIFICATIONS

User functions allow user to set:

- ▶ On/Off
- ▶ Operation modes: Cool/Heat/Drying/Fan
- ▶ Temperature (set points for heat & cool)
- ▶ Fan speed setting
- ▶ Airflow direction
- ▶ Day/Time display with 12-hour and 24-hour clock
- ▶ Filter sign display
- ▶ Adjustable auto deadband
- ▶ Space temperature offset adjustment
- ▶ Hide indoor temperature or humidity from being displayed
- ▶ Lockout function for On, Off, Mode, Fan Speed, Setpoint, and Vane Direction commands.
- ▶ Hold function
- ▶ Temporary schedule override
- ▶ Schedule for Residential or Commercial applications
- ▶ Scheduling options include: no schedule, Mon-Sun, Mon-Fri/Sat-Sun, Mon-Fri/Sat/Sun, Mon/Tues/Wed/Thu/Fri/Sat/Sun
- ▶ Diagnostics: displays and records error codes
- ▶ Uses two AA alkaline batteries (included)

Dimensions:

- MRCH2 Controller: 4-5/64" H x 4-5/64" W x 1-1/16" D
- MIFH2 Receiver: 2-15/16" H x 1-25/32" W x 20/32" D
- MRC2 Cable: 39-23/64" (connects receiver to CN105 connection on indoor unit)



MHK2

## Wireless Controller Kit and Accessories

### DELUXE HAND-HELD WIRELESS CONTROLLER WITH ADVANCED FEATURES

#### SPECIFICATIONS

- ▶ Powerful Mode function allows the system to temporarily run at a lower or higher temperature with an increased fan speed. This helps to quickly bring the room to your optimal comfort level
- ▶ Wide Vane setting provides a wider horizontal air distribution on select models
- ▶ Indirect or Direct Airflow for personalized comfort (WPH model only)

#### WPH Wall Mount

- Wide Vane
- L-Vane
- R-Vane
- Powerful
- Indirect/Direct
- Natural Flow

#### FKS Floor Mount

- Powerful
- 2Flow/1Flow
- Sleep

#### UKS EZ FIT™ Cassette

- Wide Vane
- Sleep

#### CKS 4-way Cassette

- Individual Vane Settings
- 3D i-see Sensor®
  - » Direct/Indirect Airflow
- Long
- Louver

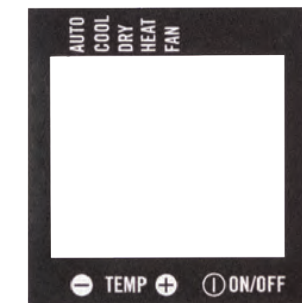


\*WPH hand held

### HAND-HELD STICKERS

#### SPECIFICATIONS

- ▶ Attached to indoor unit hand-held remote controllers display area
- ▶ Allows user to read indoor unit mode
- ▶ Two different stickers available for Nv-Series deluxe handheld wireless remote controllers:
  - WPH Model handheld wireless remote controllers
  - EF, FKS, UKS, and CKS Model handheld wireless remote controllers
- ▶ Available for order on the Literature and Promo Item website



### HAND-HELD WIRELESS CONTROLLER

#### SPECIFICATIONS

- ▶ Operation Modes: Heat/Cool/Auto/Dry
- ▶ Adjustable fan speed
- ▶ 12-hour on/off timer
- ▶ Set horizontal vane position
- ▶ Power off timer and clock adjustment
- ▶ Smart Set to program multiple settings into one quick-press feature
- ▶ Econo Cool energy efficiency cooling option
- ▶ Requires 2 AAA batteries

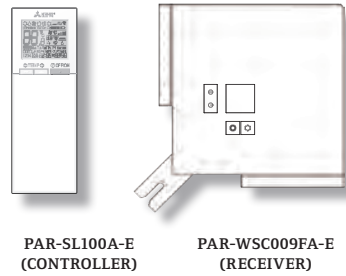


## Wireless Controllers Kits and Accessories

### REMOTE CONTROLLER AND RECEIVER FOR CEILING CASSETTES

#### SPECIFICATIONS

- ▶ Weekly timer, one per day
- ▶ Individual vane settings
- ▶ Direct/Indirect Airflow function
- ▶ Compatible with 3D i-see Sensor\*
- ▶ Compatible with CKS Model Ceiling Cassette



