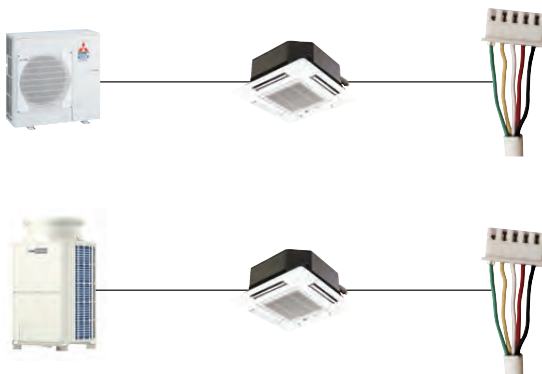


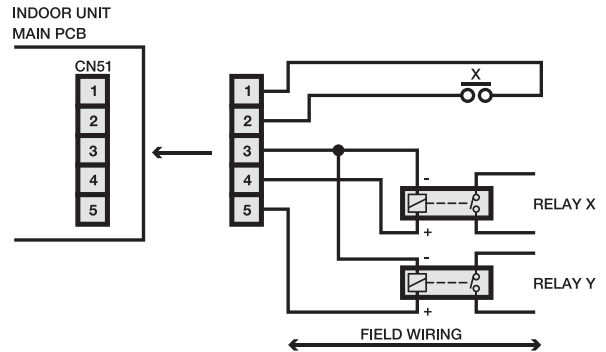
SOLUTION INTERFACE	PAC-SA88HA		
Description	Run and Fault Adapter (5 wire adapter)	Heat and Cool Adapter (5 wire adapter)	Run and Fault Adapter (5 wire adapter)
Connect to	Indoor	Indoor	Outdoor
Max Number of Units	1	1	1
Compatibility	Mr Slim and City Multi	City Multi	City Multi
Dimensions (mm) (WxDxH)	-	-	-
Control			
On/Off	x	x	x
Mode	x	x	x
Setpoint	x	x	x
Fan Speed	x	x	x
Air Direction	x	x	x
Permit/Prohibit	x	x	x
Filter Sign	x	x	x
Monitor			
On/Off	✓	x	✓
Mode	x	✓	x
Setpoint	x	x	x
Fan Speed	x	x	x
Air Direction	x	x	x
Permit/Prohibit	x	x	x
Filter Sign	x	x	x
Fault Codes	✓	✓	✓
Room Temperature	x	x	x
Fire Alarm	x	x	x
On/Off but Centrally Controlled	x	x	x
On/Off but NOT Centrally Controlled	x	x	x
Run and Fault Output	12VDC	x	12VDC
Heat and Cool Output	x	12VDC	x
Night Mode and Demand Control	x	x	x
Connect Mr Slim to M-NET	-	-	-
Connect Mr Slim to A32M	-	-	-
Connect Mr Slim to BAC-A/50	-	-	-

Note: ✓= Yes, x = No, - = Not applicable.

SYSTEM DIAGRAM



WIRING DIAGRAM 12V DC RUN AND FAULT OUTPUT CONNECTIONS



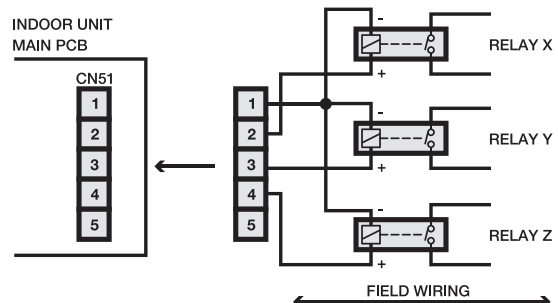
NOTE

- RELAYS NOT SUPPLIED
- X REQUIRES A PULSE SIGNAL TO START / STOP UNIT

OPERATION

- RELAY X SUPPLIED WITH 12V DC WHEN UNIT IS ON
- RELAY Y SUPPLIED WITH 12V DC WHEN UNIT IN FAULT

WIRING DIAGRAM 12V DC OPERATION MODE OUTPUT CONNECTIONS



NOTE

- RELAYS NOT SUPPLIED

OPERATION

- RELAY X SUPPLIED WITH 12V DC WHEN FAN IS RUNNING
- RELAY Y SUPPLIED WITH 12V DC WHEN UNIT IS IN COOLING MODE AND THE REMOTE CONTROLLER IS ON OR OFF
- RELAY Z SUPPLIED WITH 12V DC WHEN UNIT IS IN HEATING MODE AND THE REMOTE CONTROLLER IS ON OR OFF

Outdoor Condensers for Meeting Room AHUs

(For AHU04 & AHU05 DX Coils)



The Mr Slim multi-split system is an ideal option for open plan spaces in medium sized premises such as offices or shops, where two, three or four units are required. These can be Mr Slim ceiling cassettes (PLA-RP & SLZ-KA), ceiling suspended (PCA-RP), ducted (PEAD-RP), floor standing (PSA-RP) or wall mounted (PKA-RP) models and can be connected to a single outdoor unit using twin, triple or quadruple multi distributor pipes.

- Twin, triple or quadruple indoor heat pump units can be operated in Multi-Split configuration from a single outdoor unit
- Heat pumps must operate in same heating or cooling mode
- Inverter controlled outdoor unit with low starting current

Note: SEZ-KD indoor units cannot be used as part of a Mr Slim Multi-Split system.
PSA-RP indoor units cannot be connected with indoor units of different type.

