TOYOTOMI

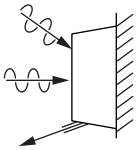
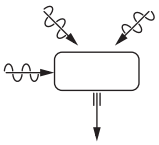
SERVICE MANUAL

ROOM AIR CONDITIONER

TAN/TAG-A28IV
TAN/TAG-A32IV
TAN/TAG-A53IV

CONTENTS

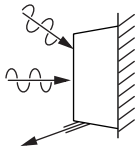
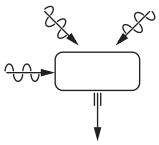
SPECIFICATION

		Unit	INDOOR	OUTDOOR
			TAN-A28IV	TAG-A28IV
Cooling Capacity		BTU/h	9,000(4,400-10,600)	–
Heating Capacity		BTU/h	11,000(4,800-12,300)	–
Moisture Removal		L/h	1.6	–
Power source		phase	Single	
		V	230	
		Hz	50	
Airflow Method		OUTLET INTAKE	SIDE VIEW 	TOP VIEW 
Air circulation (at High)		m^3/min	Cooling ; 7.8 Heating ; 7.3	–
Electrical Data	Input	W	Cooling ; 730 Heating ; 860	–
	Running Current	A	Cooling ; 3.5 Heating ; 4.1	–
	Starting Current	A	4.1	–
Piping Connection Port (Flare piping)		inch	L ; Half Union 1/4"	L ; 2-way valve 1/4"
		inch	G ; Half Union 3/8"	G ; 3-way valve 3/8"
Pipe Size (Flare piping)		inch	L (liquid side) ; 1/4"	L (liquid side) ; 1/4"
		inch	G (gas side) ; 3/8"	G (gas side) ; 3/8"
Drain hose	Inner diameter	mm	14	–
	Length	m	0.6	–
Power Cord	Length	m	1.4	–
	Number of core-wire		core-wire/ 1 mm^2	–
Dimensions	Height	mm	265	530
	Width	mm	795	780
	Depth	mm	200	277
Net Weight		kg	7.2	29.0

SPECIFICATION

		Unit	INDOOR	OUTDOOR
			TAN-A28IV	TAG-A28IV
Air Circulation	Type		Cross-flow Fan	Propeller Fan
	Motor Type		Induction (4-pole)	Induction (6-pole)
	Rated Output	W	18	21
Heat Exchanger			Plate fin configuration,forced draft	
			18.1FPI	19.5FPI
Refrigerant Control Device			–	Capillary Tube
Refrigerant (R410A)		g (oz)	–	850(30.0)
Thermostat			Electronic Control	–
Timer			Real time dual ON/OFF 7-hour OFF	–
Air Filter			Photo-catalytic Catechin	–
Parts Provided			1 Mounting plate 2 Remote controller 3 Battery (2 pcs.) 4 Remote controller holder 5 Screw cap (2 pcs.) 6 Drain elbow 7 Vibration proof rubber (4 pcs.)	

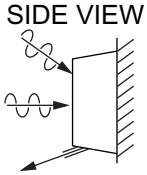
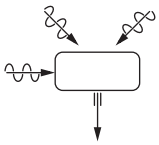
★ Specifications are subject to change without notice.

		Unit	INDOOR	OUTDOOR
			TAN-A32IV	TAG-A32IV
Cooling Capacity		BTU/h	11,300(4,800-11,900)	–
Heating Capacity		BTU/h	12,500(6,600-14,300)	–
Moisture Removal		L/h	2.0	–
Power source		phase	Single	
		V	230	
		Hz	50	
Airflow Method		OUTLET → / INTAKE →	SIDE VIEW 	TOP VIEW 
Air circulation (at High)		m^3/min	Cooling ; 9.3 Heating ; 9.8	–
Electrical Data	Input	W	Cooling ; 880 Heating ; 810	–
	Running Current	A	Cooling ; 4.2 Heating ; 3.9	–
	Starting Current	A	4.2	–
Piping Connection Port (Flare piping)		inch	L ; Half Union 1/4"	L ; 2-way valve 1/4"
		inch	G ; Half Union 3/8"	G ; 3-way valve 3/8"
Pipe Size (Flare piping)		inch	L (liquid side) ; 1/4"	L (liquid side) ; 1/4"
		inch	G (gas side) ; 3/8"	G (gas side) ; 3/8"
Drain hose	Inner diameter	mm	14	–
	Length	m	0.6	–
Power Cord	Length	m	1.4	–
	Number of core-wire		core-wire/ 1 mm^2	–
Dimensions	Height	mm	265	530
	Width	mm	795	780
	Depth	mm	207	277
Net Weight		kg	8.3	30.0

SPECIFICATION

		Unit	INDOOR	OUTDOOR
			TAN-A32IV	TAG-A32IV
Air Circulation	Type		Cross-flow Fan	Propeller Fan
	Motor Type		Induction (4-pole)	Induction (6-pole)
	Rated Output	W	22	21
Heat Exchanger			Plate fin configuration,forced draft	
			19.5FPI	19.5 FPI
Refrigerant Control Device			–	Capillary Tube
Refrigerant (R410A)		g (oz)	–	850(30.0)
Thermostat			Electronic Control	–
Timer			Real time dual ON/OFF 7-hour OFF	–
Air Filter			Photo-catalytic Catechin	–
Parts Provided			1 Mounting plate 2 Remote controller 3 Battery (2 pcs.) 4 Remote controller holder 5 Screw cap (2 pcs.) 6 Drain elbow 7 Vibration proof rubber (4 pcs.)	

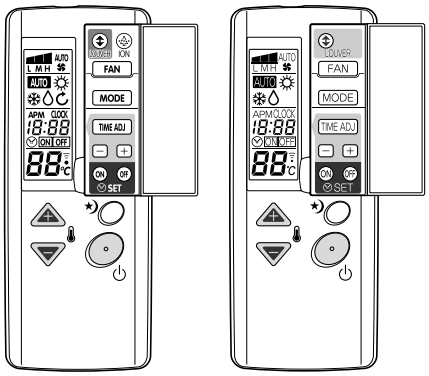
★ Specifications are subject to change without notice.

		Unit	INDOOR	OUTDOOR
			TAN-A53IV	TAG-A53IV
Cooling Capacity		BTU/h	17,700(5,100-18,000)	–
Heating Capacity		BTU/h	23,000(5,000-25,000)	–
Moisture Removal		L/h	2.8	–
Power source		phase	Single	
		V	230	
		Hz	50	
Airflow Method		OUTLET INTAKE	SIDE VIEW 	TOP VIEW 
Air circulation (at High)		m^3/min	Cooling ; 11.5 Heating ; 10.5	–
Electrical Data	Input	W	Cooling ; 1845 Heating ; 1865	–
	Running Current	A	Cooling ; 8.4 Heating ; 8.5	–
	Starting Current	A	8.5	–
Piping Connection Port (Flare piping)		inch	L ; Half Union 1/4"	L ; 2-way valve 1/4"
		inch	G ; Half Union 3/8"	G ; 3-way valve 3/8"
Pipe Size (Flare piping)		inch	L (liquid side) ; 1/4"	L (liquid side) ; 1/4"
		inch	G (gas side) ; 3/8"	G (gas side) ; 3/8"
Drain hose	Inner diameter	mm	14	–
	Length	m	0.6	–
Power Cord	Length	m	2.3	–
	Number of core-wire		core-wire/ 2 mm^2	–
Dimensions	Height	mm	295	530
	Width	mm	799	780
	Depth	mm	232	277
Net Weight		kg	8.6	34.0

		Unit	INDOOR	OUTDOOR
			TAN-A53IV	TAG-A53IV
Air Circulation	Type		Cross-flow Fan	Propeller Fan
	Motor Type		DC brushless (8-pole)	Induction (6-pole)
	Rated Output	W	30	40
Heat Exchanger			Plate fin configuration,forced draft	
			21.2FPI	18.1FPI
Refrigerant Control Device			–	Expansion Valve
Refrigerant (R410A)		g (oz)	–	1200(42.3)
Thermostat			Electronic Control	–
Timer			Real time dual ON/OFF 7-hour OFF	–
Air Filter			Photo-catalytic Catechin	–
Parts Provided			1 Mounting plate 2 Remote controller 3 Battery (2 pcs.) 4 Remote controller holder 5 Drain elbow	

★ Specifications are subject to change without notice.

REMOTE-CONTROL TRANSMITTER



TAN-A28IV
TAN-A32IV

TAN-A53IV

ON/OFF

Operation mode selection

COOL
DRY
HEAT
AUTOMATIC
CIRCULATION

Air flow selection

AUTOMATIC
HIGH
MEDIUM
LOW

Negative Ion (except TAN-A53IV)

Room temperature setting

16℃ ~ 30℃

Timer operation selection

CONTINUOUS operation
OFF
ON
Sleep

Timer / time setting

Operation stops at the set time (OFF timer)
Operation starts at the set time (ON timer)
0.5 ~ 7.0hours(Sleep timer)

Air flow direction control

Auto angle selection
Auto swing mode
Manual mode

INDOOR UNIT

Sensing the room temperature

Room temperature sensor (thermistor)

Time delay safety control

Restarting is inhibited for approximately 3 minutes.

Indoor fan speed control

High, Med, Low

Operation indication lamps (LED)

POWER ☼ (GREEN or RED)
Lights up green during operation.
Lights up red when negative ions are generated. (except TAN-A53IV)
TIMER ☼ (YELLOW)
Timer in operation
OPERATE ☼ (GREEN)
Outdoor unit operate

Dry operation mode

Automatic fan speed control

Room temperature control

Maintains the room temperature in accordance with the setting temperature.

Deice (defrost) control

Deicing operation automatically starts when the heating efficiency is declined by the ice formed in the outdoor unit.
After deicing operation, heating operation automatically starts with “Hot start function.”

Hot-start control (heating)

The indoor fan stops until the evaporator piping temperature will be reached.

Anti-freezing control for the evaporator

Compressor will be stopped when the evapolator's piping temperature is below 2℃ for one minute.
Compressor will be restarted when the evaporator's piping temperature is above 2℃.

Airflow direction control

When ON/OFF BUTTON is pressed, the vertical louver will move to the adequate positions for each operation automatically.
Manual operation.
The louver starts vertical swing with a push of the LOUVER BUTTON.
Push the LOUVER BUTTON once again to stop the louver at the desired position while swinging.

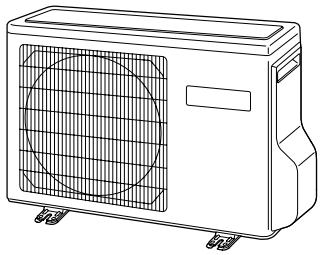
Auto recovery function

If there is any power failure during operation, operation status before power failure is memorized.
3 ~ 4 minutes after power recovery, the unit restarts automatically with previous operation status memorized.
(3 ~ 4 minutes is protective time for compressor.)

Attention

Because of Auto recovery function, if shutting off the power supply during operation, the unit may restart irrespective your intention when turning on the power supply next time.
If the unit is not to be used for a long time, shut off the power supply after terminating all operation with remote controller.

OUTDOOR UNIT



Inverter control

Inverter control reduce the ON/OFF times of compressor,so can keep the room temperature changeless during operation.

Electricity consumption

Inverter control can operate with less electricity consumption than normal air conditioner.

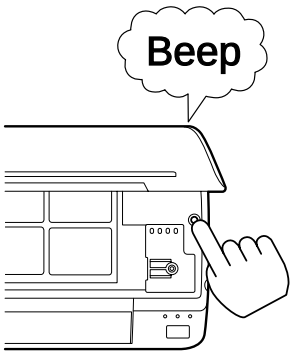
3 min. forced operation control

Once the compressor is activated, it does not stop for 3 minutes.
In case of termination of this operation, push the ON/OFF button on remote controller.

EMERGENCY AND TEST OPERATION

Emergency Operation

- Use this operation only when the remote controller is out of order or lost.
- When the emergency operation switch is pressed, beep starts once, which means the start of this operation.
- In this operation, the system automatically selects the operation modes, cooling (or heating when available) according to the room temperature, as follows.



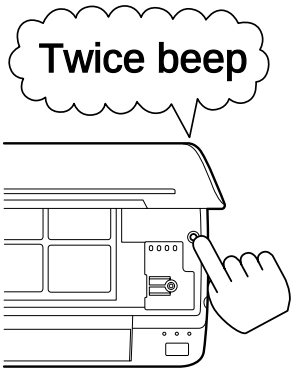
Temperature	Operation mode	Designated temperature	Timer mode	Air flow
ABOVE 23℃	COOLING	26℃	CONTINUOUS	AUTOMATIC
BELOW 23℃	HEATING	23℃	CONTINUOUS	AUTOMATIC

- It is not possible to operate in dry mode.

Test Operation

Test operation switch is same as emergency one.

- Use this operation only for testing the performance of the machine in the condition where the room temperature is less than 16℃.
- Continue to press the test operation switch for more than 5 seconds. After you hear twice beep, release your finger from the switch : the cooling operation starts with the air flow speed “HI.”
- If the test operation switch is pressed more than 10 seconds, it doesn’t work.
- After 30 minutes, test operation ends automatically.



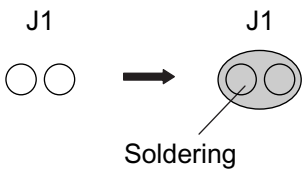
HOW TO RELEASE EMERGENCY AND TEST OPERATION

- In case of releasing during those operations, you can either push emergency operation switch once more or apply operation using remote control.
  You will hear a beep sound and emergency/ test operation is released.
- If you release the operation by remote control, operation will continue as setting of the remote control automatically.

INTERFERENCE PREVENTION OF SIGNALS FROM THE REMOTE CONTROLLER

When two indoor units used in the same room, interference of the signals may happen. To avoid this, alternative signal model B can be selected by the following. (Ex-factory setting is mode A)

- Remote controller side : Have “J1” on the PC board short-circuited by soldering.
- Indoor unit side : Cut “R13” on the PC board.



TIMER OPERATION

ON Timer operation

- Press the ON/OFF switch. Right after replacing new batteries, set the present time in advance.
- Set the “ON Time” : Press the “TIME ADJ” button twice.
  Adjust the time with the “⊞ , ⊟ ” button.
  Press the “TIME ADJ” button twice.The setting of “ON Time” is completed and the present time appears on the LCD.
- Set the “ON Timer” : Press the Timer fixing button “ON”.

OFF Timer operation

- Press the ON/OFF switch. Right after replacing new batteries, set the present time in advance.
- Set the “OFF Time” : Press the “TIME ADJ” button 3 times.
  Adjust the time with the “⊞ , ⊟ ” button.
  Press the “TIME ADJ” button once.The setting of “OFF Time” is completed and the present time appears on the LCD.
- Set the “OFF Timer” : Press the Timer fixing button “OFF”.

Sleep Timer operation

- Press the “SLEEP” button during the operation.
- Set the operating period by pressing the “SLEEP” button until the period designated appears on the LCD.

Timer Cancellation

- ON/OFF Timer : Press the Timer fixing button “ON”(On Timer) and/or “OFF”(Off Timer) once again.
- Sleep Timer : Press the “SLEEP” button until the operating period on the LCD disappears.

AIRFLOW DIRECTION CONTROL

Vertical adjustment

When ON/OFF switch is pressed, the vertical louver will move to the adequate positions for each operation automatically.

