

# **MHI**

**TECHNICAL MANUAL  
& PARTS LIST**

**DRAFT**

## **WALL MOUNTED TYPE ROOM AIR-CONDITIONER (Air to air heat pump type)**

**R22 use models**

**SRK28HD**

**SRK40HD**

## INDOOR UNIT

Models SRK28HD, SRK40HD



## OUTDOOR UNIT

Model SRC28HD



Model SRC40HD



## REMOTE CONTROLLER



# 1 GENERAL INFORMATION

## 1.1 Specific features

The “Mitsubishi Daiya” room air-conditioner: SRK series are of split and wall mounted type and the unit consists of indoor unit and outdoor unit with refrigerant precharged in factory. The indoor unit is composed of room air cooling or heating equipment with operation control switch and the outdoor unit is composed of condensing unit with compressor.

### (1) Remote control flap

The flap can be automatically controlled by operating wireless remote controller.

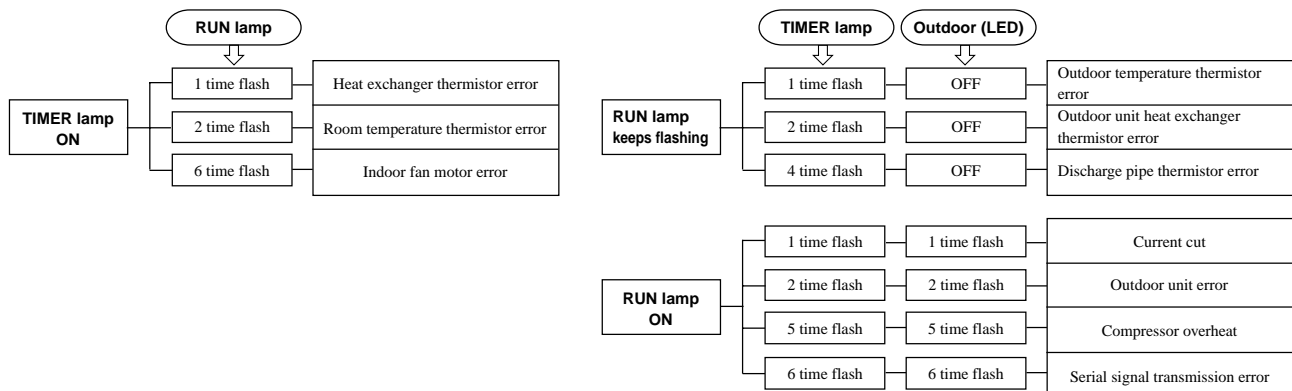
- Air scroll: Flap operation is automatically control.
- Swing: This will swing the flap up and down.
- Memory flap: Once the flap position is set, the unit memorizes the position and continues to operate at the same position from the next time.

### (2) Automatic Operation

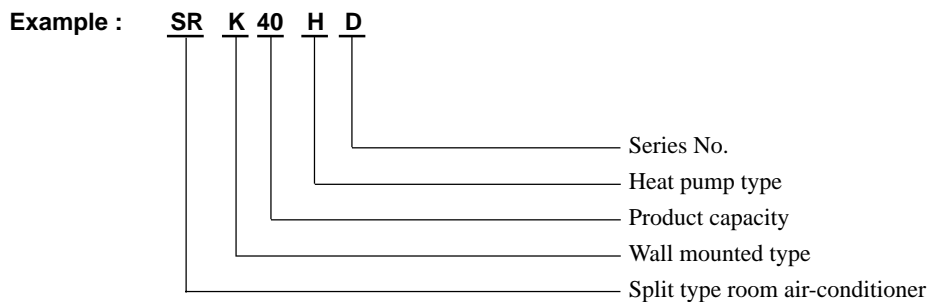
When the remote control switch is set on “auto(△)”, it will either automatically decide operation mode such as cooling, heating and thermal dry, or operate in the operation mode before it has been turned to automatic control.

### (3) Self diagnosis function

- We are constantly trying to do better service to our customers by installing such judges that show abnormality of operation as follows.



## 1.2 How to read the model name



## 2 SELECTION DATA

### 2.1 Specifications

Model SRK28HD (Indoor unit)  
SRC28HD (Outdoor unit)

