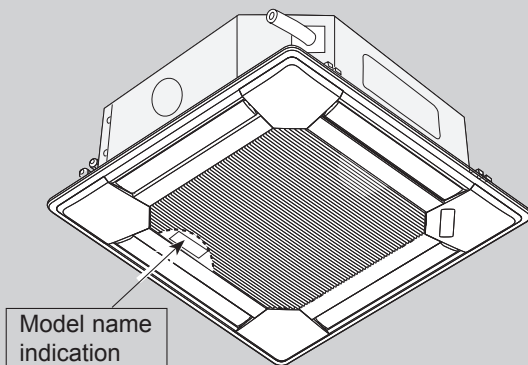


SERVICE MANUAL

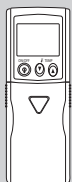
Series PLY Ceiling Cassettes R410A

Indoor unit [Model Name]	[Service Ref.]
PLY-SP18BA	PLY-SP18BA.TH(-T/-D/-N)
PLY-SP24BA	PLY-SP24BA.TH(-T/-D/-N)
PLY-SP30BA	PLY-SP30BA.TH(-T/-D/-N)
PLY-SP36BA	PLY-SP36BA.TH(-T/-D/-N)
PLY-SP42BA	PLY-SP42BA.TH(-T/-D/-N)
PLY-SP48BA	PLY-SP48BA.TH(-T/-D/-N)

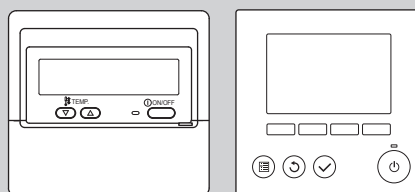
INDOOR UNIT



WIRELESS REMOTE CONTROLLER



WIRED REMOTE CONTROLLER



(Option)



REFERENCE MANUAL

OUTDOOR UNIT'S SERVICE MANUAL

Service Ref
SUY-SA18/24/30/36VA.TH
SUY-SA18/24/30/36VA.TH-T
PUY-SP42/48VKA.TH-T PUY-SP42/48VKA.TH-D PUY-SP42/48VKA.TH-N PUY-SP36/42/48YKA.TH-T PUY-SP36/42/48YKA.TH-D PUY-SP36/42/48YKA.TH-N

1-2. TECHNICAL DATA BOOK

Series (Outdoor unit)
SUY-SA•VA.TH-T
SUY-SA•VA.TH
PUY-SP•VKA.TH
PUY-SP•YKA.TH

SPECIFICATIONS

Service Ref.			PLY-SP18BA.TH(-T/-D/-N)		
INDOOR UNIT	Mode		Cooling		
	Power supply (phase, cycle, voltage)		Single phase, 50Hz, 220-240 V/Single phase, 60Hz, 220 V		
	Input	kW	0.05		
		A	0.36		
	External finish (Panel)		Munsell 6.4Y 8.9/0.4		
	Heat exchanger		Plate fin coil		
	Fan	Fan (drive) × No.		Turbo fan (direct) × 1	
		Fan motor output		50	
		Airflow (Low-Medium2-Medium1-High)		m ³ /min 12-13-14-16	
		External static pressure		Pa 0 (direct blow)	
	Booster heater		kW -		
	Operation control & Thermostat		Remote controller & built-in		
	Noise level (Low-Medium2-Medium1-High)		dB (A) 28-29-30-32		
	Field drain pipe O.D.		mm 32		
	Dimensions	W	mm	UNIT : 840	PANEL : 950
D		mm	UNIT : 840	PANEL : 950	
H		mm	UNIT : 258	PANEL : 35	
Weight		kg	UNIT : 19	PANEL : 6	

Service Ref.			PLY-SP24BA.TH(-T/-D/-N)		
INDOOR UNIT	Mode		Cooling		
	Power supply (phase, cycle, voltage)		Single phase, 50Hz, 220-240 V/Single phase, 60Hz, 220 V		
	Input	kW	0.07		
		A	0.51		
	Heat exchanger		Plate fin coil		
	Fan	Fan (drive) × No.		Turbo fan (direct) × 1	
		Fan motor output		50	
		Airflow (Low-Medium2-Medium1-High)		m ³ /min 14-16-18-20	
		External static pressure		Pa 0 (direct blow)	
	Booster heater		kW -		
	Operation control & Thermostat		Remote controller & built-in		
	Noise level (Low-Medium2-Medium1-High)		dB (A) 28-30-32-34		
	Field drain pipe O.D.		mm 32		
	Dimensions	W	mm	UNIT : 840	PANEL : 950
		D	mm	UNIT : 840	PANEL : 950
H		mm	UNIT : 258	PANEL : 35	
Weight		kg	UNIT : 22	PANEL : 6	