Swing of air flow

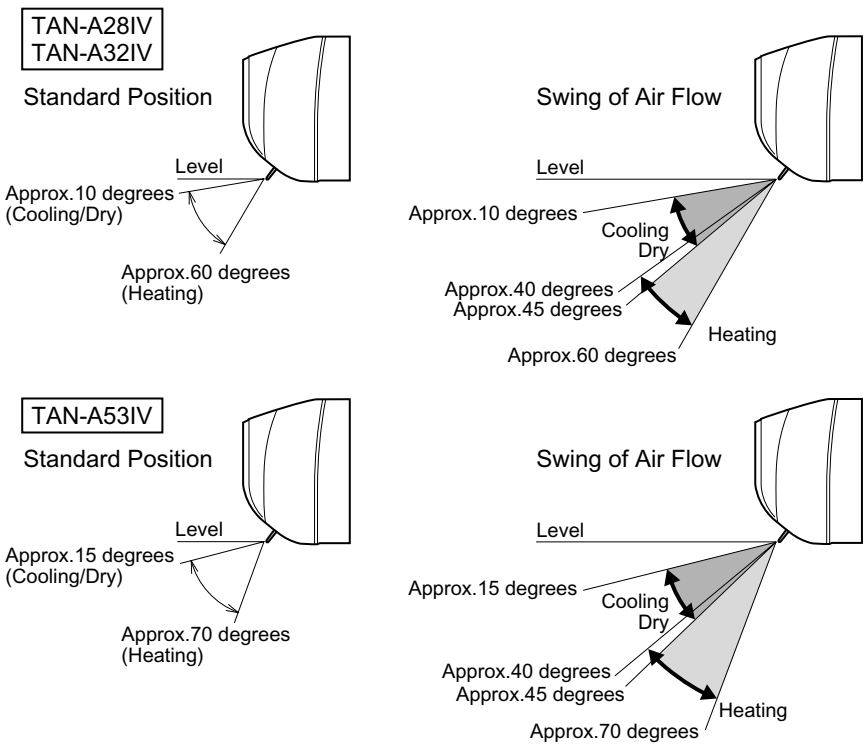
If air flow direction switch is pressed once, the vertical louver will move within the range of figures.

Fixing the flow direction

If air flow direction switch is pressed again, the vertical louver will be fixed and that position is memorized. From the next operation the louver will be set at previous position automatically.

Notes :

- In Swing Mode, the louver automatically moves up and down within the certain range, as the illustration below.
- There is two different ranges of louver swinging; one is of cooling & dry mode operation and the other is of heating operation.

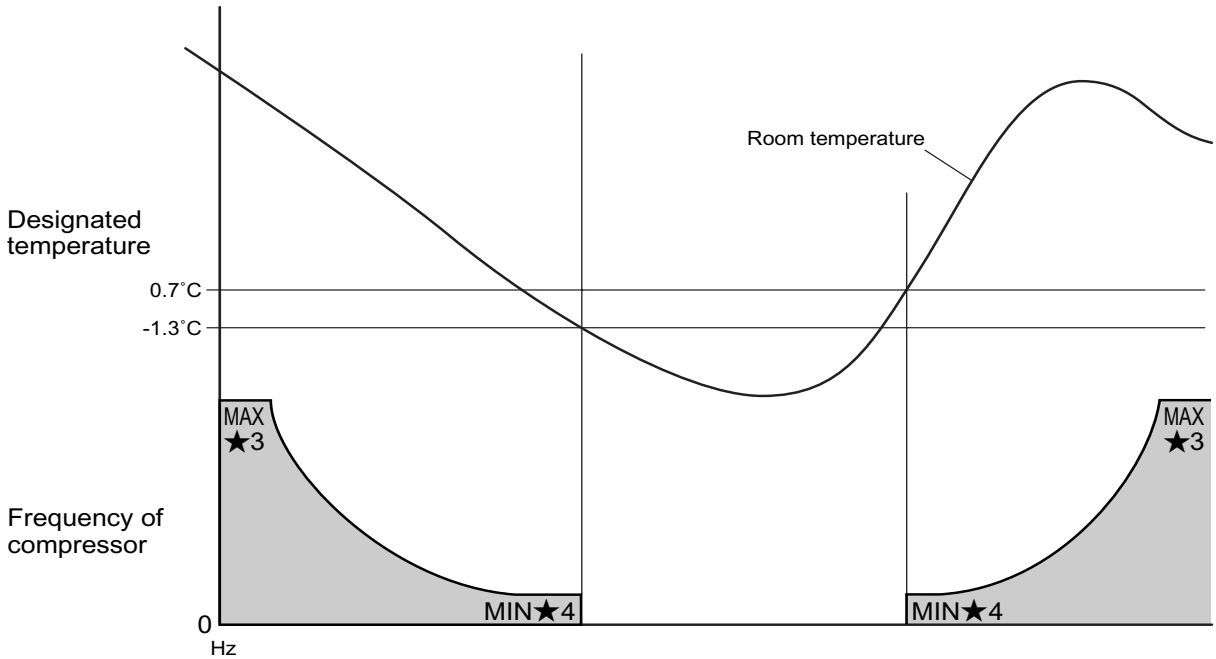


TIME DELAY SAFETY CONTROL FUNCTION - FOR PROTECTION OF COMPRESSOR

- Compressor will not restart, in any operation modes, for 3 minutes after its stop.
- Compressor does not stop during the first ★1 seconds of its operation even if the room temperature reaches to the designated temperature, except changing setting temperature.

COOLING MODE OPERATION

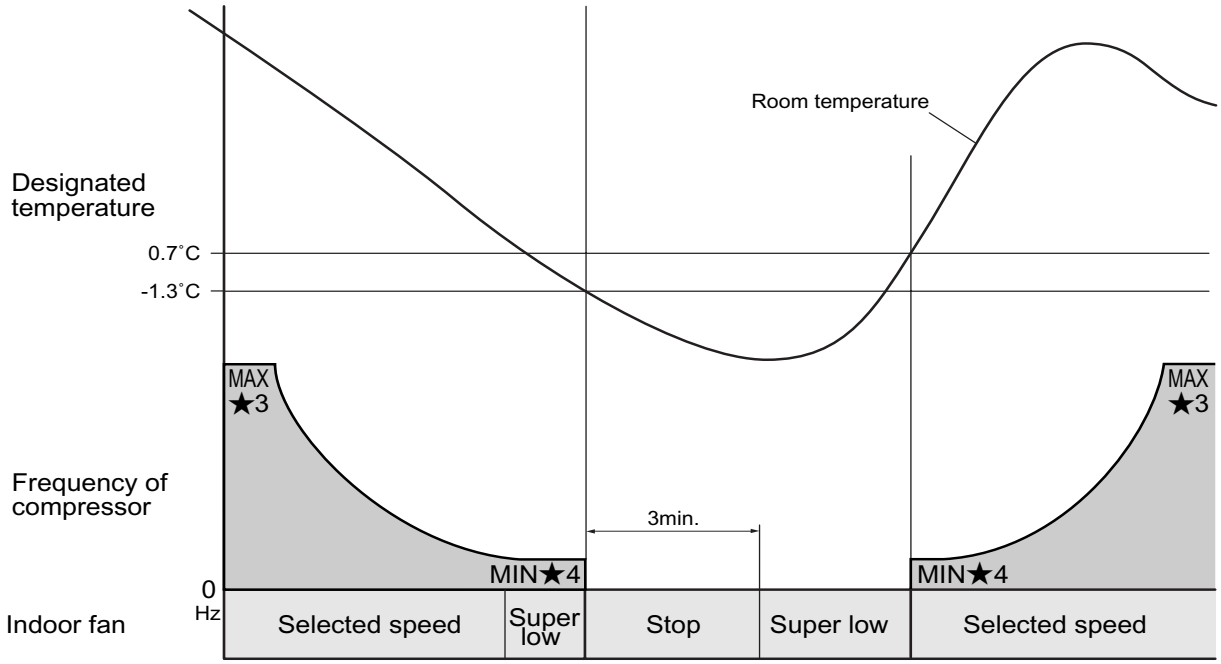
- The compressor will stop when operational frequency reached the minimum frequency and that condition has been kept for ★1 seconds and the room temperature becomes 1.3℃ lower than it was set.
- The compressor will re-start when room temperature becomes 0.7℃ higher than it was set.
- The operational frequency will be set every ★2 seconds of operation.
  The operational frequency setting will be calculated based on the deviation of the room temperature and the set temperature on one end and the deviation factor at the time of previous setting on another.



	★1	★2	★3	★4
TAN/TAG-A28IV	120	40	68Hz	32Hz
TAN/TAG-A32IV	180	60	72Hz	32Hz
TAN/TAG-A53IV	120	120	92Hz	20Hz

DRY MODE OPERATION

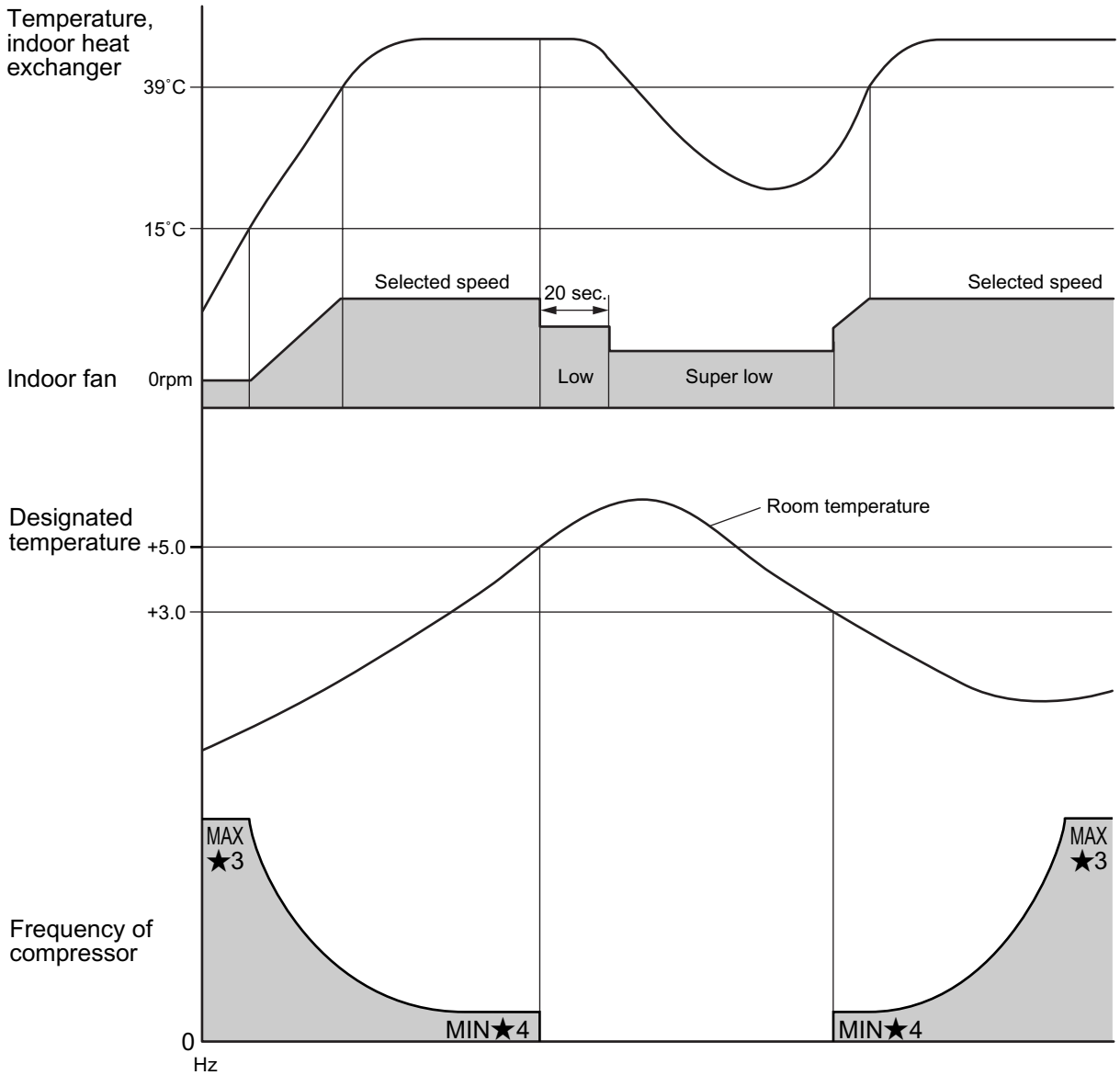
- The compressor will stop when operational frequency reached the minimum frequency and that condition has been kept for ★1 seconds and the room temperature becomes 1.3℃ lower than it was set.
- The compressor will re-start when room temperature becomes 0.7℃ higher than it was set.
- The operational frequency will be set every ★2 seconds of operation.
  The operational frequency setting will be calculated based on the deviation of the room temperature and the set temperature on one end and the deviation factor at the time of previous setting on another.



	★1	★2	★3	★4
TAN/TAG-A28IV	120	40	68Hz	32Hz
TAN/TAG-A32IV	180	60	72Hz	32Hz
TAN/TAG-A53IV	120	120	92Hz	20Hz

HEATING MODE OPERATION

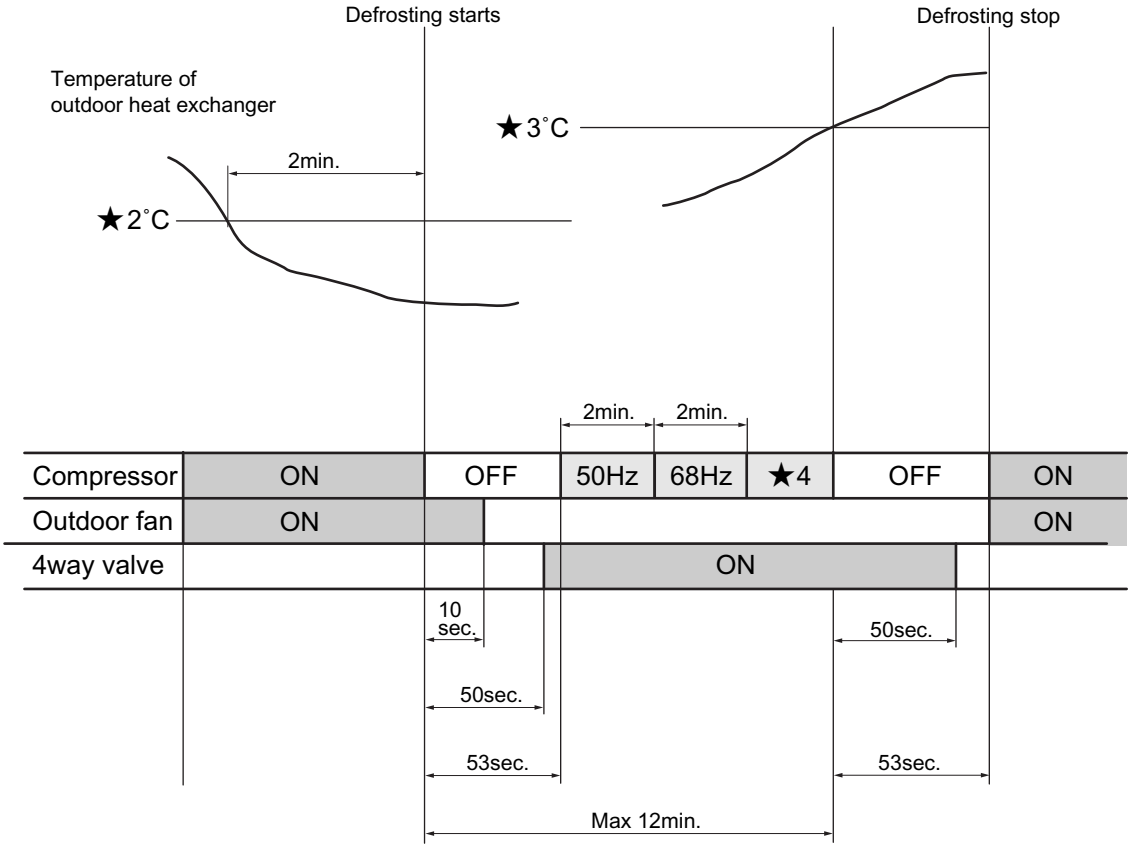
- The compressor will stop when operational frequency reached the minimum frequency and that condition has been kept for ★1 seconds and the room temperature becomes 5.0℃ higher than it was set.
- The compressor will re-start when room temperature becomes 3.0℃ higher than it was set.
- The operational frequency will be set every ★2 seconds of operation.
  The operational frequency setting will be calculated based on the deviation of the room temperature and the set temperature on one end and the deviation factor at the time of previous setting on another.