Item		Model	SRK28HD	SRC28HD	
Cooling capacity <sup>(1)</sup>		W			
Heating capacity <sup>(1)</sup>		W			
Power source			1 Phase, 220/230/240V, 50Hz		
Operation data <sup>(1)</sup>	Cooling input	kW			
	Running current (Cooling)	A			
	Heating input	kW			
	Running current (Heating)	A			
	Inrush current	A			
	COP				
	Noise level	Cooling	sound level	(55)	(60)
Power level					
Heating		sound level	(56)	(60)	
		Power level			
Exterior dimensions Height × Width × Depth		mm	250 × 815 × 249	540 × 720 × 290	
Color			Cool white	Stucco white	
Net weight		kg	9.0	32	
Refrigerant equipment Compressor type & Q'ty			-	2PS164D5BF02 (Rotary type) × 1	
Motor		kW	-	0.75	
Starting method			-	Line starting	
Heat exchanger			Louver fins & inner grooved tubing		
Refrigerant control			Capillary tubes		
Refrigerant <sup>(3)</sup>		kg	R22 0.8 (Pre-Charged up to the piping length of 7.5m)		
Refrigerant oil		ℓ	0.35 (SUNISO 4GDID or ATMOS M60)		
Deice control			MC control		
Air handling equipment Fan type & Q'ty			Tangential fan × 1	Propeller fan × 1	
Motor		W	14	15	
Air flow (at High)	(Cooling)	CMM	8.0	30	
	(Heating)		8.5	30	
Air filter, Q'ty			Polypropylene net (washable) × 2	-	
Shock & vibration absorber			-	Cushion rubber (for compressor)	
Electric heater			-	-	
Operation control Operation switch			Wireless-Remote controller	-	
Room temperature control			MC. Thermostat	-	
Pilot lamp			RUN (Green), TIMER (Yellow), HI POWER (Green), ECONO (Orange)		
Safety equipment			Frost protection, Serial signal error protection Fan motor error protection	Compressor overheat protection, Overcurrent protection, Serial signal error protection	
Refrigerant piping	O.D	mm (in)	Liquid line: φ6.35 (1/4") Gas line: φ9.52 (3/8")		
	Connecting method		Flare connecting		
	Attached length of piping		Liquid line: 0.4 m Gas line : 0.33 m	-	
	Insulation		Necessary (Both sides)		
Drain hose			Connectable		
Power source cord			2.5 m (3 cores with Earth)		
Connection wiring	Size × Core number		1.5 mm <sup>2</sup> × 4 cores (Including earth cable)		
	Connecting method		Terminal block (Screw fixing type)		
Accessories (included)			Mounting kit		
Optional parts			-		

Notes (1) The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling		27°C	19°C	35°C	24°C	ISO-T1, JIS C9612
Heating		20°C	-	7°C	6°C	ISO-T1, JIS C9612

The piping length is 7.5m.

(2) The operation data are applied to the 220/230/240V districts respectively.

(3) The refrigerant quantity to be charged includes the refrigerant in 7.5 m connecting piping.

If the piping length is longer, when it is less than 10 m, add 20 g refrigerant per meter and when it is 10 to 15 m, add 30 g refrigerant per meter.

**Model SRK40HD (Indoor unit)**  
**SRC40HD (Outdoor unit)**

Item		Model	SRK40HD	SRC40HD	
Cooling capacity <sup>(1)</sup>		W			
Heating capacity <sup>(1)</sup>		W			
Power source			1 Phase, 220/230/240V, 50Hz		
Operation data <sup>(1)</sup>	Cooling input		kW		
	Running current (Cooling)		A		
	Heating input		kW		
	Running current (Heating)		A		
	Inrush current		A		
	COP				
	Noise level	Cooling	sound level	(56)	(63)
Power level					
Heating		sound level	(57)	(64)	
		Power level			
Exterior dimensions Height × Width × Depth		mm	250 × 815 × 249	640 × 850 × 290	
Color			Cool white	Stucco white	
Net weight		kg	9.0	41	
Refrigerant equipment Compressor type & Q'ty			-	(RM5517GNE4)	
Motor		kW	-	1.3	
Starting method			-	Line starting	
Heat exchanger			Louver fins & inner grooved tubing		
Refrigerant control			Capillary tubes		
Refrigerant <sup>(3)</sup>		kg	R22	(Pre-Charged up to the piping length of 7.5m)	
Refrigerant oil		ℓ	0.6 (BARREL FREEZE 32SAM)		
Deice control			MC control		
Air handling equipment Fan type & Q'ty			Tangential fan × 1	Propeller fan × 1	
Motor		W	14	35	
Air flow (at High)	(Cooling)	CMM	9.0	38	
	(Heating)		9.5	38	
Air filter, Q'ty			Polypropylene net (washable) × 2	-	
Shock & vibration absorber			-	Cushion rubber (for compressor)	
Electric heater			-	-	
Operation control Operation switch			Wireless-Remote controller	-	
Room temperature control			MC. Thermostat	-	
Pilot lamp			RUN (Green), TIMER (Yellow), HI POWER (Green), ECONO (Orange)		
Safety equipment			Frost protection, Serial signal error protection Fan motor error protection	Compressor overheat protection, Overcurrent protection, Serial signal error protection	
Refrigerant piping	O.D	mm (in)	Liquid line: φ6.35 (1/4") Gas line: φ12.7 (1/2")		
	Connecting method		Flare connecting		
	Attached length of piping		Liquid line: 0.4 m Gas line : 0.33 m	-	
	Insulation		Necessary (Both sides)		
Drain hose		Connectable			
Power source cord		2.5 m (3 cores with Earth)			
Connection wiring	Size × Core number	1.5 mm <sup>2</sup> × 4 cores (Including earth cable)			
	Connecting method	Terminal block (Screw fixing type)			
Accessories (included)		Mounting kit			
Optional parts		-			

Notes (1) The data are measured at the following conditions.

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The piping length is 7.5m.

(2) The operation data are applied to the 220/230/240V districts respectively.

(3) The refrigerant quantity to be charged includes the refrigerant in 7.5 m connecting piping.

If the piping length is longer, when it is less than 10 m, add 20 g refrigerant per meter and when it is 10 to 15 m, add 30 g refrigerant per meter.

