MITSUBISHI
HEAVY INDUSTRIES, LTD.

Кондиционеры Mitsubishi Heavy

Техническое руководство

Кондиционеры настенного типа SRK28HD, SRK40HD

Опубликовано TopClimat

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.

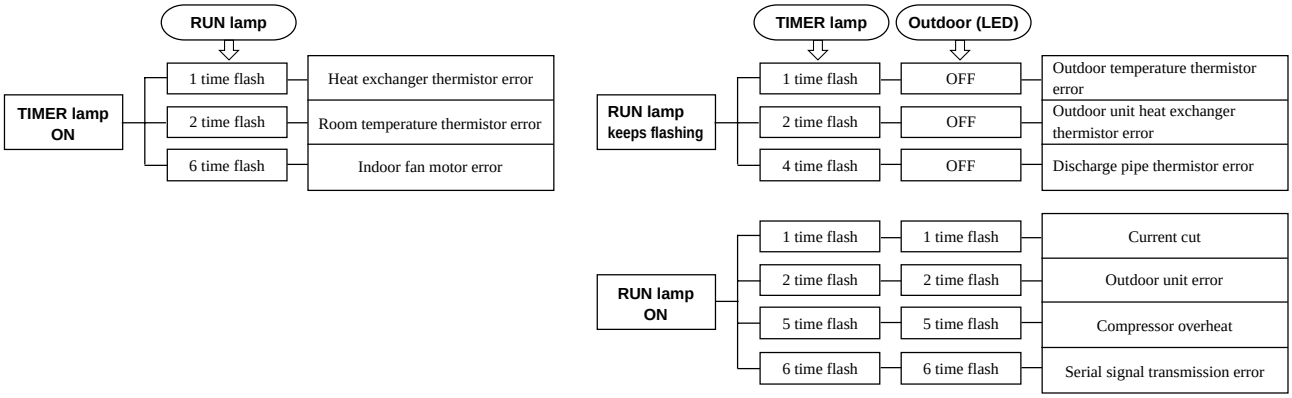
- Air scroll: Flap operation is automatically control.
- Swing: This will swing the flap up and down.
- Memory flap: Once the flap position is set, the unit memorizes the position and continues to operate at the same position from the next time.

(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

Example : SR K 40 H D

- D — Series No.
- H — Heat pump type
- 40 — Product capacity
- K — Wall mounted type
- SR — Split type room air-conditioner

2 SELECTION DATA

2.1 Specifications

Model SRK28HD (Indoor unit)
SRC28HD (Outdoor unit)

Item				Model	SRK28HD	SRC28HD
Cooling capacity(1)				W		
Heating capacity(1)				W		
Power source					1 Phase, 220/230/240V, 50Hz	
Operation data(1)	Cooling input			kW		
	Running current (Cooling)			A		
	Heating input			kW		
	Running current (Heating)			A		
	Inrush current			A		
	COP					
	Noise level	Cooling	sound level	dB		
			Power level		(55)	(60)
		Heating	sound level			
			Power level		(56)	(60)
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(3)				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 mm² × 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.

Item / Operation	Indoor air temperature DB	Indoor air temperature WB	Outdoor air temperature DB	Outdoor air temperature WB	Standards
Cooling	27ºC	19ºC	35ºC	24ºC	ISO-T1, JIS C9612
Heating	20ºC	–	7ºC	6ºC	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(1)				W		
Heating capacity(1)				W		
Power source					1 Phase, 220/230/240V, 50Hz	
Operation data(1)	Cooling input			kW		
	Running current (Cooling)			A		
	Heating input			kW		
	Running current (Heating)			A		
	Inrush current			A		
	COP					
	Noise level	Cooling	sound level	dB		
			Power level		(56)	(63)
		Heating	sound level			
			Power level		(57)	(64)
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(3)				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 mm² × 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.