	★1	★2	★3	★4
TAN/TAG-A28IV	120	40	74Hz	32Hz
TAN/TAG-A32IV	180	60	84Hz	44Hz
TAN/TAG-A53IV	120	120	100Hz	20Hz

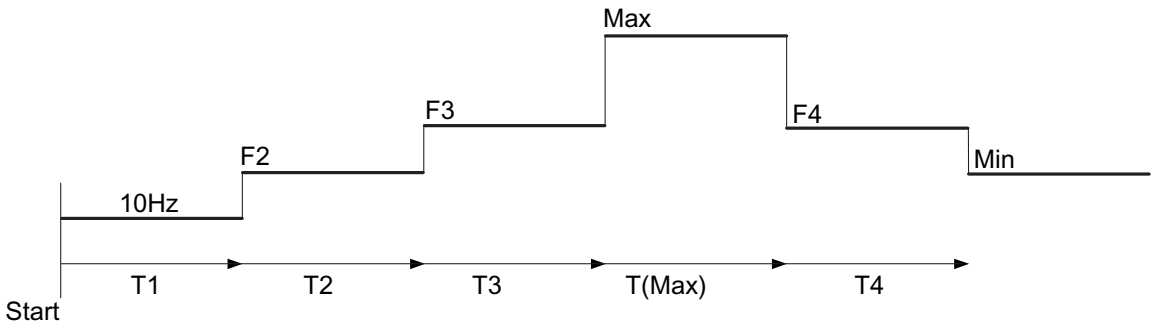
DEFROSTING OPERATION(FOR OUTDOOR UNIT HEAT EXCHANGER)

- Defrosting operation is controlled by the temperature of outdoor heat exchanger sensed by the thermistor and the timer switch.
- Defrosting operation starts when the both of the following conditions are met at the same time.
  a) ★1 minutes' of continuous run of the compressor after the start of heating operation or after the completion of previous defrosting operation.
  b) the temperature of the outdoor heat exchanger stays lower than ★2℃ continuously for two minutes.
- Defrosting operating is called off if either of the following conditions is met.
  a) The temperature of outdoor heat exchanger rises to ★3℃ while 4-way-valve is ON.
  b) 12 minutes has passed since compressor turned OFF.



	★1	★2	★3	★4
TAN/TAG-A28IV	50	-1	8	74Hz
TAN/TAG-A32IV	40	-1	8	80Hz
TAN/TAG-A53IV	40	-2	12	86Hz

COMPRESSOR STARTING SEQUENCE



Model Number	Frequency	F2	F3	Max	F4	Min
	Time	T2	T3	T(Max)	T4	-
TAN/TAG-A28IV	Cooling	48Hz	58Hz	68Hz	54Hz	32Hz
		1.5min.	1.5min.	30min.	limitless	-
	Heating	48Hz	58Hz	74Hz	74Hz	32Hz
		1.5min.	1.5min.	-	limitless	-
TAN/TAG-A32IV	Cooling	48Hz	58Hz	72Hz	66Hz	32Hz
		1.5min.	1min.	30min.	limitless	-
	Heating	48Hz	58Hz	84Hz	84Hz	44Hz
		1.5min.	1min.	-	limitless	-
TAN/TAG-A53IV	Cooling	50Hz	68Hz	92Hz	86Hz	20Hz
		1.5min.	1min.	25min.	limitless	-
	Heating	50Hz	68Hz	100Hz	86Hz	20Hz
		1.5min.	1min.	40min.	limitless	-

T1: Forced rotating to reach 10Hz
F2,F3: Forced frequency for lubricant back

FOR YOUR SAFETY USE

TAN: indoor unit TAG : outdoor unit

● For the safety and proper use and handling of the product, please read and follow the instructions carefully.

● The meaning of the marks below are as follows.

⚠ Danger	Improper use will cause the significant risk of death or serious injury of the user.
⚠ Warning	Improper use may cause the risk of death or serious injury of the user.

● Please refer the marks below.

⚠	Caution	⚠	High Voltage		Off the Plug	⃠	Prohibited
❗	Strict enforcement	⏚	Connect the earthing cable	♨	High Temperatare		

⚠ Danger

Check Point	● Be sure to take off the plug when servicing. It may cause the risk of electric shock.	
	● If leakage of refrigerant occur in the installation, ventilate a room. If the leaked refrigerant is exposed fire, poisonous gas may be generated.	
	● Boosting capacitor make the control box assembly (TAG unit) high voltage. Make the capacitor discharge enough when servicing. Otherwise will be struck by electricity.	
	● Never remodel appliance. Use designated parts or accessories to avoid accidents.	
	● In case of gas leakage, not only refill the required amount of the refrigerant gas but also find out the gas leakage point and mend it. If the service work has to be suspended before mending the leakage points, be sure to collect the refrigerant gas in the outdoor unit by using pump then fasten the service ports to avoid any further leakage. Poisonous gas may be generated when the leaked refrigerant is exposed to fire.	
	● Clean the pins of the plug and insert the plug completely into the outlet.	
	● Be sure to change the cable if it is damaged. Do not use damaged cable.	
	● Do not use power supply cord extended or connected in halfway.	

⚠ Warning

Check Point	Be sure to put the units to earthing works.	
	Be sure to check the insulated resistance, more than 1M Ω .	

※ The combinations of three LED indicators (ON/Flashing/OFF) provide the self-diagnosis information as most of them shown in the trouble shooting guide.

[Note1] Discharge electricity of the capacitor by making short circuit firstly. Then check the capacitor by tester. Be sure to set up the tester for the measurement of bigger resistance.

INDICATION LAMP

Micro computer self-diagnose the points of the troubles and inform it by the combination of the status (On, Flush, or Off) of three lamp indicators on the front panel of the indoor unit.

INDICATION LAMP POWER (green) / TIMER (yellow) / OPERATE (green)	ALARM INDICATION TIME	APPEARANCE, PORTION, PARTS SEEMED WRONG		METHOD OF CHECK (press the ON/OFF button of remote controller in case of reset)
OFF / OFF / OFF TAN, TAG do not work at all	–	–	POWER SUPPLY	check the plug inserted into the outlet and the power supply
			REMOTE CONTROL	emergency operation (display of remote controller is faint or not)
			TAN FUSE(3.15A)	check the electric continuity by tester
			TAN TERMINAL BLOCK	check the electric continuity by tester
			PCB (RECEIVER & DISPLAY)	emergency operation
			TAN PCB (MAIN)	other than described above
FLASHING / OFF / OFF	alarm indication appears immediately when press operation switch	short or open of sensor, temperature or incomplete insertion of connector	SENSOR, TEMP. ROOM	check the resistance by tester [see table 1]
FLASHING / ON / ON			SENSOR, TEMP. HEAT EXCHANGER	check the resistance by tester [see table 2]
ON / ON / FLASHING			SENSOR, TEMP. DEFROST	check the resistance by tester [see table 2]
ON / FLASHING / OFF			SENSOR, TEMP. OUTDOOR	check the resistance by tester [see table 2]
FLASHING / ON / OFF			SENSOR, TEMP. DISCHARGE	check the resistance by tester [see table 3]
OFF / OFF / FLASHING TAN, TAG don't work at all, and after 20 sec., operation lamp is flashing (2 min. in case of power on)	normal lamp indication turn alarm when something is wrong with TAN, TAG	error of transmission	MIS-WIRING (TAG-TAN CONNECTING CABLE) OR RARE CONTACT	check the wiring connection and rare contact
			CURRENT FUSE . FUSING (ON THE TAG PCB)	check the electric continuity by tester.[see fig. 2] (if it is no continuity, TAG controller assy should be replaced.)
FLASHING / OFF / FLASHING		CT disconnection	CUTTING OFF CT	change the TAG PCB
OFF / FLASHING / OFF 30 ~ 40 min. later after compressor start, the yellow lamp is flashing and TAN, TAG stop running	–	sensor discharge operate because temperature of discharge tube beyond 100℃, or sensor discharge is bad quality	GAS LEAKAGE	check the point of leakage (discharge temperature rise in case of small leakage), measure the pressure of compressor during fixed operation (emergency and test operation)
			VALVE, SERVICE IS CLOSED	check the valve by eyes
			PIPE	check by eyes
			SENSOR, TEMP. DISCHARGE	check the resistance by tester [see table 3]
FLASHING / FLASHING / OFF	once stop running with power lamp lighting when something is wrong with TAN, TAG, and start running again after 6 ~ 26 min. later after that in case of reoccurrence, alarm indication appears	protective action against excessive AC current detection	UNREASONABLE OPERATION UNDER OVERLOAD	check the place of installation (blockage of air inlet & outlet of TAN, TAG) check the excessive gas
			MOMENTARY STOP OF POWER (IN CASE OF LIGHTNING)	check the movement by reoperation
			DROP OF POWER VOLTAGE	check the power voltage (230V)
FLASHING / FLASHING / ON or FLASHING / OFF / ON		protective action against excess current DC current detection	UNREASONABLE OPERATION UNDER OVERLOAD	check the place of installation (blockage of air inlet & outlet of TAN, TAG) check the excessive gas
			MOMENTARY STOP OF POWER (IN CASE OF LIGHTNING)	check the movement by reoperation
			DROP OF POWER VOLTAGE	check the power voltage (230V)
			TAG PCB (MAIN)	If the same alarm lamp will remain lit during operation even after disconnecting the connector of the lead cable to the compressor, it implies the defect of the TAG controller assy. If the same alarm lamp wil remain lit duning operation even after replacing the TAG controller assy, it implies the defect of the compressor.
			COMPRESSOR LOCKING	
		abnormal revolution of compressor	UNREASONABLE OPERATION UNDER OVERLOAD	check the place of installation (blockage of air inlet & outlet of TAN, TAG) check the excessive gas
			MOMENTARY STOP OF POWER (IN CASE OF LIGHTNING)	check the movement by reoperation
			DROP OF POWER VOLTAGE	check the power voltage (230V)
			TAG PCB (MAIN)	If the same alarm lamp wil remain lit duning operation even after replacing the TAN controller assy, it implies the defect of the compressor.
			COMPRESSOR LOCKING	
ON / FLASHING / FLASHING	–	rise of temperature (above 100℃) of power module	SHORT CYCLE (INSUFFICIENT AIR CIRCULATION) UNREASONABLE OPERATION UNDER OVERLOAD	check the place of installation (blockage of air inlet & outlet of TAN, TAG)
FLASHING / FLASHING / FLASHING in case of heating operation, after a few minutes operation, all lamps are flashing and TAN, TAG stop running	–	in case of heating operation, a rise of temperature (above 62℃) of TAN heat exchanger or less quantity of TAN blow	FILTER IS CHOKED	check by eyes and clean it
			SENSOR, TEMP. HEAT EXCHANGER	check the resistance by tester [see table 2]
			TAN PCB (MAIN)	check the voltage between blue and yellow in connector [see fig.3] if it is not AC 110V ~ 230V, TAN PCB (main) should be replaced (except TAN-A53IV)
			FAN MOTOR (TAN)	other than described above
OFF / ON / FLASHING only TAN-A53IV	90 sec. later after start running, alarm indication appears	accident of fan motor	FAN MOTOR (TAN)	check the current fuse (1A) on the wiring (red) for fan motor (TAN) by tester if the current fuse is cut, fan motor(TAN) is defective if not, fan motor(TAN) or PCB(TAN main) is defective check the power voltage(230V) check the voltage of fan motor [see fig.6]
FLASHING / ON / FLASHING	–	accident of controller	TAN PCB (MAIN)	15 sec. later after main power on, if alarm indication appears, TAN PCB (main) should be replaced
			TAG PCB	60 sec. later after start running through remote controller, if alarm indication appears, TAG controller assy should be replaced

※ In this table TAN means indoor unit and TAG means outdoor unit.

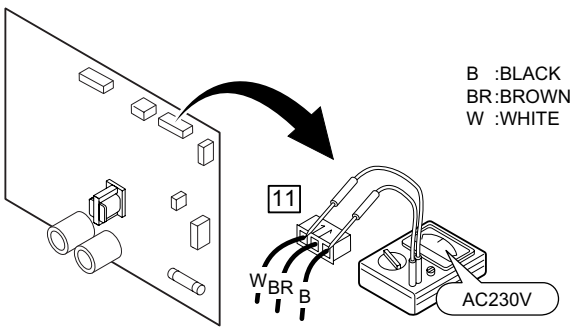
TROUBLESHOOTING GUIDE

INDICATION LAMP POWER (green)	TIMER (yellow)	OPERATE (green)	ALARM INDICATION TIME	APPEARANCE, PORTION, PARTS SEEMED WRONG		METHOD OF CHECK (press the ON/OFF button of remote controller in case of reset)
–	–	–	–	not cool down not warm up	GAS LEAKAGE	check the point of leakage measure the pressure of compressor during fixed operation (emergency and test operation)
					SENSOR, TEMP. ROOM	check the resistance by tester [see table 1]
					SENSOR, TEMP. HEAT EXCHANGER	check the resistance by tester [see table 2]
					FAN MOTOR (TAN)	check the voltage between blue and yellow in connector [see fig.3] if it is AC 110V ~ 230V, TAN fan motor should be replaced
					4-WAY VALVE	check the resistance by tester [see fig.4]
					SHORT CYCLE (INSUFFICIENT AIR CIRCULATION)	check the blockage of air inlet & outlet of TAN, TAG
–	–	–	–	water leakage	DRAINAGE	check the drain hose by eyes (it might be folded or choked)
					MIS-INSTALLATION	check the TAN whether lean or not
–	–	–	–	nasty smell	FILTER IS CHOKED	check by eyes and clean it
					NO USE FOR A LONG TIME	
					NASTY SMELL (CIGARETTE, FURNITURE, ETC.)	use deodorizer
–	–	–	–	louver doesn' t work	LOUVER MOTOR	check the resistance by tester [see fig.5]

※ In this table TAN means indoor unit and TAG means outdoor unit.

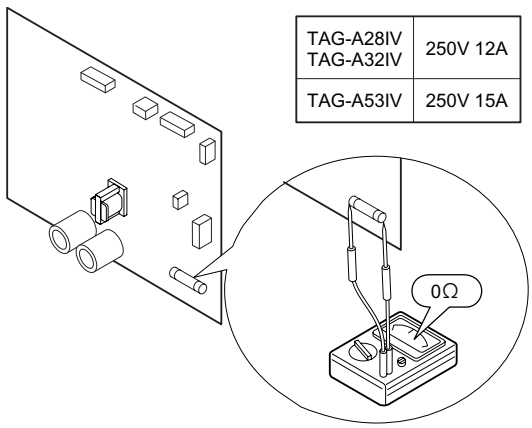
CHECK A FOLLOWING STEPS

〔fig. 1〕Voltage of TAG fan motor on the TAG PCB(main)

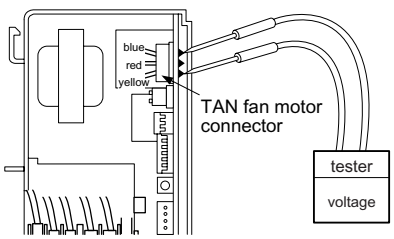


Measure the voltage between white and black in the connector.

〔fig. 2〕Continuity of current fuse on the TAG PCB(filter)



〔fig. 3〕Voltage of TAN fan motor on the TAN PCB (main)

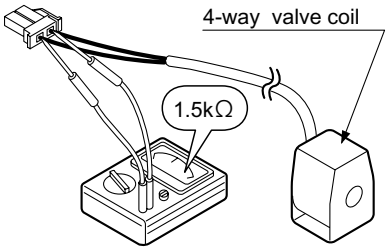


attention electric shock

Normal:110V ~ 230V

Check the TAN PCB(main)
Measure the voltage between the connector pins in the back of TAN PCB(main).

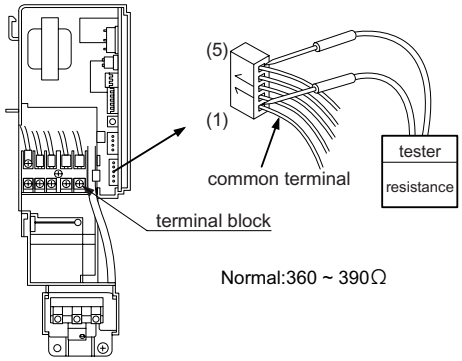
〔fig. 4〕Resistance of 4-way valve coil



Normal:1.5kΩ

※ Take off the connector and check the Resistance of 4-way valve coil.

