

TECHNICAL & SERVICE MANUAL

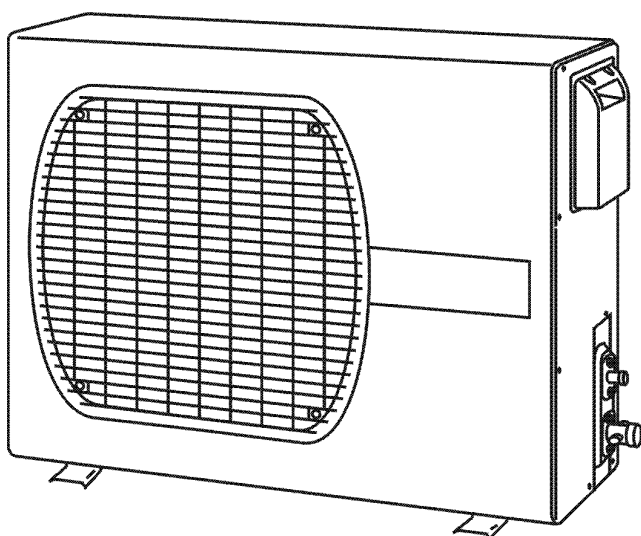
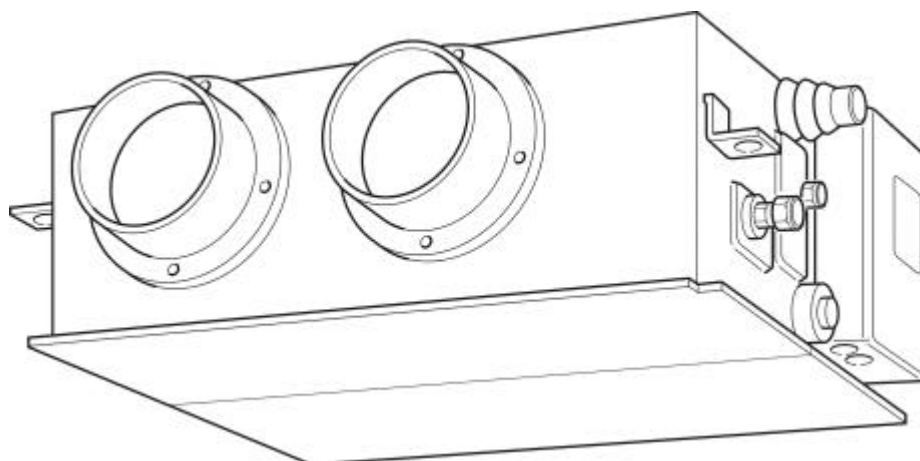
Euro-Line®

ADR518CW — AE518SC
 — AE518SC3 / AER518SCL3

ADR518HW — AE518SH
 — AE518SH3 / AER518SH3

SPLIT SYSTEM AIR CONDITIONER

INDOOR UNIT



OUTDOOR UNIT

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1) UNIT SPECIFICATIONS

UNIT MODEL	INDOOR UNIT		ADR518CW	
	OUTDOOR UNIT		AE518SC	
Power source			220 / 230 / 240V - 1 - 50 Hz	
PERFORMANCES			COOLING	
Capacity	BTU/h		16,900	
	W (Kcal/h)		4.950 (4,250)	
Air circulation (high - med - low)		m³/h	780	
External static pressure (high speed) mm w.g. (Pa)			5 (49) at shipment - 10 (98) using the Booster cable	
Moisture removal (high speed)		l/h	2,8	
ELECTRICAL RATINGS				
Voltage rating		V	230	
Available voltage range		V	198 ÷ 264	
Running ampere		A	9.5	
Power input		W	2,06	
Power factor		%	94	
Compressor locked rotor amperes		A	46	
C.O.P.		W/W	2.4	
FEATURES				
Controls			Microprocessor	
Control unit			Remote control	
Temperature control			I.C. thermostat	
Timer			ON/OFF 12 hours	
Fan speed indoor / outdoor			3 + auto / 2 auto	
Air filter			Washable, easy access (accessory)	
Compressor			Rotary (hermetic)	
Refrigerant / ref. control / amount charged at ship g			R22 / capillary tube / 1.710 g	
Operation sound	Indoor Hi / Me / Lo (1 m) dB-A		42 / 37 / 32	
	Outdoor Hi / Lo (3 m) dB-A		51 / 44	
Max. tubing length		m	(with factory R22 charge)	10
Max. allowable tubing length		m	(with R22 addition)	..20
Required amount of additional refrigerant		g/m	25	
Limit of elevation difference between the two units		m	7	
Refrigerant tube diameter	Narrow tube	mm (in.)	6.35 (1/4")	
	Wide tube	mm (in.)	12.7 (1/2")	
Accessory			Booster cable	
DIMENSIONS AND WEIGTH			INDOOR UNIT	OUTDOOR UNIT
Higth		mm	316	630
Width		mm	750	830
Depth		mm	665	305
Net weighth		kg	42	52
Shipping volume		m³	0,33	0,3
Shipping weight (approx.)		kg	44	57

Data subject to change without notice.

NOTA. Rating conditions:

Cooling: Outside air temp.: 35°C DB, indoor unit entering air temp.: 27°C DB / 19°C WB

UNIT MODEL	INDOOR UNIT		ADR518CW	
	OUTDOOR UNIT		AE518SC3	
Power source			400V - 3N - 50 Hz (4 wires)	
PERFORMANCES			COOLING	
Capacity	BTU/h		16,900	
	W (Kcal/h)		4.950 (4250)	
Air circulation (high - med - low)		m³/h	780	
External static pressure (high speed) mm w.g. (Pa)			5 (49) at shipment - 10 (98) using the Booster cable	
Moisture removal (high speed)		l/h	2,8	
ELECTRICAL RATINGS				
Voltage rating		V	400	
Available voltage range		V	342 ÷ 440	
Running ampere		A	4.0	
Power input		W	1.96	
Power factor		%	84	
Compressor locked rotor amperes		A	21.5	
C.O.P.		W/W	2.5	
FEATURES				
Controls			Microprocessor	
Control unit			Remote control	
Temperature control			I.C. thermostat	
Timer			ON/OFF 12 hours	
Fan speed indoor / outdoor			3 + auto / 2 auto	
Air filter			Washable, easy access (accessory)	
Compressor			Rotary (hermetic)	
Refrigerant / ref. control / amount charged at ship g			R22 / capillary tube / 1.405 g	
Operation sound	Indoor Hi / Me / Lo (1 m) dB-A		42 / 37 / 32	
	Outdoor Hi / Lo (3 m) dB-A		51 / 44	
Max. tubing length		m	(with factory R22 charge)	10
Max. allowable tubing length		m	(with R22 addition)	20
Required amount of additional refrigerant		g/m	25	
Limit of elevation difference between the two units		m	7	
Refrigerant tube diameter	Narrow tube mm (in.)		6,35 (1/4")	
	Wide tube mm (in.)		12,7 (1/2")	
Accessory			Booster cable	
DIMENSIONS AND WEIGHTH			INDOOR UNIT	OUTDOOR UNIT
Higth		mm	316	630
Width		mm	750	830
Depth		mm	665	305
Net weighth		kg	42	52
Shipping volume		m³	0,33	0,3
Shipping weight (approx.)		kg	44	57

Data subject to change without notice.

NOTA. Rating conditions:

Cooling: Outside air temp.: 35°C DB, indoor unit entering air temp.: 27°C DB / 19°C WB

UNIT MODEL	INDOOR UNIT		ADR518CW	
	OUTDOOR UNIT		AER518SCL3	
Power source			400V - 3N - 50 Hz (4 wires)	
PERFORMANCES			COOLING	
Capacity	BTU/h		17.400	
	W (Kcal/h)		5900 (5070)	
Air circulation (high - med - low)		m³/h	780	
External static pressure (high speed) mm w.g. (Pa)			5 (49 at shipment - 10 (98) using the Booster cable	
Moisture removal (high speed)		l/h	2.8	
ELECTRICAL RATINGS				
Voltage rating		V	400	
Available voltage range		V	342 : 440	
Running ampere		A	3.6	
Power input		W	2.000	
Power factor		%	80	
Compressor locked rotor amperes		A	21.5	
C.O.P.		W/W	2,3	
FEATURES				
Controls			Microprocessor	
Control unit			Remote control	
Temperature control			I.C. thermostat	
Timer			ON/OFF 12 hours	
Fan speed indoor / outdoor			3 + auto / 2 auto	
Air filter			Washable, easy access (accessory)	
Compressor			Rotary (hermetic)	
Refrigerant / ref. control / amount charged at ship g			R407C / capillary tube / 1.710 g	
Operation sound	Indoor Hi / Me / Lo (1 m) dB-A		42 / 37 / 32	
	Outdoor Hi / Lo (3 m) dB-A		51/ 44	
Max. tubing length		m	(with factory R407C charge)	10
Max. allowable tubing length		m	(with R407C addition)	30
Required amount of additional refrigerant		g/m	25	
Limit of elevation difference between the two units		m	7	
Refrigerant tube diameter	Narrow tube mm (in.)		6,35 (1/4")	
	Wide tube mm (in.)		12.7(1/2")	
Accessory			Booster cable	
DIMENSIONS AND WEIGTH			INDOOR UNIT	OUTDOOR UNIT
Higth		mm	316	630
Width		mm	750	830
Depth		mm	665	305
Net weighth		kg	42	52
Shipping volume		m³	0.33	0.3
Shipping weight (approx.)		kg	44	57

Data subject to change without notice.

NOTA. Rating conditions:

Cooling: Outside air temp.: 35°C DB, indoor unit entering air temp.: 27°C DB / 19°C WB

UNIT MODEL	INDOOR UNIT		ADR518HW	
	OUTDOOR UNIT		AE518SH	
Power source			220 / 230 / 240V - 1 - 50 Hz	
PERFORMANCES			COOLING	HEATING
Capacity	BTU/h		16.900	20500
	W (Kcal/h)		4.950 (4.257)	6000(5160)
Air circulation (high - med - low)		m³/h	750	
External static pressure (high speed) mm w.g. (Pa)			5 (49) at shipment - 10 (98) using the Booster cable	
Moisture removal (high speed)		l/h	2.8	---
ELECTRICAL RATINGS				
Voltage rating		V	230	
Available voltage range		V	198 ÷ 264	
Running ampere		A	9.8	10.3
Power input		W	2.100	2.150
Power factor		%	93	90
Compressor locked rotor amperes		A	57	
C.O.P.		W/W	2.35	2.8
FEATURES				
Controls			Microprocessor	
Control unit			Remote control	
Temperature control			I.C. thermostat	
Timer			ON/OFF 12 hours	
Fan speed indoor / outdoor			3 + auto / 2 auto	
Air filter			Washable, easy access (accessory)	
Compressor			Rotary (hermetic)	
Refrigerant / ref. control / amount charged at ship g			R22 / capillary tube / 1.87 g	
Operation sound	Indoor Hi / Me / Lo (1 m) dB-A		42 / 37 / 32	
	Outdoor Hi / Lo (3 m) dB-A		51 / 44	
Max. tubing length		m	(standard refrigerant charge)	10
Max. allowable tubing length		m	(with R22 addition)	30
Required amount of additional refrigerant		g/m	25	
Limit of elevation difference between the two units		m	7	
Refrigerant tube diameter	Narrow tube	mm (in.)	6,35 (1/4")	
	Wide tube	mm (in.)	12.7 (1/2")	
Accessory			Booster cable	
DIMENSIONS AND WEIGHTH			INDOOR UNIT	OUTDOOR UNIT
Higth		mm	316	630
Width		mm	750	830
Depth		mm	665	305
Net weighth		kg	42	52
Shipping volume		m³	0,33	0.3
Shipping weight (approx.)		kg	44	57

Data subject to change without notice.

NOTA. Rating conditions:

Cooling: Outside air temp.: 35°C DB, indoor unit entering air temp.: 27°C DB / 19°C WB

UNIT MODEL	INDOOR UNIT		ADR518HW	
	OUTDOOR UNIT		AE518SH3	
Power source			400V - 3N - 50 Hz (4 wires)	
PERFORMANCES			COOLING	HEATING
Capacity	BTU/h		16.100	19.800
	W (Kcal/h)		4.700 (4.042)	5.800(6.744)
Air circulation (high - med - low)		m³/h	750	
External static pressure (high speed) mm w.g. (Pa)			5 (49) at shipment - 10 (98) using the Booster cable	
Moisture removal (high speed)		l/h	2.8	---
ELECTRICAL RATINGS				
Voltage rating		V	400	
Available voltage range		V	342 ÷ 440	
Running ampere		A	3.8	4.0
Power input		W	2.000	2.100
Power factor		%	93	90
Compressor locked rotor amperes		A	22	
C.O.P.		W/W	2.35	2.76
FEATURES				
Controls			Microprocessor	
Control unit			Remote control	
Temperature control			I.C. thermostat	
Timer			ON/OFF 12 hours	
Fan speed indoor / outdoor			3 + auto / 2 auto	
Air filter			Washable, easy access (accessory)	
Compressor			Rotary (hermetic)	
Refrigerant / ref. control / amount charged at ship g			R22 / capillary tube / 2.450g	
Operation sound	Indoor Hi / Me / Lo (1 m) dB-A		42 / 37 / 32	
	Outdoor Hi / Lo (3 m) dB-A		51 / 44	
Max. tubing length		m	(standard refrigerant charge)	10
Max. allowable tubing length		m	(with R22 addition)	30
Required amount of additional refrigerant		g/m	25	
Limit of elevation difference between the two units		m	7	
Refrigerant tube diameter	Narrow tube	mm (in.)	6,35 (1/4")	
	Wide tube	mm (in.)	12.7 (1/2")	
Accessory			Booster cable	
DIMENSIONS AND WEIGHTH			INDOOR UNIT	OUTDOOR UNIT
Higth		mm	316	630
Width		mm	750	830
Depth		mm	665	305
Net weigth		kg	42	52
Shipping volume		m³	0,33	0.3
Shipping weight (approx.)		kg	44	57

Data subject to change without notice.

NOTA. Rating conditions:

Cooling: Outside air temp.: 35°C DB, indoor unit entering air temp.: 27°C DB / 19°C WB

UNIT MODEL	INDOOR UNIT		ADR518HW	
	OUTDOOR UNIT		AER518SH3	
Power source			400V - 3N - 50 Hz (4 wires)	
PERFORMANCES			COOLING	HEATING
Capacity	BTU/h		16.400	21.500
	W (Kcal/h)		4.800 (4.128)	6300(5418)
Air circulation (high - med - low)		m³/h	750	
External static pressure (high speed) mm w.g. (Pa)			5 (49) at shipment - 10 (98) using the Booster cable	
Moisture removal (high speed)		l/h	2.8	---
ELECTRICAL RATINGS				
Voltage rating		V	400	
Available voltage range		V	342 ÷ 440	
Running ampere		A	4.0	4.2
Power input		W	2.150	2.250
Power factor		%	93	90
Compressor locked rotor amperes		A	22	
C.O.P.		W/W	2.23	2.8
FEATURES				
Controls			Microprocessor	
Control unit			Remote control	
Temperature control			I.C. thermostat	
Timer			ON/OFF 12 hours	
Fan speed indoor / outdoor			3 + auto / 2 auto	
Air filter			Washable, easy access (accessory)	
Compressor			Rotary (hermetic)	
Refrigerant / ref. control / amount charged at ship g			R407C / capillary tube / 1.600 g	
Operation sound	Indoor Hi / Me / Lo (1 m) dB-A		42 / 37 / 32	
	Outdoor Hi / Lo (3 m) dB-A		51 / 44	
Max. tubing length		m	(standard refrigerant charge)	10
Max. allowable tubing length		m	(with R407C addition)	30
Required amount of additional refrigerant		g/m	25	
Limit of elevation difference between the two units		m	7	
Refrigerant tube diameter	Narrow tube	mm (in.)	6,35 (1/4")	
	Wide tube	mm (in.)	12.7 (1/2")	
Accessory			Booster cable	
DIMENSIONS AND WEIGTH			INDOOR UNIT	OUTDOOR UNIT
Higth		mm	316	630
Width		mm	750	830
Depth		mm	665	305
Net weighth		kg	42	52
Shipping volume		m³	0,33	0.3
Shipping weight (approx.)		kg	44	57

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NOTA. Rating conditions:

Cooling: Outside air temp.: 35°C DB, indoor unit entering air temp.: 27°C DB / 19°C WB

INDOOR UNIT

UNIT MODEL		ADR518CW / ADR518HW	
Power source		220 / 230 / 240V -1 - 50 Hz	
REMOTE CONTROL UNIT		RCS-U251G	
CONTROLLER P.C.B.		POW-U186GH	
Controls		Microprocessor	
Control circuit fuse		250V - 3A	
FAN		Centrifugal	
Number ... dia. / length	mm	2 ... ø 200 / L 230	
FAN MOTOR			
Model ... Number		K48410M01526 ... 1	
Power source	V	220 / 230 / 240-1-50 Hz	
No. di poli ... giri/min (230V-max)		4 ... 1040	
Nominal output	W	70	
Coil resistance (Ambient temp. 20°C)	Ω	WHT - BRN : 81,1 ORG - VLT : 36,8 YEL - ORG : 51,4 BLK - YEL : 20,6 WHT - VLT : 12,7 VLT - PNK : 44,2	
SAFETY DEVICES		Internal type	
Operating temp.	Open °C	130 ± 8	
	Close °C	79 ± 15	
Run capacitor	μF	5	
	VAC	440	
DRAIN PUMP			
Model		PC	
Rated	Voltage	AC 230V - 50 Hz	
	Input	14.7 W	
Total head capacity		0.4 m / 0.6 l/m	
HEAT EXCHANGER			
Coil		Aluminum plate fin / Copper tube	
Rows		3	
Fin pitch	mm	1,8	
Fase area	m²	0,125	
EXTERNAL FINISH		Insulated galvanized metal sheet	

Outdoor Unit

AE518SC3

Controller PCB		Part No.			POW-C181BL			
		Control circuit fuse			250V – 5A			
Compressor	Type				Rotary (Hermetic)			
	Compressor model				C-2R173H8V- 80817C88D			
	Source				380 – 400 V – 3N ~ 50 Hz			
	Nominal output W				1,700			
	Compressor oil ... Amount cc				SUNISO 4GSD-T ... 800			
	Coil resistance (Ambient temp. 25°C) Ω				C – R : 6.369 C – S : 6.073 R – S : 6.217			
	Safety devices	Type			Internal protector		External protector	
		Overload relay			—		HOE-10TB TH-5A	
		Operating temp.	Open	°C	125 ± 5		—	
			Close	°C	Automatic reclosing		—	
		Operating amp.(Ambient temp. 25°C)			—		5A	
	Run capacitor				μF		—	
					VAC		—	
	Crank case heater				240V 30W			
Fan & Fan Motor	Type				Propeller			
	Q`ty ... Dia. mm				1 ... ø400			
	Fan motor model ... Q`ty				SMEN 19 TFB6055 ... 1			
	Source				220 – 230 V ~ 50 Hz			
	No. of poles ... rpm (220 V, High)				6 ... 910			
	Nominal output W				43			
	Coil resistance (Ambient temp. 20°C) Ω				WHT – BRN : 77.7 WHT - YEL : 366 WHT – PNK : 211			
	Safety devices	Type			Internal type			
		Operating temp.	Open	°C	130 ± 5			
			Close		Automatic reclosing			
	Run capacitor				μF		2.0	
					VAC		400	
Heat Exch. Coil	Coil				Aluminum plate fin / Copper tube			
	Rows				2			
	Fin pitch mm				1.8			
	Face area m²				0.508			
External Finish					Acrylic baked-on enamel finish			