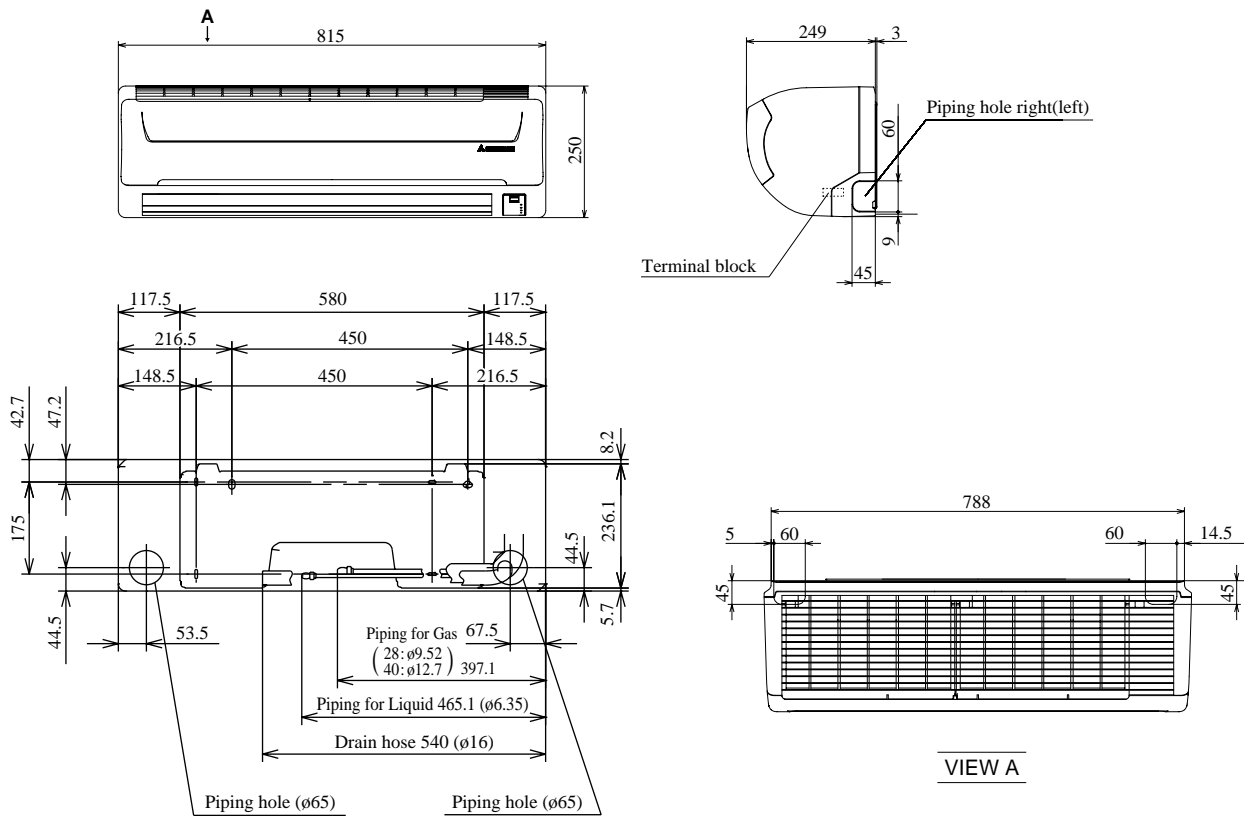
## 2.2 Range of usage & limitations

Item	Models	All models
Indoor return air temperature (Upper, lower limits)		Refer to the selection chart
Outdoor air temperature (Upper, lower limits)		
Refrigerant line (one way) length		Max. 15m
Vertical height difference between outdoor unit and indoor unit		Max. 5m (Outdoor unit is higher) Max. 5m (Outdoor unit is lower)
Power source voltage		Rating $\pm$ 10%
Voltage at starting		Min. 85% of rating
Frequency of ON-OFF cycle		Max. 10 times/h
ON and OFF interval		Max. 3 minutes

## 2.3 Exterior dimensions

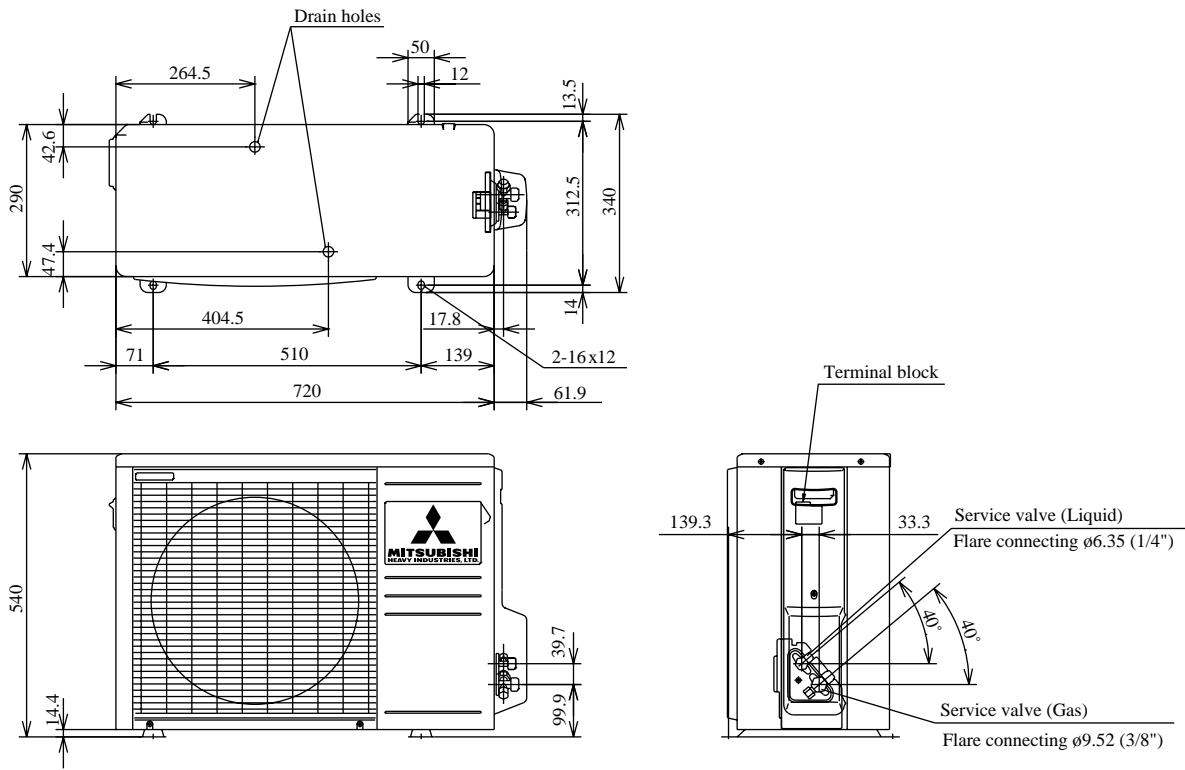
### (1) Indoor unit Models SRK28HD, 40HD