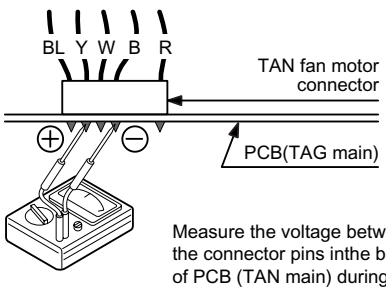
〔fig. 5〕Resistance of TAN louver motor



Normal:360 ~ 390Ω

Take off the connector and check the resistance between the common terminal and each terminal.

〔fig. 6〕Voltage of TAN fan motor on the PCB(TAN main)



Measure the voltage between the connector pins inthe back of PCB (TAN main) during cooling operation.

between red ⊕ and black ⊖ approx.DC325V
between yellow ⊕ and black ⊖ approx.DC3 ~5V
between white ⊕ and black ⊖ approx.DC15V

PCB(TAN main) is Normal

ELECTRIC CHARACTER

〔ftable 1〕 Sensor, temp. room

Temp. (℃)	Resistance (k Ω)
10	48
15	37
20	29
25	23
30	18
35	15

〔ftable 2〕 Sensor, temp. defrost
Sensor, temp. heat exchanger
Sensor, temp. outdoor

Temp. (℃)	Resistance (k Ω)
0	31
5	24
10	19
15	15
20	12
25	10
30	8
35	7

〔ftable 3〕 Sensor, temp. discharge

Temp. (℃)	Resistance (k Ω)
10	1,130
20	660
35	320
40	250
50	160
80	50

〔ftable 4〕 Sensor, temp. power module

Temp. (℃)	Resistance (k Ω)
10	210
30	79
50	33
70	15
90	8
110	4

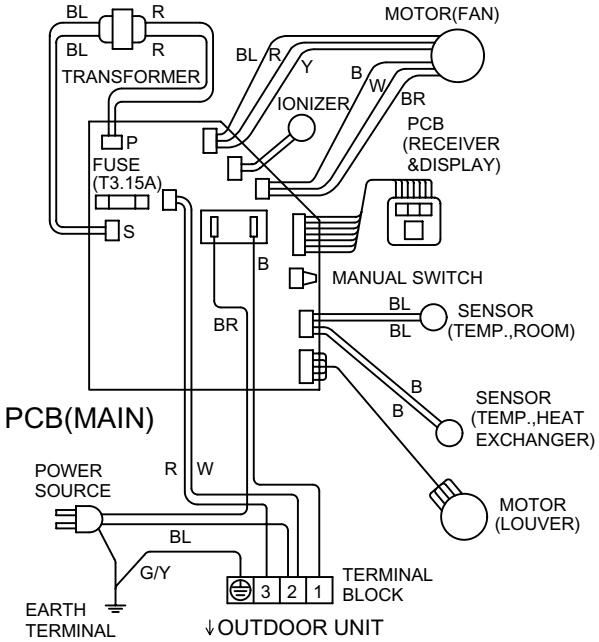
DISPLAY OF ERRORS IN THE PAST

- Push emergency operation switch and hold for more than 10 seconds while unit is not operated and release the switch when you hear three beeps.
  You will see the latest error by indication lamp.
  Further pushing of the switch will make the error indication by reversing cycle up to four latest errors in the past.
  At any stage, the error indication will disappear after 30 seconds.

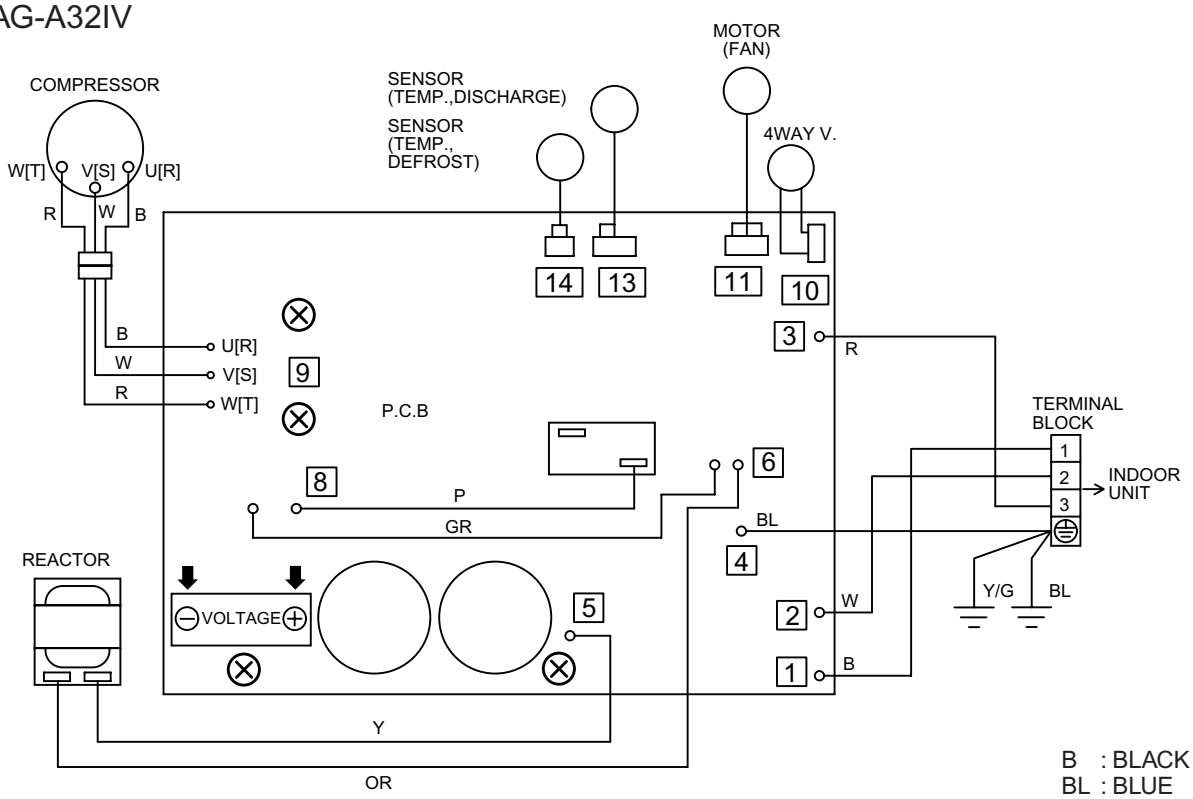
Hold switch for more than 10 seconds	Three beeps	The latest error indication
Another push	Two beeps	The second latest error indication
Another push	Three beeps	The third latest error indication
Another push	Four beeps	The fourth error indication
Another push	One beep	Indication lamp goes off

WIRING DIAGRAM

TAN-A28IV
TAN-A32IV



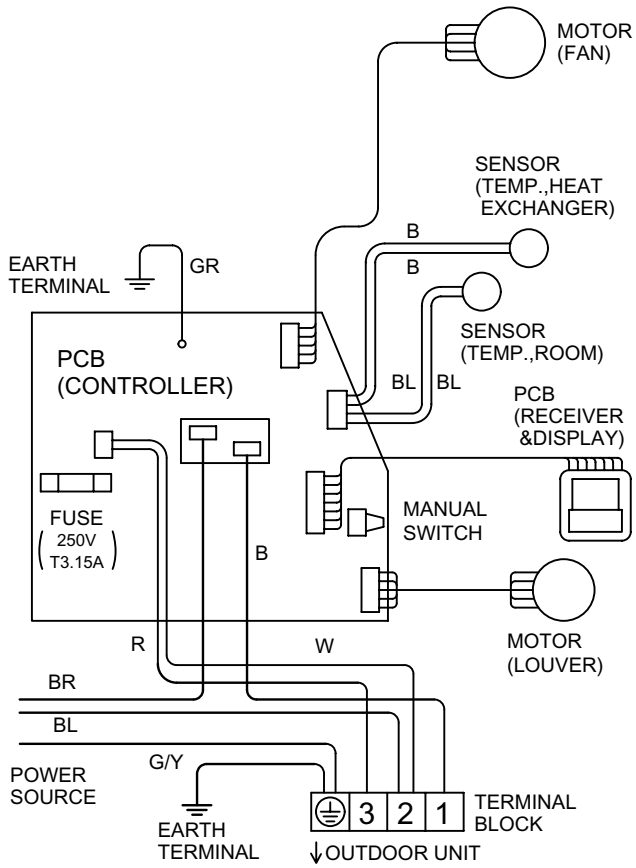
TAG-A28IV
TAG-A32IV



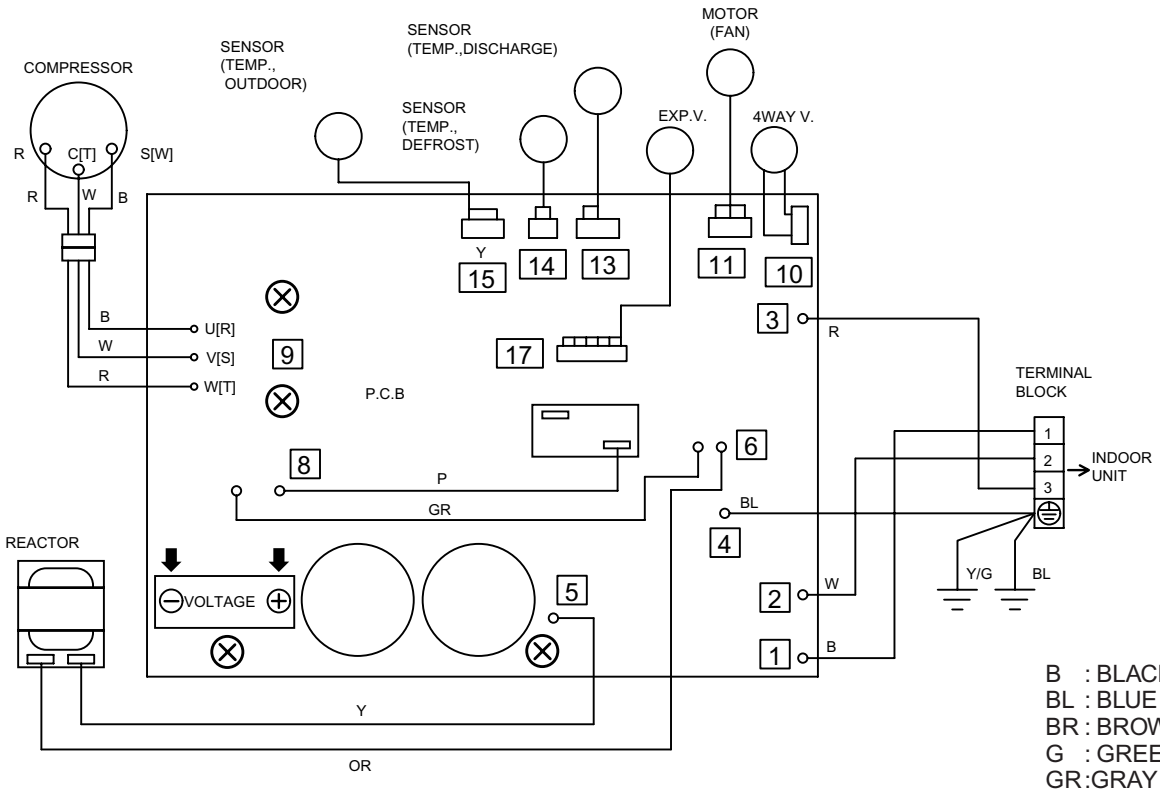
TAN: INDOOR UNIT
TAG: OUTDOOR UNIT

B : BLACK
BL : BLUE
BR : BROWN
G : GREEN
GR : GRAY
OR : ORANGE
P : PINK
R : RED
W : WHITE
Y : YELLOW

TAN-A53IV



TAG-A53IV



TAN: INDOOR UNIT
TAG: OUTDOOR UNIT

B : BLACK
BL : BLUE
BR : BROWN
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R : RED
W : WHITE
Y : YELLOW

REMARKS FOR GAS PRESSURE CHECK AND CHARGING

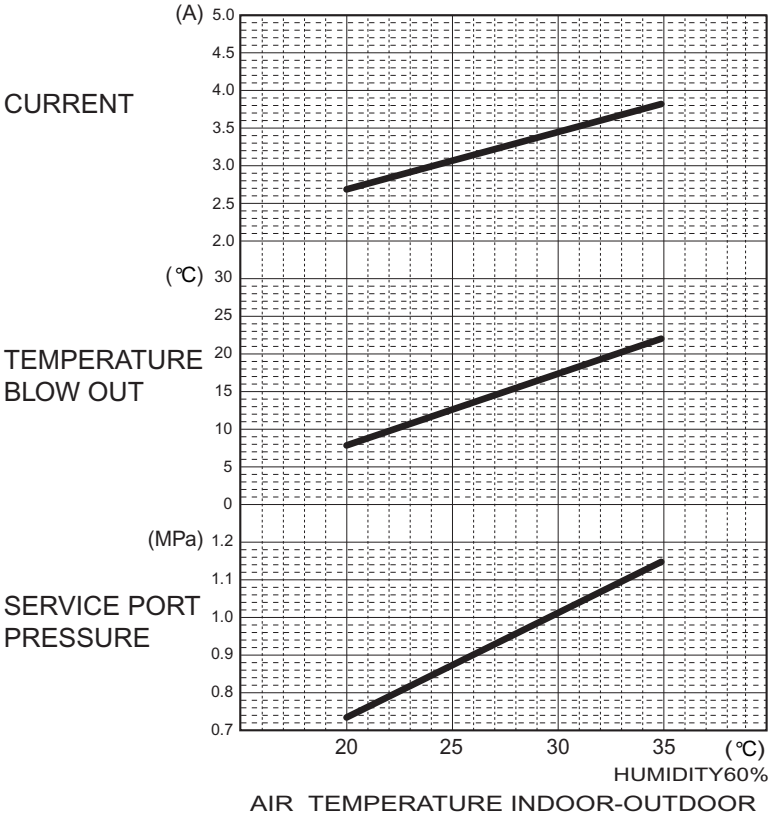
Gas pressure is to be measured at TEST OPERATION for cooling or EMERGENCY OPERATION for heating. (It is operated for 30 minutes at fixed frequency.)
If you find substantial diffrence in performance compared with PERFORMANCE CURVE as shown next, recharge the refrigerant.
(In order to avoid excessive charging, purge all the remaining refrigerant first and then evacuate the unit completely with vacuum pump and finally apply rated volume charging of refrigerant.)
Charging of refrigerant should be done by cooling operation, because the pressure at service valve will be too high at heating cycle, then the heating performance characteristics must be checked by restarting of heating operation.