Service Ref.			PLY-SP30BA.TH(-T/-D/-N)		
INDOOR UNIT	Mode		Cooling		
	Power supply (phase, cycle, voltage)		Single phase, 50Hz, 220-240 V/Single phase, 60Hz, 220 V		
		Input	kW	0.14	
		Running current	A	0.94	
	Heat exchanger		Plate fin coil		
	Fan	Fan (drive) × No.		Turbo fan (direct) × 1	
		Fan motor output		120	
		Airflow (Low-Medium2-Medium1-High)		m ³ /min	
		External static pressure		Pa	
	Booster heater		kW		
	Operation control & Thermostat		Remote controller & built-in		
	Noise level (Low-Medium2-Medium1-High)		dB (A)		
	Field drain pipe O.D.		mm		
	Dimensions	W	mm	UNIT : 840	PANEL : 950
		D	mm	UNIT : 840	PANEL : 950
H		mm	UNIT : 298	PANEL : 35	
Weight		kg			
			UNIT : 24	PANEL : 6	

Service Ref.			PLY-SP36/42/48BA.TH(-T/-D/-N)		
INDOOR UNIT	Mode		Cooling		
	Power supply (phase, cycle, voltage)		Single phase, 50Hz, 220-240 V/Single phase, 60Hz, 220 V		
		Input	kW	0.16	
		Running current	A	1.07	
	Heat exchanger		Plate fin coil		
	Fan	Fan (drive) × No.		Turbo fan (direct) × 1	
		Fan motor output		120	
		Airflow (Low-Medium2-Medium1-High)		m ³ /min	
		External static pressure		Pa	
	Booster heater		kW		
	Operation control & Thermostat		Remote controller & built-in		
	Noise level (Low-Medium2-Medium1-High)		dB (A)		
	Field drain pipe O.D.		mm		
	Dimensions	W	mm	UNIT : 840	PANEL : 950
		D	mm	UNIT : 840	PANEL : 950
H		mm	UNIT : 298	PANEL : 35	
Weight		kg			
			UNIT : 26	PANEL : 6	

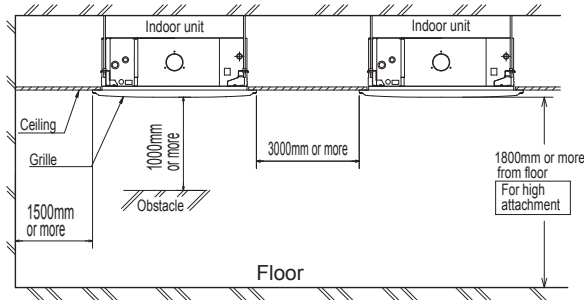
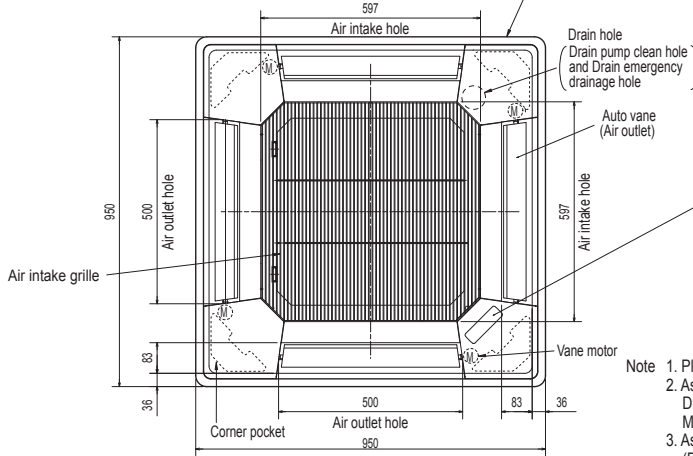
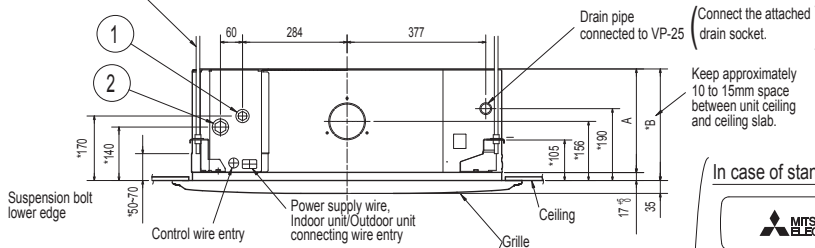
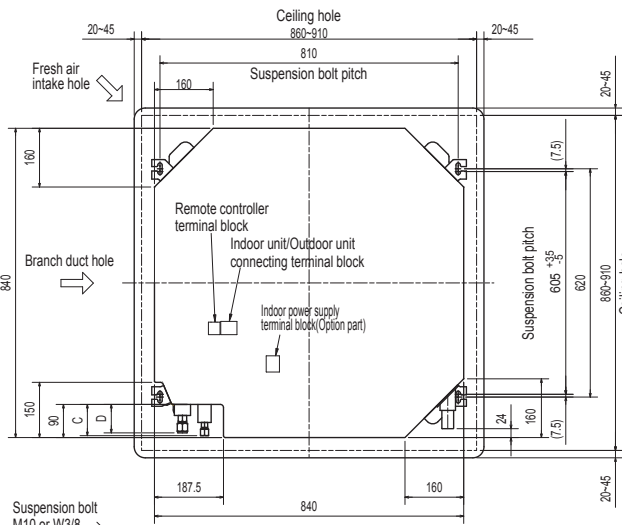
OUTLINES AND DIMENSIONS