### HAND-HELD WIRELESS CONTROLLER AND RECEIVER FOR CONCEALED INDOOR UNITS

#### PAR-SR32MA-W SPECIFICATIONS

- ▶ For use with PAR-FA32MA Wireless MA Remote Controller Receiver
- ▶ Maximum signal receiving distance is approximately 22 feet
- ▶ Controls group operation for up to 16 indoor units in a single group
- ▶ User functions:
  - On/Off
  - Set temperature
  - Operation modes: Heat/Cool/Dry/Fan
  - Fan speed setting
  - Airflow direction (depending on indoor unit)
- ▶ On/Off timer (one setting per day)
- ▶ Dimensions: 2-1/4" x 6-1/4" x 3/4"



#### TAR-FL32MA-E SPECIFICATIONS

- ▶ On/Off lamp to indicate unit operation and error status
- ▶ Emergency heat and cool operation from receiver (at preset parameter) from the receiver for when the remote is not operational
- ▶ Wiring: connects using two-wire, stranded, non-polar control wire to TB-15 connection terminal on the indoor unit.
- ▶ Dimensions: 2-3/4" W x 4-3/4" H x 7/8" D

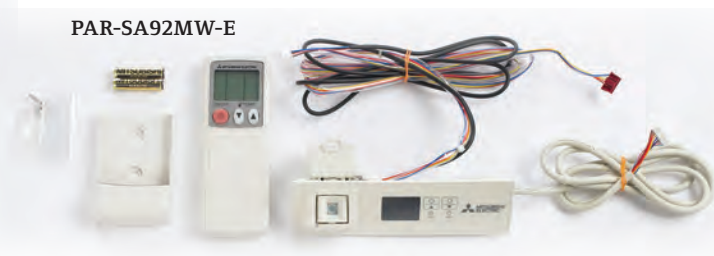
### REMOTE CONTROLLER KIT



#### SPECIFICATIONS

- ▶ For use with P-Series ceiling-suspended units
- ▶ See compatibility table on page 10
- ▶ Kits contain:
  - (1) Wireless remote controller receiver (PAR-SL93B-E)
  - (1) Wireless remote controller with cradle
  - (2) AAA LR03 alkaline batteries

### REMOTE CONTROLLER KIT WITH i-see Sensor™



- (2) 4.1 x 16 wood screws
- (1) Wireless remote controller receiver with i-see Sensor (PAR-SA92MW-E)
- (2) Cord retaining clips
- (1) Connection cord fixing seal (12 x 30 size)

## Wired Controllers

### TOUCH MA REMOTE CONTROLLER

#### SPECIFICATIONS

- ▶ User-friendly, customizable full color touch panel display
- ▶ Ability to add a custom logo on the display
- ▶ Large icons with 180 color patterns
- ▶ Daily and weekly timers
- ▶ Password protected
- ▶ Requires MAC-334IF-E for use with Nv-Series ductless products
- ▶ The MELRemo app and Bluetooth® Low Energy (BLE) technology supports communication with smartphones or tablets in multiple languages



TAR-CT01MAU-SB

### SIMPLE MA CONTROLLER

#### SPECIFICATIONS

- ▶ Controls group operation for up to 16 indoor units in a single group
- ▶ Supports Fahrenheit and Celsius
- ▶ User defined functions:
  - On/Off
  - Operation modes: Heat/Cool/Auto/Dry
  - Fan speed setting
  - Airflow direction
  - Set temperature range: 40° F to 95° F depending on operation mode and indoor unit connected
- ▶ Set temperature range limit for cool and heat modes
- ▶ LOSSNAY®: Simple MA for interlocked system can set high/low/stop on LOSSNAY
- ▶ Room temperature can be sensed either at indoor unit (default) or at the remote controller
- ▶ Dimensions: 2-3/4" W x 9/16" D x 4-3/4" H
- ▶ Requires MAC-334IF-E for use with Nv-Series ductless products.