Piping size	Liquid side	6.35mm
	Gas side	9.52mm
Max. tube length	TAN/TAG-A28IV	12m
	TAN/TAG-A32IV TAN/TAG-A53IV	15m
Max. height difference	TAN/TAG-A28IV	8m
	TAN/TAG-A32IV TAN/TAG-A53IV	10m

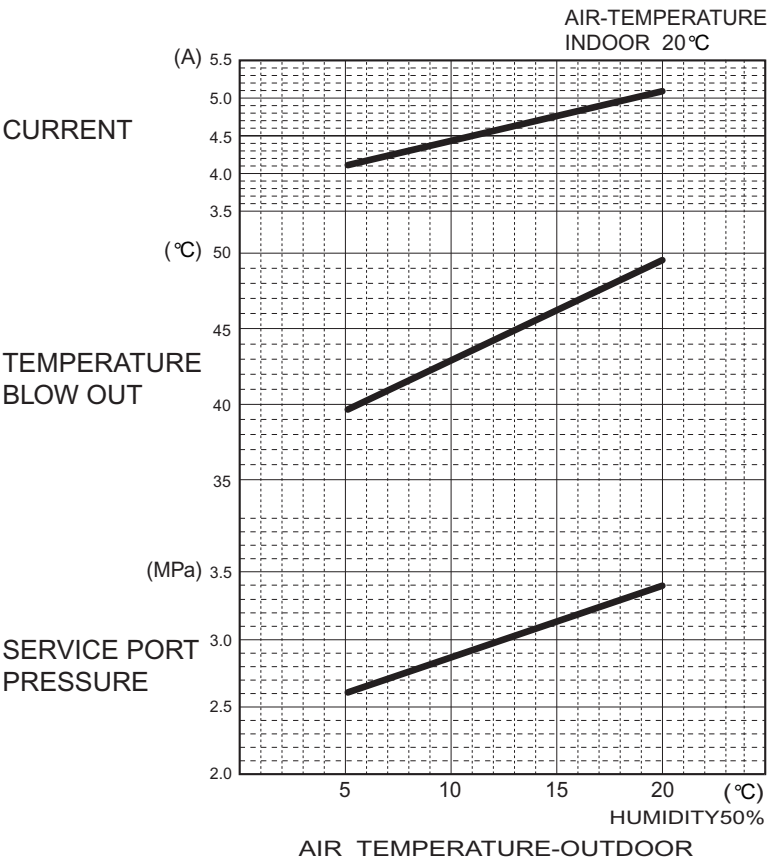
PERFORMANCE CURVE DIAGRAM

TAN/TAG-A28IV

COOLING



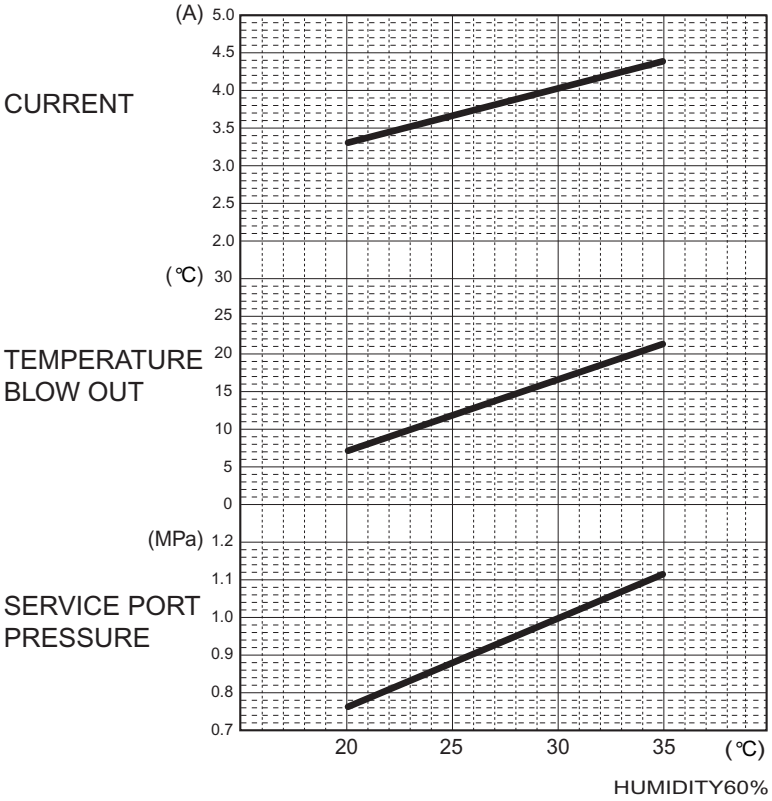
HEATING



PERFORMANCE CURVE DIAGRAM

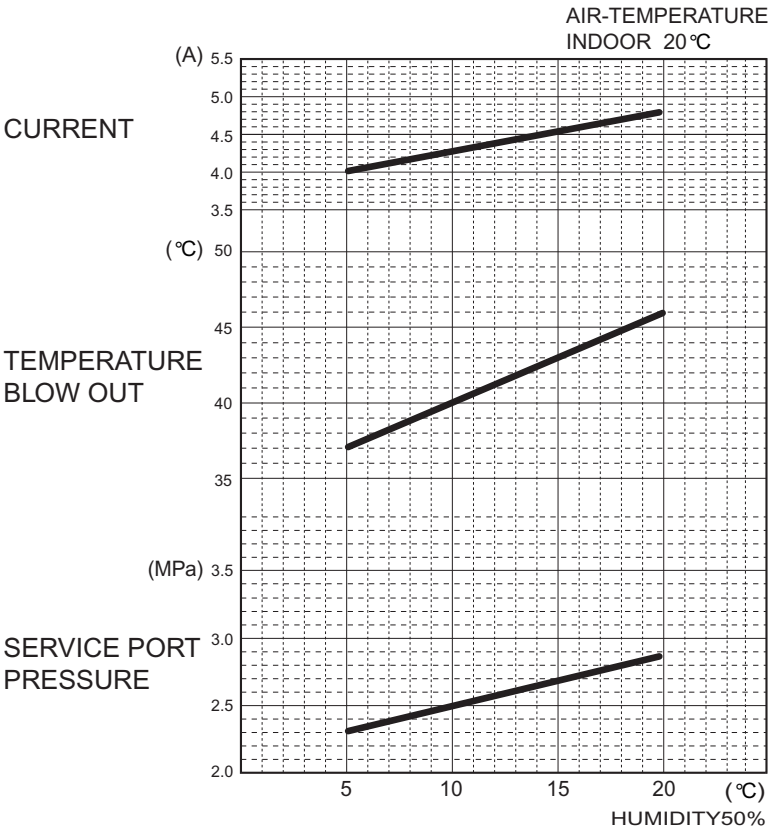
TAN/TAG-A32IV

COOLING



AIR TEMPERATURE INDOOR-OUTDOOR

HEATING

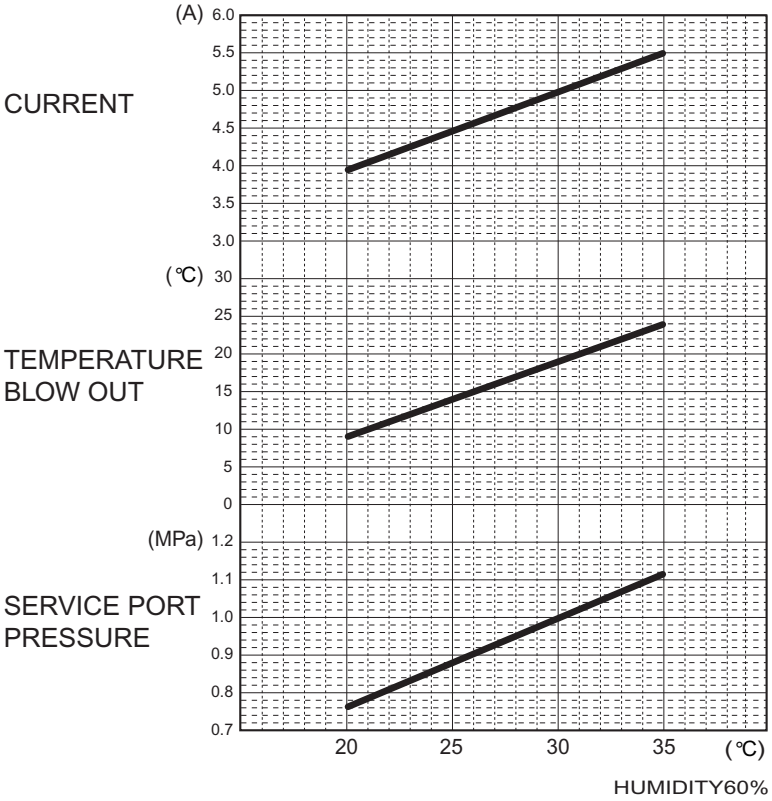


AIR TEMPERATURE-OUTDOOR

PERFORMANCE CURVE DIAGRAM

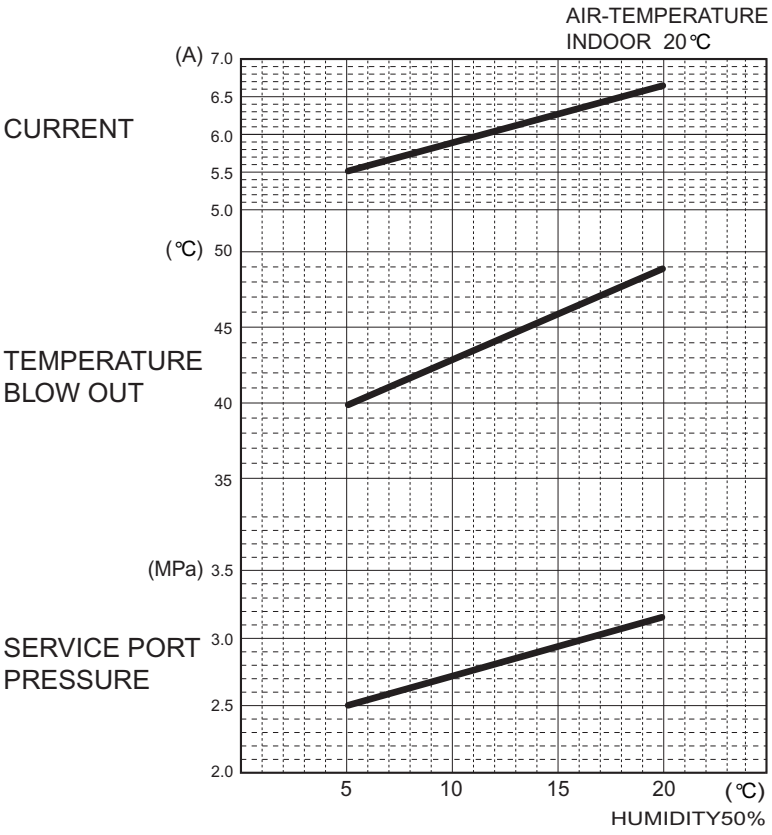
TAN/TAG-A53IV

COOLING



AIR TEMPERATURE INDOOR-OUTDOOR

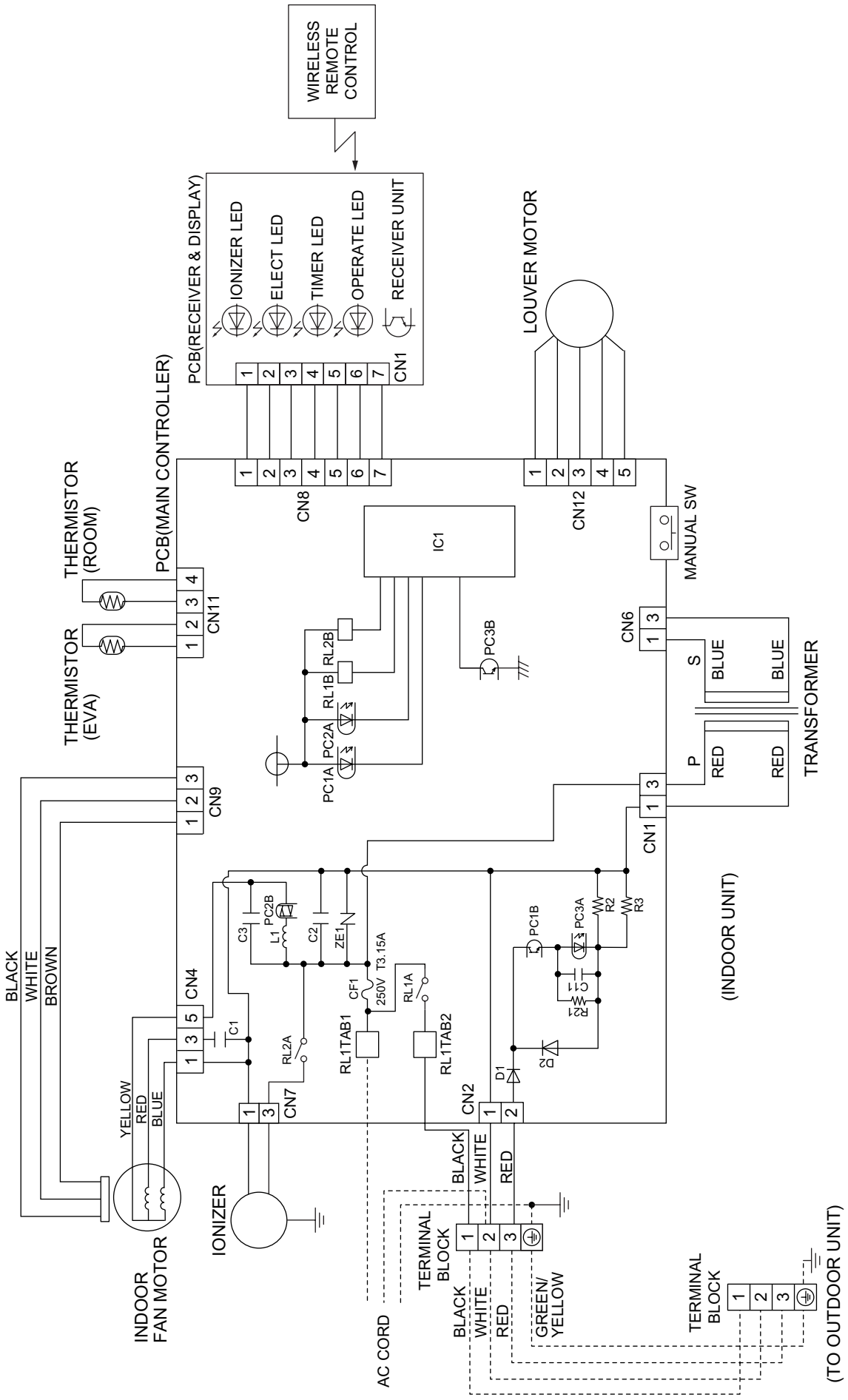
HEATING



AIR TEMPERATURE-OUTDOOR

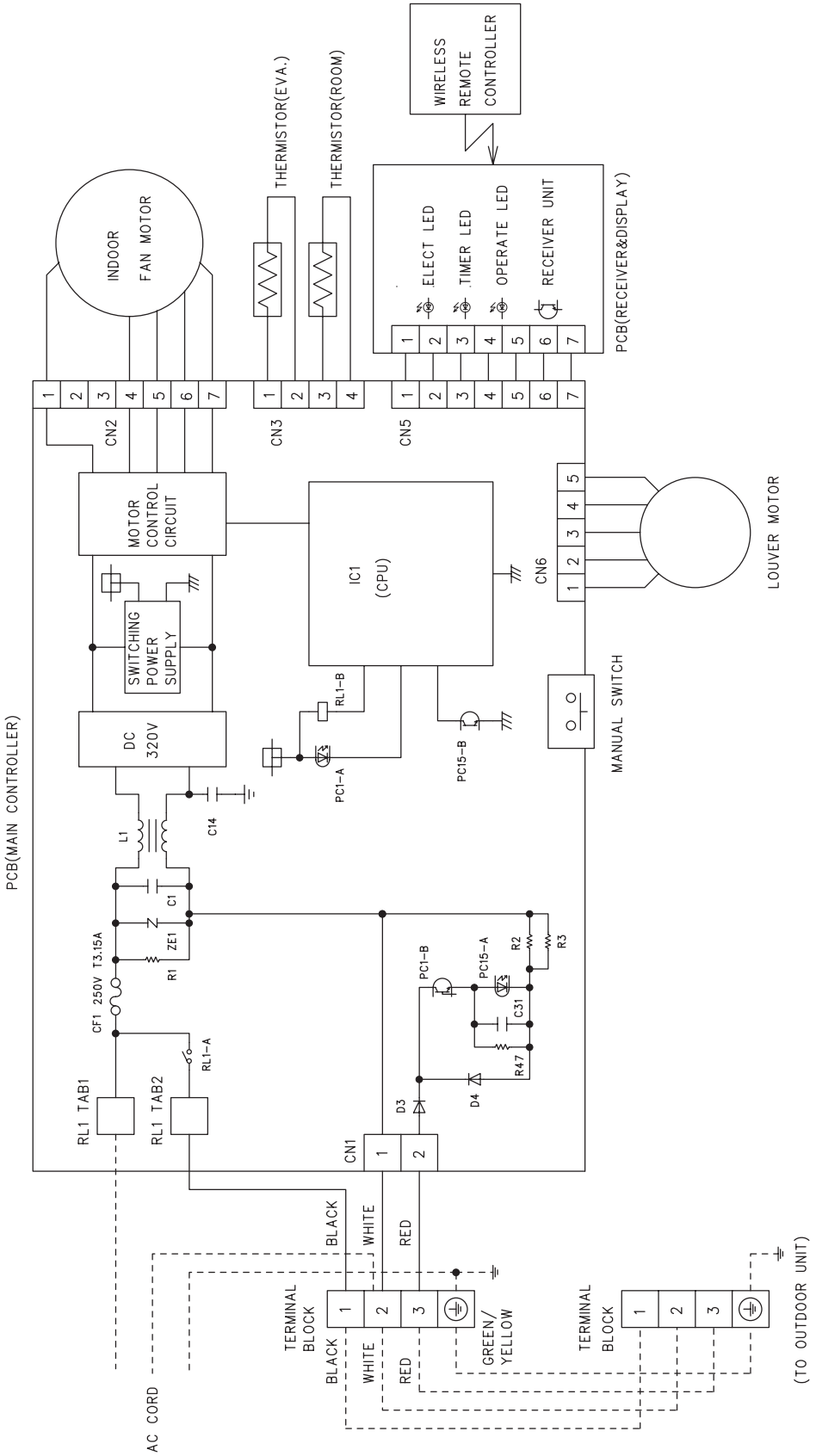
ELECTRIC CIRCUIT DIAGRAM

TAN-A28IV, TAN-A32IV



ELECTRIC CIRCUIT DIAGRAM

TAN-A53IV



SENSOR, ROOM TEMPERATURE

TAN SENSOR, ROOM TEMPERATURE
B CONSTANT ····· 4150±3%
STANDARD TEMPERATURE ····· 25.0℃
STANDARD RESISTANCE ····· 23kΩ±3%

T(℃)	R(kΩ)	Voltage(V)	T(℃)	R(kΩ)	Voltage(V)
-30.0	537.8	0.18	-10.0	146.8	0.60
-29.5	519.3	0.19	-9.5	142.4	0.62
-29.0	501.5	0.19	-9.0	138.2	0.63
-28.5	484.3	0.20	-8.5	134.2	0.65
-28.0	467.8	0.20	-8.0	130.3	0.67
-27.5	452.0	0.21	-7.5	126.5	0.68
-27.0	436.7	0.22	-7.0	122.8	0.70
-26.5	422.0	0.23	-6.5	119.3	0.72
-26.0	407.9	0.23	-6.0	115.9	0.74
-25.5	394.3	0.24	-5.5	112.5	0.75
-25.0	381.1	0.25	-5.0	109.3	0.77
-24.5	368.5	0.26	-4.5	106.2	0.79
-24.0	356.4	0.27	-4.0	103.2	0.81
-23.5	344.7	0.27	-3.5	100.3	0.83
-23.0	333.4	0.28	-3.0	97.5	0.85
-22.5	322.5	0.29	-2.5	94.8	0.87
-22.0	312.1	0.30	-2.0	92.1	0.89
-21.5	302.0	0.31	-1.5	89.5	0.91
-21.0	292.2	0.32	-1.0	87.1	0.93
-20.5	282.9	0.33	-0.5	84.7	0.96
-20.0	273.8	0.34	0.0	82.3	0.98
-19.5	265.1	0.35	0.5	80.1	1.00
-19.0	256.7	0.36	1.0	77.9	1.02
-18.5	248.6	0.37	1.5	75.8	1.04
-18.0	240.8	0.38	2.0	73.7	1.07
-17.5	233.2	0.39	2.5	71.7	1.09
-17.0	225.9	0.41	3.0	69.8	1.11
-16.5	218.9	0.42	3.5	67.9	1.14
-16.0	212.1	0.43	4.0	66.1	1.16
-15.5	205.6	0.44	4.5	64.3	1.19
-15.0	199.3	0.46	5.0	62.6	1.21
-14.5	193.2	0.47	5.5	61.0	1.23
-14.0	187.3	0.48	6.0	59.4	1.26
-13.5	181.6	0.50	6.5	57.8	1.29
-13.0	176.1	0.51	7.0	56.3	1.31
-12.5	170.8	0.52	7.5	54.8	1.34
-12.0	165.6	0.54	8.0	53.4	1.36
-11.5	160.7	0.55	8.5	52.0	1.39
-11.0	155.9	0.57	9.0	50.7	1.41
-10.5	151.2	0.58	9.5	49.4	1.44
-10.0	146.8	0.60	10.0	48.1	1.47

THERMISTOR RESISTANCE CHART

TAN SENSOR, ROOM TEMPERATURE
B CONSTANT ····· 4150±3%
STANDARD TEMPERATURE ····· 25.0℃
STANDARD RESISTANCE ····· 23kΩ±3%

T(℃)	R(kΩ)	Voltage(V)	T(℃)	R(kΩ)	Voltage(V)
10.0	48.1	1.47	30.0	18.3	2.61
10.5	46.9	1.50	30.5	17.9	2.64
11.0	45.7	1.52	31.0	17.5	2.67
11.5	44.5	1.55	31.5	17.1	2.70
12.0	43.4	1.58	32.0	16.7	2.72
12.5	42.3	1.60	32.5	16.3	2.75
13.0	41.3	1.63	33.0	16.0	2.78
13.5	40.2	1.66	33.5	15.6	2.81
14.0	39.2	1.69	34.0	15.3	2.83
14.5	38.2	1.72	34.5	15.0	2.86
15.0	37.3	1.75	35.0	14.6	2.89
15.5	36.4	1.77	35.5	14.3	2.91
16.0	35.5	1.80	36.0	14.0	2.94
16.5	34.6	1.83	36.5	13.7	2.97
17.0	33.8	1.86	37.0	13.4	2.99
17.5	33.0	1.89	37.5	13.1	3.02
18.0	32.2	1.92	38.0	12.9	3.04
18.5	31.4	1.95	38.5	12.6	3.07
19.0	30.6	1.98	39.0	12.3	3.09
19.5	29.9	2.00	39.5	12.1	3.12
20.0	29.2	2.03	40.0	11.8	3.14
20.5	28.5	2.06	40.5	11.6	3.17
21.0	27.8	2.09	41.0	11.3	3.19
21.5	27.1	2.12	41.5	11.1	3.22
22.0	26.5	2.15	42.0	10.8	3.24
22.5	25.9	2.18	42.5	10.6	3.27
23.0	25.3	2.21	43.0	10.4	3.29
23.5	24.7	2.24	43.5	10.2	3.31
24.0	24.1	2.27	44.0	10.0	3.34
24.5	23.5	2.30	44.5	9.8	3.36
25.0	23.0	2.33	45.0	9.6	3.38
25.5	22.5	2.35	45.5	9.4	3.40
26.0	22.0	2.38	46.0	9.2	3.43
26.5	21.5	2.41	46.5	9.0	3.45
27.0	21.0	2.44	47.0	8.8	3.47
27.5	20.5	2.47	47.5	8.7	3.49
28.0	20.0	2.50	48.0	8.5	3.51
28.5	19.6	2.53	48.5	8.3	3.53
29.0	19.1	2.56	49.0	8.1	3.55
29.5	18.7	2.58	49.5	8.0	3.57
30.0	18.3	2.61	50.0	7.8	3.59

SENSOR, HEAT EXCHANGER TEMPERATURE

TAN SENSOR, HEAT EXCHANGER TEMPERATURE
B CONSTANT ····· 3700±3%
STANDARD TEMPERATURE ····· 25.0℃
STANDARD RESISTANCE ····· 10kΩ±3%

T(℃)	R(kΩ)	Voltage(V)	T(℃)	R(kΩ)	Voltage(V)
-40.0	319.4	0.05	0.0	31.2	0.48
-39.0	298.4	0.05	1.0	29.7	0.50
-38.0	279.0	0.06	2.0	28.2	0.52
-37.0	261.0	0.06	3.0	26.9	0.55
-36.0	244.3	0.07	4.0	25.6	0.57