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Outdoor Unit **AE518SC**

Controller PCB					—		
Compressor	Type				Rotary (Hermetic)		
	Compressor model				PH36VTRT		
	Nominal output			W	1,600		
	Compressor oil ... Amount			cc	DIAMOND... 900		
	Coil resistance (Ambient temp. 20°C)			Ω	C – R : 1.06 C – S : 2.03		
	Safety devices	Type			Internal protector (OLR)		
		Overload relay			—		
		Operating temp.	Open	°C	Automatic opening 155 ± 5		
			Close	°C	Automatic reclosing 90 ± 10		
	Operating amp. (Ambient temp. 25 C)			Trip in 3 to 10 sec at 54A			
	Run capacitor		μF		55.0		
			VAC		450		
	Crank case heater				—		
Fan & Fan Motor	Type				Propeller		
	Number ... Dia.			mm	1 ... ø 400		
	Fan motor model ... Number				Smen 19TFB6055 ... 1		
	No. of poles ... rpm (230 V, High)				6 ... 910		
	Nominal output			W	43		
	Coil resistance (Ambient temp. 20°C)			Ω	WHT – BRN : 77.7 ± 7% WHT – YEL : 366.0 ± 7% WHT – PNK : 211.0 ± 7%		
	Safety devices	Type			Thermal protector		
		Operating temp.	Open	°C	130 ± 5		
			Close		Automatic reclosing		
	Run capacitor		μF		2.0		
			VAC		440		
	Heat Exch. Coil	Coil				Aluminum plate fin / Copper tube	
		Rows				2	
Fin pitch			mm	1.8			
Face area			m²	0.508			
External Finish					Acrylic baked-on enamel finish		

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Outdoor Unit

AER518SCL3

Controller PCB		Part No.				POW-C181BL			
		Control circuit fuse				250V – 5A			
Compressor	Type					Rotary (Hermetic)			
	Compressor model					C-2RN173H8W 80807088			
	Source					380 – 400 V – 3N ~ 50 Hz			
	Nominal output W					1,700			
	Compressor oil ... Amount cc					FV68S ... 800			
	Coil resistance (Ambient temp. 25°C) Ω					C – R : 6.369 C – S : 6.073 R – S : 6.217			
	Safety devices	Type				Internal protector		External protector	
		Overload relay				—		HOE-10TB TH-5A	
		Operating temp.		Open	°C	Automatic opening		—	
				Close	°C	Automatic reclosing		—	
		Operating amp.(Ambient temp. 25°C)				—		5A	
	Run capacitor			μF		—			
				VAC		—			
	Crank case heater					240V 30W			
Fan & Fan Motor	Type					Propeller			
	Q`ty ... Dia. mm					1 ... ø400			
	Fan motor model ... Q`ty					SMEN 19 TFB6047 ... 1			
	Source					220 – 230 V ~ 50 Hz			
	No. of poles ... rpm (220 V, High)					6 ... 910			
	Nominal output W					43			
	Coil resistance (Ambient temp. 20°C) Ω					WHT – BRN : 83.4 WHT – PNK : 218.7			
	Safety devices	Type				Internal type			
		Operating temp.		Open	°C	130 ± 5			
				Close		Automatic reclosing			
	Run capacitor			μF		2.0			
VAC				440					
Heat Exch. Coil	Coil					Aluminum plate fin / Copper tube			
	Rows					2			
	Fin pitch mm					1.8			
	Face area m²					0.508			
External Finish						Acrylic baked-on enamel finish			

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Outdoor Unit **AE518SH**

Controller PCB					POW–C186GH				
Compressor	Type				Rotary (Hermetic)				
	Compressor model				SCI PH36VTRT				
	Nominal output				W	1600			
	Compressor oil ... Amount				cc	DIAMOND...900			
	Coil resistance (Ambient temp. 20°C)				Ω	C – R : 1.06 C – S : 2.03			
	Safety devices	Type			Internal protector		External (OLR)		
		Overload relay			MRA-8967-9200				
		Operating temp.		Open	°C	160 ± 5			
				Close	°C	84± 11			
	Operating amp.(Ambient temp. 25°C)				Trip in 6 to 16 sec. at 55 A				
	Run capacitor				μF	55.0			
					VAC	450			
	Crank case heater				240V 30W				
Fan & Fan Motor	Type				Propeller				
	Number ... Dia.				mm	1 ... ø 400			
	Fan motor model ... Number				Smen 19TFB6055 ... 1				
	No. of poles ... rpm (230 V, High)				6 ... 900				
	Nominal output				W	50			
	Coil resistance (Ambient temp. 20°C)				Ω	WHT – BRN : 77.7 ± 7% WHT – YEL : 366.0 ± 7% WHT – PNK : 211 ± 7%			
	Safety devices	Type			Internal protector				
		Operating temp.		Open	°C	130 ±8			
				Close	Automatic reclosing				
	Run capacitor				μF	2.0			
					VAC	440			
Heat Exch. Coil	Coil				Aluminum plate fin / Copper tube				
	Rows				2				
	Fin pitch				mm	1.6			
	Face area				m²	0.453			
External Finish					Acrylic baked-on enamel finish				

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Power source			380 - 400 V - 3N ~ 50 Hz		
Control circuit			220 - 240 V ~ 50 Hz		
CONTROLLER PCB			POW-C186GH		
COMPRESSOR					
Type			Rotary (Hermetic)		
Compressor model			C-R173H8M-806-389-88		
Source			380 - 400 V - 3N ~ 50 Hz		
Nominal output		W	1700		
Compressor oil ... Amount		cc	SUNISO4CS ... 800		
Coil resistance (Ambient temp. 25°C)	C - R	Ω	5,62		
	C - S	Ω	5,51		
	R - S	Ω	5,62		
Safety devices:	Type		Internal protector	External protector	
	Overload relay		//	HOE-10TB TH-7A	
	Operating temp.	Open °C	120 ± 5	//	
		Close °C	Automatic reclosing	//	
Operating amp. (Ambient temp. 25°C)			//	5 A	
Run capacitor		μF	//		
		VAC	//		
Crank case heater			240 V - 30 W		
FAN AND FAN MOTOR					
Type			Propeller		
Number ... Dia.		mm	1 ... Ø400		
Fan motor model ... Number			Smen 19TFB6055 ... 1		
Source			220 - 240 V ~ 50 Hz		
No. of poles ... rpm (220 V)			6 ... 900		
Nominal output		W	50		
Coil resistance (Ambient temp. 20°C)	WHT - BRN	Ω	77,7		
	WHT - YEL	Ω	366,0		
	WHT - PNK	Ω	211,0		
Safety devices:	Type		Internal protector		
	Operating temp.	Open °C	130 ± 8		
		Close	Automatic reclosing		
Run capacitor		μF	2		
		VAC	440		
HEAT EXCH. COIL					
Coil			Aluminum plate fin / Copper tube		
Rows			2		
Fin pitch		mm	1,6		
Face area		m²	0,453		
EXTERNAL FINISH			Acrylic baked-on enamel finish		

Data subject to change without notice.

Power source			380 - 400 V - 3N ~ 50 Hz		
Control circuit			220 - 240 V ~ 50 Hz		
CONTROLLER PCB			POW-C186GH		
COMPRESSOR					
Type			Rotary (Hermetic)		
Compressor model			C-2RN173H8A 80242088		
Source			380 - 400 V - 3N ~ 50 Hz		
Nominal output		W	1700		
Compressor oil ... Amount		cc	FV68S ... 800		
Coil resistance (Ambient temp. 25°C)	C - R	Ω	5,62		
	C - S	Ω	5,51		
	R - S	Ω	5,62		
Safety devices:	Type		Internal protector	External protector	
	Overload relay		//	HOE-10TB TH-7A	
	Operating temp.	Open	°C	120 ± 5	//
		Close	°C	Automatic reclosing	//
Operating amp. (Ambient temp. 25°C)			//	5 A	
Run capacitor		μF	//		
		VAC	//		
Crank case heater			240 V - 30 W		
FAN AND FAN MOTOR					
Type			Propeller		
Number ... Dia.		mm	1 ... Ø400		
Fan motor model ... Number			Smen 19TFB6055 ... 1		
Source			220 - 240 V ~ 50 Hz		
No. of poles ... rpm (220 V)			6 ... 900		
Nominal output		W	50		
Coil resistance (Ambient temp. 20°C)	WHT - BRN	Ω	77,7		
	WHT - YEL	Ω	366,0		
	WHT - PNK	Ω	211,0		
Safety devices:	Type		Internal protector		
	Operating temp.	Open	°C	130 ± 8	
		Close		Automatic reclosing	
Run capacitor		μF	2		
		VAC	440		
HEAT EXCH. COIL					
Coil			Aluminum plate fin / Copper tube		
Rows			2		
Fin pitch		mm	1,6		
Face area		m ²	0,453		
EXTERNAL FINISH			Acrylic baked-on enamel finish		

Data subject to change without notice.

Outdoor Unit **AE518SC**

Power Relay	G7L-2A-TUB
Coil rating	AC 200–240V, 50/60Hz
Coil resistance kΩ (at 23°C)	(21 ± 15%)
Contact rating	AC 220V, 25A

Thermostat (Fan Speed Control 23S)	MQT5S-27YZJ
Switching temp. °C	high → LOW 23.5°C $\begin{smallmatrix} +0 \\ -2.5 \end{smallmatrix}$
	low → HIGH 27.0°C $\begin{smallmatrix} +0 \\ -3 \end{smallmatrix}$
Contact rating	AC 220V, 3A

Outdoor Unit **AE518SC3**

Negative Phase Relay (47C)	RDR-S400
Rating	AC 415V, 3-phase 50Hz
Contact rating	AC 400V, 1A
Operation	Positive phase: ON Negative phase: OFF

Electro Magnetic Contactor (MG)	HOE-10TB TH-5A
Magnetic contactor	
Coil rating	AC 220–240V, 50Hz / AC 240–260V, 60Hz
Coil resistance Ω (at 25°C)	1,260 ± 10%
Contact rating (Main)	AC 440V, 8A
Thermal relay (Overcurrent relay)	MQT5S-27YZJ
Operating amperes	5A

Outdoor Unit **AER518SCL3**

Thermistor (Coil sensor TH3 / Air sensor TH4)		PBC-41E-S4 / PBC-41E-S8			
Resistance	kΩ	−20°C	40.1 ± 5%	20°C	6.5 ± 5%
		−10°C	24.4 ± 5%	30°C	4.4 ± 5%
		0°C	15.3 ± 5%	40°C	3.0 ± 5%
		10°C	9.9 ± 5%	50°C	2.1 ± 5%
Solid State Relay (SSR)		G3L-205TL-TS1			
Input		DC 12V			
	Rated voltage	DC 0V to 6.4V			
	Control voltage range	AC 75V to 264V, 50Hz			
Load voltage range					
Negative Phase Relay (47C)		RDR-S400			
Rating		AC 415V, 3-phase 50Hz			
Contact rating		AC 400V, 1A			
Operation		Positive phase: ON			
		Negative phase: OFF			
Electro Magnetic Contactor (MG)		HOE-10TB TH-5A			
Magnetic contactor		AC 220–240V, 50Hz / AC 240–260V, 60Hz			
Coil rating		1,260 ± 10%			
Coil resistance	Ω (at 25°C)	AC 440V, 8A			
Contact rating (Main)		MQT5S-27YZJ			
Thermal relay (Overcurrent relay)		5A			
Operating amperes					
Transformer (TR2)		ATR-J105-I			
Rating	Primary	AC 230V, 50Hz			
	Secondary	19V, 0.526A			
	Capacity	10VA			
Coil resistance	Ω (at 22°C)	Primary (WHT – WHT):	205 ± 10%		
		Secondary (BRN – BRN):	2.0 ± 10%		
Thermal cut-off temp.		150°C			
Power Relay		HH62S DC24V			
Coil rating		DC 24V			
Coil resistance	kΩ (at 23°C)	650 ± 10%			
Contact rating		AC 250V, 10A			

Power Relay (PR)	DFU24D1-F
Coil rating	DC 24V
Coil resistance Ω (at 20°C)	650 ± 10%
Contact rating	AC 250V, 20A
Starting Relay (SR)	AMVL300A
Coil rating	AC 300V, 50Hz
Coil resistance kΩ (at 23°C)	13.3 ± 2%
Contact rating	20A AC
Operating voltage	AC 185 – 217V, 50Hz
Return voltage	AC 60 – 120V, 50Hz
Thermostat (Defrost thermo. 23D)	TRS02-12MSR
Operating temp. °C	ON 12 ± 2
	Diff. 8 deg. below
Thermostat (Fan Speed Control 23S)	MQT5S-27YZJ
Switching temp. °C	high → LOW 23.5°C ±1.5
	low → HIGH 27.0°C ⁺⁰ ₋₃
Contact rating	AC 220V, 3A
4-way Valve (20S)	LB64012 (Coil), V26-110B (Valve)
Coil rating	AC 220-240V, 50Hz, 6W
Coil resistance Ω (at 20°C)	1.740 ± 7%
Starting Capacitor	C4; C5
Capacitor	125 μF - 165V
Resistor	18KW - 2W

Outdoor Unit **AE518SH3**

Electro Magnetic Contactor (MG)	HOE-10TB TH-5A
Magnetic contactor	
Coil rating	AC 220–240V, 50Hz / AC 240–260V, 60Hz
Coil resistance Ω (at 25°C)	1,260 $\pm$ 10%
Contact rating (Main)	AC 440V, 8A
Thermal relay (Overcurrent relay)	
Operating amperes	5A

Negative Phase Relay (47C)	RDR-S400
Rating	AC 415V, 3-phase 50Hz
Contact rating	AC 400V, 1A
Operation	Positive phase: ON Negative phase: OFF

Relay (PR)	MY2-TSDF
Coil rating	DC 24V
Coil resistance Ω (at 20°C)	650 $\pm$ 10%
Contact rating	AC 200V, 5A

4-way Valve (SC)	LB64012 (Coil), V26-110B (Valve)
Coil rating	AC 220/240V, 50Hz, 6W
Coil resistance Ω (at 20°C)	1,740 $\pm$ 7%

Thermostat (Defrost thermo. 23D)	TRS02-12MSR
Operating temp. °C	ON 12 $\pm$ 2 Diff. 8 deg. below

Thermostat (Fan Speed Control 23S)	MQT5S-27YZJ
Switching temp. °C	high $\rightarrow$ LOW 23.5°C $\pm$ 1.5 low $\rightarrow$ HIGH 27.0°C $^{+0}_{-3}$
Contact rating	AC 220V, 3A

Outdoor Unit **AER518SH3**

Electro Magnetic Contactor (MG)	HOE-10TB TH-5A
Magnetic contactor	
Coil rating	AC 220–240V, 50Hz / AC 240–260V, 60Hz
Coil resistance Ω (at 25°C)	1,260 $\pm$ 10%
Contact rating (Main)	AC 440V, 8A
Thermal relay (Overcurrent relay)	
Operating amperes	5A

Negative Phase Relay (47C)	RDR-S400
Rating	AC 415V, 3-phase 50Hz
Contact rating	AC 400V, 1A
Operation	Positive phase: ON Negative phase: OFF

Relay (PR)	MY2-TSDF
Coil rating	DC 24V
Coil resistance Ω (at 20°C)	650 $\pm$ 10%
Contact rating	AC 200V, 5A

4-way Valve (SC)	LB64012 (Coil), V26-110B (Valve)
Coil rating	AC 220/240V, 50Hz, 6W
Coil resistance Ω (at 20°C)	1,740 $\pm$ 7%

Thermostat (Defrost thermo. 23D)	TRS02-12MSR
Operating temp. °C	ON 12 $\pm$ 2 Diff. 8 deg. below

Thermostat (Fan Speed Control 23S)	MQT5S-27YZJ
Switching temp. °C	high $\rightarrow$ LOW 23.5°C $\pm$ 1.5 low $\rightarrow$ HIGH 27.0°C $^{+0}_{-3}$
Contact rating	AC 220V, 3A

D**OPERATING RANGE**

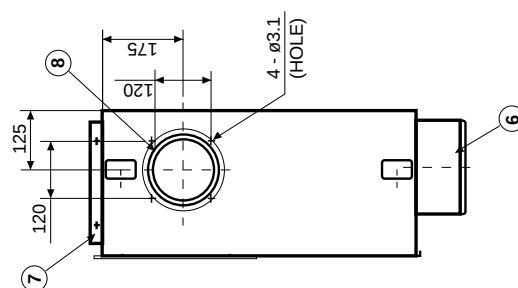
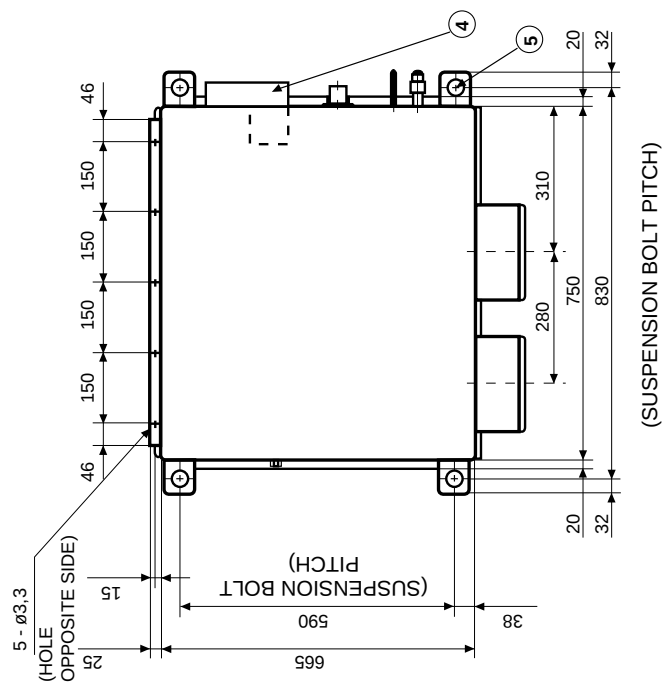
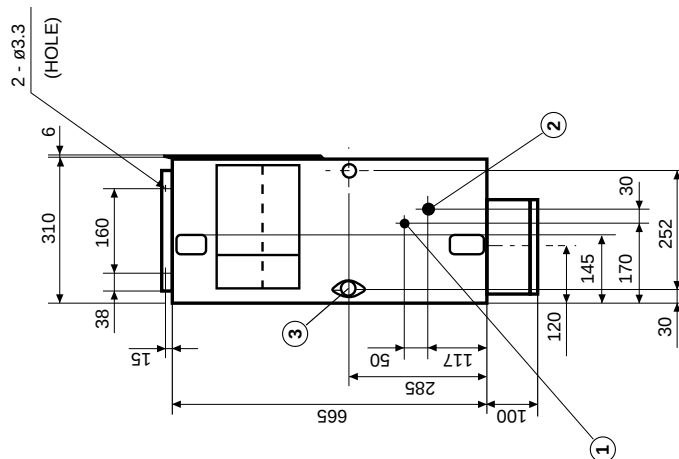
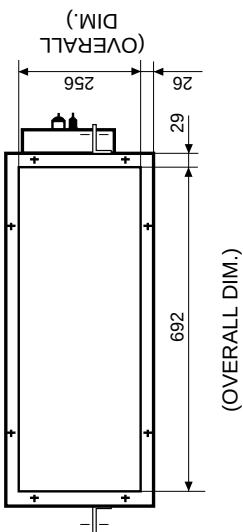
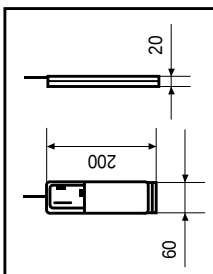
		INDOOR UNIT	OUTDOOR UNIT
Function	Temperature	Indoor air intake temp.	Outdoor air intake temp.
Cooling	Maximum	35°C BS / 22.5°C BU	52°C BS
	Minimum	19°C BS / 14°C BU	19°C BS

Referred to the systems - ADR518CW - AER518SCL3 only (3 phase and low ambient version)