Unit: mm

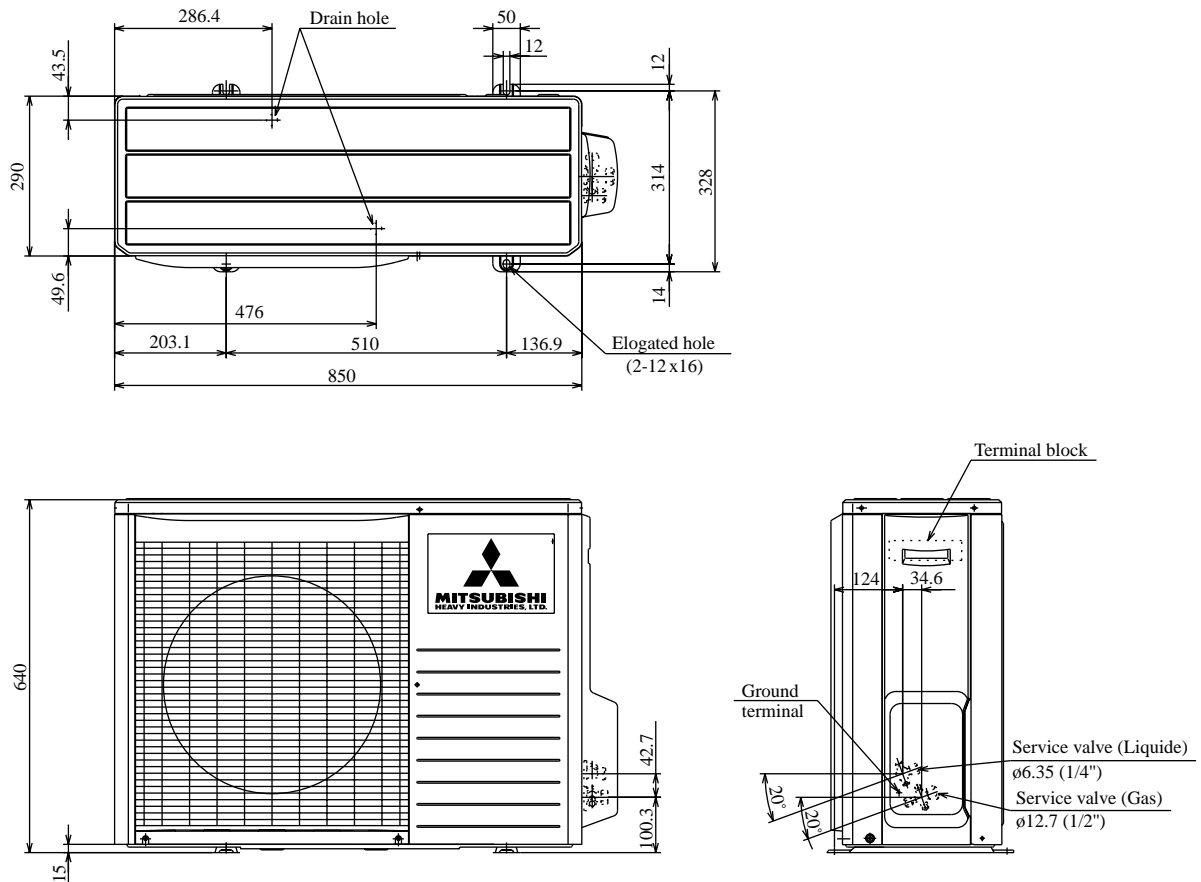


(2) Outdoor unit  
Model SRC28HD

Unit: mm

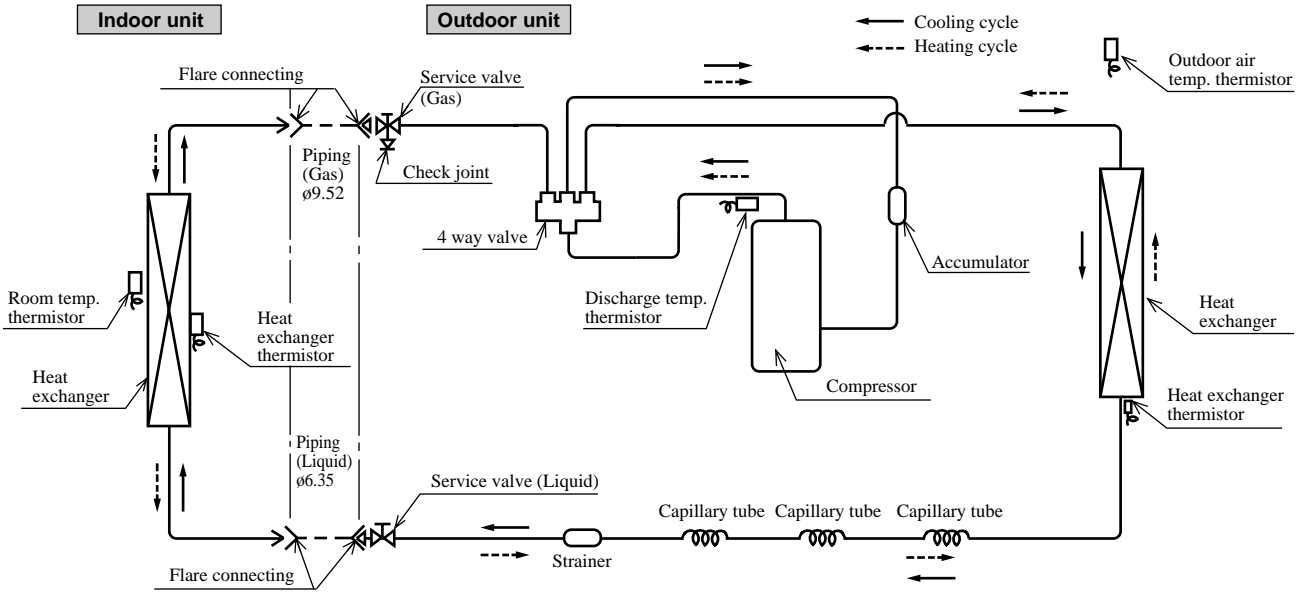


**Model SRC40HD**

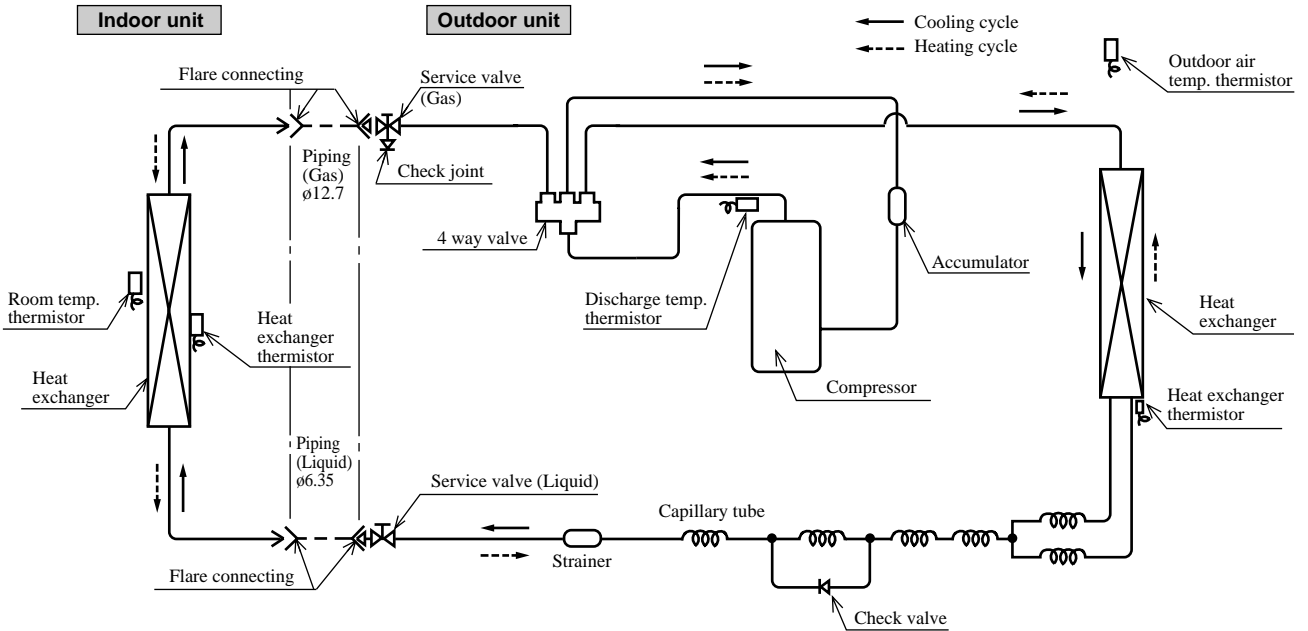


## 2.4 Piping system

Model SRK28HD



Model SRK40HD



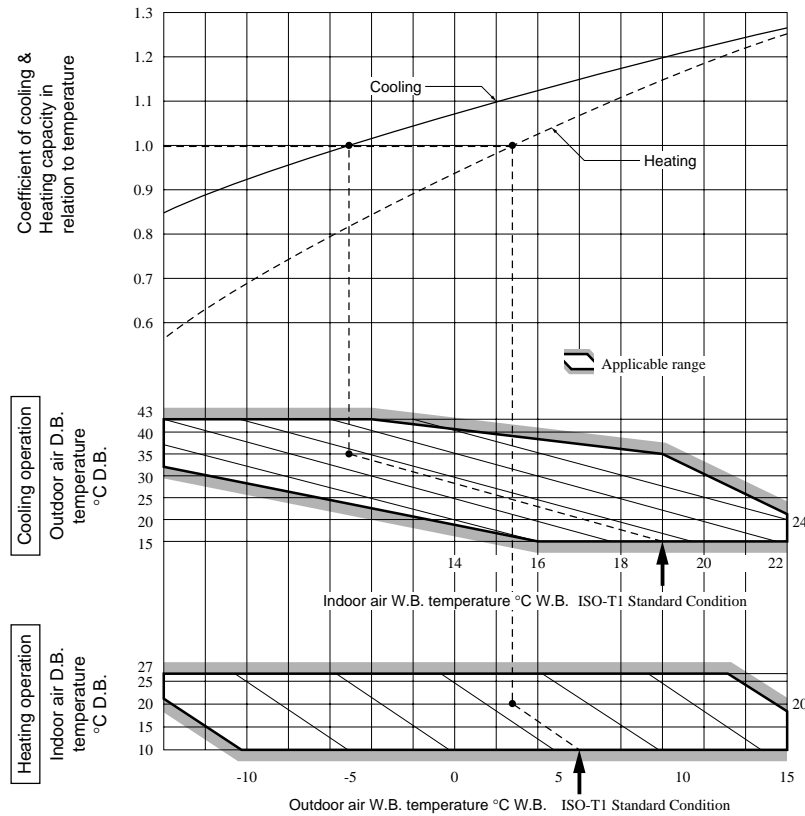


## 2.5 Selection chart

Correct the cooling and heating capacity in accordance with the conditions as follows. The net cooling and heating capacity can be obtained in the following way.