PUHZ-RP250YKA

TOTAL CAPACITY (kW)	Heating (nominal)	12.5 - 31.5
	Cooling (nominal)	11.2 - 28.0
	Heating (UK)	10.65 - 26.8
	Cooling (UK)	10.3 - 25.75
NOISE (dBA)	Heating / Cooling (silent)	59 / 58 (55)
WEIGHT (kg)		141
DIMENSIONS (mm)	Width	1050
	Depth	330 + 30
	Height	1338
ELECTRICAL SUPPLY		380-415V, 50Hz
PHASE		3
STARTING CURRENT (A)		5
MAX RUNNING CURRENT (A)		21
FUSE RATING (BS88) - HRC (A)		25
MAINS CABLE No. CORES		5
MAX PIPE LENGTH (m)		120
MAX HEIGHT DIFFERENCE (m)		30
CHARGE R410A (kg) - 30m		7.7

Applicable Combinations

2 x Size 125 Indoor units
3 x Size 71 Indoor units
4 x Size 60 Indoor units

MSDD-50WR-E Pipe Kit
MSDT-111R-E Pipe Kit
MSDF-1111R-E Pipe Kit



Air Conditioning | Commercial Heating
Domestic Heating | Photovoltaics



Air Conditioning

Product Information

PAR-31MAA : Standard Remote Controller

CONTROLS



Our air conditioning systems are supported by a multitude of remote controllers. Each remote controller type, whilst being able to support the general control and monitoring functions for a group of indoor units, can also offer other unique operational features.

The PAR-31MAA is a popular, advanced remote controller with a clear backlit display and a very simple user interface.

FEATURES



DIMENSIONS

Not available



The PAC-SA89TA is a simple 3 wire adapter for connection to Mr Slim or City Multi indoor units with two operation possibilities:

1. Remote on/off & fire alarm interface from external VFC signals.
2. Night mode & demand control interface from external VFC signals.

Key Features

- Also known as 3 wire adapter
- Remote on/off
- Fire alarm input
- Night mode
- Demand control



Air Conditioning | Heating
Ventilation | Controls



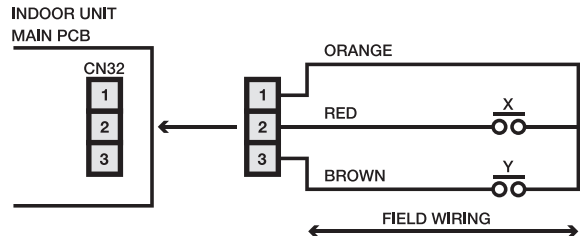
SIMPLE INTERFACE	PAC-SA89TA	
Description	On/Off Adapter (3 wire adapter)	Night Mode and Demand Control (3 wire adapter)
Connect to	Indoor	Outdoor
Max Number of Units	1	1
Compatibility	Mr Slim and City Multi	Mr Slim and City Multi
Dimensions (mm) (WxDxH)	-	-
Control	On/Off Mode Setpoint Fan Speed Air Direction Permit/Prohibit Filter Sign	On/Off Mode Setpoint Fan Speed Air Direction Permit/Prohibit Filter Sign
Monitor	On/Off Mode Setpoint Fan Speed Air Direction Permit/Prohibit Filter Sign Fault Codes Room Temperature Fire Alarm	On/Off Mode Setpoint Fan Speed Air Direction Permit/Prohibit Filter Sign Fault Codes Room Temperature Fire Alarm
On/Off but Centrally Controlled	VFC	x
On/Off but NOT Centrally Controlled	x	x
Run and Fault Output	x	x
Heat and Cool Output	x	x
Night Mode and Demand Control	x	VFC
Connect Mr Slim to M-NET	-	-
Connect Mr Slim to A32M	-	-
Connect Mr Slim to BAC-A/50	-	-

Note: VFC: Volt free contact. ✓ = Yes, x = No, - = Not applicable.

SYSTEM DIAGRAM



WIRING DIAGRAM On/Off and Fire Alarm



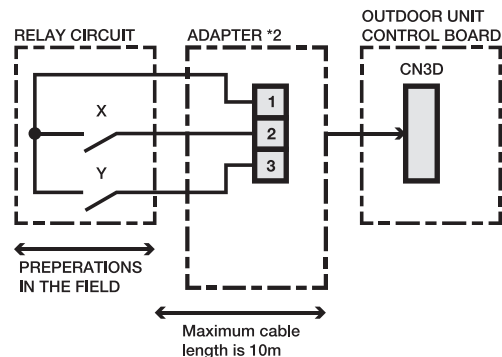
NOTE

- ON / OFF BUTTON ON THE REMOTE CONTROLLER NOT AVAILABLE
- ADAPTER WIRE COLOURS MAY VARY
- RELAYS NOT SUPPLIED

OPERATION

- X AND Y CLOSED TO START UNIT

WIRING DIAGRAM Low Noise and Demand Connections



NOTE

- X : Low noise mode or demand
- Y : Demand
- X, Y : Relay
- Contact rating voltage $\geq 15\text{VDC}$
- Contact rating current $\geq 0.1\text{A}$
- Minimum applicable load $\leq 1\text{mA}$ at DC



The PAC-SA88HA is a simple 5 wire adapter for connection to Mr Slim or City Multi indoor units and City Multi outdoor units with two operation possibilities:

1. 12v DC outputs run and fault, compatible with Mr Slim, City Multi indoor units and City Multi outdoor units.
2. 12v DC outputs of operation mode, fan / heat / cool, compatible with City Multi indoor units.

Key Features

- Heating and cooling signal
- Run and fault signal



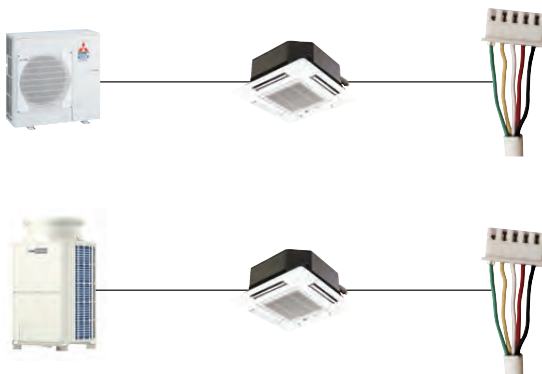
Air Conditioning | Heating
Ventilation | Controls