		INDOOR UNIT	OUTDOOR UNIT
Function	Temperature	Indoor air intake temp.	Outdoor air intake temp.
Cooling	Maximum	35°C BS / 22°C BU	50°C BS
	Minimum	19°C BS / 14°C BU	-15°C BS

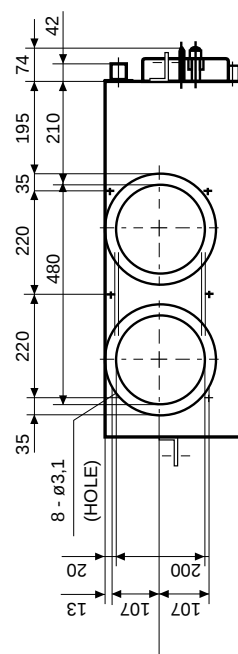
Indoor unit ADR518SW

REMOTE CONTROL UNIT



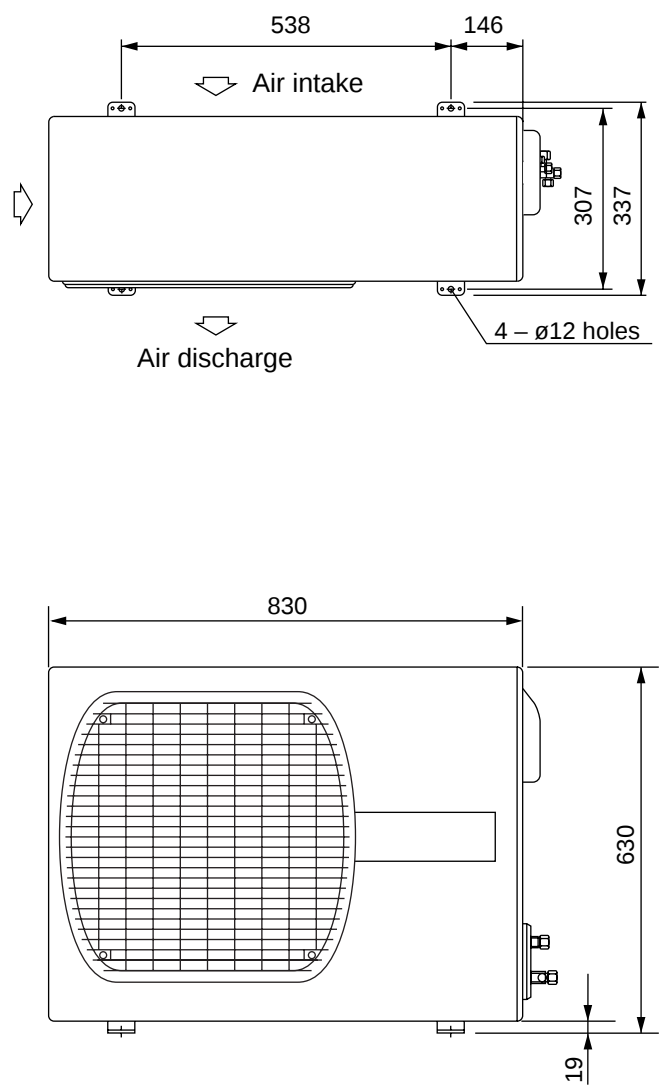
LEGEND

- ① Refrigerant liquid line (Narrow tube - $\varnothing 6.35$)
- ② Refrigerant gas line (Wide tube - $\varnothing 12.70$)
- ③ Drain connection (outside diam. 32)
- ④ Electrical junction box
- ⑤ Mounting for suspension
- ⑥ Duct connection for discharge ($\varnothing 200$)
- ⑦ Duct connection for suction
- ⑧ Fresh air intake ($\varnothing 150$)



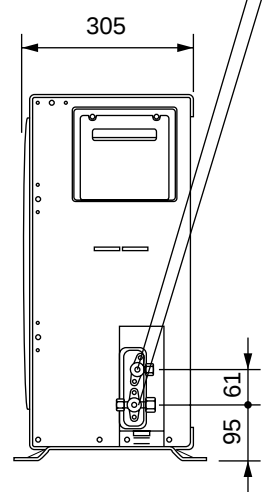
Dimension: mm

Outdoor Unit



Wide tube service valve
 $\phi 12.7$ (1/2")

Narrow tube service valve
 $\phi 6.35$ (1/4")

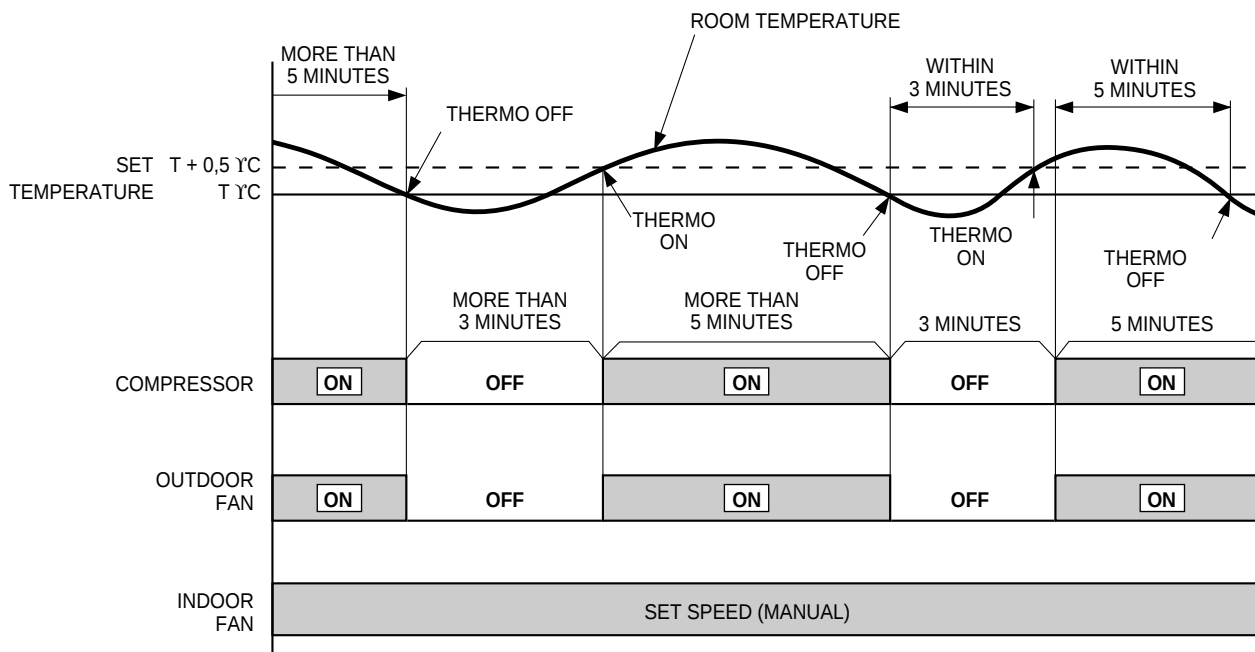


Unit : mm

1) ROOM TEMPERATURE CONTROL

Cooling

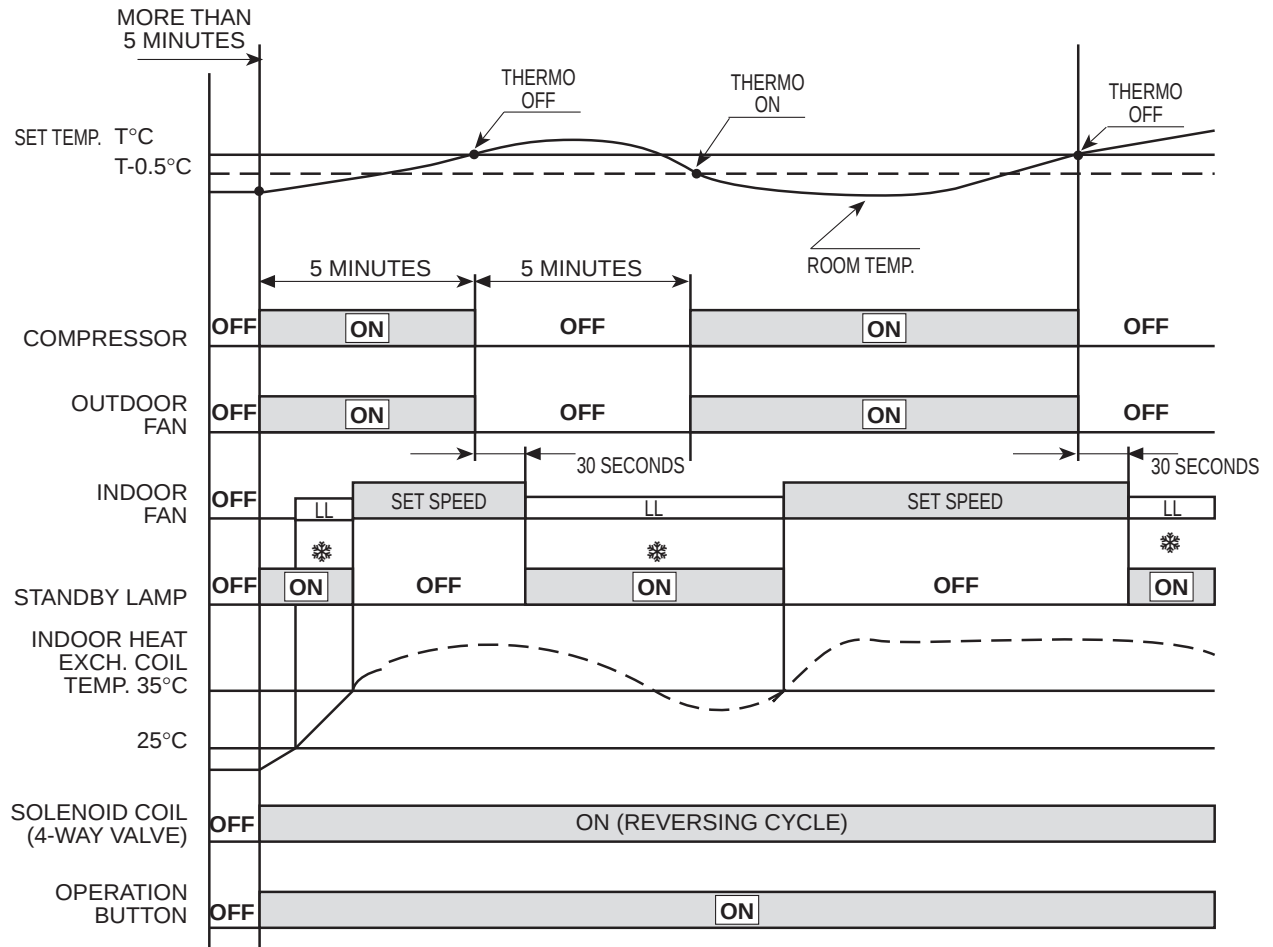
- Room temperature control is obtained by cycling the compressor ON and OFF under control of the room temperature sensor in the remote control unit.



NOTA

- The control circuit will not attempt to turn the compressor ON until the compressor has been OFF for at least 3 minutes.
To protect the compressor from stalling out when trying to start against the high side refrigerant pressure, the control circuit has a built-in automatic time delay to allow the internal pressure to equalize.
- As a protective measure, the control circuit switches the compressor OFF after 5 minutes or more of compressor operation.
- Thermo ON: When the room temperature is above $T + 1^{\circ}\text{C}$ ($T^{\circ}\text{C}$ is set temperature).
Compressor → ON.
- Thermo OFF: When the room temperature is equal to or below set temperature $T^{\circ}\text{C}$.
Compressor → OFF.

Heating



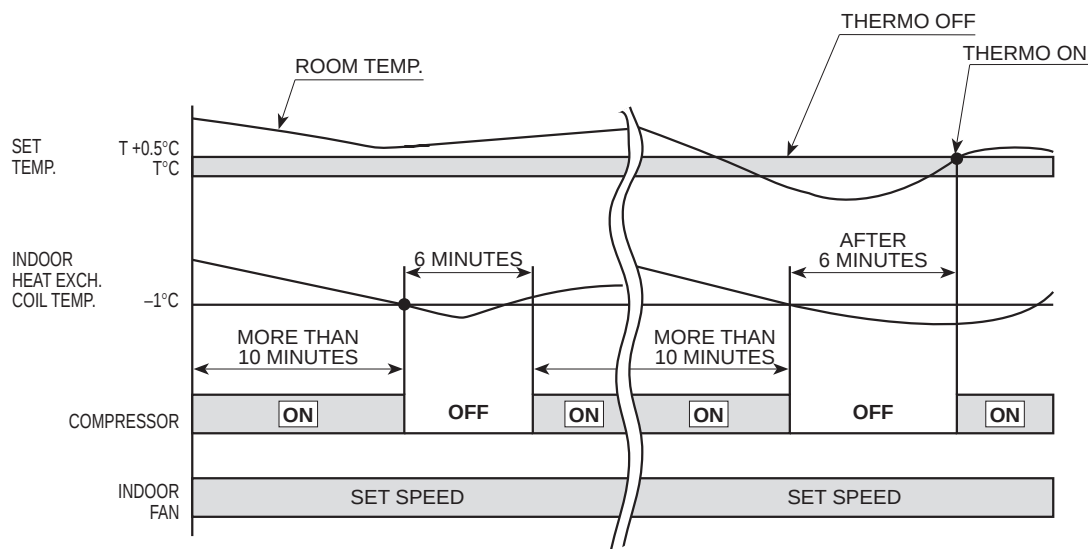
L L = Low low speed

❄ COLD DRAFT PREVENTION

- The control circuit will not attempt to turn the compressor ON until the compressor has been OFF for at least 5 minutes. To protect the compressor from stalling out when trying to start against the high side refrigerant pressure, the control circuit has a built-in automatic time delay to allow the internal pressure to equalize.
- As a protective measure, the control circuit switches the compressor OFF after 5 minutes or more of compressor operation.
- Thermo ON: when the room temperature is below $T - 1^\circ\text{C}$ ($T^\circ\text{C}$ is set temperature). Compressor → ON.
- Thermo OFF: when the room temperature is equal to or above set temperature $T^\circ\text{C}$. Compressor → OFF.

2) FREEZE PREVENTION (COOLING)

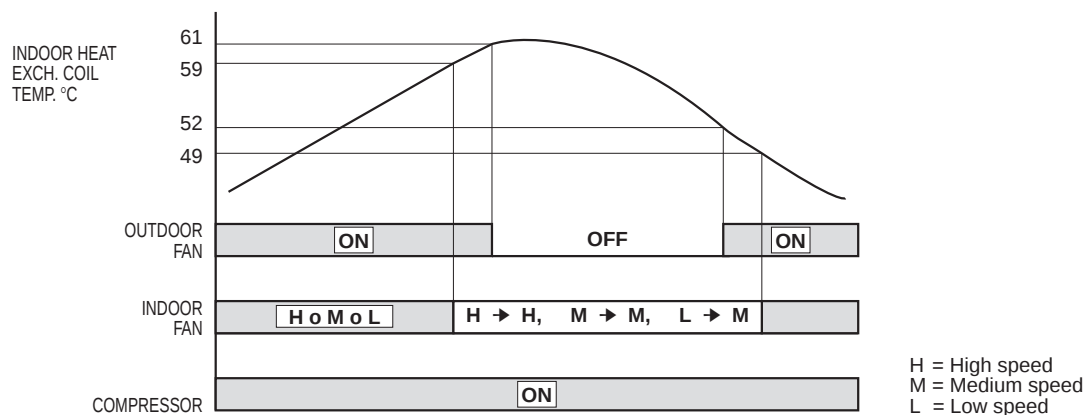
- This function prevents freezing of the indoor heat exchange coil.
- When the compressor has been running for 10 minutes or more and the temperature of the indoor heat exchange coil falls below -1°C , the control circuit stops the compressor for at least 6 minutes.



3) OVERLOAD PREVENTION (HEATING)

- This function prevents overheating of the indoor heat exchange coil.

For indoor units ADR518HW only

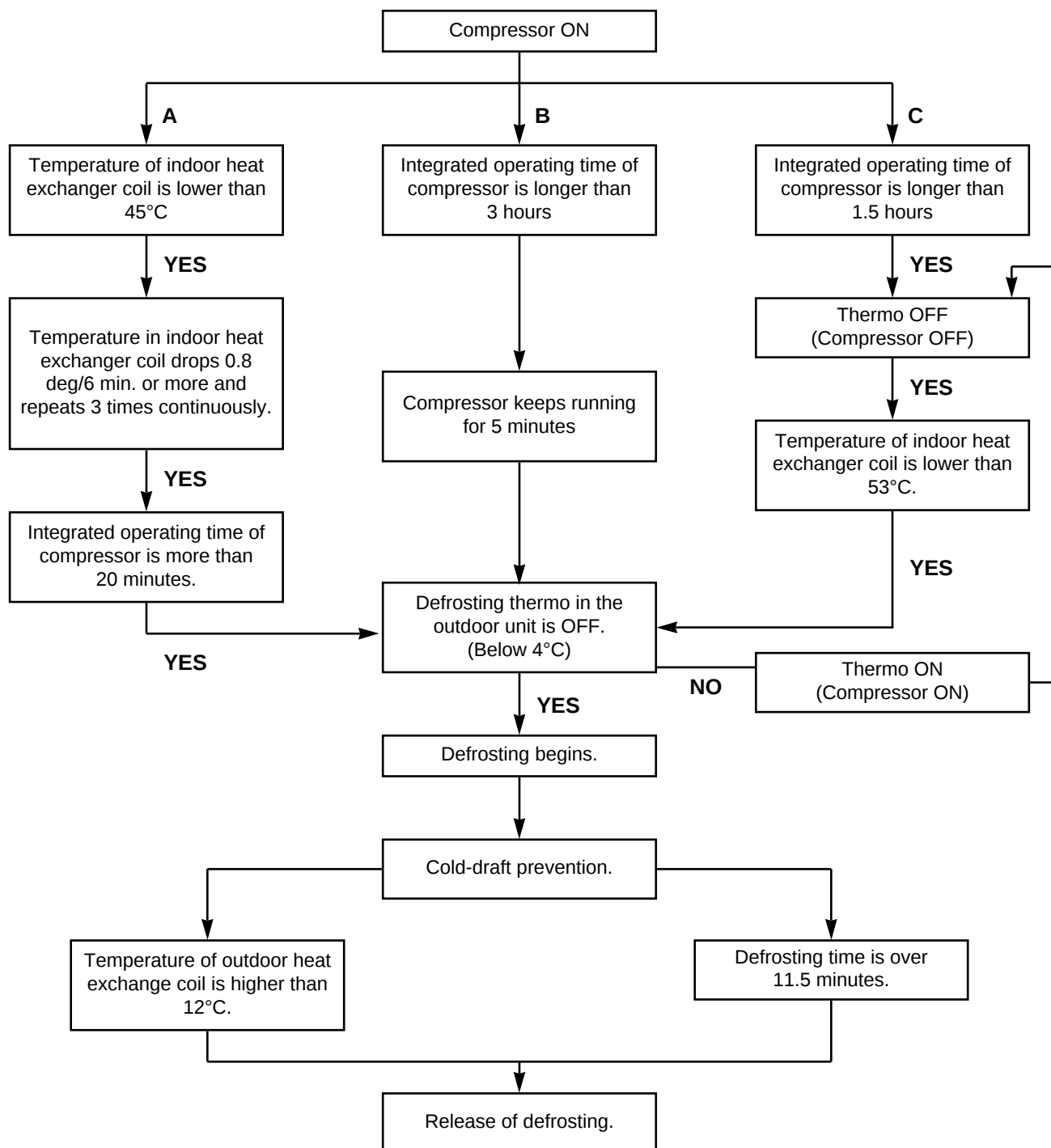


- When the temperature of the indoor heat exchange coil rises above 59°C , and if the indoor fan is L (low speed), then the fan speed changes from L (low speed) to M (medium speed).
- When the temperature of the indoor heat exchange coil rises above 61°C , the outdoor fan stops.