**Net capacity = Capacity shown on specification × Correction factors as follows.**

### (1) Coefficient of cooling and heating capacity in relation to temperatures



### (2) Correction of cooling and heating capacity in relation to one way length of refrigerant piping

It is necessary to correct the cooling and heating capacity in relation to the one way piping length between the indoor and outdoor units.

Piping length [m]	7	10	15
Cooling	1.0	0.99	0.975
Heating	1.0	1.0	1.0

### (3) Correction relative to frosting on outdoor heat exchanger during heating

In additions to the foregoing corrections (1), (2) the heating capacity needs to be adjusted also with respect to the frosting on the outdoor heat exchanger.

Air inlet temperature of outdoor unit in °CWB	-10	-9	-7	-5	-3	-1	1	3	5
Adjustment coefficient	0.95	0.94	0.93	0.91	0.88	0.86	0.87	0.92	1.00

### How to obtain the cooling and heating capacity

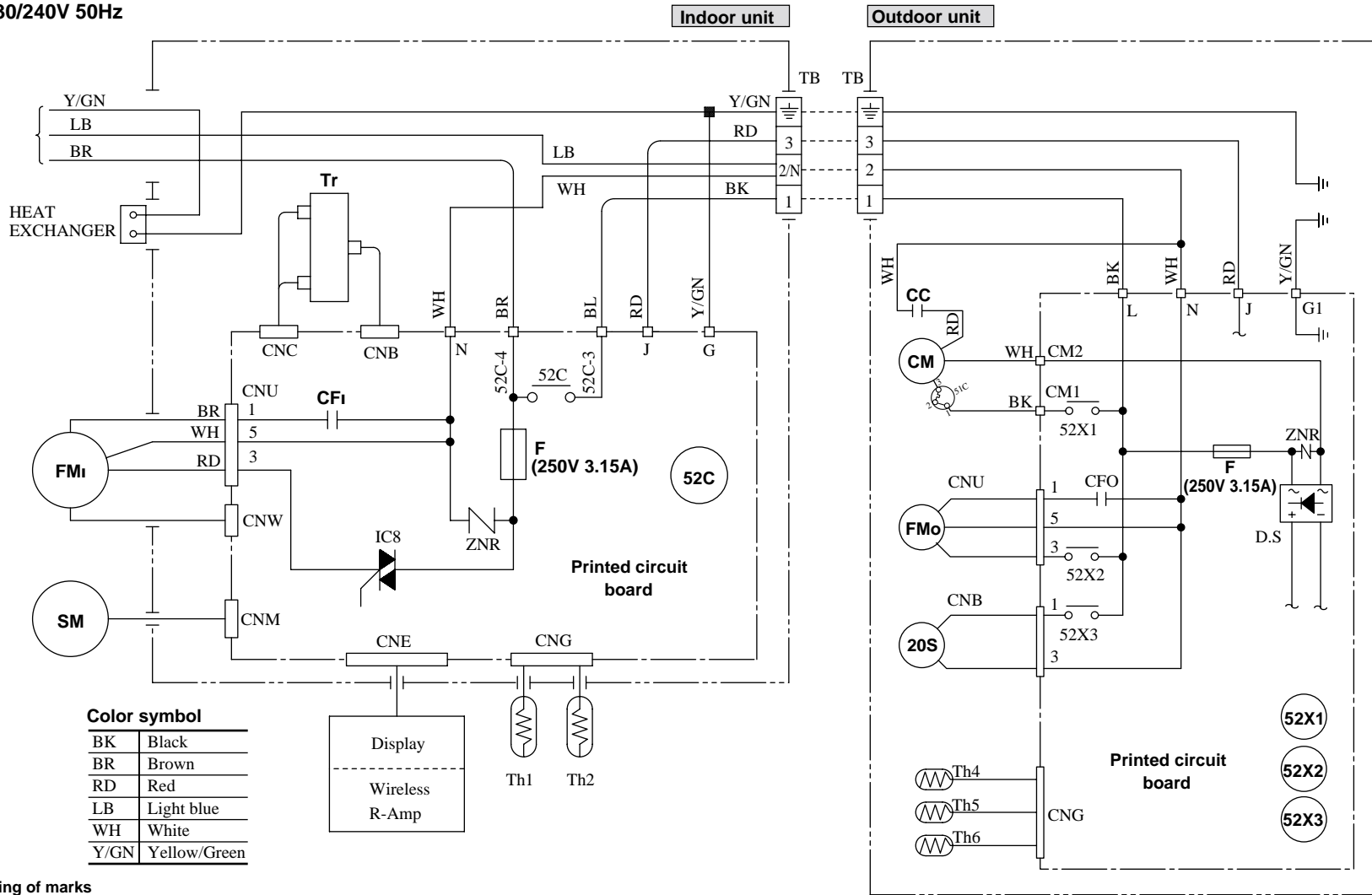
Example : The net cooling capacity of the model SRK40HD with the piping length of 15m, indoor wet-bulb temperature at 19.0°C and outdoor dry-bulb temperature 35°C is Net cooling capacity =