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

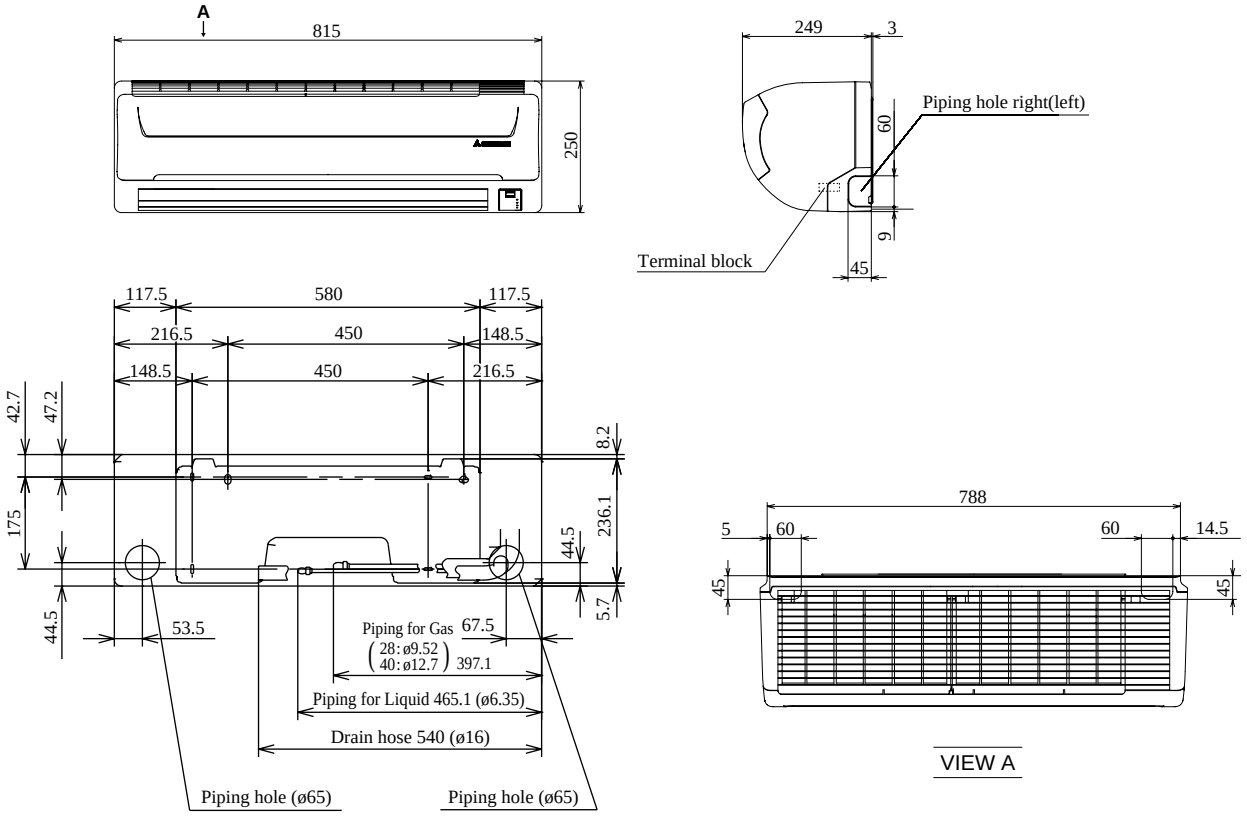
2.2 Range of usage & limitations

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 ± 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