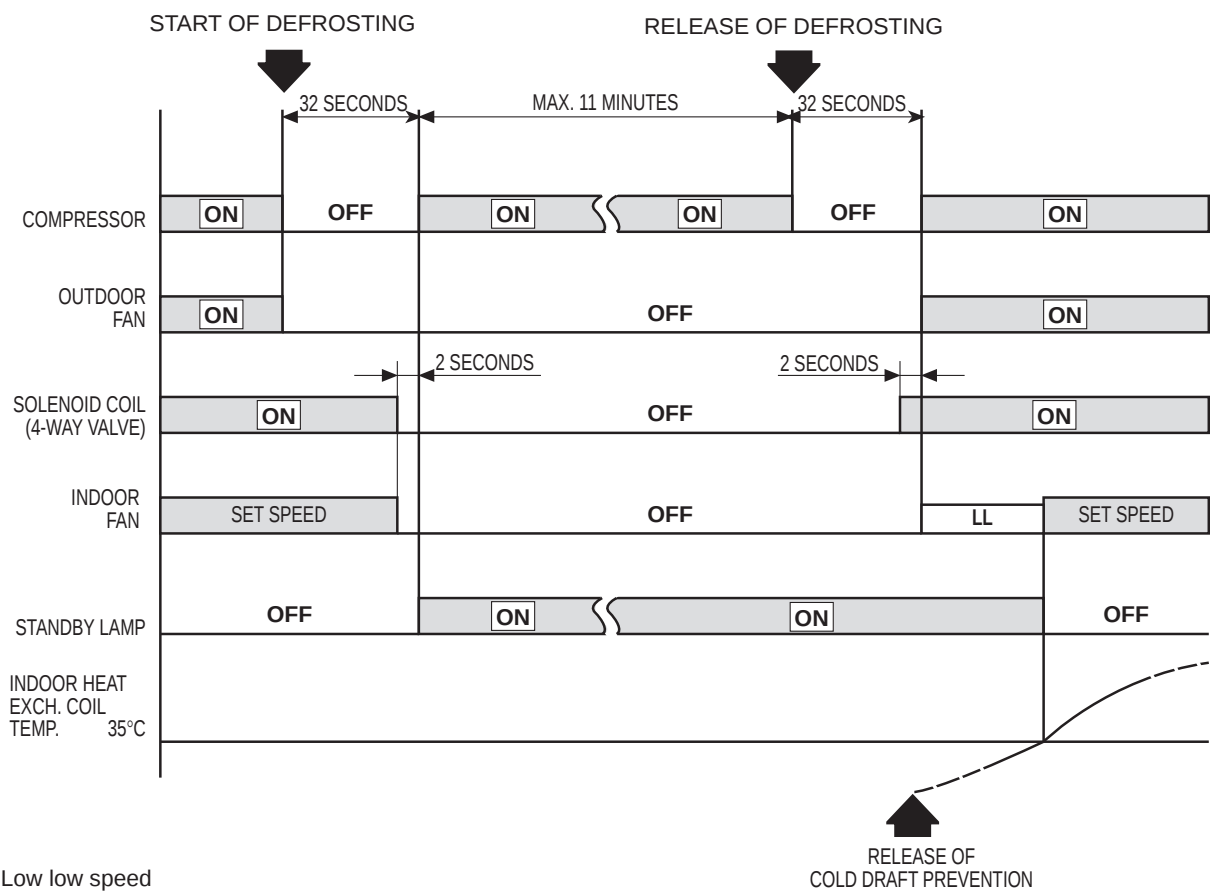
4) DEFROSTING OPERATION (Heating)

- When the capacity of the unit has been decreased due to frosting up of the outdoor heat exchanger during heating, the temperature drop gradient is detected by the microcomputer-controlled temperature sensing system, and defrosting operation is started.

DEFROSTING FLOWCHART

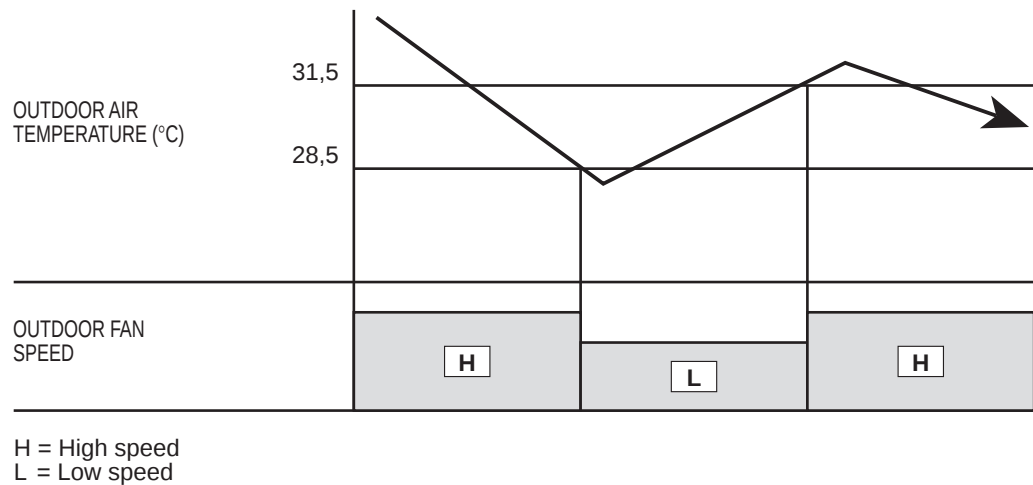


5) DEFROSTING MODE TIMING CHART



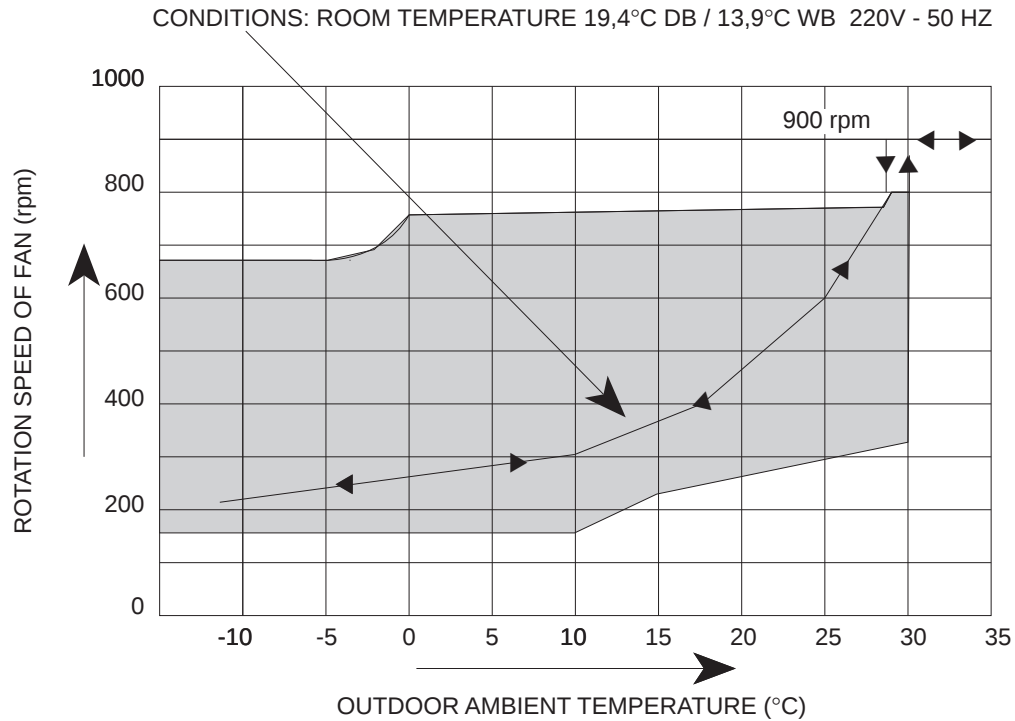
6) OUTDOOR FAN SPEED CONTROL (COOLING)

- To optimize performance of the air conditioner, the outdoor fan speed is switched automatically according to the outdoor temperature.
- If the outdoor air temperature falls below 28.5°C, the fan speed switches to LOW.
- If the outdoor air temperature rises above 31.5°C for 5 minutes or longer, the fan speed switches to HIGH.
- This function does not become active in heating operation.

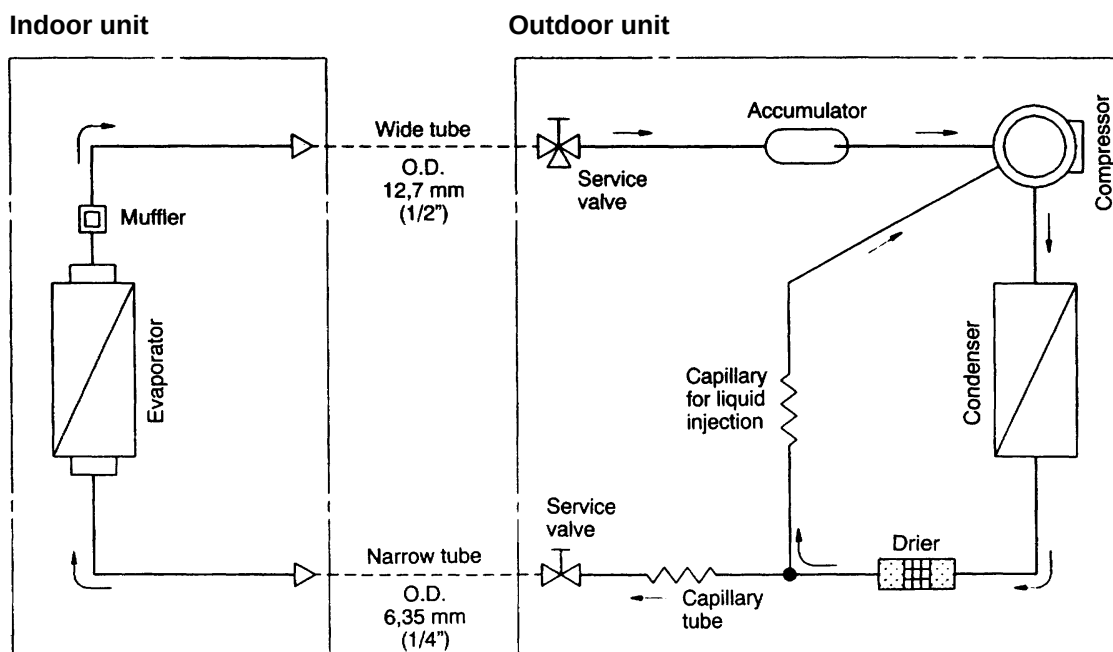


3) For AER518SCL3 only (3 phase and low ambient version)

- When the outside ambient temperature decreases, the rotation speed of the outdoor fan is regulated by means of the outdoor heat-exchanger sensor to prevent liquid back.
- The rotation speed varies with indoor temperature conditions (Hatching area).
- The unit is protected against high pressure by means of the outside temperature sensor, and thus when the outside ambient temperature reaches 30°C respectively, the fan speed is forced to high.



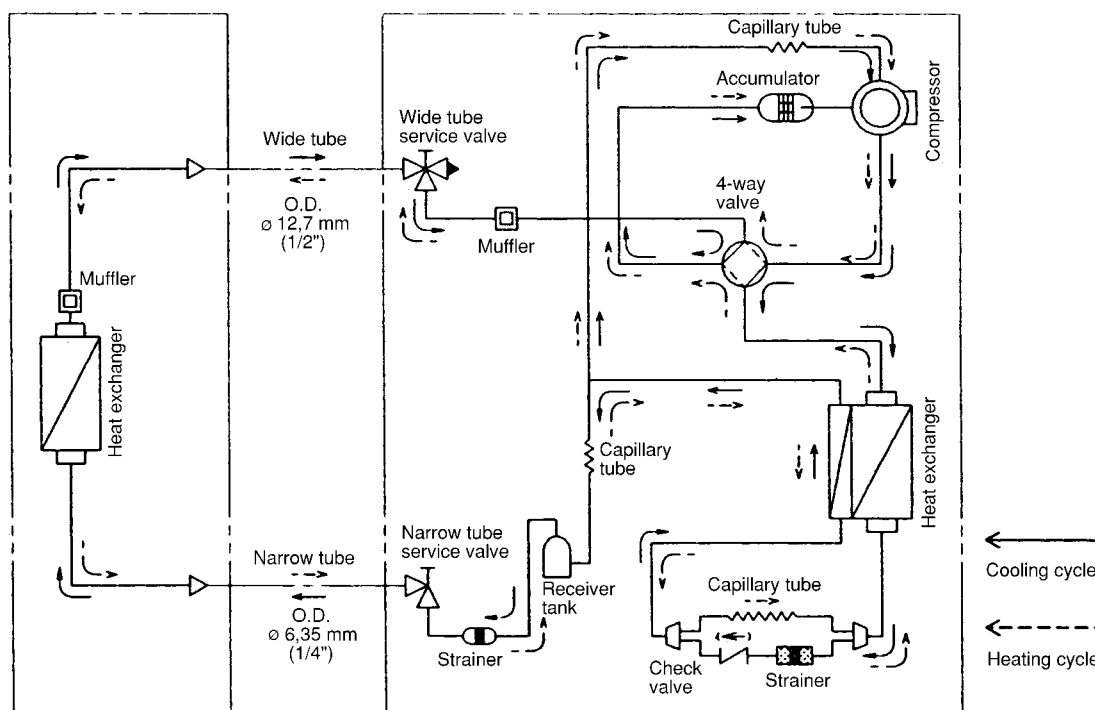
COOLING MODE

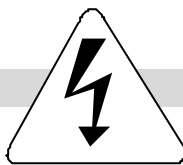


HEAT PUMP MODE

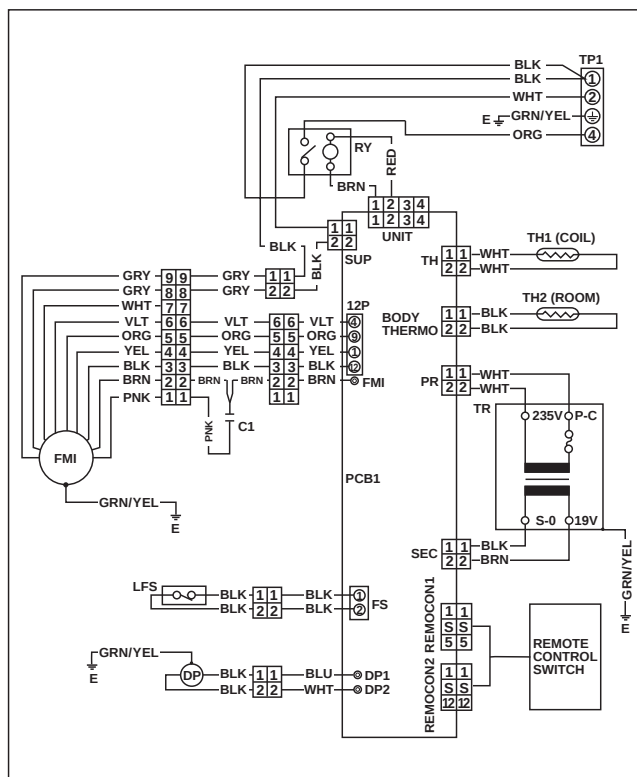
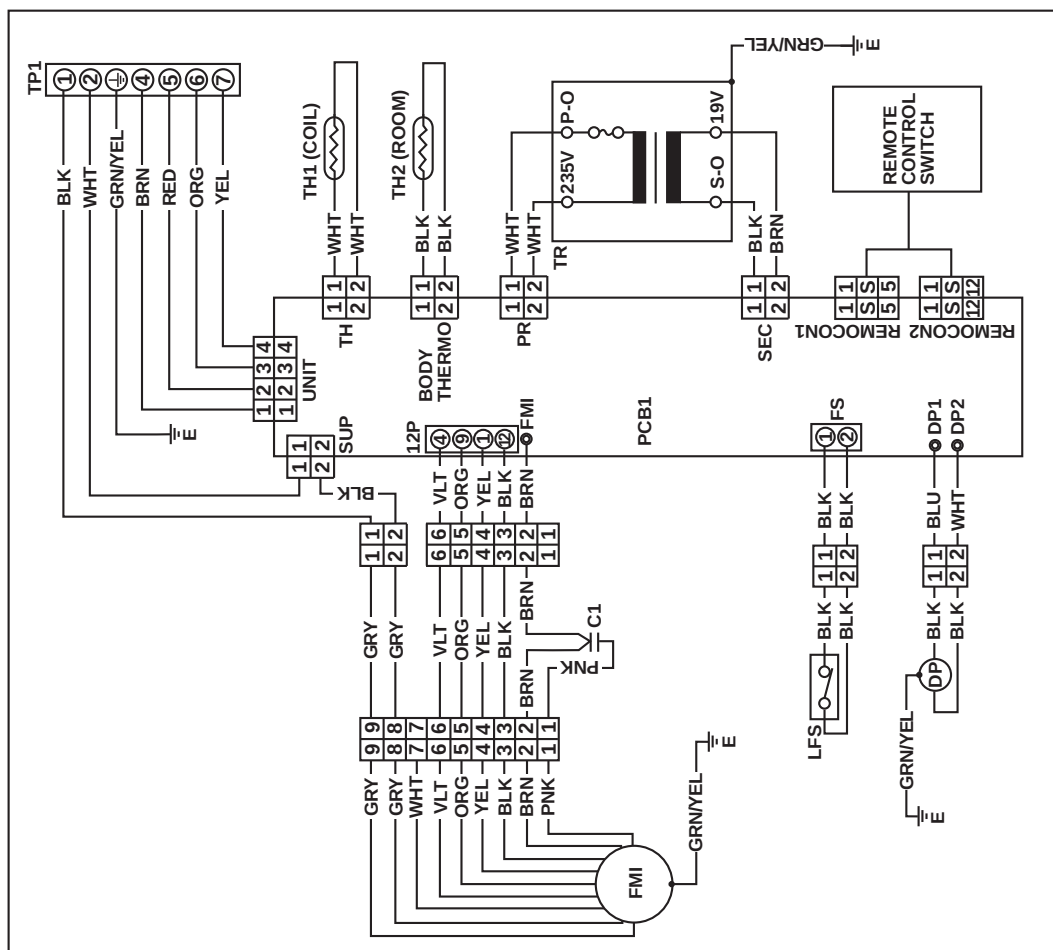
Indoor unit