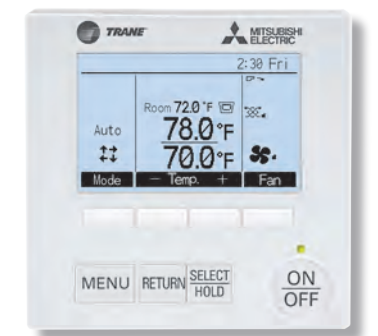


TAC-YT53CRAU-J

### DELUXE MA REMOTE CONTROLLER

#### SPECIFICATIONS

- ▶ User defined functions:
  - On/Off
  - Operation modes: Heat/Cool/Auto/Dry
  - Room temperature setting & Temperature range restriction
  - Manual vane angle (P-Series cassette indoor units)
  - Smooth maintenance (P-Series only)
  - Auto-off timer & Weekly timer
- ▶ Energy save functions for 3D i-see Sensor\*
- ▶ B&W Inversion
- ▶ Setback Mode
- ▶ Draft reduction mode
- ▶ Daylight Saving Time (DST)
- ▶ Dimensions: 4-3/4" W x 9/16" D x 4-3/4" H
- ▶ Requires MAC-334IF-E for use with M-Series ductless products
- ▶ Room temperature displays room temperature sensed either at the indoor unit (default) or at the controller



TAR-40MAAU

# Third Party Controls Interface

## BACnet® & MODBUS® INTERFACE

### SPECIFICATIONS

- ▶ Allows for third-party home automation/building management system to control indoor unit
- ▶ One interface required per indoor unit
- ▶ Powered from indoor unit CN105 connection
- ▶ Compatible with remote controllers
- ▶ Dimensions: 3.74" x 2" x 0.75"
- ▶ Cable length: 37"



PAC-UKPRC001-CN-1

### BACNET POINTS TABLE

Object Type	Object Name
<b>Monitor Only Points</b>	Drive ON/OFF State
	Mode State
	Fan Speed State
	Air Direction State
	Inlet Temperature
	Fault Code

Object Type	Object Name
<b>Commandable Points</b>	Drive ON/OFF Setup
	Set point
	Mode Setup
	Fan Speed Setup
	Air Direction Setup
	Temperature Units

### MODBUS POINTS TABLE

Object Type	Object Name
<b>Commandable Points</b>	ON/OFF
	Mode
	Set point
	Fan Speed
	Air Direction
<b>Monitor Only Points</b>	Fault Codes
	Room Temperature

## FLUSH MOUNT SENSOR

### SPECIFICATIONS



PAC-USSEN001-FM-1

- ▶ Remote sensing of space temperature up to 100 feet
  - Requires field supplied 22-2 AWG wire for installation
- ▶ Dimensions: Sensor Head is Ø0.74" W x 0.65" L
- ▶ Mounting Requirements:
  - Drywall 1/2" hole,
  - Solid Walls 1/4" hole
- ▶ Paintable
- ▶ For Nv-Series ducted and P-series indoor units

## Nv-SERIES SENSOR M21-EAA-307

### SPECIFICATIONS

- ▶ Remote Nv-Series Ductless Temperature Sensor



M21-EAA-307

# Third Party Controls Interface

## THERMOSTAT INTERFACE

### SPECIFICATIONS

- ▶ Connect your favorite third party 24VAC thermostat (provided by others)
- ▶ One Thermostat Interface per indoor unit and third party thermostat (supplied by others)
- ▶ Connects to indoor unit CN105 connection
- ▶ Modes of operation: cooling/heating/ventilation (fan)/off
- ▶ Fan speed control: high/medium/low
- ▶ Delayed off adjustable setting: 0, 5 (default), 10, or 30 minutes
- ▶ Indoor unit fan speed setting: auto (default), medium, high, or custom auto
- ▶ Two-stage heat and cool thermostat operation
  - Capacity is adjusted based on zone temperature rate of change measured by the return air sensor (highly recommended)
  - Full capacity (default)
- ▶ Auto recovery after power failure
- ▶ 24VAC transformer required (Sold separately or supplied by third party)
- ▶ VPL24-210 is a compact 24VAC 5VA transformer
  - Dimensions: 1.437 x 2.375 x 1.437 inch (HxWxD)