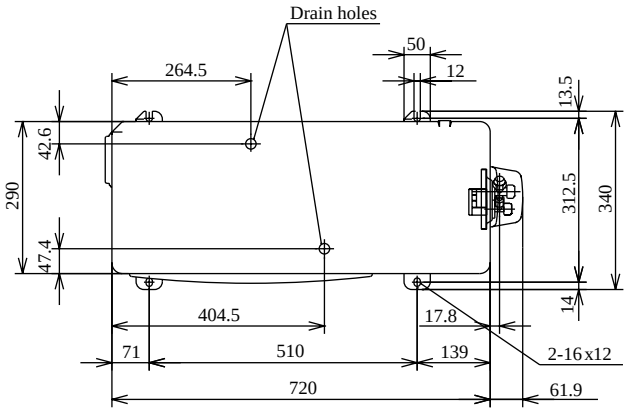
(1) Indoor unit
Models SRK28HD, 40HD

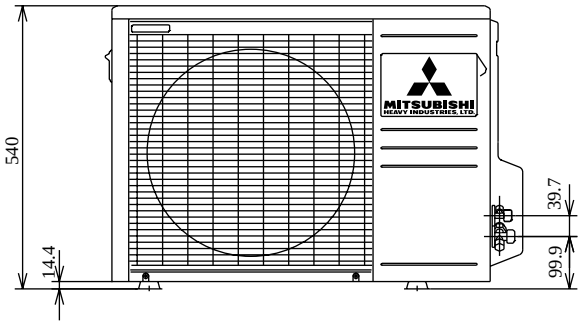
Unit: mm

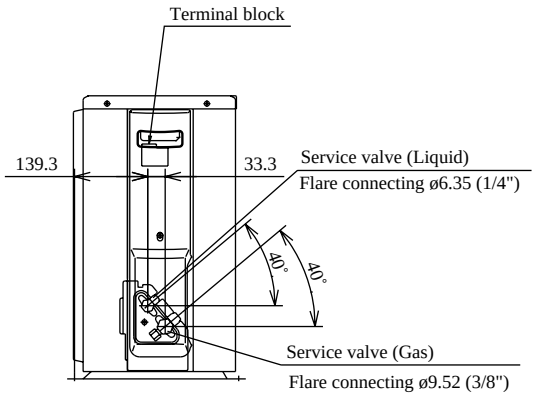


(2) Outdoor unit
Model SRC28HD

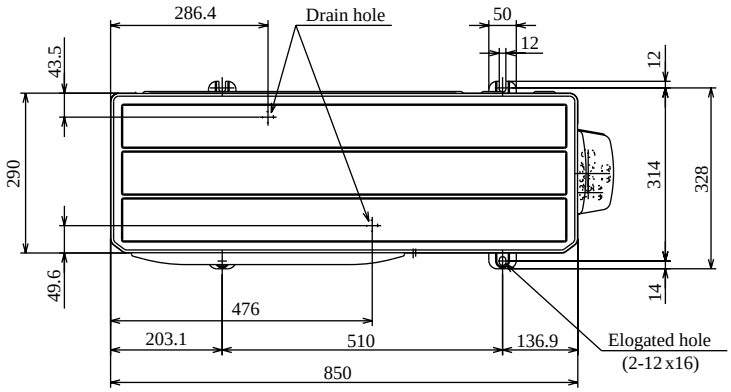
Unit: mm

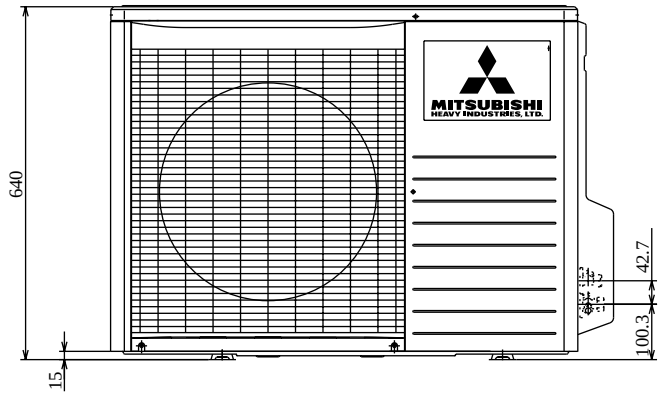


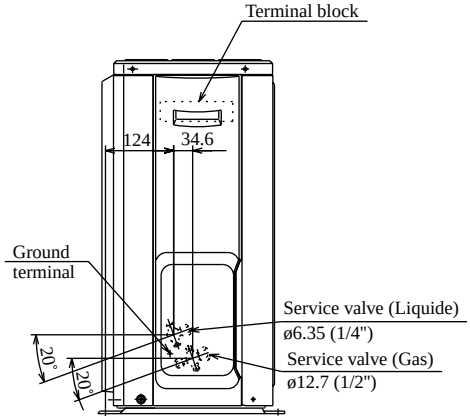




Model SRC40HD

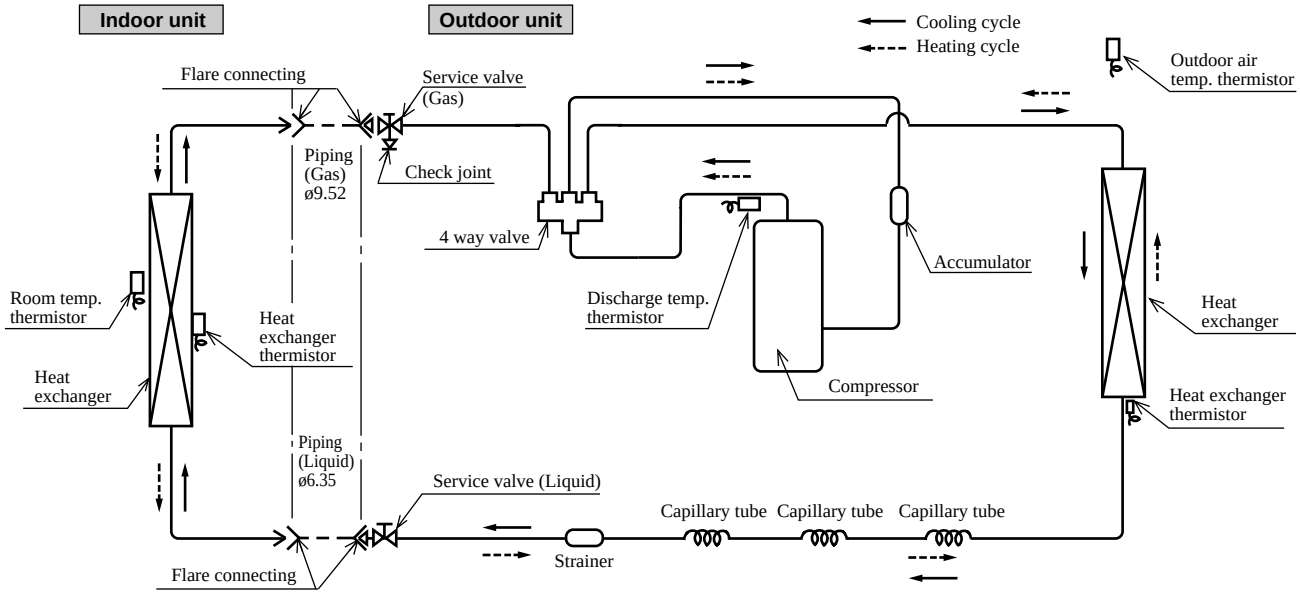




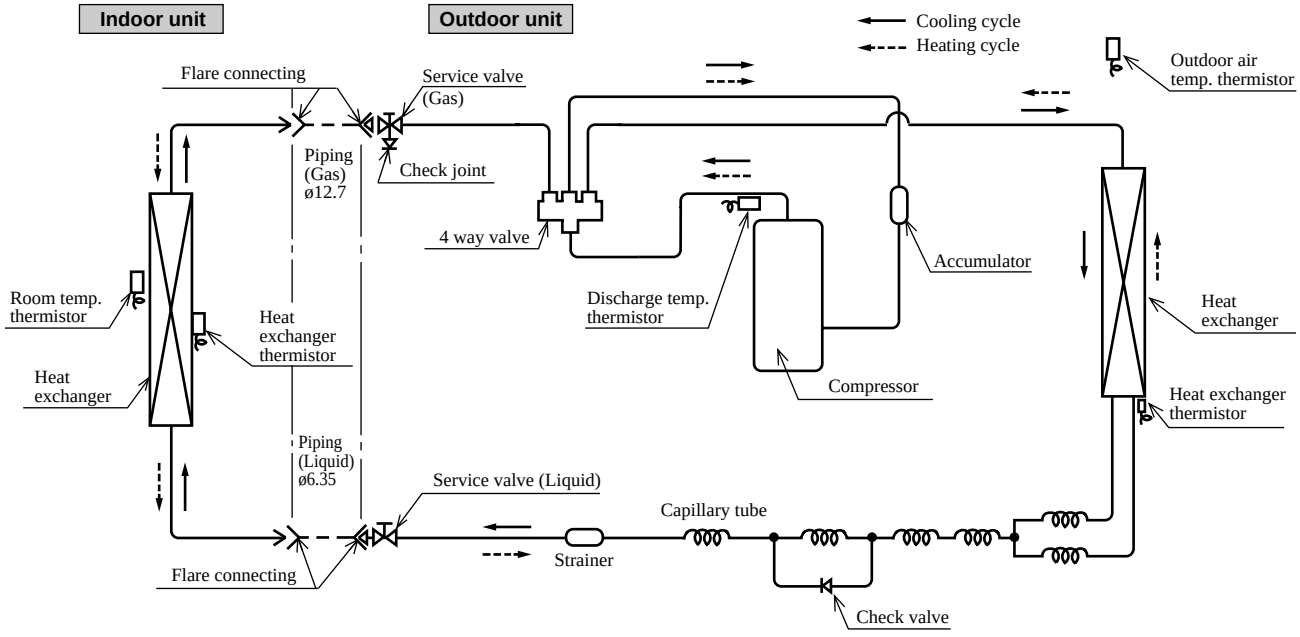