Outdoor unit

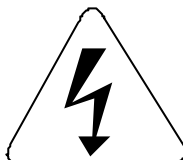




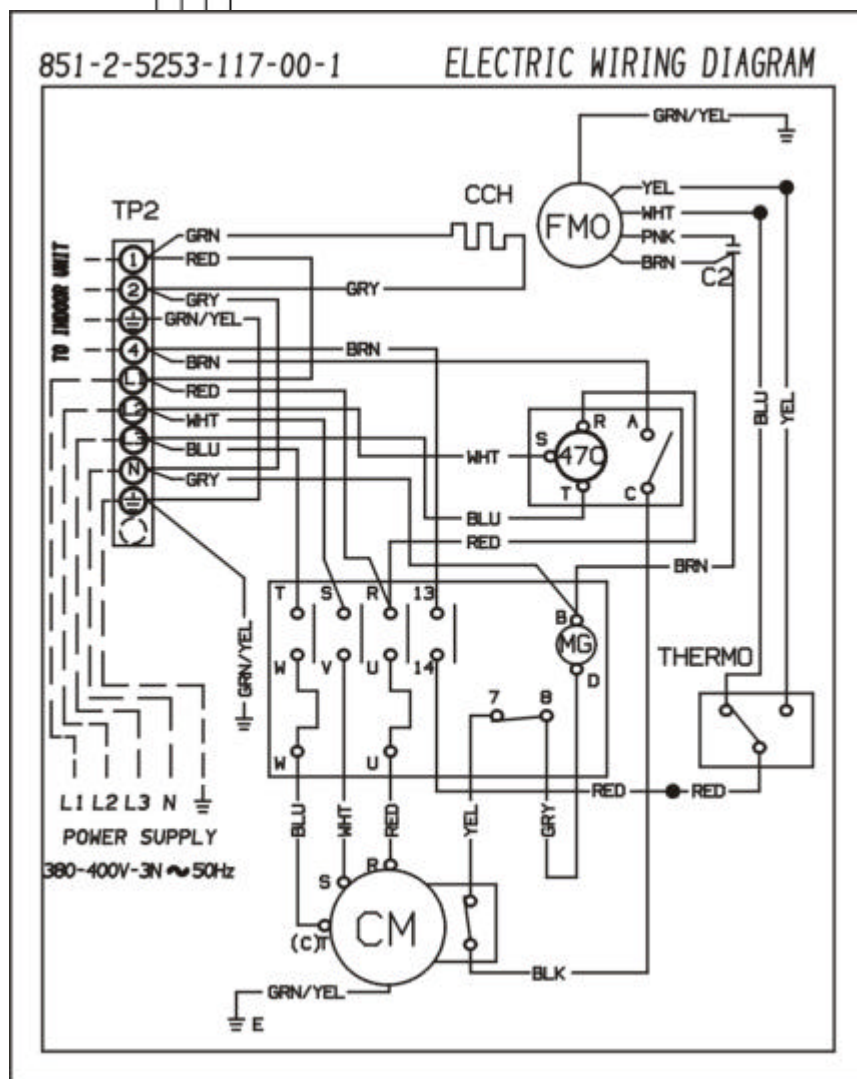
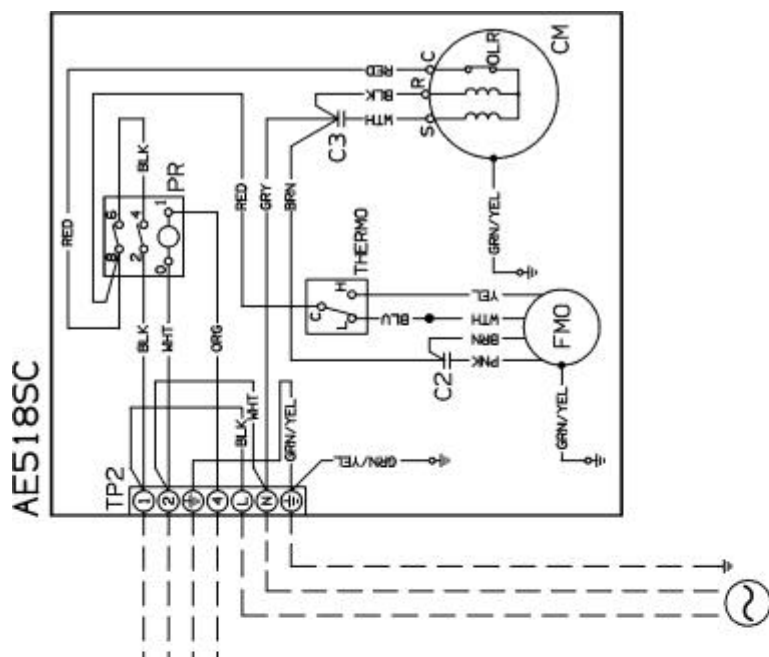
To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts

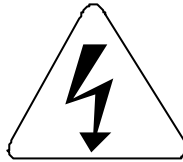
ADR518CW**ADR518HW**

Outdoor Unit **AE518SC**
AE518SC3

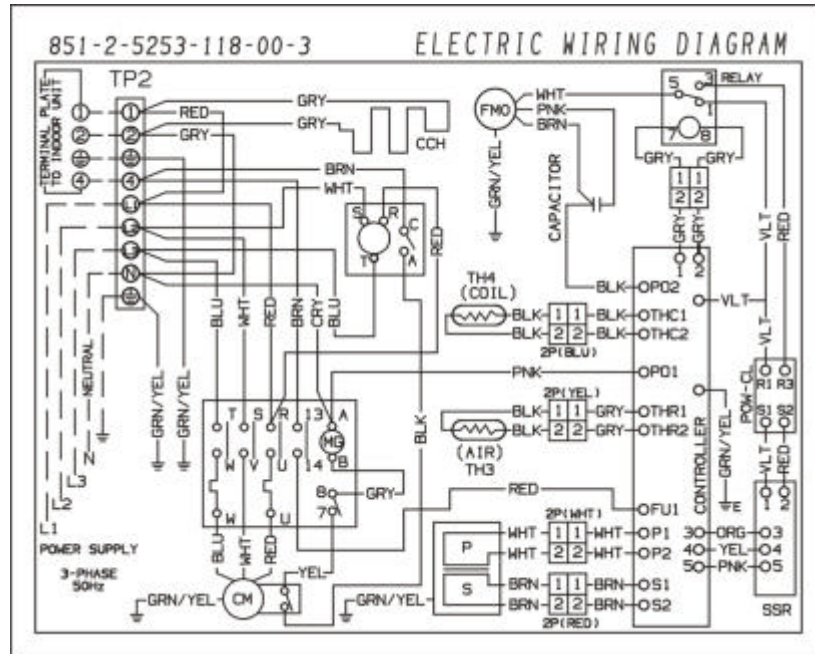
**WARNING**

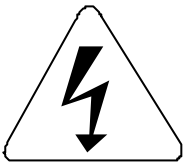
To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts



AER518SCL3**WARNING**

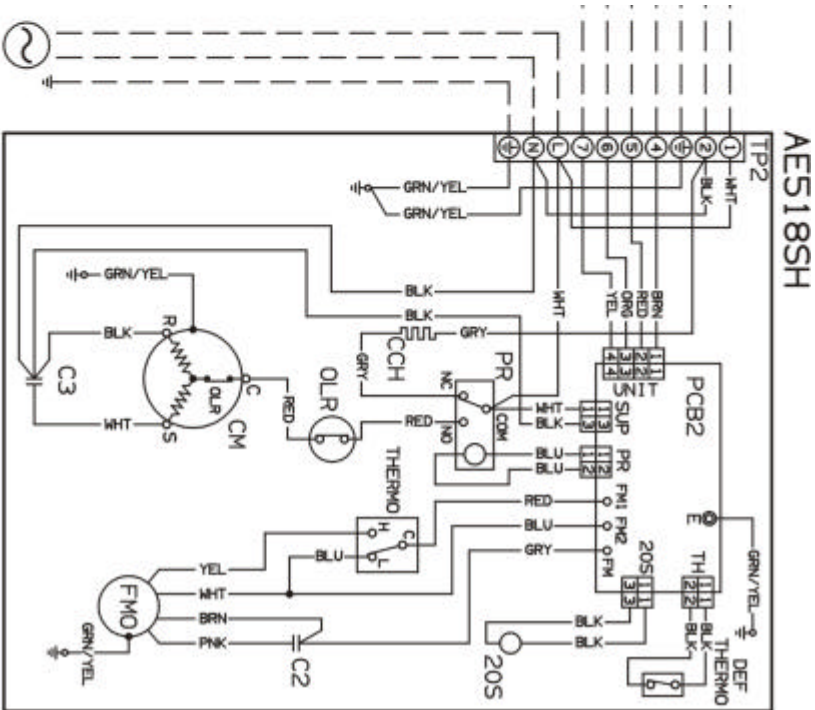
To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts





WARNING

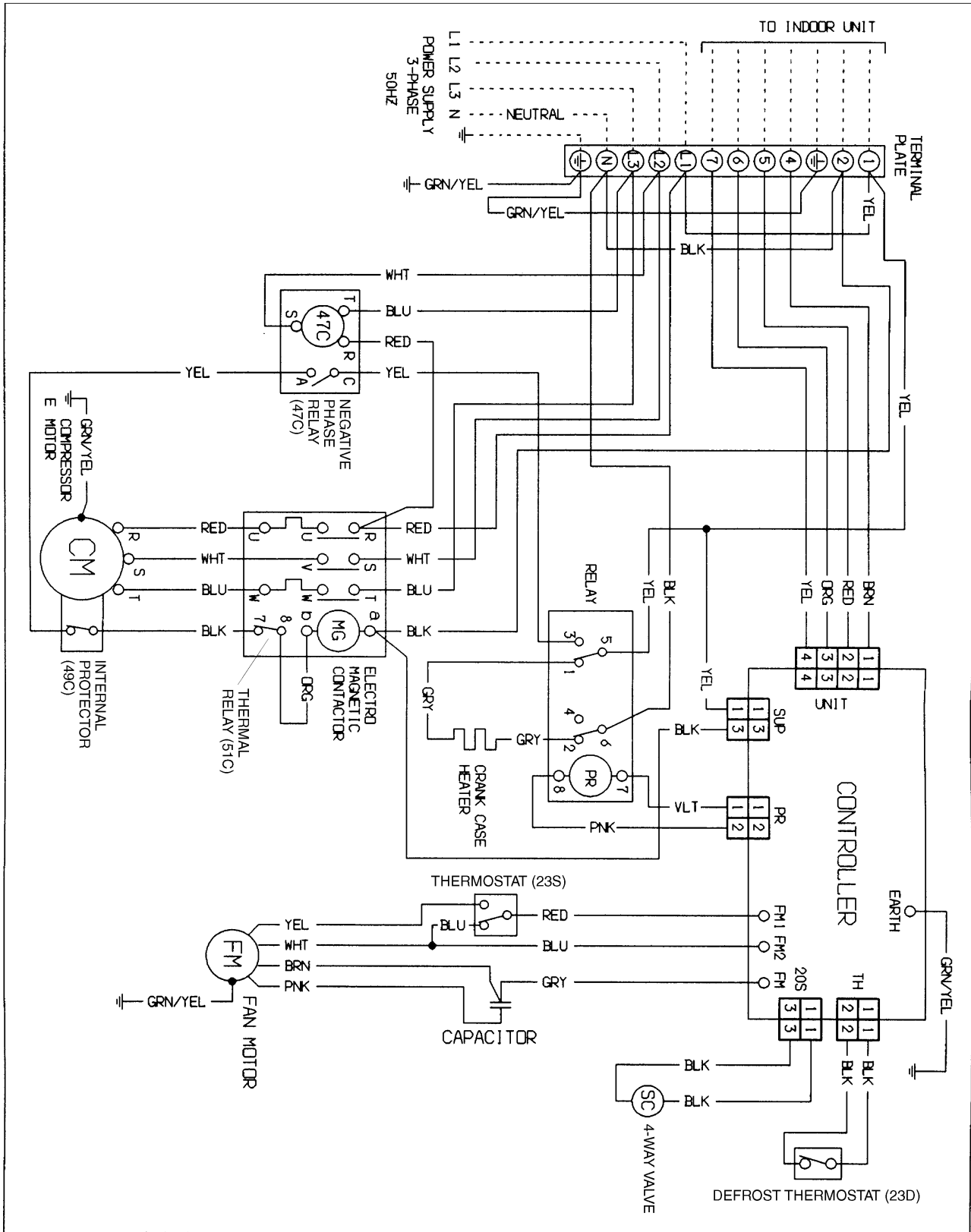
To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts





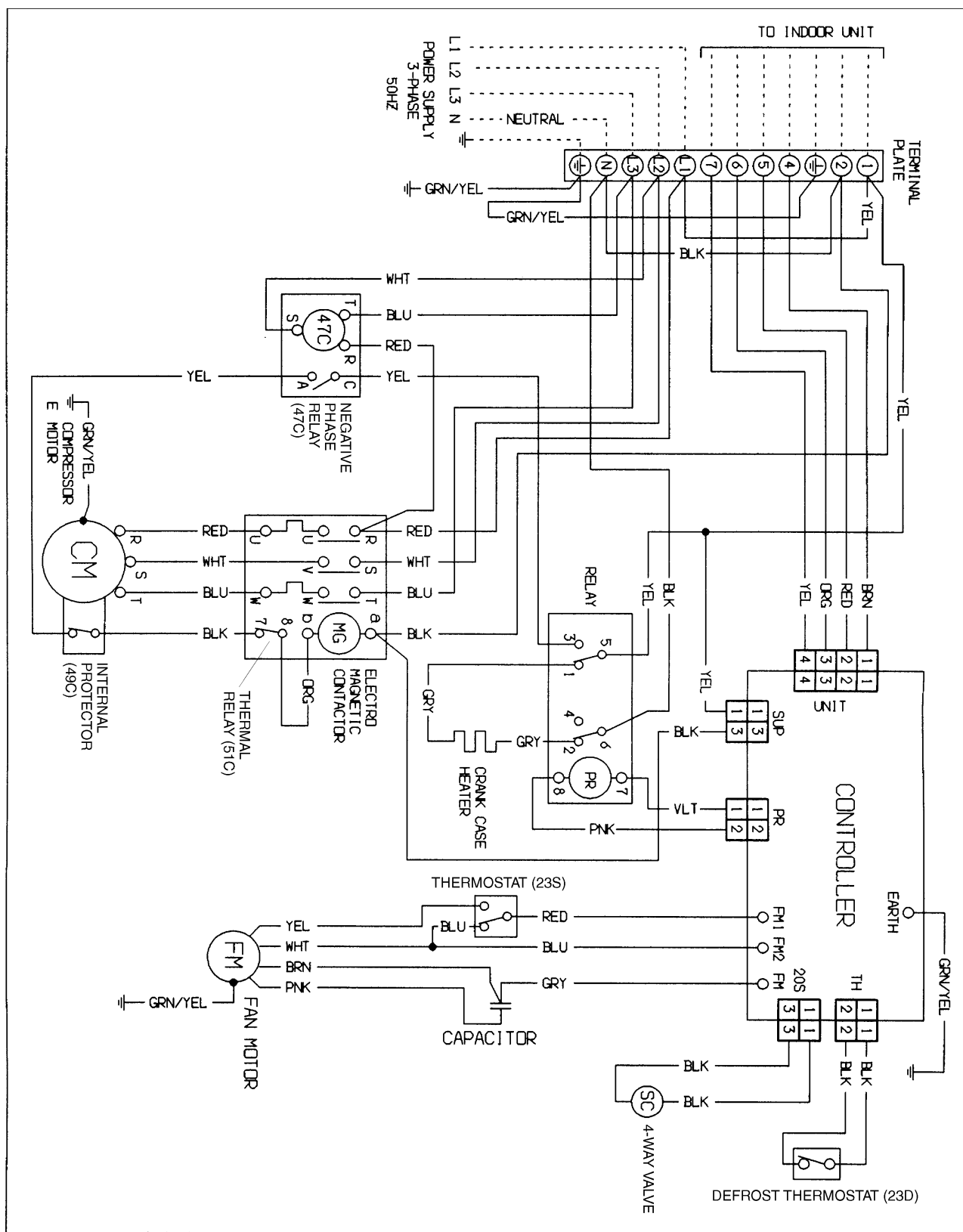
WARNING

To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts.



**WARNING**

To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts.



I TROUBLESHOOTING (cooling model)

1) CHECK BEFORE AND AFTER “TROUBLESHOOTING”

a) Check power supply wiring.

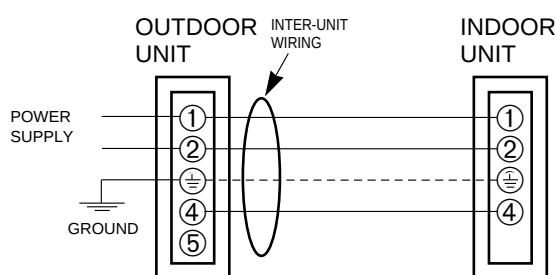
- **WARNING:**
If the following troubleshooting must be done with power being supplied, be careful about any uninsulated live part that can cause ELECTRIC SHOCK.

b) Check inter-unit wiring.

- Check that inter-unit wiring (both the power wiring and control wiring) is correctly connected to the indoor unit from the outdoor unit.

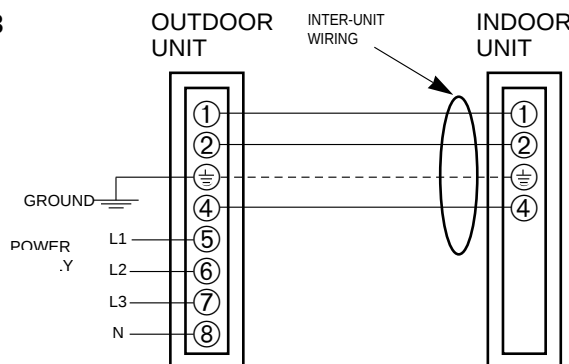
ADR518CW- AE518SC

POWER SUPPLY
50 Hz - Single-phase
220/230/240 V



ADR518CW- AER/AE518SCL3

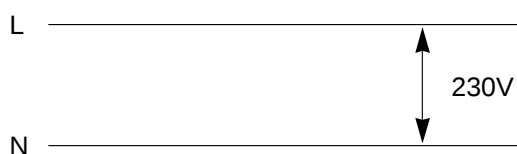
POWER SUPPLY
50 Hz - 3-phase 400V
4 Wires



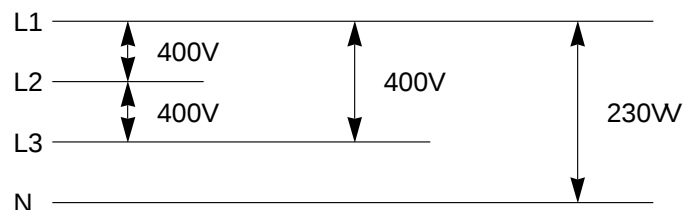
(c) Check power supply

- Check that voltage is within the specified range ($\pm 10\%$ of the rating).
- Check that power is within the specified range.