$$\begin{array}{ccccccc}
 \frac{3600}{\uparrow} & \times & \frac{0.975}{\uparrow} & \times & \frac{1.0}{\uparrow} & = & 3510 \text{ w} \\
 \text{SRK40HD} & & \text{Length 15m} & & \text{Factor by air} & & \\
 & & & & \text{temperatures} & & 
 \end{array}$$

# 3 ELECTRICAL DATA

## 3.1 Electrical wiring Models SRK28HD, 40HD

Power source  
1 Phase  
220/230/240V 50Hz



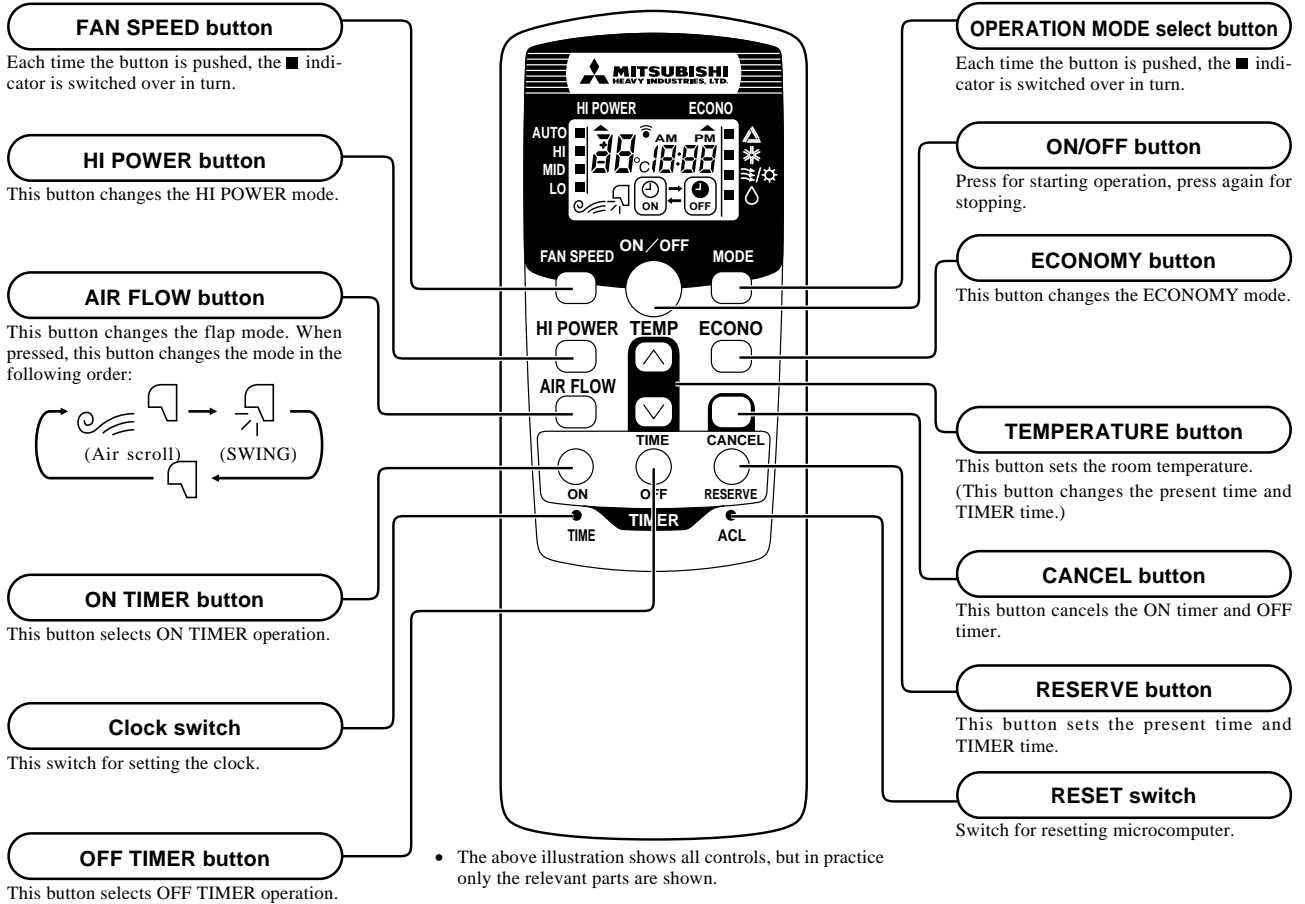
# 4 OUTLINE OF OPERATION CONTROL BY MICROCOMPUTER

## 4.1 Operation control function by remote control switch

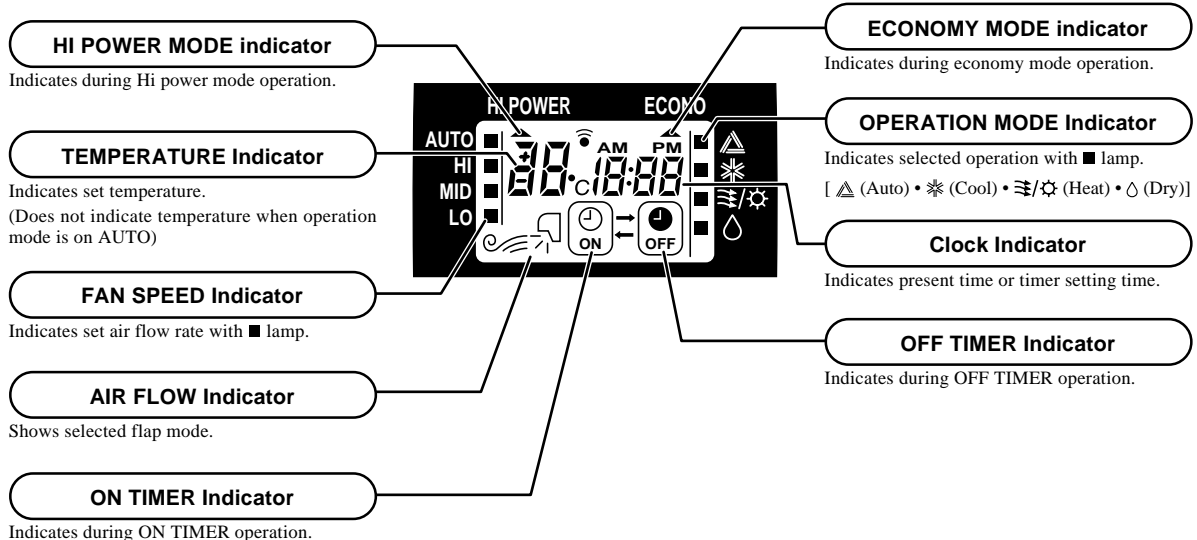
### Remote controller

Models All models

#### ◆ Operation section

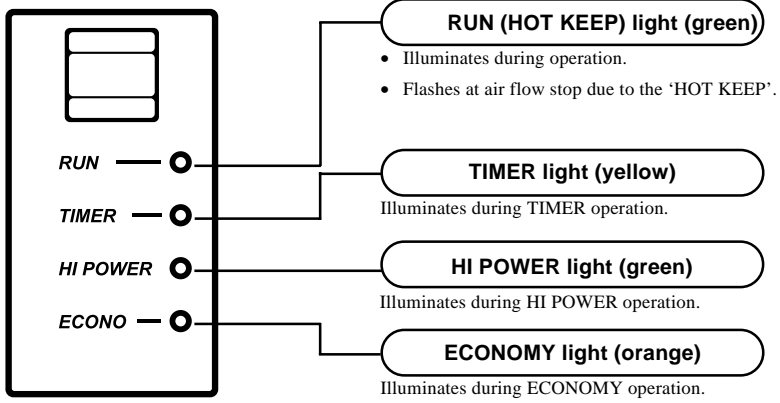


#### ◆ Indication section



## Unit indication section

Models All models



## 5 PARTS LIST (Main parts)

### (1) Indoor unit

No.	Parts Name	Parts No.	
		SRK28HD	SRK40HD
1	PANEL ASSY, FRONT	RKV102A600	
2	PANEL, FRONT	RKV122A001G	
3	PANEL ASSY, AIR INLET	RKV435A100B	
