MITSUBISHI
ELECTRIC

RESIDENTIAL & LIGHT COMMERCIAL

CONTROLS GUIDE

COMPATIBLE WITH M-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

Download on the **App Store**   available at **amazon** appstore   GET IT ON **Google play**   WORKS WITH **alexa**   works with the **Google Assistant**   Works with **IFTTT**

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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 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®

PAC-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 M-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 (FH Series only)

| MSZ-FH	MFZ-KJ	MLZ-KP	SLZ-KF
• Wide Vane • L-Vane • R-Vane • Powerful • Indirect/Direct • Natural Flow	• Powerful • 2Flow/1Flow • Sleep	• Wide Vane • Sleep	• Individual Vane Settings • 3D i-see Sensor » Direct/Indirect Airflow • Long • Louver

* FH 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 M-Series deluxe handheld wireless remote controllers:
  • FH Model handheld wireless remote controllers
  • EF, KJ, KP, and KF Model handheld wireless remote controllers

► Available for order on the Literature and Promo Item website
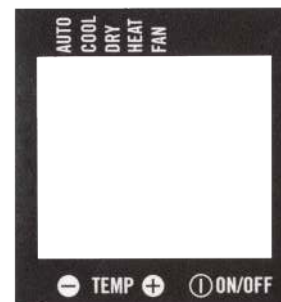
HAND-HELD WIRELESS CONTROLLER

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
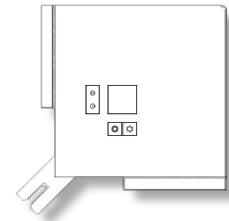
Wireless Controllers Kits and Accessories

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 SLZ Model Ceiling Cassette

PAR-SL100A-E (CONTROLLER)   **PAR-SF9FA-E (RECEIVER)**

HAND-HELD WIRELESS CONTROLLER AND RECEIVER FOR CONCEALED INDOOR UNITS

PAR-FL32MA 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″

PAR-FA32MA (RECEIVER)   **PAR-FL32MA (CONTROLLER)**

PAR-FA32MA 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

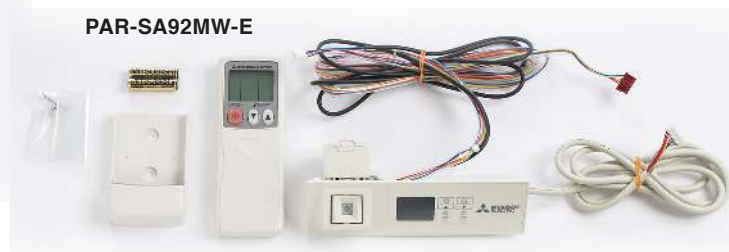## REMOTE CONTROLLER KIT

PAR-SL93B-E

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

PAR-SA92MW-E

  • (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 M-Series ductless products

▶ The MELRemo app and Bluetooth® Low Energy (BLE) technology supports communication with smartphones or tablets in multiple languages

PAR-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 M-Series ductless products.

PAC-YT53CRAU

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)

PAR-40MAAU-A

▶ 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

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	Object Type	Object Name
Monitor Only Points	Drive ON/OFF State	Commandable Points	Drive ON/OFF Setup
	Mode State		Set point
	Fan Speed State		Mode Setup
	Air Direction State		Fan Speed Setup
	Inlet Temperature		Air Direction Setup
	Fault Code		Temperature Units

MODBUS POINTS TABLE

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

FLUSH MOUNT SENSOR

PAC-USSEN001-FM-1

SPECIFICATIONS

► 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 M-Series ducted and P-series indoor units

M-SERIES SENSOR M21-EAA-307

SPECIFICATIONS

► Remote M-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 available for purchase from METUS
   • Dimensions: 1.437 x 2.375 x 1.437 inch (HxWxD)

PAC-US444CN-1   **VPL24-210**

THIRD PARTY THERMOSTATS PROVIDED BY OTHERS

70
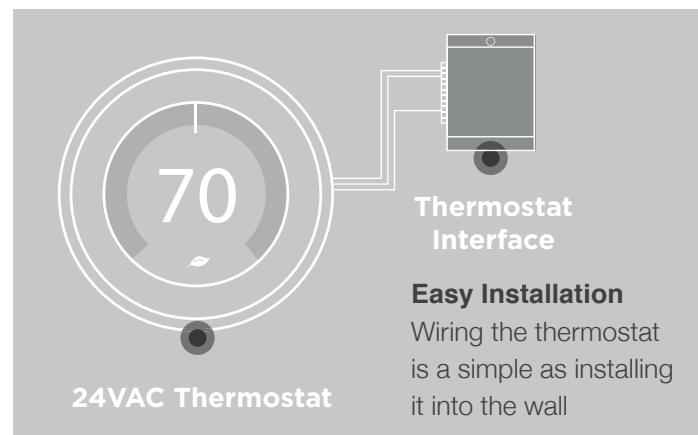
24VAC Thermostat

Thermostat Interface

Easy Installation
Wiring the thermostat is a simple as installing it into the wall
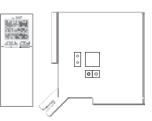
USNAP INTERFACE