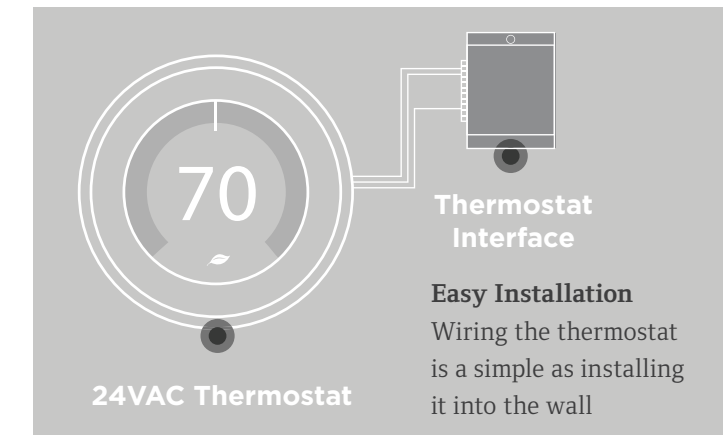
PAC-US444CN-1



VPL24-210



THIRD PARTY THERMOSTATS PROVIDED BY OTHERS



## USNAP INTERFACE

### SPECIFICATIONS











- ▶ Allows indoor units to participate in demand response events
- ▶ Works with CTA 2045 DC Form Factor Universal Communication Modules (UCMs)
- ▶ 3 LEDs to display device status
  - Communication with UCM
  - Communication to indoor unit
  - Demand Response Events
- ▶ System Reset



PAC-WHS01UP-E

# CONTROLS

## Compatibility Table

		Nv-Series										P-Series										
		Floor Mount	Wall Mount					Air Handler	Horizontal Ducted	Ceiling Cassette		Ceiling Suspended		Horizontal Ducted		Wall Mount		Ceiling Cassette		Air Handler		
		NTXFKS	MSZ -EF	NT(Y/X) WST	NTXWPH	NTXWMT	NTXWEL	NTXAMT	NTXDKS	NTXCKS	NTXUKS	PCA -GA	PCA -KA	PEA -AA	PEAD -AA	PKA -HA	PKA -KA	PLA -AA	PLA -BA	PLA -EA	PVA -AA4	PVA -AA7
 <p>Wireless Interface BACnet® &amp; Modbus Interface Thermostat Interface USNAP Interface</p>	PAC-USWHS002-WF-2																					
	PAC-UKPRC001-CN-1	■	■	■	■	■	■	■	■	■		■	■	■	■	■		■	■	■	■	■
	PAC-US444CN-1																					
	PAC-WHS01UP-E																					
 <p>kumo touch™ Wireless Controller &amp; Receiver</p>	MHK2	■	■	■	■	■	■	■	■	■		■	■	■	■	■		■	■	■	■	
 <p>Deluxe SG Hand-held Wireless Controller</p>	Varies by model, see Part Manual for Part Number	■	■		■							■										
 <p>Standard KM Hand-held Wireless Controller</p>	Varies by model, see Part Manual for Part Number			■								■	■	■	■	■	■		■	Optional		
 <p>Moderate MS Hand-held Wireless Controller</p>	Varies by model, see Part Manual for Part Number				■	■							■									
 <p>Handheld Wireless Controller &amp; Receiver for Concealed Indoor Units</p>	TAR-FL32MA-E (controller) PAR-SR32MA-W (receiver)							○	○	○			○	○	○	○	○	○	○	○	○	○
 <p>Remote Controller Kit</p>	PAR-SL93B-E																					
 <p>Remote Controller Kit with i-see Sensor™</p>	PAR-SA92MW-E										■	■										
 <p>Touch MA Remote Controller Deluxe MA Remote Controller Simple MA Remote Controller</p>	TAR-CT01MAU-SB TAR-40MAAU TAC-YT53CRAU-J	○	○	○	○	○	○	○	○	○												
		MAC-334IF-E Required	MAC-334IF-E Required	MAC-334IF-E Required	MAC-334IF-E Required	MAC-334IF-E Required	MAC-334IF-E Required															
 <p>Corner Panel Receiver and Remote</p>	PAR-SL100A-E (controller) PAR-WSC009FA-E (receiver)								■													

■ = CN105 Compatibility

○ = TB15 Compatibility

\*Features may vary by wireless controller part number.

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