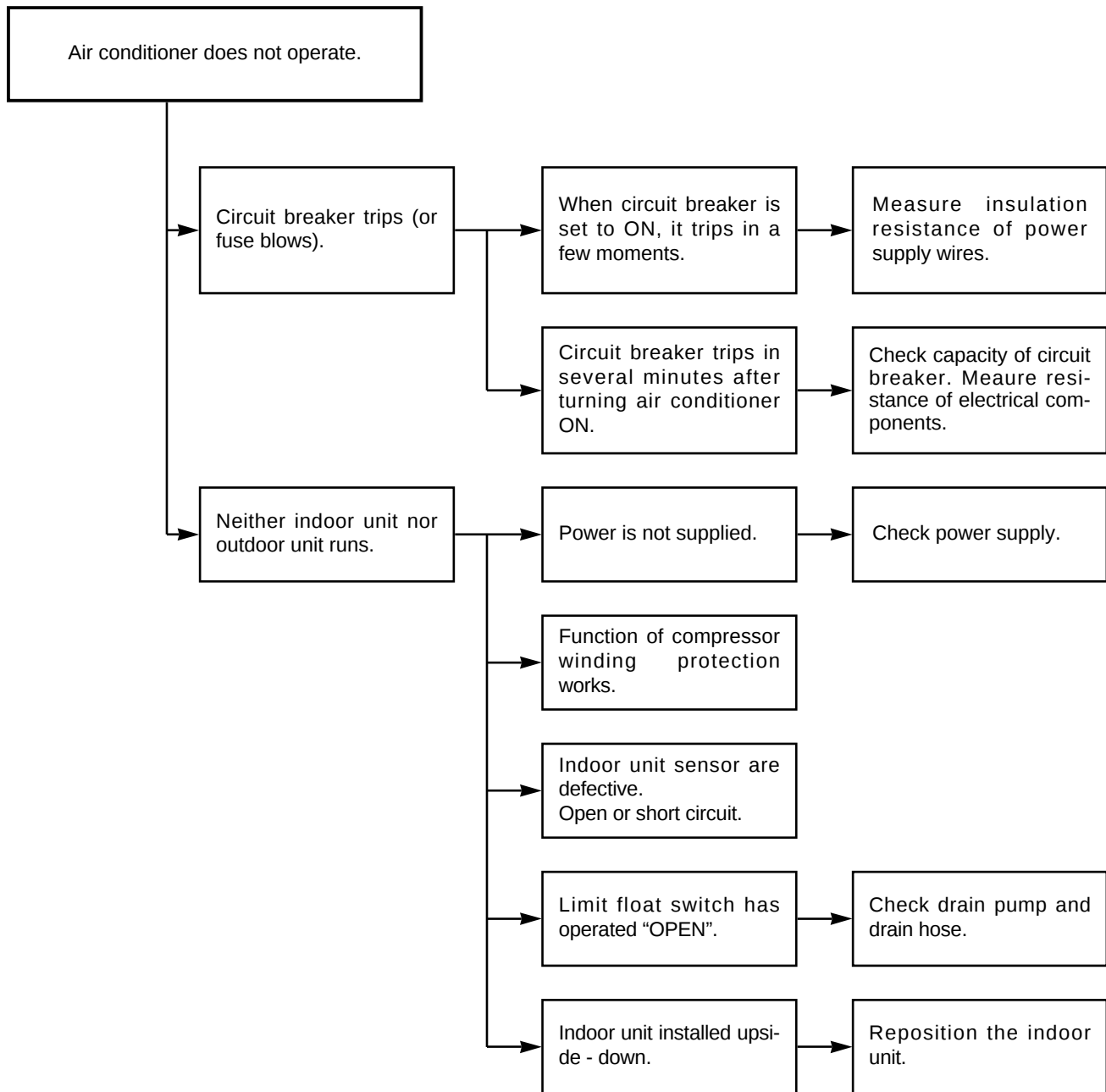
Single-phase systems



Three-phase systems



2) SYSTEMATIC CHART OF “TROUBLESHOOTING”

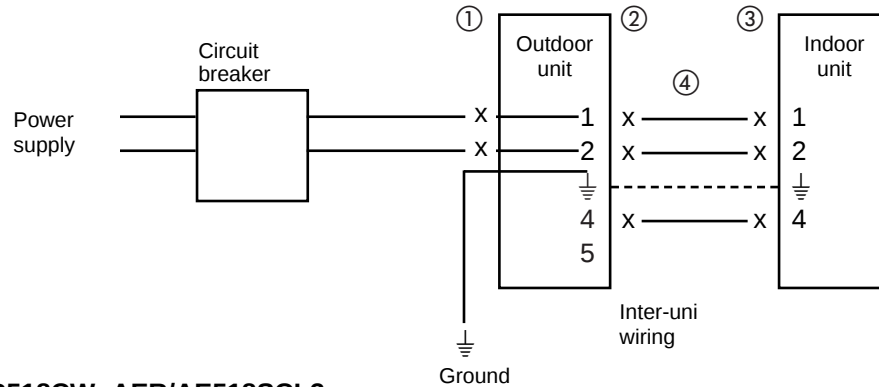


3) AIR CONDITIONER DOES NOT OPERATE

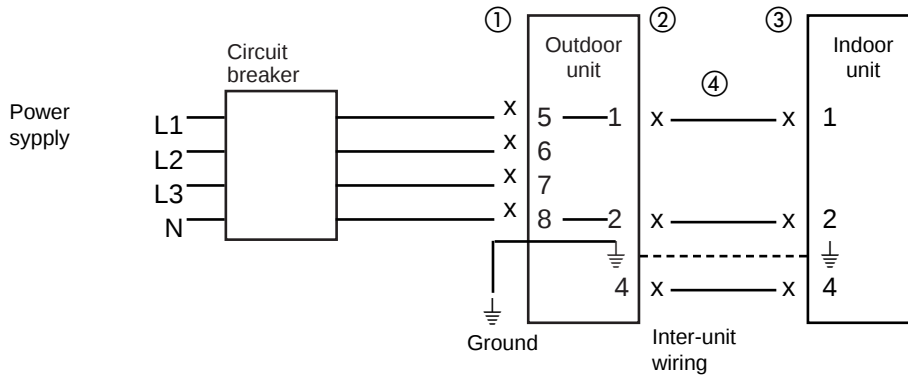
(a) Circuit breaker trips (or fuse blows)

- When circuit breaker is set to ON, it trips in a few moments. (Resetting is not possible).
- Measure insulation resistance there is a possibility of ground fault. If resistance value is $1M\Omega$ or less, insulation is defective.

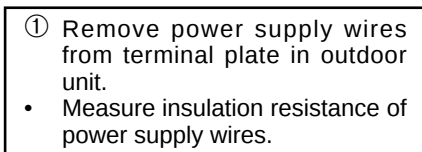
ADR518CW - AE518SC



ADR518CW- AER/AE518SCL3

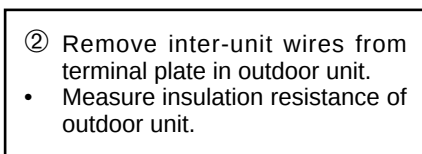


- Set circuit breaker to OFF.



OK

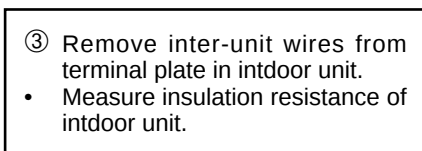
Do rewiring



Insulation of outdoor unit is defective.

YES

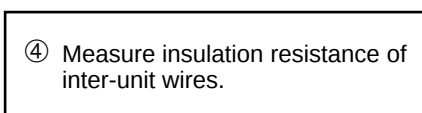
Measure insulation resistance of electrical parts in outdoor unit.



Insulation of indoor unit is defective.

YES

Measure insulation resistance of electrical parts in indoor unit.

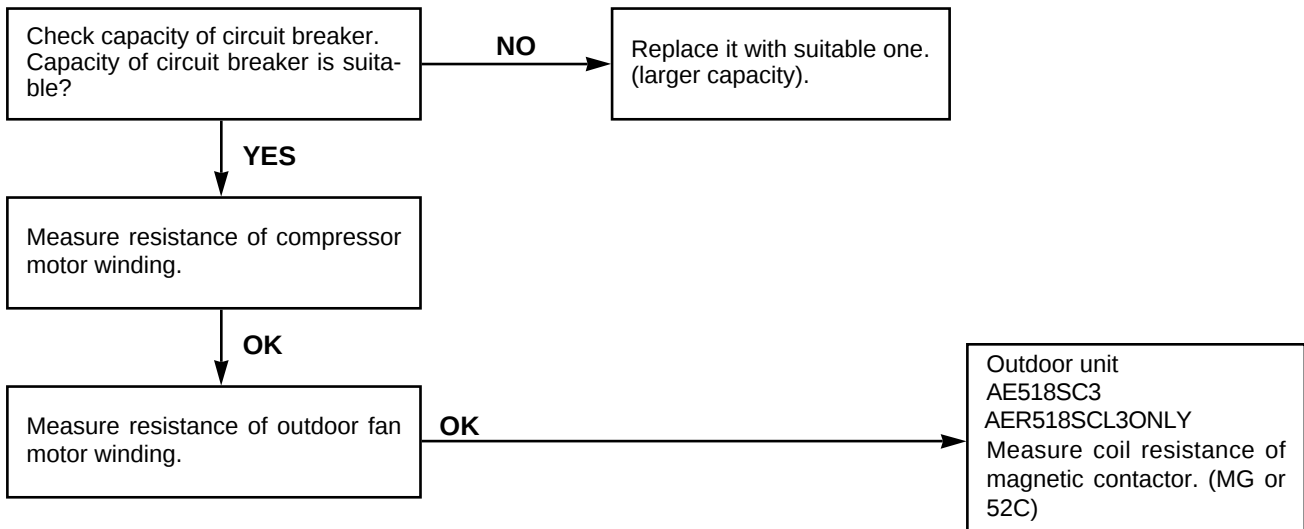


OK

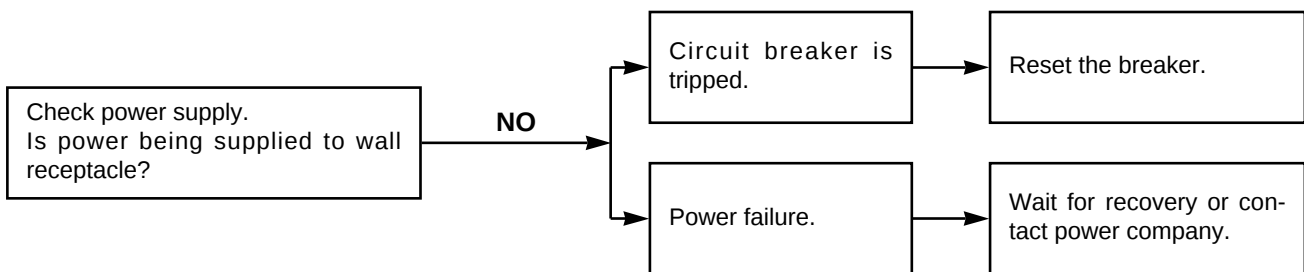
Do rewiring.

(b) Circuit breaker trips in several minutes after turning air conditioner ON.

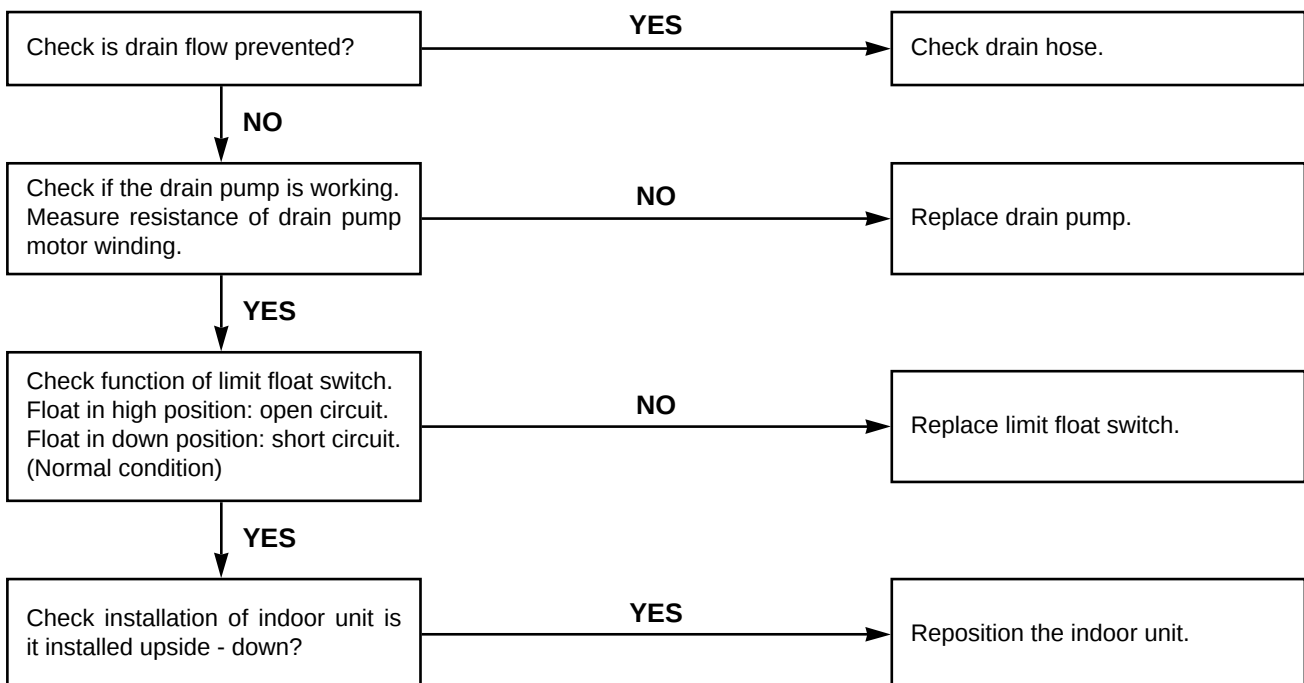
- There is a possibility of short circuit.



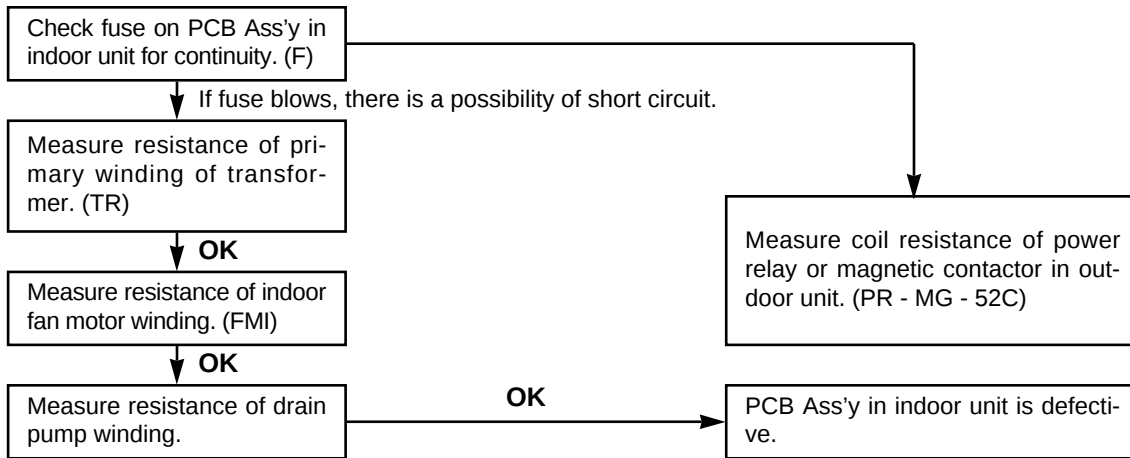
(c) Neither indoor unit nor outdoor unit runs



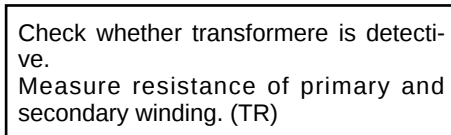
Leds of remote control unit are light



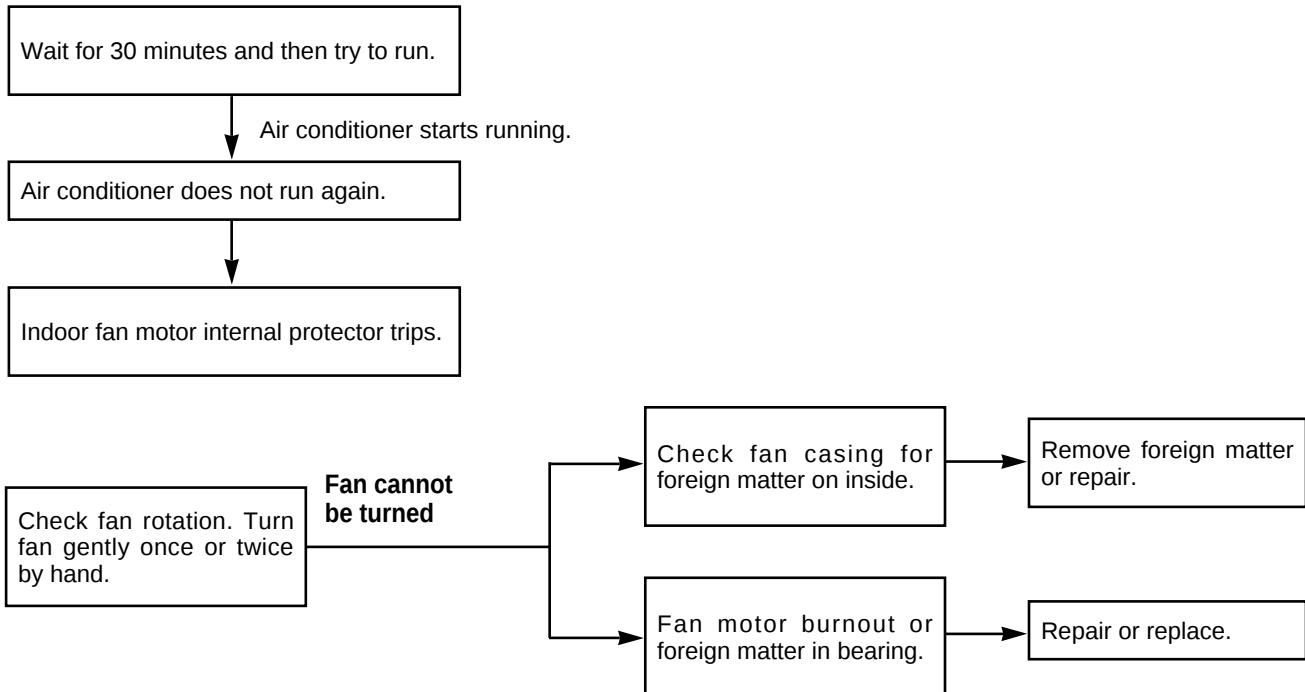
(d) Check fuse on PCB Ass'y in indoor unit



e) Check transformer in indoor unit



f) Check indoor fan motor protector



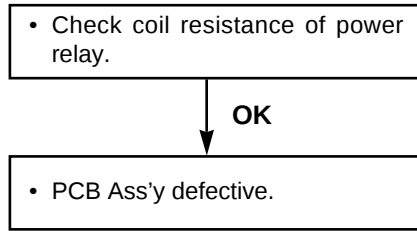
4) ONLY OUTDOOR UNIT DOES NOT RUN

a) Outdoor unit does not run when air conditioner is in following conditions.

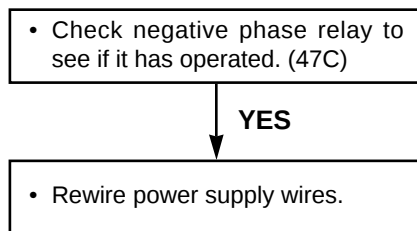
- During thermo OFF.
- During freeze prevention (for at least 6 minutes).
- During drain pump works (for at least 12 minutes).

b) PCB Ass'y in indoor unit is defective.