4	GRILLE ASSY, AIR OUTLET	RKV435A101B	
5	MOTOR, AC	SSA511J218	
6	IMPELLER	SSA431G042A	
7	HEAT EXCH ASSY (AIR)	RKV301A500L	RKV301A500M
8	PWB ASSY		
9	CONTROL ASSY, REMOTE	RKT502A420	

### (2) Outdoor unit

No.	Parts Name	Parts No.	
		SRC28HD	SRC40HD
1	PANEL, FRONT	RCP122A001	RWC122A003
2	PANEL, SIDE (R)	RCP123A001	RWC123A003
3	PANEL, SIDE (L)	—	RWC123A002
4	PANEL, TOP	RCP124A001	RWC124A003
5	GRILLE, AIR OUTLET	RCP435A001A	RWC435A002
6	GUARD, FIN	—	RWC131A004
7	BRACKET, MOTOR	RCP116A001	RWC116A041
8	MOTOR, AC	SSA511C061B	SSA511C063
9	PROPELLER	SSA431B213	SSA431B233
10	BASE ASSY	RCP111A001	RWC111A003F
11	HEAT EXCH (AIR)	RCP311A001D	RPC311A851
12	VALVE, S (4WAY)	SSA382C077	SSA382C078
13	COIL ASSY, SOLENOID	RSA382F010G	
14	COMPRESSOR ASSY	RMC201A002	
15	PWB ASSY	RCP505A500	RCP505A500A

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**WALL MOUNTED TYPE  
ROOM AIR-CONDITIONER**

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