2.4 Piping system

Model SRK28HD



Model SRK40HD

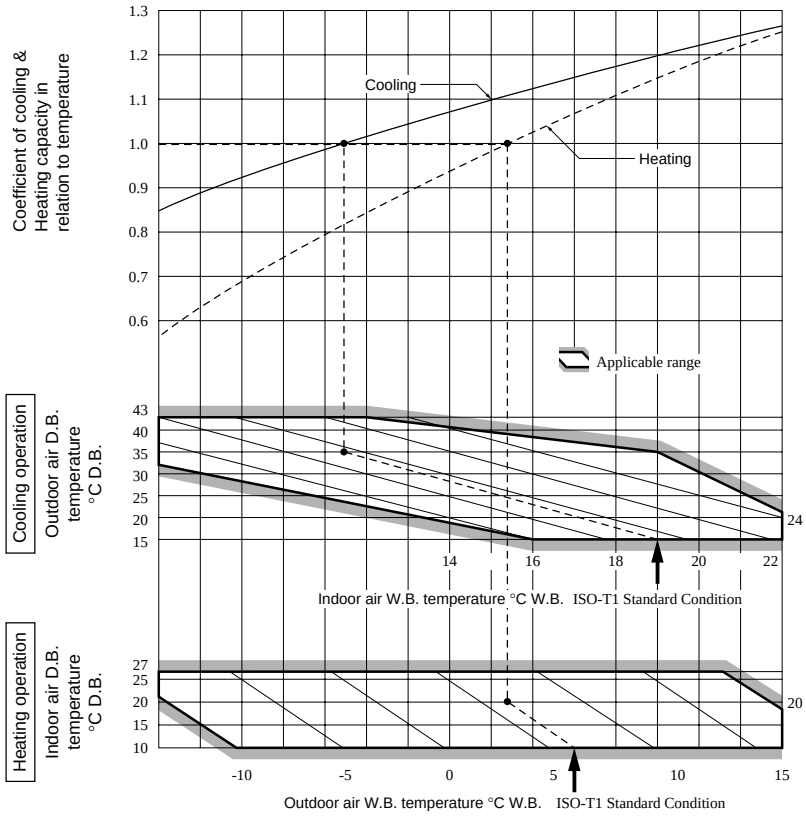


2.5 Selection chart

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

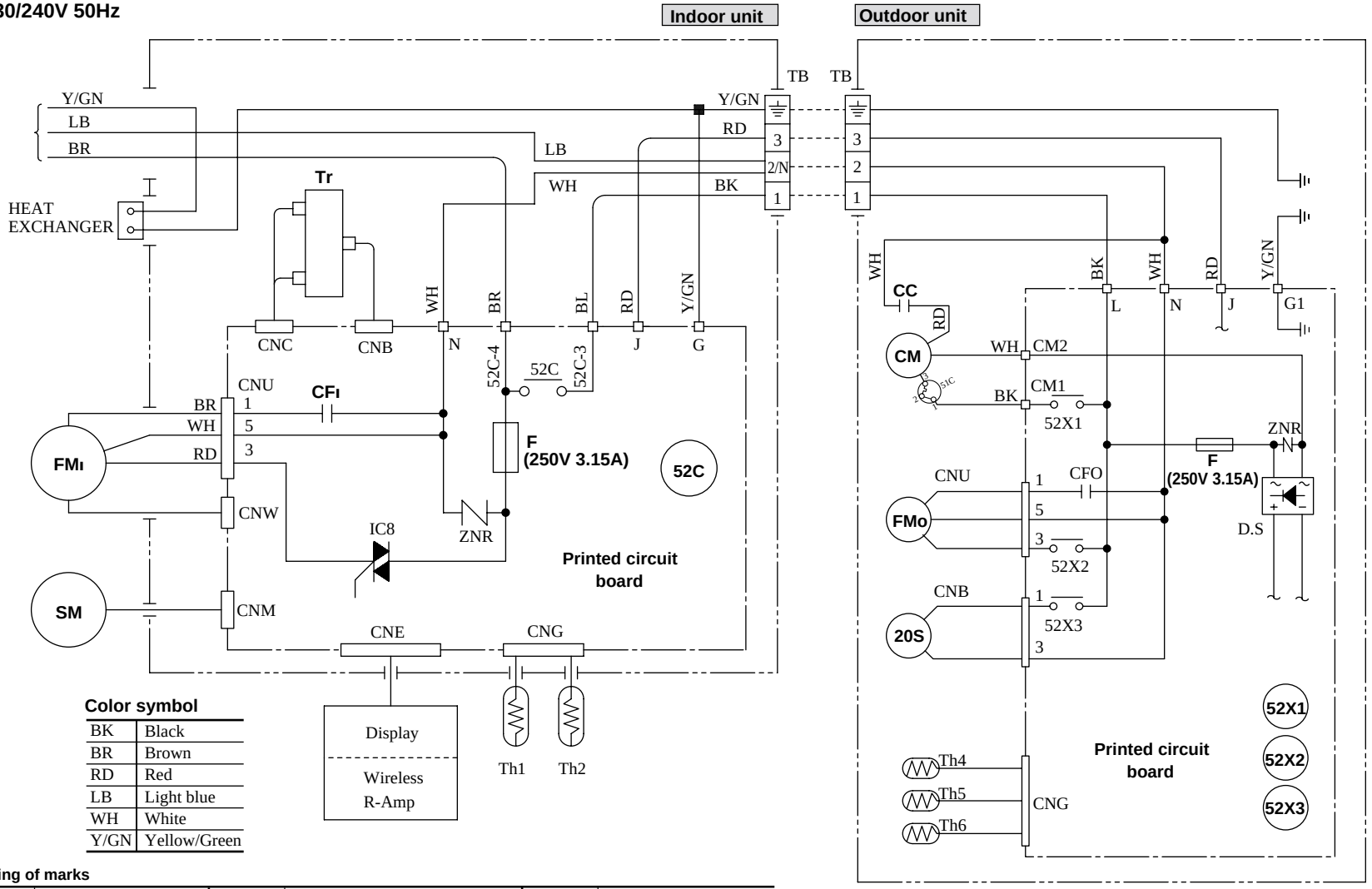
Example : The net cooling capacity of the model SRK40HD with the piping length of 15m, indoor wet-bulb temperature at 19.0˚C and outdoor dry-bulb temperature 35˚C is Net cooling capacity = $\underset{\text{SRK40HD}}{3600} \times \underset{\text{Length 15m}}{0.975} \times \underset{\text{Factor by air temperatures}}{1.0} = 3510$ w

3 ELECTRICAL DATA

3.1 Electrical wiring

Models SRK28HD, 40HD

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



Color symbol

BK	Black
BR	Brown
RD	Red
LB	Light blue
WH	White
Y/GN	Yellow/Green

Meaning of marks

Symbol	Parts name	Symbol	Parts name	Symbol	Parts name
CFI	Capacitor for FMI	**Th1**	Room temp. thermistor	**ZNR**	Varistor
CM	Compressor motor	**Th2**	Heat exchanger thermistor (Indoor unit)	**20S**	4 way valve (coil)
F	Fuse	**Th4**	Heat exchanger thermistor (Outdoor unit)	**52C**	Magnetic contactor
FMI	Fan motor (Indoor)	**Th5**	Outdoor air temp. thermistor	**DS**	Diode stack
FMo	Fan motor (Outdoor)	**Th6**	Discharge temp. thermistor	**52X1-3**	Auxiliary relay
SM	Flap motor	**Tr**	Transformer	**51C**	Motor Protector for CM