-35.0	228.8	0.07	5.0	24.4	0.60
-34.0	214.4	0.08	6.0	23.3	0.62
-33.0	201.0	0.08	7.0	22.2	0.65
-32.0	188.5	0.09	8.0	21.2	0.67
-31.0	176.9	0.09	9.0	20.2	0.70
-30.0	166.1	0.10	10.0	19.3	0.73
-29.0	156.1	0.10	11.0	18.4	0.76
-28.0	146.7	0.11	12.0	17.6	0.79
-27.0	138.0	0.12	13.0	16.8	0.82
-26.0	129.8	0.12	14.0	16.1	0.85
-25.0	122.2	0.13	15.0	15.4	0.88
-24.0	115.1	0.14	16.0	14.7	0.92
-23.0	108.5	0.15	17.0	14.1	0.95
-22.0	102.3	0.16	18.0	13.5	0.98
-21.0	96.4	0.17	19.0	12.9	1.02
-20.0	91.0	0.17	20.0	12.4	1.05
-19.0	85.9	0.18	21.0	11.8	1.09
-18.0	81.1	0.20	22.0	11.3	1.13
-17.0	76.7	0.21	23.0	10.9	1.16
-16.0	72.5	0.22	24.0	10.4	1.20
-15.0	68.5	0.23	25.0	10.0	1.24
-14.0	64.9	0.24	26.0	9.6	1.28
-13.0	61.4	0.26	27.0	9.2	1.32
-12.0	58.1	0.27	28.0	8.8	1.36
-11.0	55.1	0.28	29.0	8.5	1.40
-10.0	52.2	0.30	30.0	8.1	1.44
-9.0	49.5	0.31	31.0	7.8	1.48
-8.0	46.9	0.33	32.0	7.5	1.52
-7.0	44.5	0.34	33.0	7.2	1.57
-6.0	42.3	0.36	34.0	6.9	1.61
-5.0	40.1	0.38	35.0	6.7	1.65
-4.0	38.1	0.40	36.0	6.4	1.70
-3.0	36.2	0.42	37.0	6.2	1.74
-2.0	34.5	0.44	38.0	6.0	1.78
-1.0	32.8	0.46	39.0	5.7	1.83
0.0	31.2	0.48	40.0	5.5	1.87

THERMISTOR RESISTANCE CHART

TAN SENSOR, HEAT EXCHANGER TEMPERATURE
B CONSTANT ····· 3700±3%
STANDARD TEMPERATURE ····· 25.0℃
STANDARD RESISTANCE ····· 10kΩ±3%

T(℃)	R(kΩ)	Voltage(V)	T(℃)	R(kΩ)	Voltage(V)
40.0	5.5	1.87	80.0	1.4	3.48
41.0	5.3	1.92	81.0	1.4	3.51
42.0	5.1	1.96	82.0	1.4	3.54
43.0	4.9	2.00	83.0	1.3	3.57
44.0	4.8	2.05	84.0	1.3	3.60
45.0	4.6	2.09	85.0	1.2	3.63
46.0	4.4	2.14	86.0	1.2	3.66
47.0	4.3	2.18	87.0	1.2	3.68
48.0	4.1	2.23	88.0	1.1	3.71
49.0	4.0	2.27	89.0	1.1	3.74
50.0	3.8	2.32	90.0	1.1	3.76
51.0	3.7	2.36	91.0	1.1	3.79
52.0	3.6	2.40	92.0	1.0	3.82
53.0	3.4	2.45	93.0	1.0	3.84
54.0	3.3	2.49	94.0	1.0	3.87
55.0	3.2	2.53	95.0	0.9	3.89
56.0	3.1	2.58	96.0	0.9	3.91
57.0	3.0	2.62	97.0	0.9	3.94
58.0	2.9	2.66	98.0	0.9	3.96
59.0	2.8	2.70	99.0	0.8	3.98
60.0	2.7	2.74	100.0	0.8	4.00
61.0	2.6	2.79	101.0	0.8	4.02
62.0	2.5	2.83	102.0	0.8	4.04
63.0	2.5	2.87	103.0	0.8	4.06
64.0	2.4	2.91	104.0	0.7	4.08
65.0	2.3	2.95	105.0	0.7	4.10
66.0	2.2	2.99	106.0	0.7	4.12
67.0	2.2	3.02	107.0	0.7	4.14
68.0	2.1	3.06	108.0	0.7	4.16
69.0	2.0	3.10	109.0	0.7	4.18
70.0	2.0	3.14	110.0	0.6	4.19
71.0	1.9	3.17	111.0	0.6	4.21
72.0	1.8	3.21	112.0	0.6	4.23
73.0	1.8	3.24	113.0	0.6	4.24
74.0	1.7	3.28	114.0	0.6	4.26
75.0	1.7	3.31	115.0	0.6	4.27
76.0	1.6	3.35	116.0	0.5	4.29
77.0	1.6	3.38	117.0	0.5	4.30
78.0	1.5	3.41	118.0	0.5	4.32
79.0	1.5	3.45	119.0	0.5	4.33
80.0	1.4	3.48	120.0	0.5	4.35

SENSOR, DEFROST TEMPERATURE & OUTDOOR TEMPERATURE

TAG SENSOR, DEFROST TEMPERATURE & OUTDOOR TEMPERATURE
B CONSTANT ····· 3700±3%
STANDARD TEMPERATURE ····· 25.0℃
STANDARD RESISTANCE ····· 10kΩ±3%

T(℃)	R(kΩ)	Voltage(V)	T(℃)	R(kΩ)	Voltage(V)
-40.0	319.4	0.29	0.0	31.2	1.95
-39.0	298.4	0.31	1.0	29.7	2.01
-38.0	279.0	0.33	2.0	28.2	2.07
-37.0	261.0	0.36	3.0	26.9	2.13
-36.0	244.3	0.38	4.0	25.6	2.19
-35.0	228.8	0.40	5.0	24.4	2.25
-34.0	214.4	0.43	6.0	23.3	2.31
-33.0	201.0	0.45	7.0	22.2	2.37
-32.0	188.5	0.48	8.0	21.2	2.43
-31.0	176.9	0.51	9.0	20.2	2.49
-30.0	166.1	0.54	10.0	19.3	2.54
-29.0	156.1	0.57	11.0	18.4	2.60
-28.0	146.7	0.60	12.0	17.6	2.66
-27.0	138.0	0.63	13.0	16.8	2.71
-26.0	129.8	0.67	14.0	16.1	2.77
-25.0	122.2	0.70	15.0	15.4	2.83
-24.0	115.1	0.74	16.0	14.7	2.88
-23.0	108.5	0.78	17.0	14.1	2.93
-22.0	102.3	0.82	18.0	13.5	2.99
-21.0	96.4	0.86	19.0	12.9	3.04
-20.0	91.0	0.90	20.0	12.4	3.09
-19.0	85.9	0.94	21.0	11.8	3.14
-18.0	81.1	0.99	22.0	11.3	3.19
-17.0	76.7	1.03	23.0	10.9	3.24
-16.0	72.5	1.08	24.0	10.4	3.29
-15.0	68.5	1.13	25.0	10.0	3.33
-14.0	64.9	1.18	26.0	9.6	3.38
-13.0	61.4	1.23	27.0	9.2	3.42
-12.0	58.1	1.28	28.0	8.8	3.47
-11.0	55.1	1.33	29.0	8.5	3.51
-10.0	52.2	1.39	30.0	8.1	3.55
-9.0	49.5	1.44	31.0	7.8	3.59
-8.0	46.9	1.49	32.0	7.5	3.63
-7.0	44.5	1.55	33.0	7.2	3.67
-6.0	42.3	1.61	34.0	6.9	3.71
-5.0	40.1	1.66	35.0	6.7	3.75
-4.0	38.1	1.72	36.0	6.4	3.78
-3.0	36.2	1.78	37.0	6.2	3.82
-2.0	34.5	1.84	38.0	6.0	3.85
-1.0	32.8	1.90	39.0	5.7	3.89
0.0	31.2	1.95	40.0	5.5	3.92

THERMISTOR RESISTANCE CHART

TAG SENSOR, DEFROST TEMPERATUR & OUTDOOR TEMPERATUREE
B CONSTANT ····· 3700±3%
STANDARD TEMPERATURE ····· 25.0℃
STANDARD RESISTANCE ····· 10kΩ±3%