PLY-SP18BA.TH(-T/-D/-N)
PLY-SP36BA.TH(-T/-D/-N)

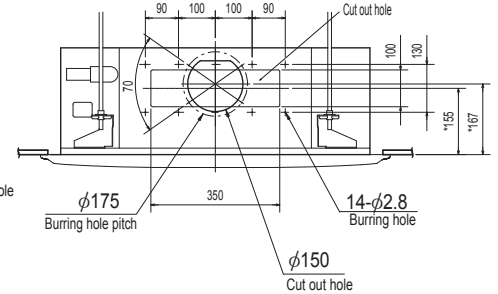
PLY-SP24BA.TH(-T/-D/-N)
PLY-SP42BA.TH(-T/-D/-N)

PLY-SP30BA.TH(-T/-D/-N)
PLY-SP48BA.TH(-T/-D/-N)

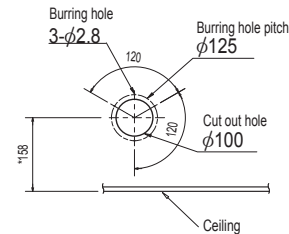
Unit: mm



Detail connecting of branch duct(Both aspects)



Detail drawing of fresh air intake hole



In case of standard grille : PLP-6BA/PLP-6BAMD

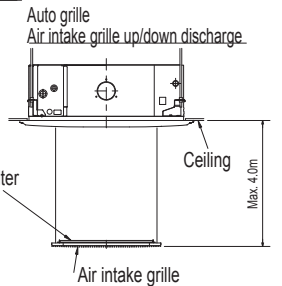
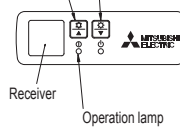


In case of auto-grille : PLP-6BAJ

In case of wireless remote controller : PLP-6BALCM

Emergency operation switch<Cooling>and Emergency Up/Down switch<Up>

Emergency operation switch<Fan mode>and Emergency Up/Down switch<Down>



- Note
- Please choose the grille between a standard grille and an auto-grille.
 - As for drain pipe, please use VP-25(O.D. φ32 PVC TUBE). Drain pump is included. Max. lifting height is 850mm from the ceiling.
 - As for suspension bolt, please use M10 or W3/8. (Procured at local site)
 - Electrical box may be removed for the service purpose. Make sure to slack the electrical wire a bit for control/ power wires connection.
 - The height of the indoor unit is able to be adjusted with the grille attached.
 - For the installation of the optional high efficiency filter or optional multi-functional casement.
 - Requires E or more space between transom and ceiling for the installation.
 - Add 135 mm to the dimensions * marked on the figure.
 - The optional high efficiency filter must be used jointly with the optional multi-functional casement.
 - When installing the branch ducts, be sure to insulate adequately. Otherwise condensation and dripping may occur. (It becomes the cause of dew drops/water dew.)
 - As for necessary installation/service space, please refer to the left figure.