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

		M-Series												
		Floor Mount		Wall Mount										
		MFZ-KA	MFZ-KJ	MSY/MSZ-D	MSZ-FD	MSZ-FE	MSZ-EF	MSY/MSZ-GE	MSY/MSZ-GL	MSZ-FH	MSZ-HE	MSZ-HM	MSZ-WR	MSZ-JP
Wireless Interface	PAC-USWHS002-WF-1 PAC-USWHS002-WF-2	■	■	■ NA-8		■ 09(12) NA-8 & 18NA	■	■ NA-8, NA-9 & GE24NA	■	■		■	■	■
Bacnet® & Modbus Interface	PAC-UKPRC001-CN-1													
Thermostat Interface	PAC-US444CN-1													
USNAP Interface	PAC-WHS01UP-E													
kumo touch™ Wireless Thermostat & Receiver	MHK2	■	■	■ NA-8		■ 09(12) NA-8 & 18NA	■	■ NA-8, NA-9 & GE24NA	■	■		■	■	■
Hand-held Wireless Controller	Deluxe SG Varies by model, see Part Manual for Part Number		■				■			■				
Hand-held Wireless Controller	Standard KM Varies by model, see Part Manual for Part Number	■		■	■	■		■	■					
Hand-held Wireless Controller	Moderate MS Varies by model, see Part Manual for Part Number										■	■	■	■
Handheld Wireless Controller & Receiver for Concealed Indoor Units	PAR-FL32MA (controller) PAR-FA32MA (receiver)													
Remote Controller Kit	PAR-SL93B-E													
Remote Controller Kit with i-see Sensor™	(PAR-SA92MW-E)													
Touch MA Remote Controller	PAR-CT01MAU-SB	◉ MAC-334IF-E Required	◉ MAC-334IF-E Required	◉ MAC-334IF-E Required NA-8		◉ MAC-334IF-E Required 09(12) NA-8 & 18NA	◉ MAC-334IF-E Required	◉ MAC-334IF-E Required NA-8, NA-9 & GE24NA	◉ MAC-334IF-E Required	◉ MAC-334IF-E Required		◉ MAC-334IF-E Required	◉ MAC-334IF-E Required	◉ MAC-334IF-E Required
Deluxe MA Remote Controller	PAR-40MAAU-A													
Simple MA Controller	PAC-YT53CRAU													
Corner Panel Receiver and Remote	PAR-SL100A-E (controller) PAR-SF9FA-E (receiver)													

■ = CN105 Compatibility   I   ◉ = TB15 Compatibility

	M-Series						P-Series										
	Air Handler		Horizontal Ducted		Ceiling Cassette		Ceiling Suspended		Horizontal Ducted		Wall Mount		Ceiling Cassette			Air Handler	
	MVZ -AA4 -AA7	SVZ -KP	SEZ -KD	SEZ -KD 4	SLZ-KA & KF	MLZ -KP	PCA -GA	PCA -KA	PEA -AA	PEAD -AA	PKA -HA	PKA -KA	PLA -AA	PLA -BA	PLA -EA	PVA -AA4	PVA -AA7
	■	■		■ KD4.1TH & KD4R1.TH	■	■		■ KA4, KA4.TH, KA6 & KA7	■ AA4, AAR1.TH & AA6	■ AA4, AA5, & AA7	■ HA4, HA6, & HA7	■ KA4.TH, KA6 & KA7		■ BA4 & BA6	■	■	■
	■	■		■ KD4.1TH & KD4R1.TH	■	■		■ KA4, KA4.TH, KA6 & KA7	■ AA4 & AA4R1.TH	■ AA4, AA5, & AA7	■ HA4, HA6, & HA7	■ KA4.TH, KA6 & KA7		■ BA4 & BA6	■	■	■
								■ Optional									
								■	■	■	■	■	■		■ Optional		
						■			■								
	○	○	○	○	○		○ Included In Kit	○ Included In Kit	○ Receiver Required	○ Receiver Required	○ Receiver Built In	○ Receiver Built In		○ Receiver Required	○ Receiver Required	○ Receiver Required	○ Receiver Required
							■	■									
	○	○	○	○	○	○ MAC-334IF-E Required	○	○	○	○	○	○	○	○	○	○	○
					■ SLZ-KF only												

Features may vary by wireless controller part number.

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