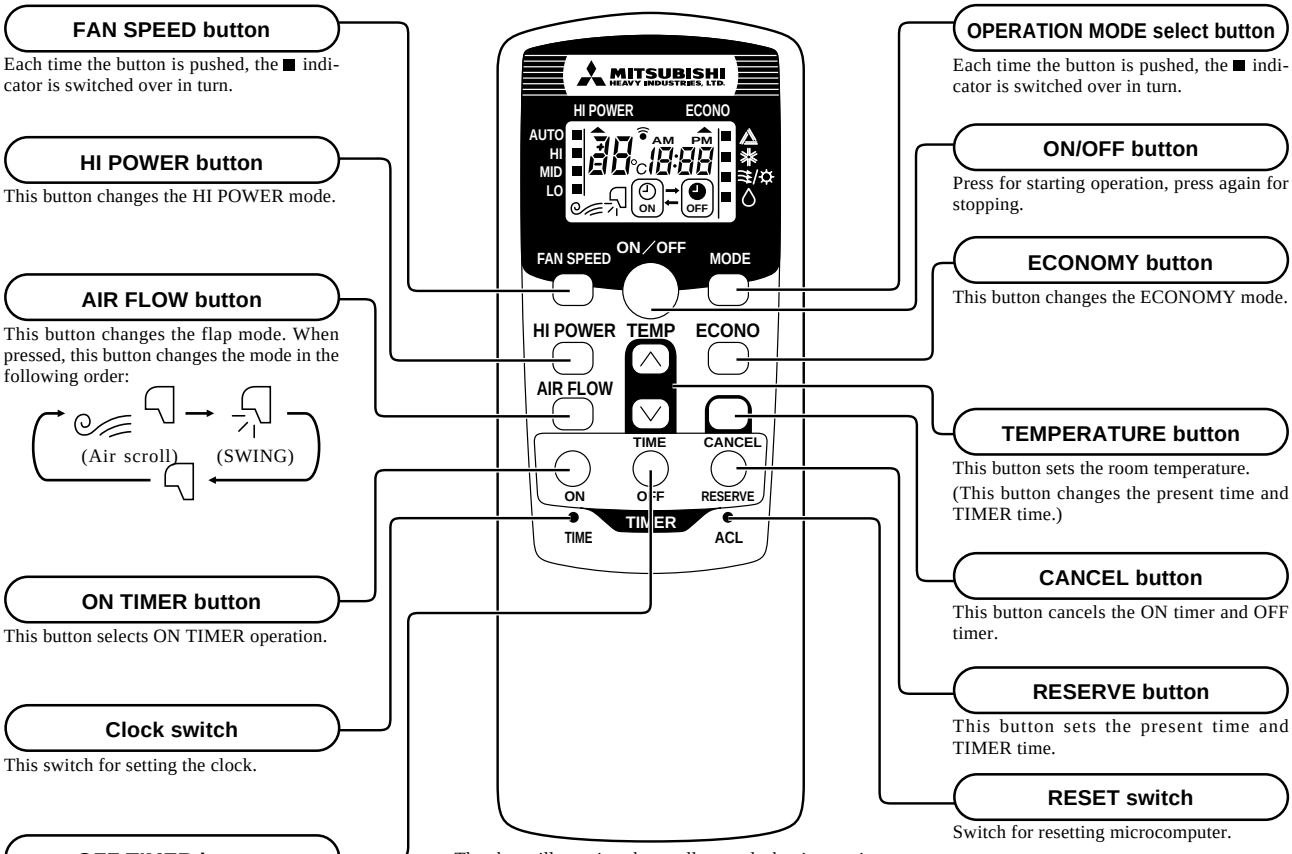
4 OUTLINE OF OPERATION CONTROL BY MICROCOMPUTER

4.1 Operation control function by remote control switch

Remote controller

Models All models

◆ Operation section



FAN SPEED button

Each time the button is pushed, the ■ indicator is switched over in turn.

HI POWER button

This button changes the HI POWER mode.

AIR FLOW button

This button changes the flap mode. When pressed, this button changes the mode in the following order:

(Air scroll) (SWING)

ON TIMER button

This button selects ON TIMER operation.

Clock switch

This switch for setting the clock.

OFF TIMER button

This button selects OFF TIMER operation.

OPERATION MODE select button

Each time the button is pushed, the ■ indicator is switched over in turn.

ON/OFF button

Press for starting operation, press again for stopping.

ECONOMY button

This button changes the ECONOMY mode.

TEMPERATURE button

This button sets the room temperature.
(This button changes the present time and TIMER time.)