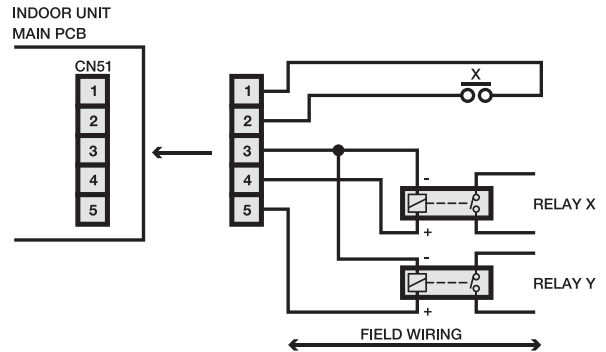
SOLUTION INTERFACE	PAC-SA88HA		
Description	Run and Fault Adapter (5 wire adapter)	Heat and Cool Adapter (5 wire adapter)	Run and Fault Adapter (5 wire adapter)
Connect to	Indoor	Indoor	Outdoor
Max Number of Units	1	1	1
Compatibility	Mr Slim and City Multi	City Multi	City Multi
Dimensions (mm) (WxDxH)	-	-	-
Control			
On/Off	x	x	x
Mode	x	x	x
Setpoint	x	x	x
Fan Speed	x	x	x
Air Direction	x	x	x
Permit/Prohibit	x	x	x
Filter Sign	x	x	x
Monitor			
On/Off	✓	x	✓
Mode	x	✓	x
Setpoint	x	x	x
Fan Speed	x	x	x
Air Direction	x	x	x
Permit/Prohibit	x	x	x
Filter Sign	x	x	x
Fault Codes	✓	✓	✓
Room Temperature	x	x	x
Fire Alarm	x	x	x
On/Off but Centrally Controlled	x	x	x
On/Off but NOT Centrally Controlled	x	x	x
Run and Fault Output	12VDC	x	12VDC
Heat and Cool Output	x	12VDC	x
Night Mode and Demand Control	x	x	x
Connect Mr Slim to M-NET	-	-	-
Connect Mr Slim to A32M	-	-	-
Connect Mr Slim to BAC-A/50	-	-	-

Note: ✓ = Yes, x = No, - = Not applicable.

SYSTEM DIAGRAM



WIRING DIAGRAM 12V DC RUN AND FAULT OUTPUT CONNECTIONS



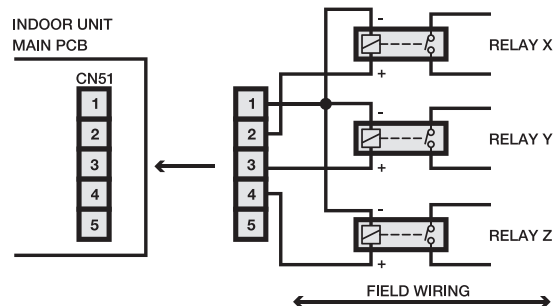
NOTE

- RELAYS NOT SUPPLIED
- X REQUIRES A PULSE SIGNAL TO START / STOP UNIT

OPERATION

- RELAY X SUPPLIED WITH 12V DC WHEN UNIT IS ON
- RELAY Y SUPPLIED WITH 12V DC WHEN UNIT IN FAULT

WIRING DIAGRAM 12V DC OPERATION MODE OUTPUT CONNECTIONS



NOTE

- RELAYS NOT SUPPLIED

OPERATION

- RELAY X SUPPLIED WITH 12V DC WHEN FAN IS RUNNING
- RELAY Y SUPPLIED WITH 12V DC WHEN UNIT IS IN COOLING MODE AND THE REMOTE CONTROLLER IS ON OR OFF
- RELAY Z SUPPLIED WITH 12V DC WHEN UNIT IS IN HEATING MODE AND THE REMOTE CONTROLLER IS ON OR OFF

Reception AHU (AHU06) –

Indoor Ceiling mount Fan Coil Unit (Basement Level) &
Related Outdoor Condenser (Roof Level)

Air Conditioning

Product Information

PEFY-P200VMHS-E : Indoor Unit

High Static Pressure Ceiling Concealed Ducted



With improved design flexibility as a result of increased external static pressure, the PEFY-P-VMHS-E allows authentic duct air conditioning within the strictest aesthetic confines.

FEATURES

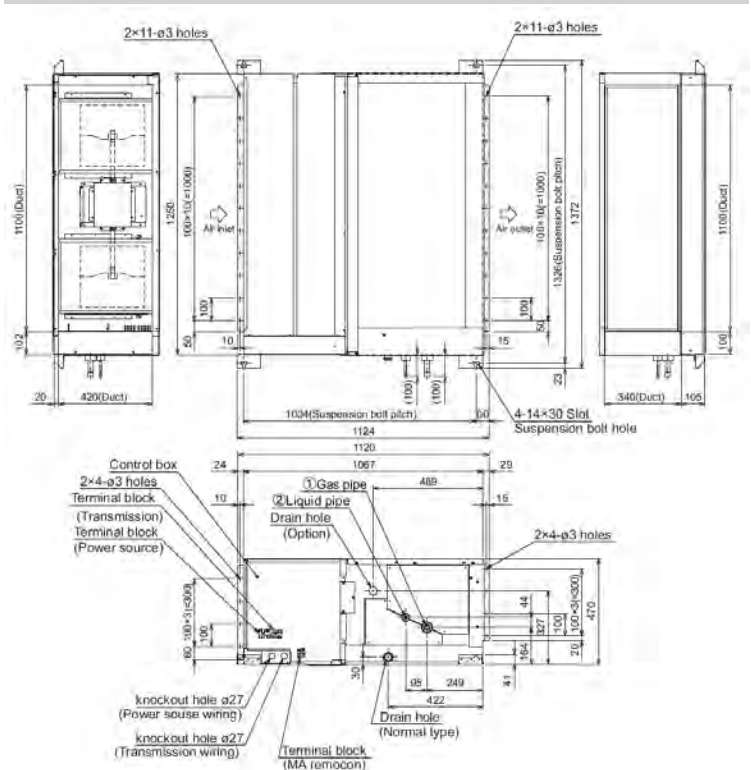


INDOOR

Heating Capacity (kW) (nominal)	25
Cooling Capacity (kW) (nominal)	22.4
High Performance Heating Capacity (kW) (UK)	25
COP Priority Heating Capacity (kW) (UK)	23.4
Cooling Capacity (kW) (UK)	21.2
Cooling Capacity (Hi-Sens Mode) (kW) (UK)	16.3
SHF (UK)	0.75
SHF (Hi-Sens Mode) (UK)	0.92
Heating Power Input (kW) (nominal)	0.63
Cooling Power Input (kW) (nominal)	0.63
Airflow (m³/min) - Lo-Hi	50 - 72
External Static Pressure (Pa)	50 - 150 - 250
Sound Pressure Level (dBA) - Lo-Hi	36 - 43
Weight (kg)	97
Dimensions (mm) Width	1250
Dimensions (mm) Depth	1120
Dimensions (mm) Height	470
Electrical Supply	220-240V, 50HZ
Phase	SINGLE
Running Current (A) - Heating / Cooling	3.18 / 3.18
Fuse Rating (BS88) - HRC (A)	6
Mains Cable No. Cores	3