• **Check power relay in outdoor unit (only for AE518SC)**

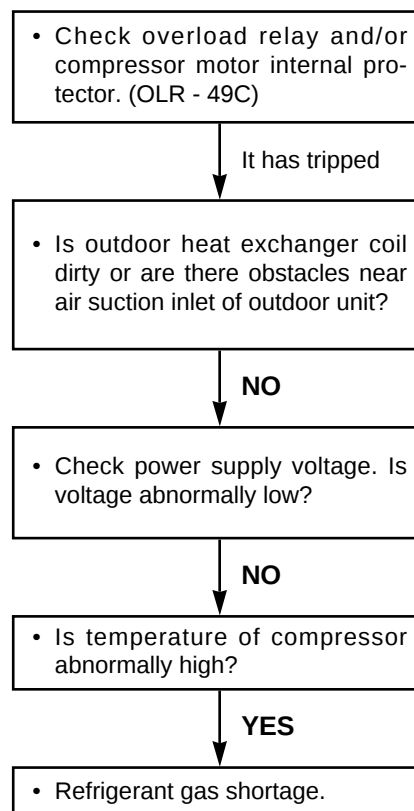
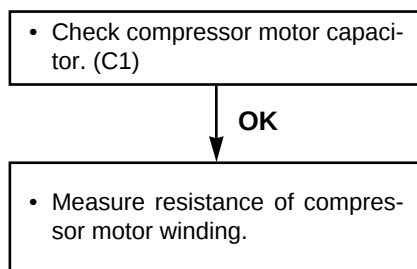


• **Check negative phase relay (only for AE518SC/SCL3-AER/AE518SH3)**

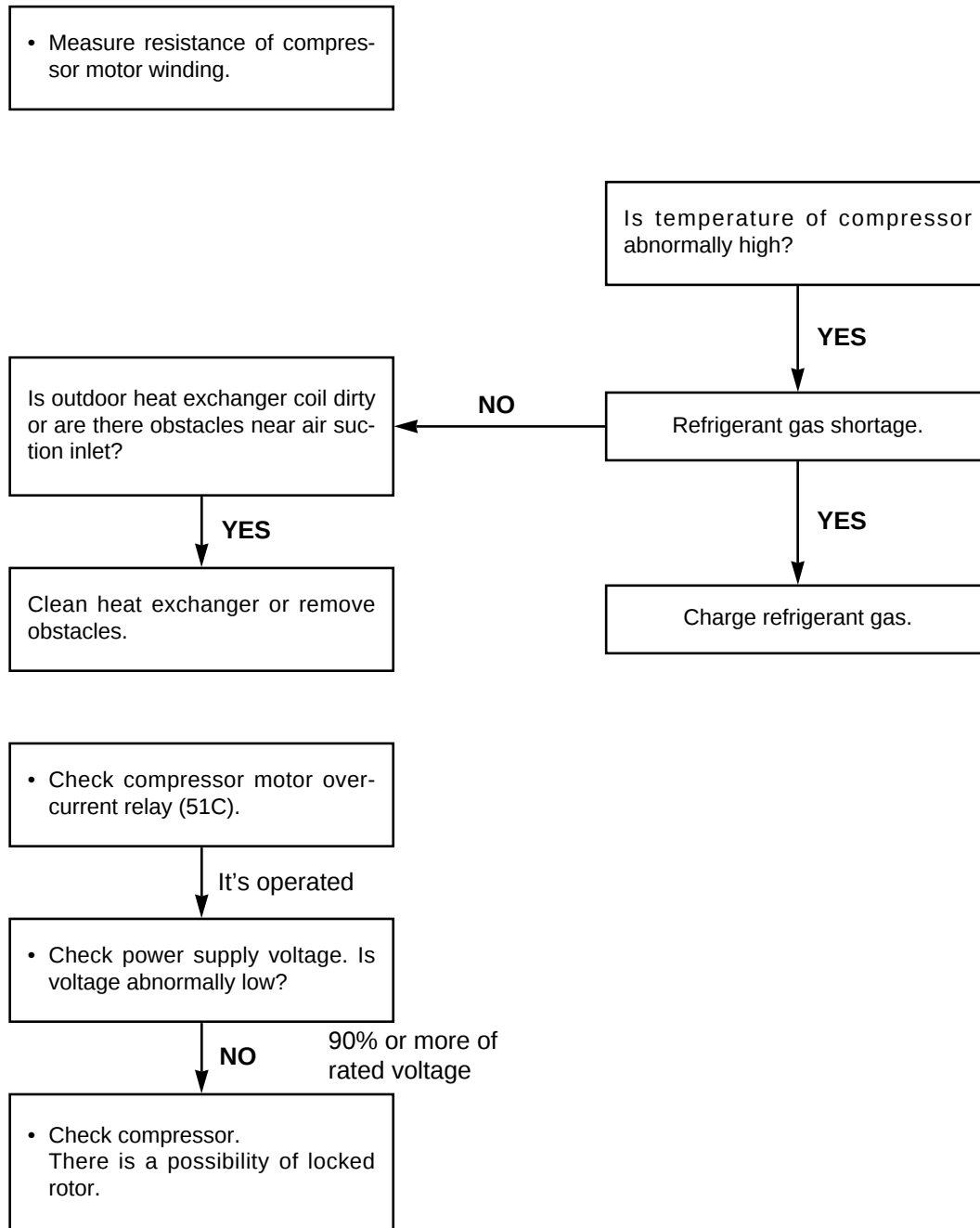


5) COMPRESSOR MOTOR DOES NOT RUN (only for AE518SC)

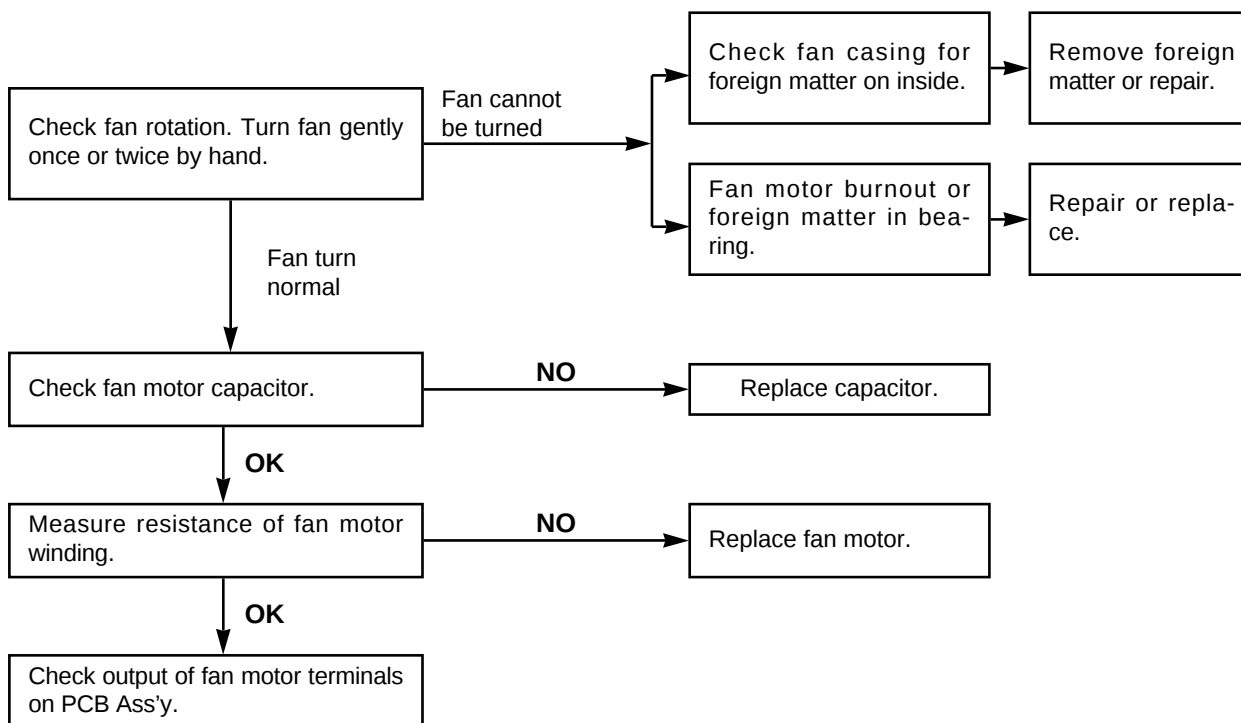
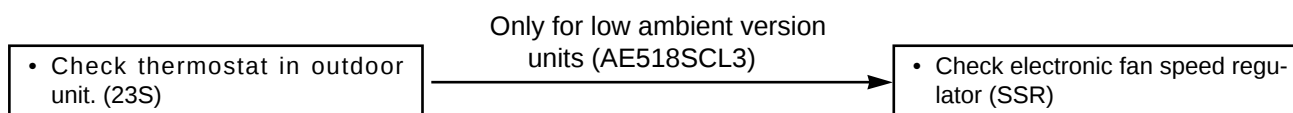
a) Single phase systems 230V - 1 - 50 Hz



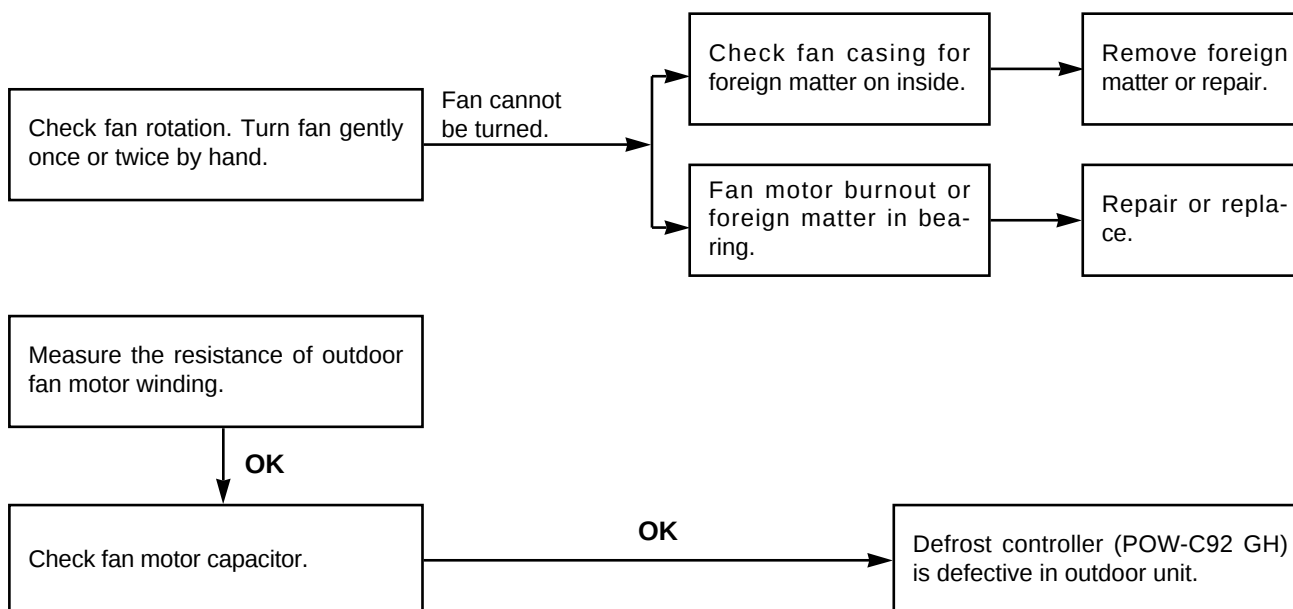
b) Three - phase systems 400V - 3N - 50 Hz



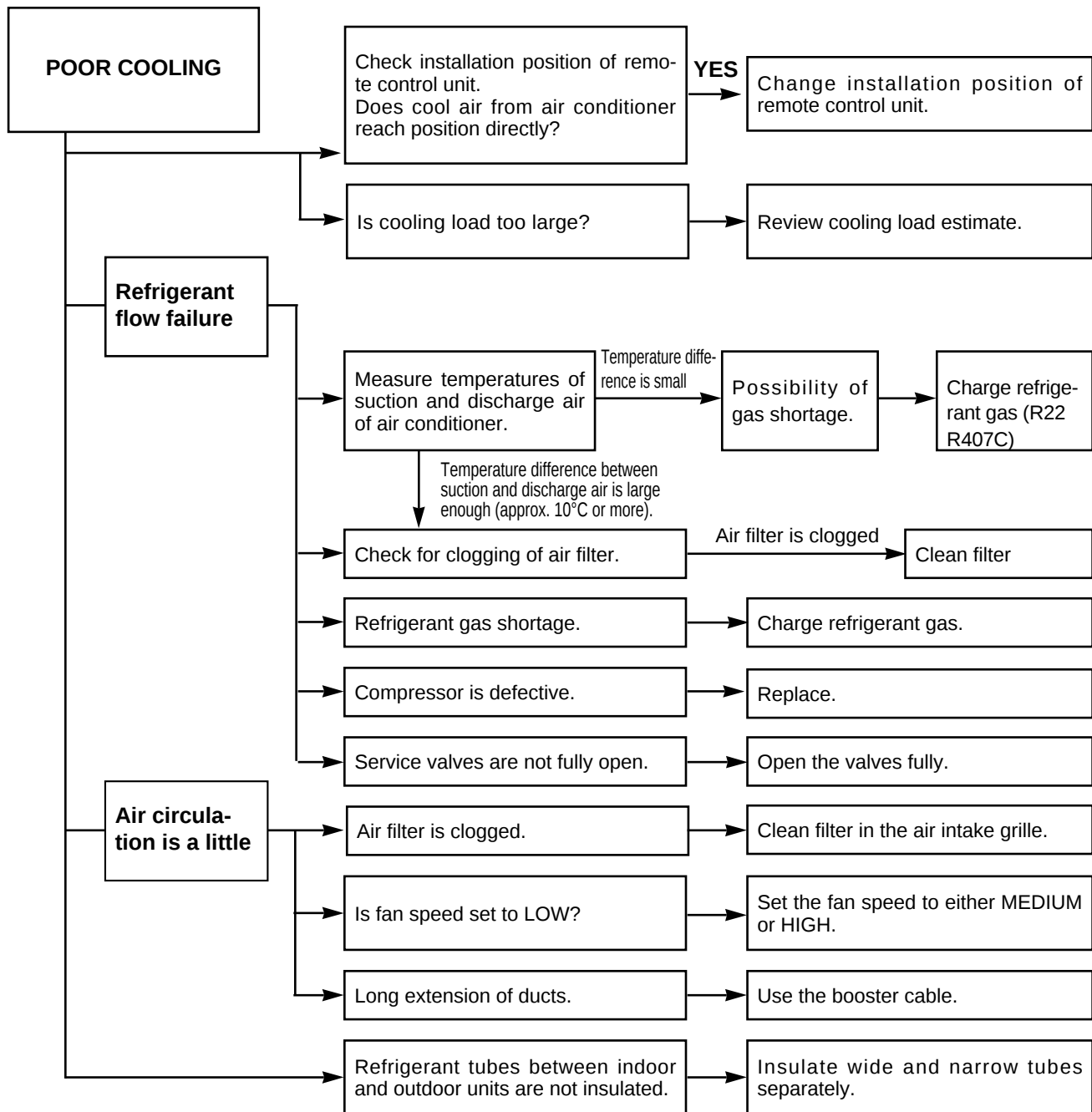
1) ONLY INDOOR FAN DOES NOT RUN

2) FUNCTION OF OUTDOOR FAN SPEED CONTROL DOES NOT WORK PROPERLY
(only for SAP-C188E5)

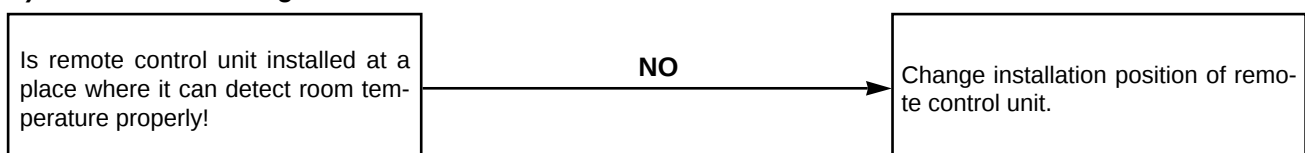
3) ONLY OUTDOOR FAN DOES NOT RUN



a)



b) Excessive cooling



1) CHECK BEFORE AND AFTER “TROUBLESHOOTING”

a) Check power supply wiring.

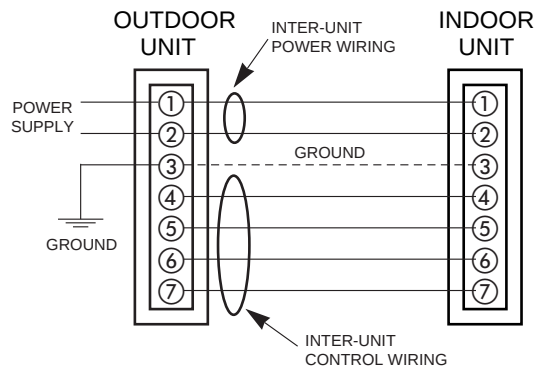
- **WARNING:**
If the following troubleshooting must be done with power being supplied, be careful about any uninsulated live part that can cause **ELECTRIC SHOCK**.
- Check that power supply wires are correctly connected to terminals:
Single-phase system – No. 1 and No. 2 on the terminal plate in the outdoor unit.
Three-phase system – A D R 5 1 8 H W / A E 5 1 8 S H - No. 1, 2, on the terminal plate in the outdoor unit.
– ADR518HW / AE/AER518SH3 - No. 8, 9, 10 and 11 on terminal plate in the outdoor unit.

b) Check inter-unit wiring.

- Check that inter-unit wiring (both the power wiring and control wiring) is correctly connected to the indoor unit from the outdoor unit.

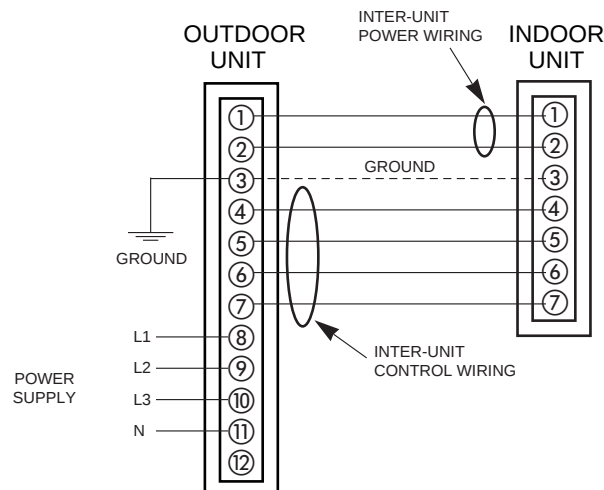
ADR518HW - AE518SH

POWER SUPPLY
50 Hz - Single-phase
220/230/240 V



ADR518HW - AE/AER518SH3

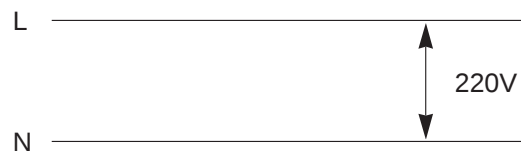
POWER SUPPLY
50 Hz - 3-phase 400V
4 Wires



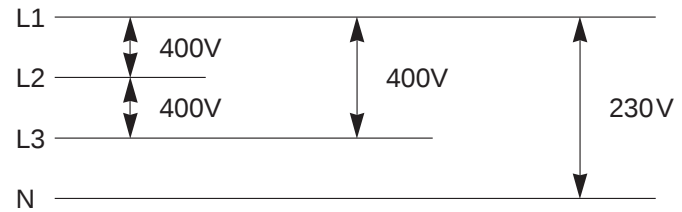
(c) Check power supply

- Check that voltage is in specified range ($\pm 10\%$ of the rating).
- Check that power is being supplied

Single-phase systems



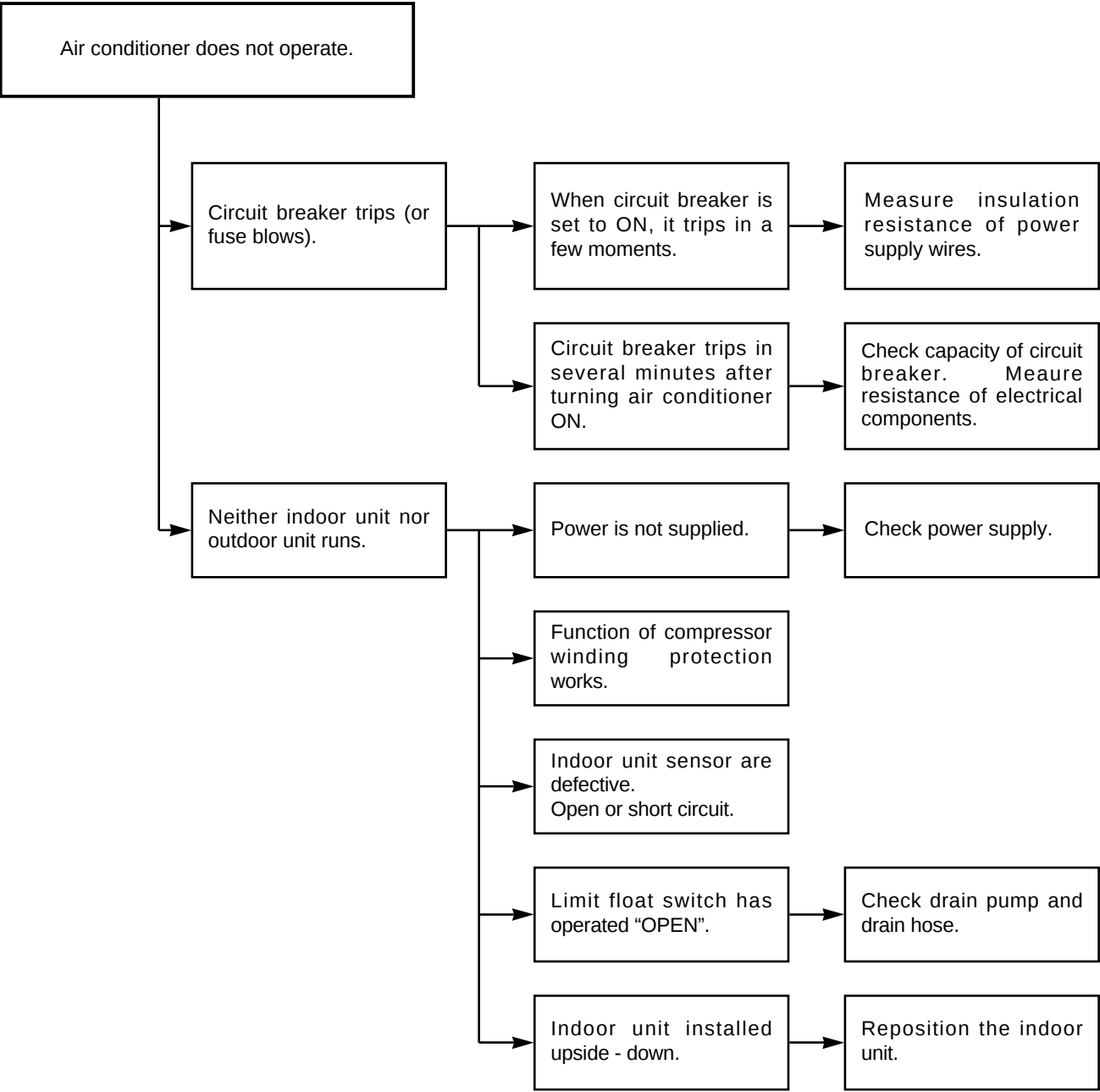
Three-phase systems



(d) Check lead wires and connectors in indoor and outdoor units.