T(℃)	R(kΩ)	Voltage(V)	T(℃)	R(kΩ)	Voltage(V)
40.0	5.5	3.92	80.0	1.4	4.66
41.0	5.3	3.95	81.0	1.4	4.67
42.0	5.1	3.98	82.0	1.4	4.68
43.0	4.9	4.01	83.0	1.3	4.69
44.0	4.8	4.04	84.0	1.3	4.70
45.0	4.6	4.07	85.0	1.2	4.71
46.0	4.4	4.10	86.0	1.2	4.71
47.0	4.3	4.12	87.0	1.2	4.72
48.0	4.1	4.15	88.0	1.1	4.73
49.0	4.0	4.17	89.0	1.1	4.74
50.0	3.8	4.20	90.0	1.1	4.74
51.0	3.7	4.22	91.0	1.1	4.75
52.0	3.6	4.24	92.0	1.0	4.76
53.0	3.4	4.27	93.0	1.0	4.76
54.0	3.3	4.29	94.0	1.0	4.77
55.0	3.2	4.31	95.0	0.9	4.77
56.0	3.1	4.33	96.0	0.9	4.78
57.0	3.0	4.35	97.0	0.9	4.79
58.0	2.9	4.37	98.0	0.9	4.79
59.0	2.8	4.39	99.0	0.8	4.80
60.0	2.7	4.40	100.0	0.8	4.80
61.0	2.6	4.42	101.0	0.8	4.81
62.0	2.5	4.44	102.0	0.8	4.81
63.0	2.5	4.45	103.0	0.8	4.82
64.0	2.4	4.47	104.0	0.7	4.82
65.0	2.3	4.48	105.0	0.7	4.83
66.0	2.2	4.50	106.0	0.7	4.83
67.0	2.2	4.51	107.0	0.7	4.83
68.0	2.1	4.53	108.0	0.7	4.84
69.0	2.0	4.54	109.0	0.7	4.84
70.0	2.0	4.55	110.0	0.6	4.85
71.0	1.9	4.57	111.0	0.6	4.85
72.0	1.8	4.58	112.0	0.6	4.85
73.0	1.8	4.59	113.0	0.6	4.86
74.0	1.7	4.60	114.0	0.6	4.86
75.0	1.7	4.61	115.0	0.6	4.86
76.0	1.6	4.62	116.0	0.5	4.87
77.0	1.6	4.63	117.0	0.5	4.87
78.0	1.5	4.64	118.0	0.5	4.87
79.0	1.5	4.65	119.0	0.5	4.88
80.0	1.4	4.66	120.0	0.5	4.88

THERMISTOR RESISTANCE CHART

SENSOR, DISCHARGE TEMPERATURE

TAG SENSOR, DISCHARGE TEMPERATURE
B CONSTANT ····· 4250±3%
STANDARD TEMPERATURE ····· 80.0℃
STANDARD RESISTANCE ····· 50kΩ±3%

T(℃)	R(kΩ)	Voltage(V)	T(℃)	R(kΩ)	Voltage(V)
-40.0	33007.9	0.01	0.0	2010.5	0.11
-39.0	30420.9	0.01	1.0	1894.4	0.12
-38.0	28056.1	0.01	2.0	1785.8	0.13
-37.0	25892.9	0.01	3.0	1684.1	0.14
-36.0	23912.6	0.01	4.0	1588.9	0.14
-35.0	22098.6	0.01	5.0	1499.6	0.15
-34.0	20435.7	0.01	6.0	1416.0	0.16
-33.0	18910.2	0.01	7.0	1337.6	0.17
-32.0	17509.9	0.01	8.0	1264.1	0.18
-31.0	16223.6	0.01	9.0	1195.0	0.19
-30.0	15041.2	0.02	10.0	1130.2	0.20
-29.0	13953.6	0.02	11.0	1069.3	0.21
-28.0	12952.7	0.02	12.0	1012.1	0.22
-27.0	12030.8	0.02	13.0	958.4	0.23
-26.0	11181.2	0.02	14.0	907.8	0.25
-25.0	10397.7	0.02	15.0	860.2	0.26
-24.0	9674.8	0.02	16.0	815.4	0.27
-23.0	9007.3	0.03	17.0	773.3	0.29
-22.0	8390.7	0.03	18.0	733.5	0.30
-21.0	7820.6	0.03	19.0	696.1	0.32
-20.0	7293.4	0.03	20.0	660.8	0.33
-19.0	6805.4	0.03	21.0	627.6	0.35
-18.0	6353.6	0.04	22.0	596.2	0.37
-17.0	5934.9	0.04	23.0	566.6	0.38
-16.0	5546.7	0.04	24.0	538.6	0.40
-15.0	5186.7	0.04	25.0	512.2	0.42
-14.0	4852.5	0.05	26.0	487.2	0.44
-13.0	4542.2	0.05	27.0	463.6	0.46
-12.0	4253.9	0.05	28.0	441.4	0.48
-11.0	3985.9	0.06	29.0	420.3	0.50
-10.0	3736.6	0.06	30.0	400.3	0.53
-9.0	3504.7	0.07	31.0	381.4	0.55
-8.0	3288.7	0.07	32.0	363.6	0.57
-7.0	3087.5	0.07	33.0	346.6	0.60
-6.0	2900.0	0.08	34.0	330.6	0.62
-5.0	2725.1	0.08	35.0	315.4	0.65
-4.0	2562.0	0.09	36.0	301.0	0.68
-3.0	2409.7	0.10	37.0	287.3	0.70
-2.0	2267.5	0.10	38.0	274.4	0.73
-1.0	2134.7	0.11	39.0	262.1	0.76
0.0	2010.5	0.11	40.0	250.4	0.79

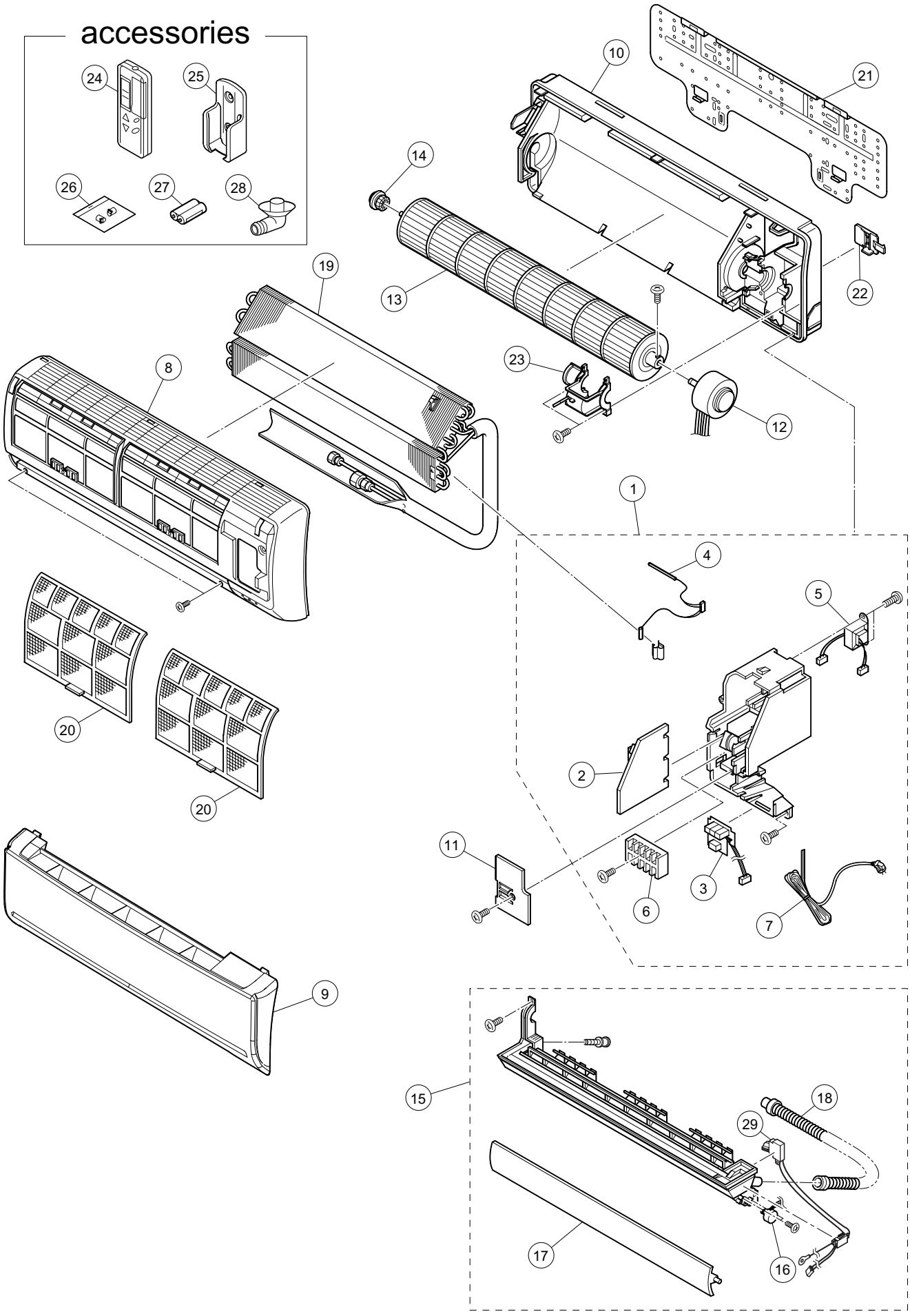
THERMISTOR RESISTANCE CHART

TAG SENSOR, DISCHARGE TEMPERATURE
B CONSTANT ····· 4250±3%
STANDARD TEMPERATUR ····· 80.0℃
STANDARD RESISTANCE ····· 50kΩ±3%

T(℃)	R(kΩ)	Voltage(V)	T(℃)	R(kΩ)	Voltage(V)
40.0	250.4	0.79	80.0	50.0	2.42
41.0	239.3	0.82	81.0	48.3	2.47
42.0	228.8	0.85	82.0	46.6	2.51
43.0	218.8	0.88	83.0	45.0	2.56
44.0	209.3	0.92	84.0	43.4	2.60
45.0	200.2	0.95	85.0	41.9	2.64
46.0	191.6	0.98	86.0	40.5	2.69
47.0	183.5	1.02	87.0	39.1	2.73
48.0	175.7	1.06	88.0	37.8	2.77
49.0	168.3	1.09	89.0	36.5	2.81
50.0	161.2	1.13	90.0	35.3	2.85
51.0	154.5	1.17	91.0	34.2	2.90
52.0	148.1	1.20	92.0	33.0	2.94
53.0	142.0	1.24	93.0	32.0	2.98
54.0	136.2	1.28	94.0	30.9	3.02
55.0	130.7	1.32	95.0	29.9	3.06
56.0	125.4	1.36	96.0	28.9	3.09
57.0	120.4	1.40	97.0	28.0	3.13
58.0	115.6	1.45	98.0	27.1	3.17
59.0	111.0	1.49	99.0	26.3	3.21
60.0	106.6	1.53	100.0	25.4	3.24
61.0	102.4	1.57	101.0	24.6	3.28
62.0	98.4	1.62	102.0	23.9	3.32
63.0	94.6	1.66	103.0	23.1	3.35
64.0	91.0	1.70	104.0	22.4	3.39
65.0	87.5	1.75	105.0	21.7	3.42
66.0	84.2	1.79	106.0	21.1	3.45
67.0	81.0	1.84	107.0	20.4	3.49
68.0	77.9	1.88	108.0	19.8	3.52
69.0	75.0	1.93	109.0	19.2	3.55
70.0	72.2	1.97	110.0	18.6	3.58
71.0	69.5	2.02	111.0	18.1	3.61
72.0	67.0	2.06	112.0	17.5	3.64
73.0	64.5	2.11	113.0	17.0	3.67
74.0	62.2	2.15	114.0	16.5	3.70
75.0	59.9	2.20	115.0	16.0	3.73
76.0	57.8	2.24	116.0	15.6	3.76
77.0	55.7	2.29	117.0	15.1	3.78
78.0	53.7	2.33	118.0	14.7	3.81
79.0	51.8	2.38	119.0	14.3	3.84
80.0	50.0	2.42	120.0	13.9	3.86

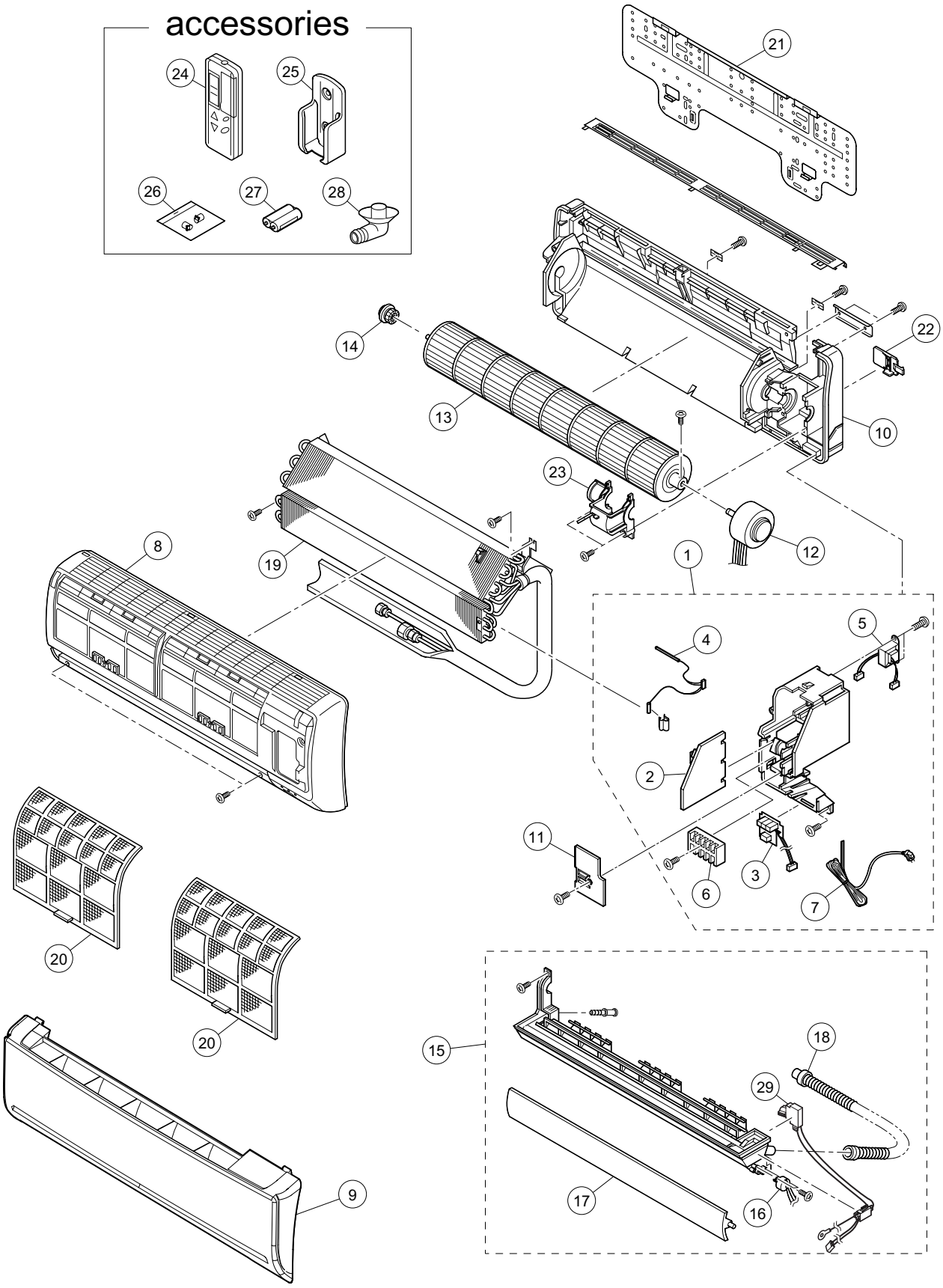
EXPLODED VIEW (INDOOR UNIT)