DIMENSIONS

PEFY-P200VMHS-E



Telephone: 01707 282880 Fax: 01707 278881

Email: airconditioning@meuk.mee.com Website: <http://www.airconditioning.mitsubishielectric.co.uk>

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Service Ref.		PUMY-P200YKM PUMY-P200YKM-BS	
Power source		380/400/415 V, 50 Hz	
Cooling capacity (Nominal)		kW *1	22.4
		kcal/h *1	19,300
		BTU/h *1	76,400
	Power input	kW	6.05
	Current input	A	9.88, 9.39, 9.05
	COP	kW/kW	3.70
Temp. range of cooling	Indoor temp.	W.B.	15 to 24°C
	Outdoor temp.	D.B.	-5 to 46°C
Heating capacity (Nominal)		kW *2	25.0
		kcal/h *2	21,500
		BTU/h *2	85,300
	Power input	kW	5.84
	Current input	A	9.54, 9.06, 8.74
	COP	kW/kW	4.28
Temp. range of heating	Indoor temp.	D.B.	15 to 27°C
	Outdoor temp.	W.B.	-20 to 15°C
Indoor unit connectable	Total capacity	50 to 130% of outdoor unit capacity	
	Model / Quantity	15 - 250 / 12	
Sound pressure level (measured in anechoic room)		dB <A>	56/ 61
Power pressure level (measured in anechoic room)		dB <A>	-
Refrigerant piping diameter	Liquid pipe	mm (in)	9.52 (3/8)*3
	Gas pipe	mm (in)	19.05 (3/4)
FAN *2	Type x Quantity		Propeller Fan x 2
	Air flow rate	m3/min	139
		L/s	2,316
		cfm	4,908
	Control, Driving mechanism		DC control
	Motor output	kW	0.20 + 0.20
Compressor	External static press.		0
	Type x Quantity		Scroll hermetic compressor x 1
	Manufacturer		Siam Compressor Industry Co., Ltd.
	Starting method		Inverter
	Capacity control	%	Cooling 25 to 100 Heating 17 to 100
	Motor output	kW	5.3
	Case heater	kW	0
Lubricant		FV50S(2.3litter)	
External finish		Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1	
External dimension HxWxD	mm	1338 x 1050 x 330(+25)	
		52-11/16 x 41-11/32 x 13 (+1)	
Protection devices	High pressure protection		High pressure Switch
	Inverter circuit (COMP./FAN)		Overcurrent detection, Overheat detection(Heat sink thermistor)
	Compressor		Compressor thermistor, Over current detection
	Fan motor		Overheating, Voltage protection
Refrigerant	Type x original charge		R410A 7.3 kg
	Control		Electronic Expansion Valve
Net weight		kg (lb)	138 (305)
Heat exchanger		Cross Fin and Copper tube	
HIC circuit (HIC: Heat Inter-Changer)		HIC circuit	
Defrosting method		Reversed refrigerant circuit	
Drawing	External	BK01N339	
	Wiring	BH79J199	
Standard attachment	Document	Installation Manual	
	Accessory	Joint pipe x 1, Grounded lead wire x2	
Optional parts		Joint: CMY-Y62-G-E Header: CMY-Y64/68-G-E	
<p>* 1 Nominal cooling conditions * 2 Nominal heating conditions</p> <p>Indoor : 27°C D.B./19°C W.B. [81°F D.B./66°F W.B.] 20°C D.B. [68°F D.B.]</p> <p>Outdoor : 35°C D.B. [95°F D.B.] 7°C DB/6°C W.B. [45 °F D.B./43 °F W.B.]</p> <p>Pipe length : 7.5 m [24-9/16 ft] 7.5 m [24-9/16 ft]</p> <p>Level difference : 0 m [0 ft] 0 m [0 ft]</p> <p>*3 Liquid pipe diameter: 12.7 mm, in case of further piping length is longer than 60 m.</p> <p>Note : 1. Nominal conditions * 1, * 2 are subject to ISO 15042. 2. Due to continuing improvement, above specifications may be subject to change without notice.</p>			<p>Unit converter</p> <p>kcal/h = kW × 860 BTU/h = kW × 3,412 cfm = m3/min x 35.31 lb = kg/0.4536</p> <p>Above specification data is subject to rounding variation.</p>

Unit : mm



Air Conditioning

Product Information

PAR-31MAA : Standard Remote Controller

CONTROLS



Our air conditioning systems are supported by a multitude of remote controllers. Each remote controller type, whilst being able to support the general control and monitoring functions for a group of indoor units, can also offer other unique operational features.

The PAR-31MAA is a popular, advanced remote controller with a clear backlit display and a very simple user interface.

FEATURES



DIMENSIONS

Not available



The PAC-SA89TA is a simple 3 wire adapter for connection to Mr Slim or City Multi indoor units with two operation possibilities:

1. Remote on/off & fire alarm interface from external VFC signals.
2. Night mode & demand control interface from external VFC signals.