Unit : mm

Models	①	②	A	B	C	D	E
PLY-SP18BA.TH(-T/-D/-N)	Refrigerant pipe ...φ6.35 Flared connection ...1/4 F	Refrigerant pipe ...φ12.7 Flared connection ...1/2 F			80	74	
PLY-SP24BA.TH(-T/-D/-N)			241	258			400
PLY-SP30BA.TH(-T/-D/-N)	Refrigerant pipe ...φ9.52 Flared connection ...3/8 F	Refrigerant pipe ...φ15.88 Flared connection ...5/8 F			85	77	
PLY-SP36BA.TH(-T/-D/-N)			281	298			440
PLY-SP42BA.TH(-T/-D/-N)							
PLY-SP48BA.TH(-T/-D/-N)							

WIRING DIAGRAM

PLY-SP18BA.TH(-T/-D/-N)
PLY-SP36BA.TH(-T/-D/-N)

PLY-SP24BA.TH(-T/-D/-N)
PLY-SP42BA.TH(-T/-D/-N)

PLY-SP30BA.TH(-T/-D/-N)
PLY-SP48BA.TH(-T/-D/-N)

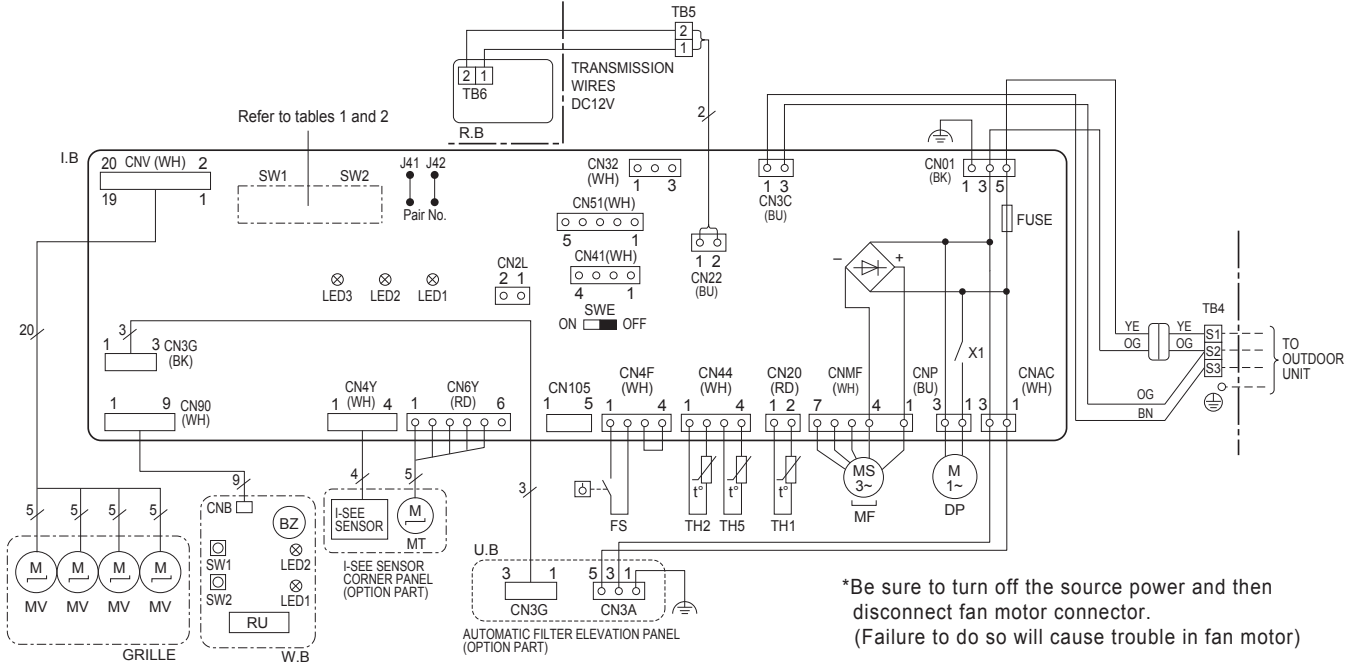
[Self-diagnosis]

- For details on how to operate self-diagnosis with the wireless remote control, refer to the technical manuals etc.
- For the wired remote control: When you quickly press twice the CHECK switch on the remote control, the unit begins self-diagnosis, and Check Codes generated in the past appear on the display.
For Check Codes and Symptoms refer to the table below.