TAN-A28IV



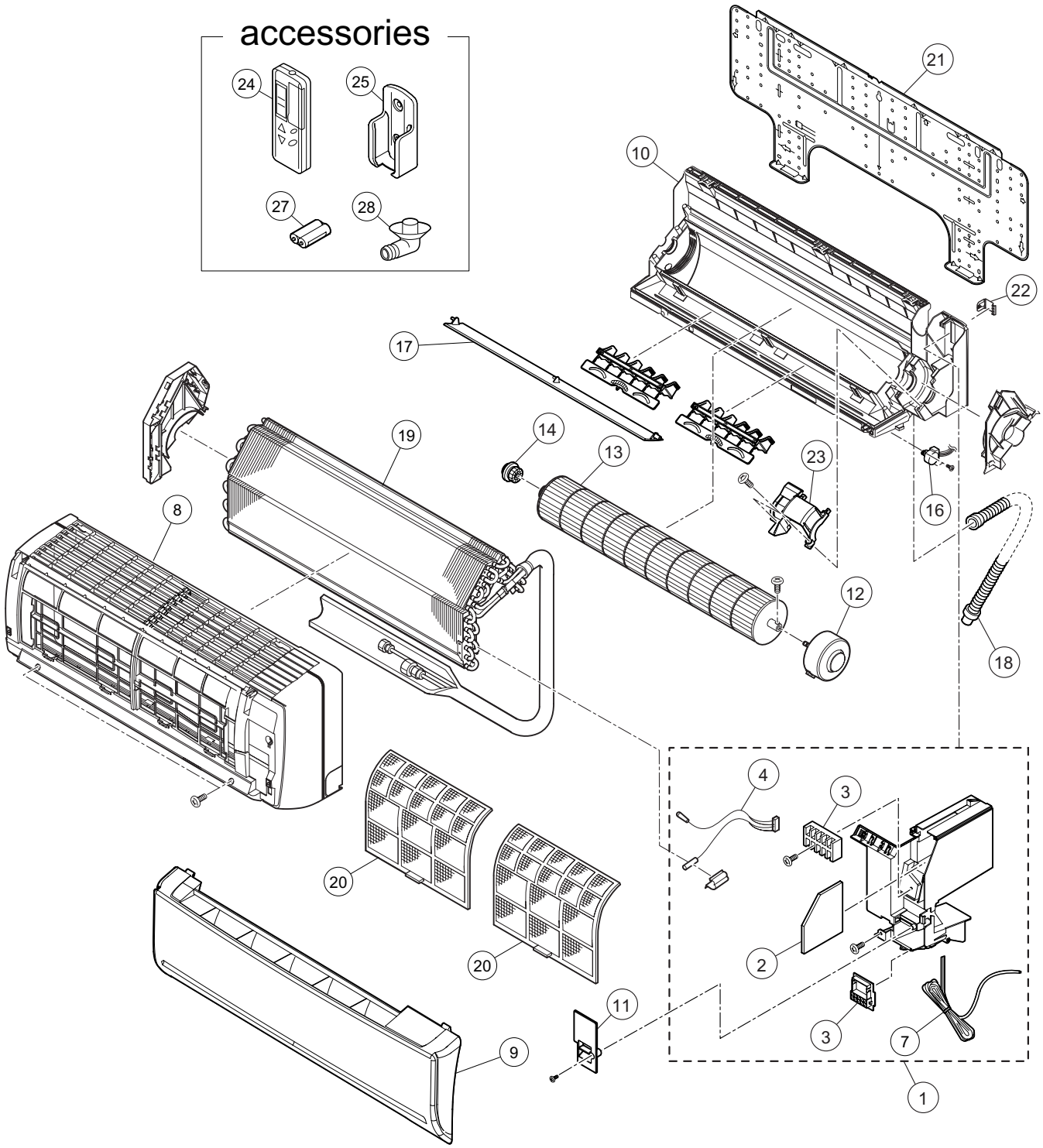
EXPLODED VIEW (INDOOR UNIT)

TAN-A32IV



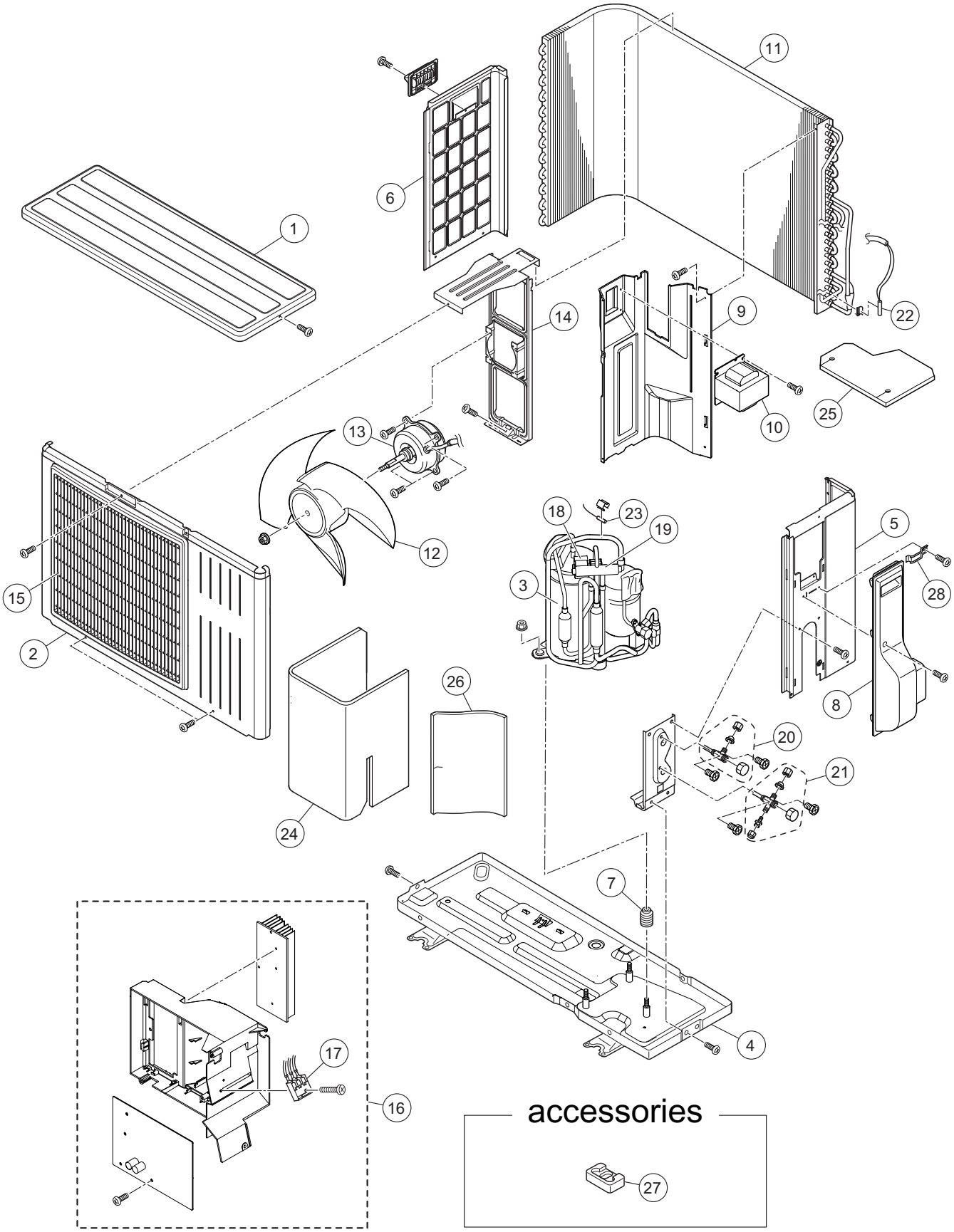
EXPLODED VIEW (INDOOR UNIT)

TAN-A53IV



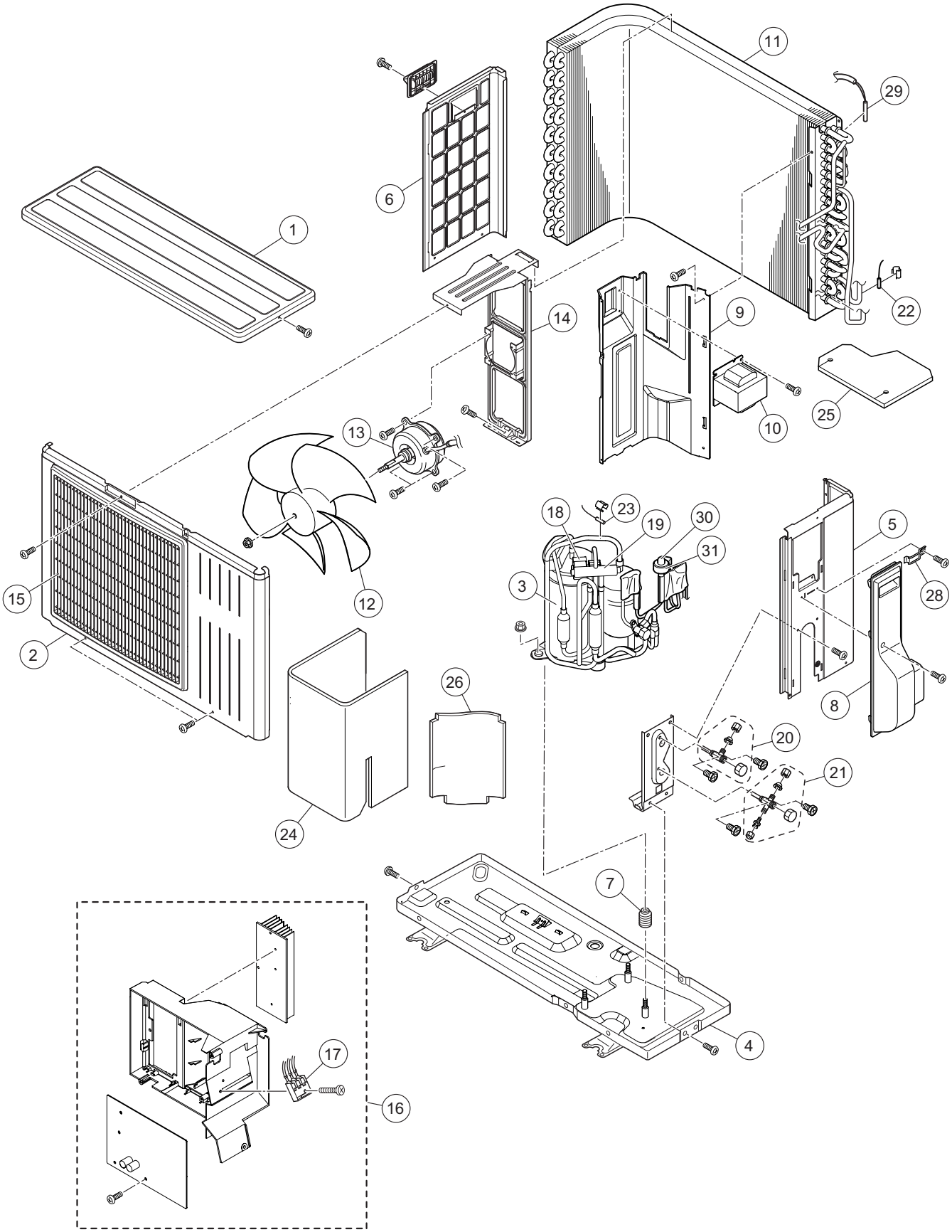
EXPLODED VIEW (OUTDOOR UNIT)

TAG-A28IV
TAG-A32IV



EXPLODED VIEW (OUTDOOR UNIT)

TAG-A53IV



NO.	PARTS NAME	TAN-A28IV	TAN-A32IV	TAN-A53IV
1	CONTROLLER ASSY.	2049029[0]	2050051[0]	2049049[1]
2	PCB (MAIN)	3007992[0]	3007993[0]	3007994[0]
3	PCB (RECEIVER & DISPLAY)	3005551[0]	←	3005629[0]
4	SENSOR (TEMP,ROOM & HEAT EXCHAGER)	3005507[0]	←	←
5	TRANSFORMER	3007092[0]	←	–
6	TERMINAL BLOCK	5162084[0]	←	←
7	CORD,POWER SUPPLY	3002155[0]	←	5196643[0]
8	FRONT PANEL ASSY.	2008820[0]	←	2041196[1]
9	INLET GRILLE	2046982[1]	←	2050192[0]
10	REAR CASE ASSY.	2046576[0]	2046577[0]	2041203[5]
11	WIRING LID	2004449[0]	←	2041232[0]
12	MOTOR,FAN	3006370[0]	3006371[0]	5350163[2]
13	TANGENTIAL FAN	5081009[0]	←	3005623[0]
14	BEARING ASSY.	2004833[0]	←	←
15	DRAIN PAN ASSY.	2046578[0]	←	–
16	MOTOR,LOUVER	3006139[0]	←	3005753[0]
17	LOUVER (UP-DOWN)	2004445[0]	←	2041212[0]
18	DRAIN HOSE	5162000[0]	←	←
19	EVAPORATOR ASSY.	2046581[1]	2046584[1]	2041217[4]
20	AIR FILTER	2049028[0]	2049037[0]	2049966[0]
21	MOUNTING PLATE	2017395[0]	2004830[0]	2014715[3]
22	PIPING SUPPORT	2004441[0]	←	2041209[0]
23	MOTOR SUPPORT	2004442[0]	2004505[0]	2041216[0]
24	REMOTE CONTROLLER ASSY.	2043184[0]	←	2003147[1]
25	REMOTE CONTROLLER HOLDER	2013955[0]	←	←
26	SCREW CAP	2004842[0]	←	–
27	BATTERY	3005775[0]	←	←
28	DRAIN ELBOW	2014808[0]	←	←
29	IONIZER	3005549[0]	←	–

The digit in [ ] may vary depending on the version for the improvement.

NO.	PARTS NAME	TAG-A28IV	TAG-A32IV	TAG-A53IV
1	TOP PANEL ASSY.	2044497[0]	←	←
2	FRONT PANEL	2041361[2]	←	←
3	COMPRESSOR	3005642[0]	3006168[0]	3008337[0]
4	BOTTOM PANEL ASSY.	2041521[2]	2043715[3]	2049057[0]
5	RIGHT SIDE PANE LASSY.	2041519[2]	←	←
6	LEFT SIDE PANE LASSY.	2041520[2]	←	←
7	VIBRATION PROOF RUBBER (comp.)	3005645[0]	3006170[0]	3000205[0]
8	VALVE COVER	2013023[0]	←	←
9	BAFFLE PANEL ASSY.	2044754[1]	←	2049060[0]
10	REACTOR	3005556[0]	←	3008336[0]
11	CONDENSER ASSY.	2041534[0]	←	2049067[0]
12	PROPELLER FAN	3005637[0]	←	5263034[0]
13	MOTOR	3006660[0]	←	3008001[0]
14	BRACKET, MOTOR	2041527[2]	←	2049063[0]
15	OUTLET GRILLE	2041498[0]	←	←
16	CONTROLLER ASSY.	2049033[1]	2049041[1]	2049064[1]
17	TERMINAL BLOCK	5162082[0]	←	←
18	COIL,4-WAY VALVE	5120232[1]	←	←
19	4-WAY VALVE	5120241[1]	←	5120242[1]
20	VALVE,SERVICE (1/4)	5153562[1]	←	5153573[1]
21	VALVE,SERVICE (3/8)	3005635[1]	←	←
22	SENSOR (TEMP.DEFROST)	5110096[0]	←	←
23	SENSOR (TEMP.DISCHARGE)	5110087[0]	←	←
24	SOUND PROOFMATERIAL1	2041545[1]	2043772[0]	2049086[0]
25	SOUND PROOFMATERIAL2	2041546[1]	2043773[1]	2049087[0]
26	SOUND PROOFMATERIAL3	–	2043909[1]	2049088[0]
27	VIBRATION PROOF RUBBER (UNIT)	2003831[0]	←	–
28	FIXTURE,CORD	2003819[0]	←	←
29	SENSOR (TEMP.OUTDOOR)	–	–	3006768[0]
30	EXPANSION VALVE	–	–	5191450[0]
31	COIL, EXPANSION VALVE	–	–	5191451[0]

The digit in [ ] may vary depending on the version for the improvement.

RA-53-[1]

ISSUED	MAR.2007

Printed in Japan