Key Features

- Also known as 3 wire adapter
- Remote on/off
- Fire alarm input
- Night mode
- Demand control



Air Conditioning | Heating
Ventilation | Controls



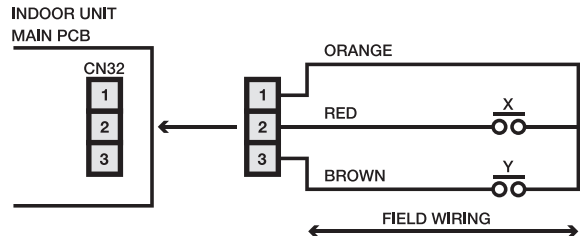
SIMPLE INTERFACE	PAC-SA89TA	
Description	On/Off Adapter (3 wire adapter)	Night Mode and Demand Control (3 wire adapter)
Connect to	Indoor	Outdoor
Max Number of Units	1	1
Compatibility	Mr Slim and City Multi	Mr Slim and City Multi
Dimensions (mm) (WxDxH)	-	-
Control	On/Off Mode Setpoint Fan Speed Air Direction Permit/Prohibit Filter Sign	On/Off Mode Setpoint Fan Speed Air Direction Permit/Prohibit Filter Sign
Monitor	On/Off Mode Setpoint Fan Speed Air Direction Permit/Prohibit Filter Sign Fault Codes Room Temperature Fire Alarm	On/Off Mode Setpoint Fan Speed Air Direction Permit/Prohibit Filter Sign Fault Codes Room Temperature Fire Alarm
On/Off but Centrally Controlled	VFC	x
On/Off but NOT Centrally Controlled	x	x
Run and Fault Output	x	x
Heat and Cool Output	x	x
Night Mode and Demand Control	x	VFC
Connect Mr Slim to M-NET	-	-
Connect Mr Slim to A32M	-	-
Connect Mr Slim to BAC-A/50	-	-

Note: VFC: Volt free contact. ✓ = Yes, x = No, - = Not applicable.

SYSTEM DIAGRAM



WIRING DIAGRAM On/Off and Fire Alarm



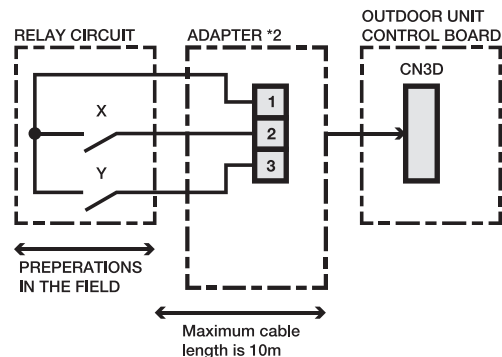
NOTE

- ON / OFF BUTTON ON THE REMOTE CONTROLLER NOT AVAILABLE
- ADAPTER WIRE COLOURS MAY VARY
- RELAYS NOT SUPPLIED

OPERATION

- X AND Y CLOSED TO START UNIT

WIRING DIAGRAM Low Noise and Demand Connections



NOTE

- X : Low noise mode or demand
- Y : Demand
- X, Y : Relay
- Contact rating voltage $\geq 15\text{VDC}$
- Contact rating current $\geq 0.1\text{A}$
- Minimum applicable load $\leq 1\text{mA}$ at DC



The PAC-SA88HA is a simple 5 wire adapter for connection to Mr Slim or City Multi indoor units and City Multi outdoor units with two operation possibilities:

1. 12v DC outputs run and fault, compatible with Mr Slim, City Multi indoor units and City Multi outdoor units.
2. 12v DC outputs of operation mode, fan / heat / cool, compatible with City Multi indoor units.

Key Features

- Heating and cooling signal
- Run and fault signal



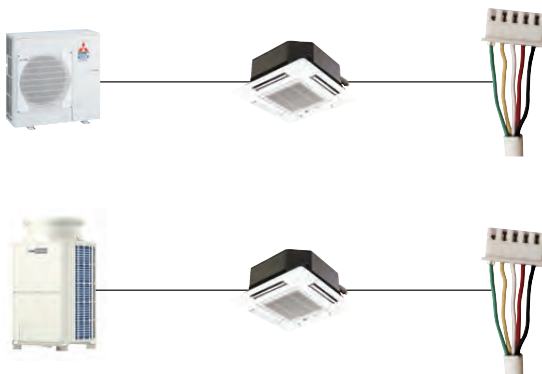
Air Conditioning | Heating
Ventilation | Controls



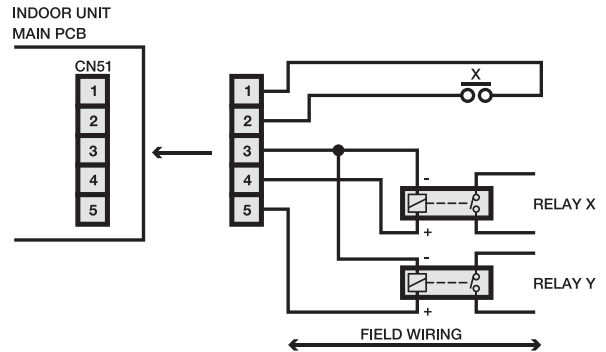
SOLUTION INTERFACE	PAC-SA88HA		
Description	Run and Fault Adapter (5 wire adapter)	Heat and Cool Adapter (5 wire adapter)	Run and Fault Adapter (5 wire adapter)
Connect to	Indoor	Indoor	Outdoor
Max Number of Units	1	1	1
Compatibility	Mr Slim and City Multi	City Multi	City Multi
Dimensions (mm) (WxDxH)	-	-	-
Control			
On/Off	x	x	x
Mode	x	x	x
Setpoint	x	x	x
Fan Speed	x	x	x
Air Direction	x	x	x
Permit/Prohibit	x	x	x
Filter Sign	x	x	x
Monitor			
On/Off	✓	x	✓
Mode	x	✓	x
Setpoint	x	x	x
Fan Speed	x	x	x
Air Direction	x	x	x
Permit/Prohibit	x	x	x
Filter Sign	x	x	x
Fault Codes	✓	✓	✓
Room Temperature	x	x	x
Fire Alarm	x	x	x
On/Off but Centrally Controlled	x	x	x
On/Off but NOT Centrally Controlled	x	x	x
Run and Fault Output	12VDC	x	12VDC
Heat and Cool Output	x	12VDC	x
Night Mode and Demand Control	x	x	x
Connect Mr Slim to M-NET	-	-	-
Connect Mr Slim to A32M	-	-	-
Connect Mr Slim to BAC-A/50	-	-	-

Note: ✓= Yes, x = No, - = Not applicable.