CANCEL button

This button cancels the ON timer and OFF timer.

RESERVE button

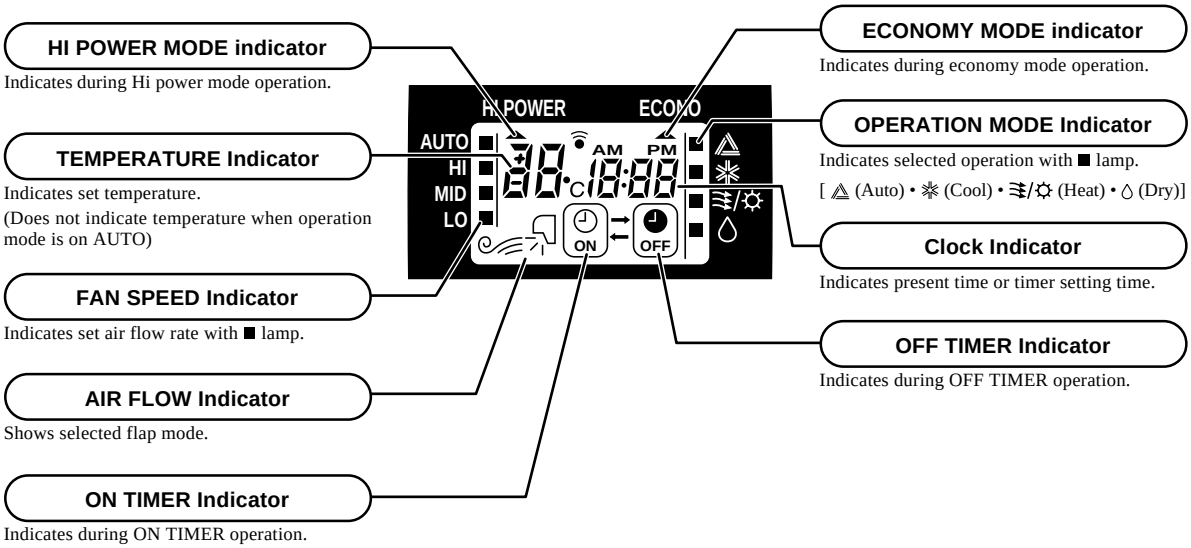
This button sets the present time and TIMER time.

RESET switch

Switch for resetting microcomputer.

- The above illustration shows all controls, but in practice only the relevant parts are shown.

◆ Indication section



HI POWER MODE indicator

Indicates during Hi power mode operation.

TEMPERATURE Indicator

Indicates set temperature.
(Does not indicate temperature when operation mode is on AUTO)

FAN SPEED Indicator

Indicates set air flow rate with ■ lamp.

AIR FLOW Indicator

Shows selected flap mode.

ON TIMER Indicator

Indicates during ON TIMER operation.

ECONOMY MODE indicator

Indicates during economy mode operation.

OPERATION MODE Indicator

Indicates selected operation with ■ lamp.
[⧋ (Auto) • ❄ (Cool) • ≋/☼ (Heat) • ♢ (Dry)]

Clock Indicator

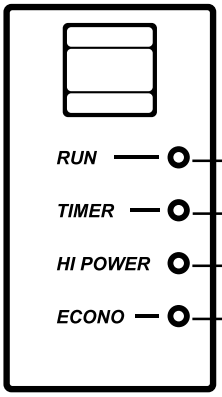
Indicates present time or timer setting time.

OFF TIMER Indicator

Indicates during OFF TIMER operation.

Unit indication section

Models All models



RUN (HOT KEEP) light (green)

- Illuminates during operation.
- Flashes at air flow stop due to the ‘HOT KEEP’.

TIMER light (yellow)

Illuminates during TIMER operation.

HI POWER light (green)

Illuminates during HI POWER operation.

ECONOMY light (orange)

Illuminates during ECONOMY operation.

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

WALL MOUNTED TYPE
ROOM AIR-CONDITIONER

MITSUBISHI HEAVY INDUSTRIES, LTD.

Air-Conditioning & Refrigeration Systems Headquarters
16-5, 2-Chome, Kounan, Minato-ku, Tokyo, 108-8215, Japan
Fax: (03) 6716-5926

No.063 (3A) R