[LEGEND]

SYMBOL	NAME	SYMBOL	NAME
I.B	INDOOR CONTROLLER BOARD	MF	FAN MOTOR
CN2L	CONNECTOR (LOSSNAY)	MV	VANE MOTOR
CN32	CONNECTOR (REMOTE SWITCH)	TB4	TERMINAL BLOCK (INDOOR/OUTDOOR CONNECTING LINE)
CN41	CONNECTOR (HA TERMINAL-A)	TB5, TB6	TERMINAL BLOCK (REMOTE CONTROLLER TRANSMISSION LINE)
CN51	CONNECTOR (CENTRALLY CONTROL)	TH1	ROOM TEMP. THERMISTOR (0°C/15kΩ, 25°C/5.4kΩ DETECT)
FUSE	FUSE (T6.3AL250V)	TH2	PIPE TEMP. THERMISTOR/LIQUID (0°C/15kΩ, 25°C/5.4kΩ DETECT)
LED1	POWER SUPPLY (L.B)	TH5	COND./EVA. TEMP. THERMISTOR (0°C/15kΩ, 25°C/5.4kΩ DETECT)
LED2	POWER SUPPLY (R.B)		
LED3	TRANSMISSION (INDOOR-OUTDOOR)		
SW1	SWITCH (MODEL SELECTION) *See table 1		
SW2	SWITCH (CAPACITY CODE) *See table 2		
SWE	CONNECTOR (EMERGENCY OPERATION)	OPTION PART	
X1	RELAY (DRAIN PUMP)	W.B	PCB FOR WIRELESS REMOTE CONTROLLER
DP	DRAIN PUMP	BZ	BUZZER
FS	DRAIN FLOAT SWITCH	LED1	LED (OPERATION INDICATION : GREEN)
R.B	WIRED REMOTE CONTROLLER BOARD	RU	RECEIVING UNIT
		SW1	EMERGENCY OPERATION (FAN/DOWN)
		SW2	EMERGENCY OPERATION (COOL/UP)
		MT	I-SEE SENSOR MOTOR

- Notes:**
- Symbols used in wiring diagram above are, □□□□ : Connector, □□□□ : Terminal (block).
 - Indoor and outdoor connecting wires are made with polarities, make wiring matching terminal numbers (S1, S2, S3).
 - Since the outdoor side electric wiring may change be sure to check the outdoor unit electric wiring for servicing.
 - This diagram shows the wiring of indoor and outdoor connecting wires (specification of 220 - 240V), adopting superimposed system of power and signal.



*Be sure to turn off the source power and then disconnect fan motor connector.
(Failure to do so will cause trouble in fan motor)

<Table 1> SW1 (MODEL SELECTION)

SW1															
Manufacture/Service															
<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	1	2	3	4	5										
1	2	3	4	5											
ON OFF															

The black square (■) indicates a switch position.

<Table 2> SW2 (CAPACITY CODE)

SW2																
MODELS	Manufacture/Service															
PLY-SP18BA	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	1	2	3	4	5										
1	2	3	4	5												
PLY-SP24BA	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	1	2	3	4	5										
1	2	3	4	5												
PLY-SP30BA	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	1	2	3	4	5										
1	2	3	4	5												
PLY-SP36BA	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	1	2	3	4	5										
1	2	3	4	5												
PLY-SP42BA	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	1	2	3	4	5										
1	2	3	4	5												
PLY-SP48BA	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	1	2	3	4	5										
1	2	3	4	5												

The black square (■) indicates a switch position.

REFRIGERANT SYSTEM DIAGRAM

PLY-SP18BA.TH(-T/-D/-N)
PLY-SP36BA.TH(-T/-D/-N)

PLY-SP24BA.TH(-T/-D/-N)
PLY-SP42BA.TH(-T/-D/-N)

PLY-SP30BA.TH(-T/-D/-N)
PLY-SP48BA.TH(-T/-D/-N)