SYSTEM DIAGRAM



WIRING DIAGRAM 12V DC RUN AND FAULT OUTPUT CONNECTIONS



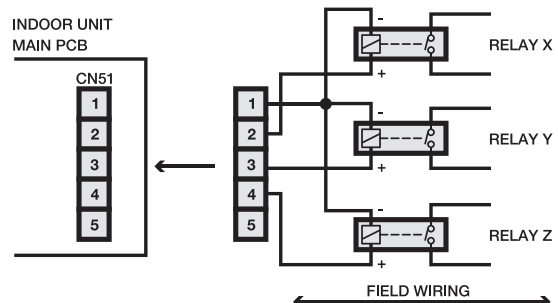
NOTE

- RELAYS NOT SUPPLIED
- X REQUIRES A PULSE SIGNAL TO START / STOP UNIT

OPERATION

- RELAY X SUPPLIED WITH 12V DC WHEN UNIT IS ON
- RELAY Y SUPPLIED WITH 12V DC WHEN UNIT IN FAULT

WIRING DIAGRAM 12V DC OPERATION MODE OUTPUT CONNECTIONS



NOTE

- RELAYS NOT SUPPLIED

OPERATION

- RELAY X SUPPLIED WITH 12V DC WHEN FAN IS RUNNING
- RELAY Y SUPPLIED WITH 12V DC WHEN UNIT IS IN COOLING MODE AND THE REMOTE CONTROLLER IS ON OR OFF
- RELAY Z SUPPLIED WITH 12V DC WHEN UNIT IS IN HEATING MODE AND THE REMOTE CONTROLLER IS ON OR OFF

BMS Maintenance Office Split Type AC Indoor wall
mount Units & Related Outdoor Condensers

Water Tank Plant Room Split Type AC Indoor wall
mount Units & Related Outdoor Condensers

Air Conditioning

Product Information

PKFY-P50VHM-E : Indoor Unit

Wall Mounted



CITY MULT



An elegant design combined with compact dimensions and quiet operation make the PKFY-P an ideal unit choice. Noise levels are significantly reduced thanks to a unique airflow passage design that not only makes the unit one of the quietest in the industry, but also suppresses condensation and prevents mixing with secondary air.

FEATURES

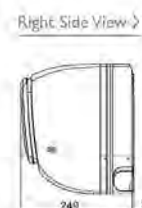
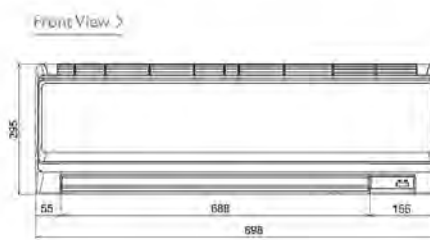


INDOOR

Heating Capacity (kW) (nominal)	6.3
Cooling Capacity (kW) (nominal)	5.6
High Performance Heating Capacity (kW) (UK)	6.3
COP Priority Heating Capacity (kW) (UK)	5.9
Cooling Capacity (kW) (UK)	5.3
Cooling Capacity (Hi-Sens Mode) (kW) (UK)	4.1
SHF (UK)	0.72
SHF (Hi-Sens Mode) (UK)	0.78
Heating Power Input (kW) (nominal)	0.03
Cooling Power Input (kW) (nominal)	0.04
Airflow (m³/min) - Lo-Mi-Hi	9 - 10.5 - 12
Sound Pressure Level (dBA) - Lo-Mi-Hi	34 - 39 - 43
Weight (kg)	13
Dimensions (mm) Width	898
Dimensions (mm) Depth	249
Dimensions (mm) Height	295
Electrical Supply	220-240V, 50HZ
Phase	SINGLE
Running Current (A) - Heating / Cooling	0.3 / 0.4
Fuse Rating (BS88) - HRC (A)	6
Mains Cable No. Cores	3

DIMENSIONS

PKFY-P50VHM-E



Air Conditioning

Product Information

PUMY-P112YKM : Y Series 4.5hp Outdoor Unit

R410A Heat Pump



The latest in Mitsubishi Electric Y Series technology incorporated within the new City Multi 4.5hp model allows up to 9 indoor units to be connected to a single outdoor unit, using the standard branch/header pipework system proven in the larger models. Utilising the latest Mitsubishi Electric Inverter technology, the system is fully controllable with all City Multi controllers or linked to third party BEMS.

FEATURES



OUTDOOR

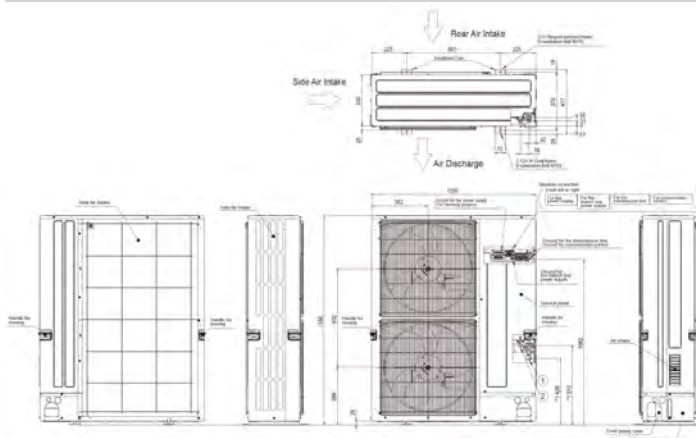
Heating Capacity (kW) (nominal)	14
Cooling Capacity (kW) (nominal)	12.5
Heating Capacity (kW) (UK)	11.6
Cooling Capacity (kW) (UK)	11.5
Heating Power Input (kW) (nominal)	3.04
Cooling Power Input (kW) (nominal)	2.79
Heating Power Input (kW) (UK)	2.71
Cooling Power Input (kW) (UK)	1.87
COP / EER (nominal)	4.61 / 4.48
Max No. of Connectable Indoor Units	9
Max Connectable Capacity	130%
Airflow (m³/min)	110
Pipe Size Gas (mm [in])	15.88 (5/8)
Pipe Size Liquid (mm [in])	9.52 (3/8)
Sound Pressure Level (dBA)	49
Weight (kg)	125
Dimensions (mm) Width x Depth x Height	1050 x 330+30 x 1338
Electrical Supply	380-415V, 50HZ
Phase	3
Starting Current (A)	5
Running Current (A) - Heating	4.62
Running Current (A) - Cooling	4.24
Guaranteed Operating Range (°C) - Heating	-20 ~ 15
Guaranteed Operating Range (°C) - Cooling	-5 ~ 46
Fuse Rating (BS88) - HRC (A)	16
Mains Cable No. Cores	4+ EARTH

PIPING RESTRICTIONS

Total Piping Length (m)	300
Furthest Piping Length (m)	150
Furthest Piping Length After First Branch (m)	30
Between Indoor and Outdoor units - Height (m)	50
Between Indoor and Indoor units - Height (m)	15

DIMENSIONS

PUMY-P112YKM



Air Conditioning

Product Information

PAR-31MAA : Standard Remote Controller

CONTROLS



Our air conditioning systems are supported by a multitude of remote controllers. Each remote controller type, whilst being able to support the general control and monitoring functions for a group of indoor units, can also offer other unique operational features.

The PAR-31MAA is a popular, advanced remote controller with a clear backlit display and a very simple user interface.

FEATURES



DIMENSIONS

Not available

Air Source Heat Pumps (ASHP 1 to 3) for

Hot Water Generation

(Primary side of HWS plate heat Exchangers)

Commercial Heating

Product Information

CAHV-P500YA-HPB

Ecodan Air Source Heat Pump Boiler

Making a
World of
Difference



CAHV Monobloc Heat Pump Boiler System



Certificate Number: MCS HP0002
Product Reference: CAHV-P500YA-HPB



The Ecodan CAHV air source heat pump monobloc system can operate singularly, or form part of a multiple unit system. The CAHV also comes equipped with a wide range of controller features as standard.

A multiple unit system has the ability to cascade available units on and off to meet the load from a building. As an example of this modulation, a 16 unit system allows 0.5kW increments of capacity, from 18kW all the way up to 688kW. This level of modulation is unprecedented within the heating industry and with cascade and rotation built in as standard, the Ecodan CAHV system is perfectly suited to a wide range of commercial applications.

- Multiple unit cascade control of up to 688kW capacity
- Split refrigerant circuits within each CAHV provide 50% back up
- Ability to rotate units based on accumulated run hours
- Provides from 25°C up to 70°C water flow temperatures without boost heaters
- Low maintenance, hermetically-sealed monobloc design
- Low on-site refrigerant volume
- HIC (Zubadan) technology delivers 43kW at -3°C with minimal drop off down to -20°C



Air Conditioning | Commercial Heating
Domestic Heating | Photovoltaics



ecodan[®]
Renewable Heating Technology

MODEL		CAHV-P500YA-HPB
Heating*1 (A7/W35)	Capacity (kW)	45
	Power Input (kW)	10.9
	Running Current [MAX] (A)	17.6 [52.9]
	COP	4.13
Heating*2 (A-3/W35)	Capacity (kW)	43
	Power Input (kW)	15.2
	Running Current [MAX] (A)	24.58 [52.9]
	COP	2.80
Water Pressure Drop*1 *2 (kPa)		18
Temperature Range	Outlet Water Temperature	25-70°C
	Outdoor Temperature D.B	-20-40°C
Circulating Water Volume Range		7.5m³/h - 15.0m³/h
Sound Pressure Level (measured in anechoic room)*1 at 1m (dBA)*3		59
Sound Pressure Level (measured in anechoic room)*1 at 10m (dBA)*3		51
Diameter of Water Pipe Connection mm(in)	Inlet	38.1 (Rc 1 1/2") screw
	Outlet	38.1 (Rc 1 1/2") screw
External Finish		Acrylic painted steel plate - MUNSELL 5Y 6/1 or similar
Dimensions (mm)	Width	1978
	Depth	759
	Height	1710 (1650 without legs)
Weight (kg)		526
Electrical Supply		380-415v, 50Hz
Phase		3
Compressor		Inverter scroll hematic compressor
Refrigerant	Type x original charge	R407c x (5.5kg) x 2
	Control	LEV and HIC circuit

*1 Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 35°C, inlet water temp 30°C as tested to BS EN14511.

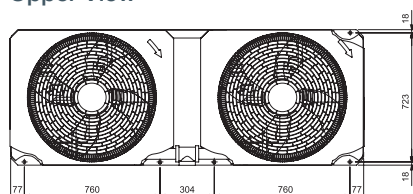
*2 Under normal heating conditions at outdoor temp: -3°CDB / -4°CWB, outlet water temp 35°C, inlet water temp 30°C.

*3 Sound power level 70.7dBA tested to BS EN12102.

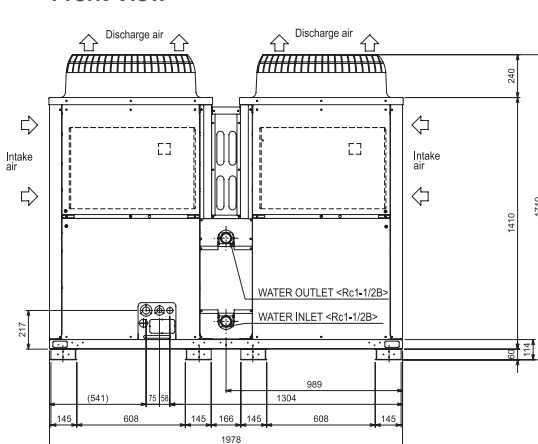
- Please don't use the steel material for the water piping material.
- Please always make water circulate or pull out the circulation water completely when not using it.
- Please do not use groundwater or well water.
- Install the unit in an environment where the wet bulb temperature will not exceed 32°C.
- The water circuit must be a closed circuit.

Schematics

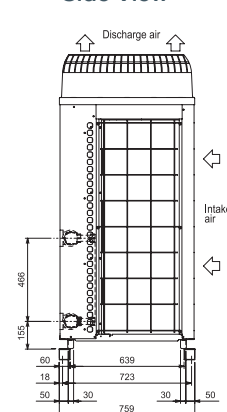
Upper View



Front View



Side View



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Mitsubishi Electric's commitment
to the environment



Air Source Heat Pump (ASHP 4) for
Low Temperature Hot Water to
Underfloor Heating to Reception Area

PUHZ Monobloc Systems



■ PUHZ-W50VHA



■ PUHZ-W85VHA2



■ PUHZ-HW140VHA2 / YHA2

Our comprehensive range of Ecodan air source packaged heat pumps also include the 5, 8.5 and 14kW sizes.

Designed to suit a wide number of applications, these smaller capacity models offer a viable solution, catering for the varying requirements that certain commercial applications demand. For instance, planning restrictions often include height constraints, of which the PUHZ range is perfectly adept to cope with.

Application Examples:

- Small Retail Outlets
- Dental / Doctors Surgeries
- Public Sector Buildings

We have carried out extensive research and development to ensure we can maximise Ecodan's performance. To ensure that you enjoy the full range of benefits that the Ecodan PUHZ range has to offer, where hot water loads exist, we recommend that you team Ecodan with the new Mitsubishi Electric water storage cylinder and control system.

The PUHZ range of Ecodan units are all MCS certified products, helping to build a rapidly growing Microgeneration industry based on quality and reliability.



Certificate Number:
MCS HP0002
Product Reference:
PUHZ-W50VHA-(BS)
PUHZ-W85VHA2-(BS)
PUHZ-HW140VHA2/YHA2-(BS)



Manufactured in the UK

The European Eco-Label

The European Eco-label also known as “the Flower” denotes products and services with superior environmental performance.

Products bearing the label are certified to meet EU-wide environmental criteria, and compliance is independently verified by an approved body.

The Eco-label scheme is voluntary and represents products with class leading environmental performance. It is available for many consumer and commercial product groups and now includes heat pumps. The Ecodan PUHZ range of products meet this criteria.



MODEL		PUHZ-W50VHA	PUHZ-W85VHA2	PUHZ-HW140VHA2	PUHZ-HW140YHA2
Heating*1	Capacity (kW)	5.0 (1.5-5.0)	8.5 (2.6-8.5)	14.0 (4.2-14.0)	14.0 (4.2-14.0)
	COP	3.13	3.17	3.11	3.11
	Power Input (kW)	1.60	2.68	4.52	4.52
	Nominal flow rate (L/min)	14.3	25.8	40.1	40.1
Heating*2	Capacity (kW)	5.0 (1.5-5.0)	9.0 (2.7-9.0)	14.0 (4.2-14.0)	14.0 (4.2-14.0)
	COP	4.10	4.18	4.25	4.25
	Power Input (kW)	1.22	2.15	3.31	3.31
	Nominal flow rate (L/min)	14.3	25.8	40.1	40.1
Dimensions (mm)	Width	950	950	1020	1020
	Depth	330+30*	330+30*	330+30*	330+30*
	Height	740	943	1350	1350
Weight (kg)		64	77	134	148
Airflow (m³/min)		50	55	100	100
Nominal Sound Pressure Level (dBA)*3		45▲	48▲	53▲	53▲
Low Noise Mode (dBA) @ 7°C		40	42	46	46
Guaranteed Operating Range (Outdoor)		-15~+35°C	-20~+35°C	-25~+35°C	-25~+35°C
Electrical Supply		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	380-415v, 50Hz
Phase		Single	Single	Single	3
Running Current [Max] (A)		5.4 [13]	10.3 [23]	14.9 [35]	5.1 [13]
Fuse Rating (MCB sizes BS EN 60947-2) (A)		16	25	40	16

*Grille ▲At distance of 1m from outdoor unit

Nominal operating condition:

Nominal operating condition as tested to BS EN14511:

*1 Heating (A2/W35) Outside air temperature (dry) +2°C
Outside air temperature (humid) +1°C
Water temperature (inlet/outlet) +30/+35°C

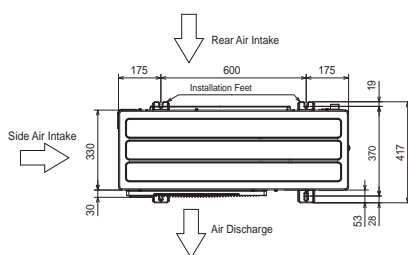
*2 Heating (A7/W35) Outside air temperature (dry) +7°C
Outside air temperature (humid) +6°C
Water temperature (inlet/outlet) +30/+35°C

*3 Sound power level of the W50 is 61dBA, W85 is 62.5dBA, HW140V is 65.5dBA and HW140Y is 67.5dBA. Tested to BS EN12102.

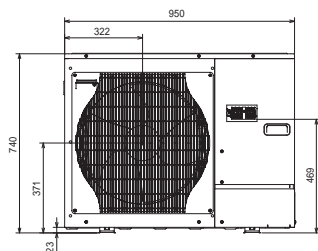
Schematics

PUHZ-W50VHA

Upper View

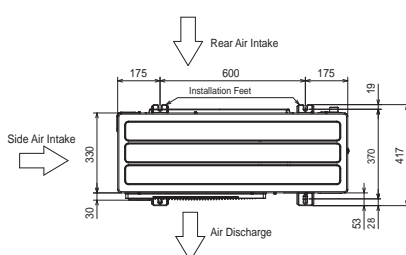


Front View

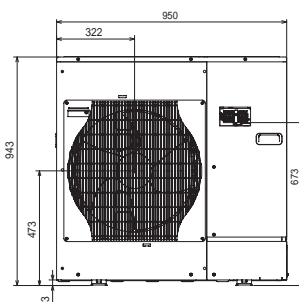


PUHZ-W85VHA2

Upper View

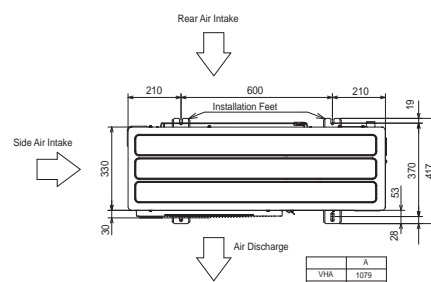


Front View



PUHZ-HW140VHA2 / YHA2

Upper View



Front View