- Check that coating of lead wires is not damaged.
- Check that lead wires and connectors are connected firmly.
- Check that wiring is correct.

2) SYSTEMATIC CHART OF “TROUBLESHOOTING”

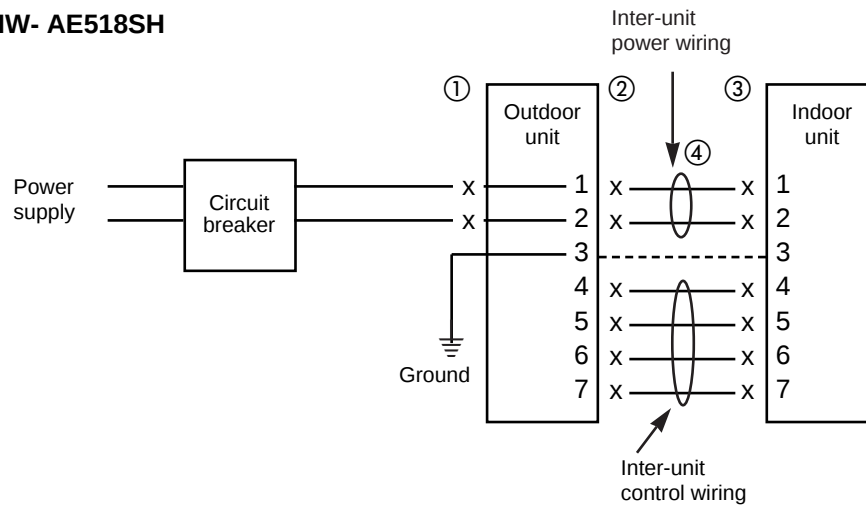


3) AIR CONDITIONER DOES NOT OPERATE

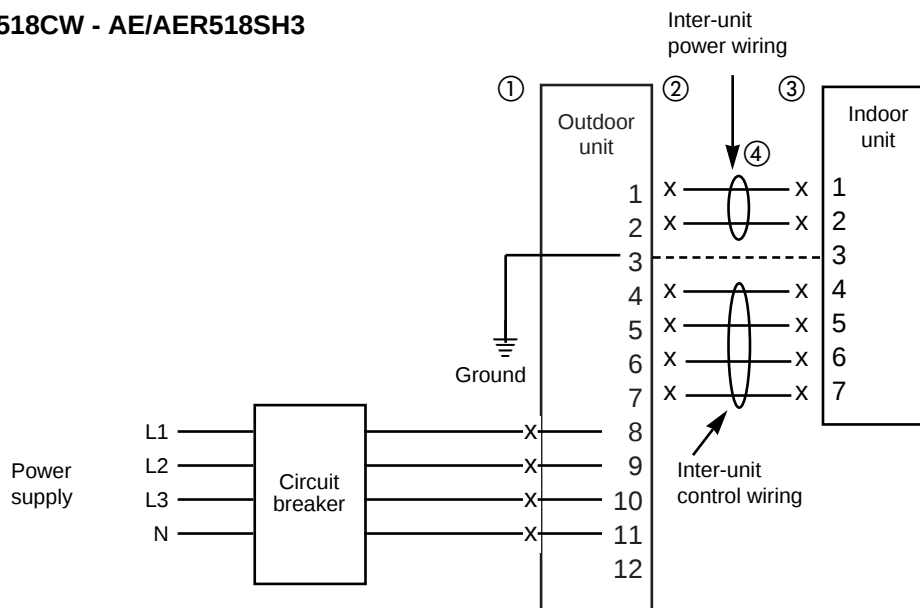
(a) Circuit breaker trips (or fuse blows)

- When circuit breaker is set to ON, it trips in a few moments. (Resetting is not possible).
- Measure insulation resistance there is a possibility of ground fault. If resistance value is $1M\Omega$ or less, insulation is defective.

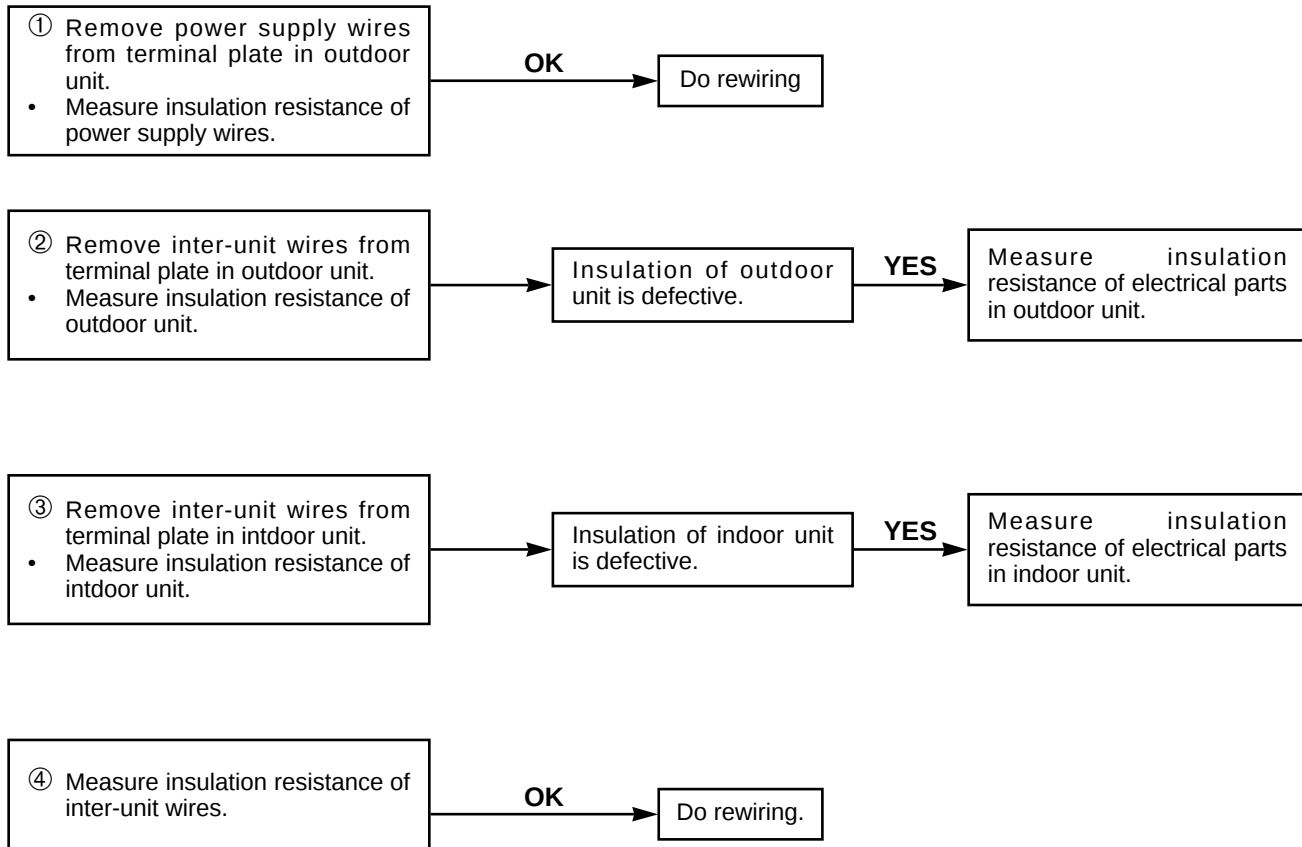
ADR518HW- AE518SH



ADR518CW - AE/AER518SH3

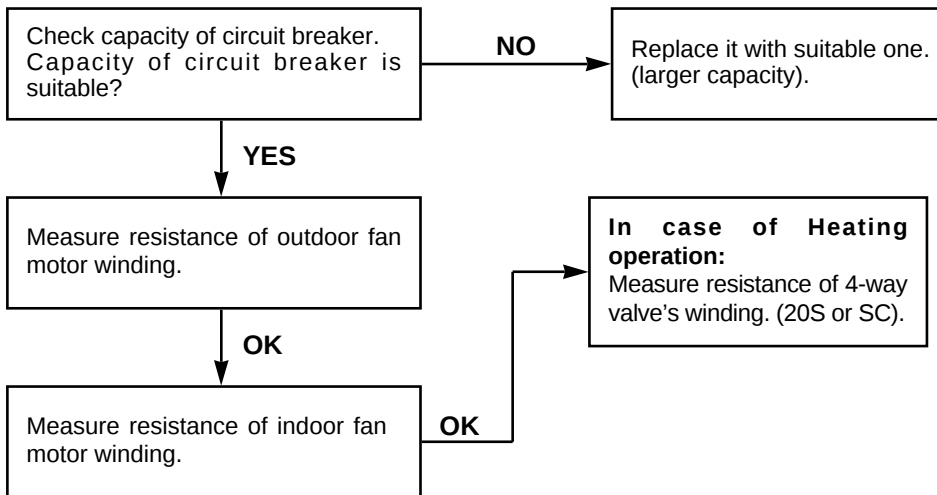


- Set circuit breaker to OFF.

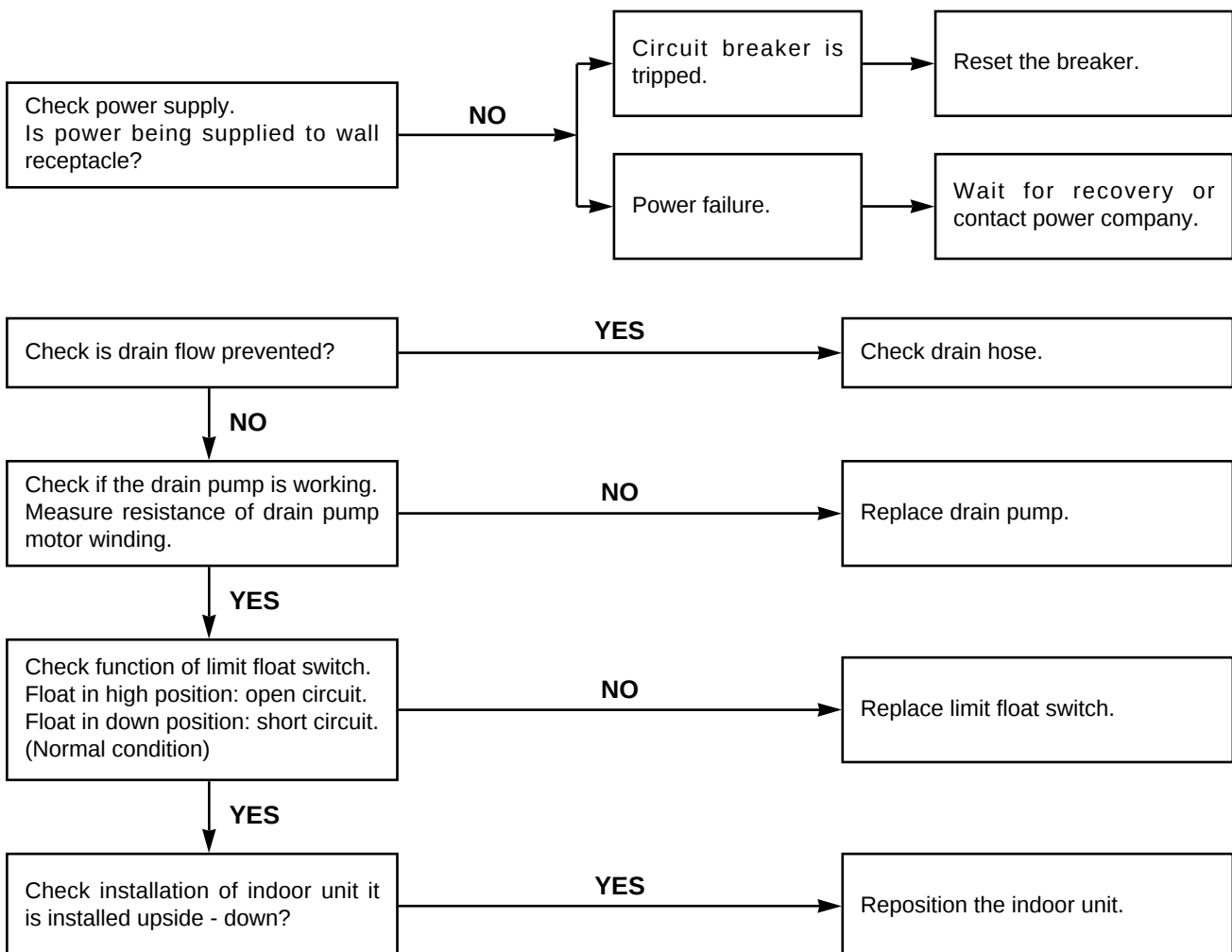


(b) Circuit breaker trips in several minutes after turning air conditioner ON.

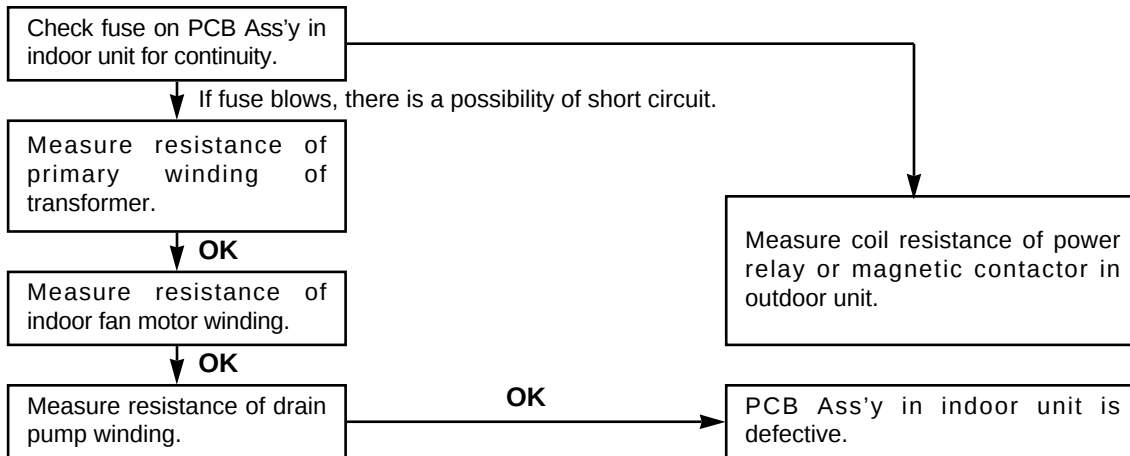
- There is a possibility of short circuit.



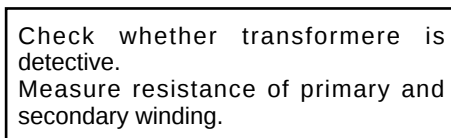
(c) Neither indoor unit nor outdoor unit runs (leds of remote control unit are light)



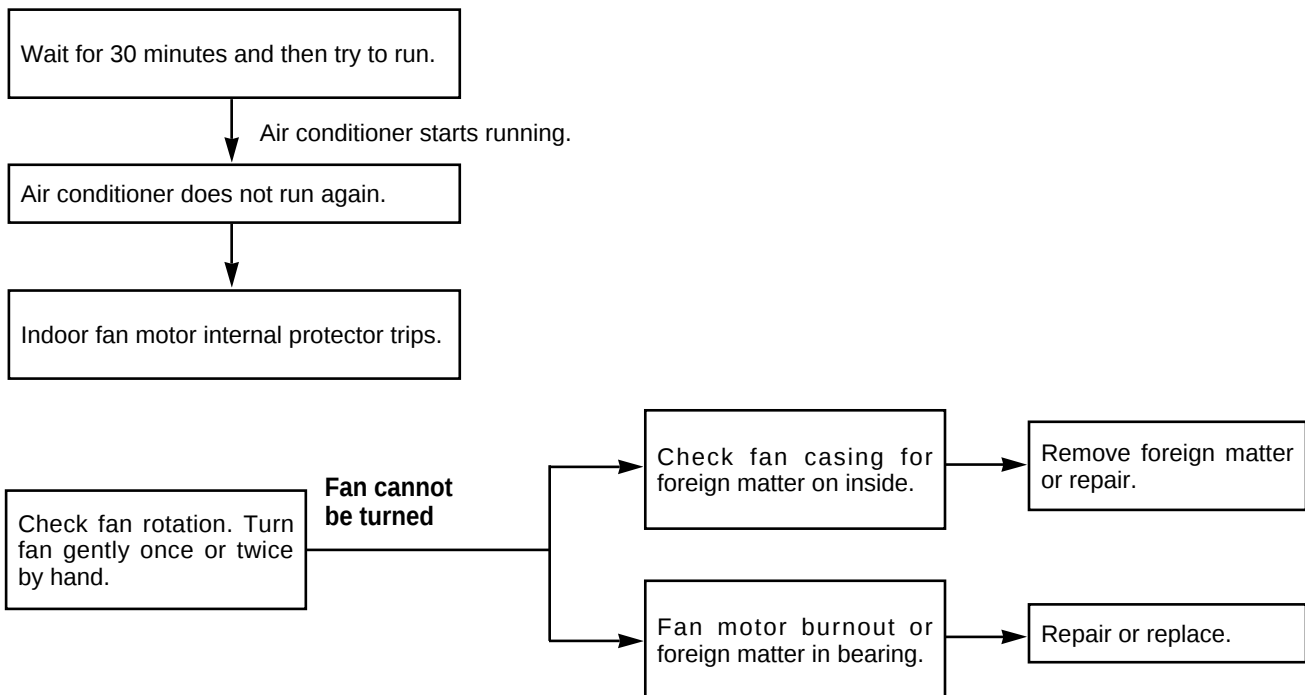
(d) Check fuse on PCB Ass'y in indoor unit



e) Check transformer in indoor unit



f) Check indoor fan motor protector



4) ONLY OUTDOOR UNIT DOES NOT RUN

a) Outdoor unit does not run when air conditioner is in following conditions.

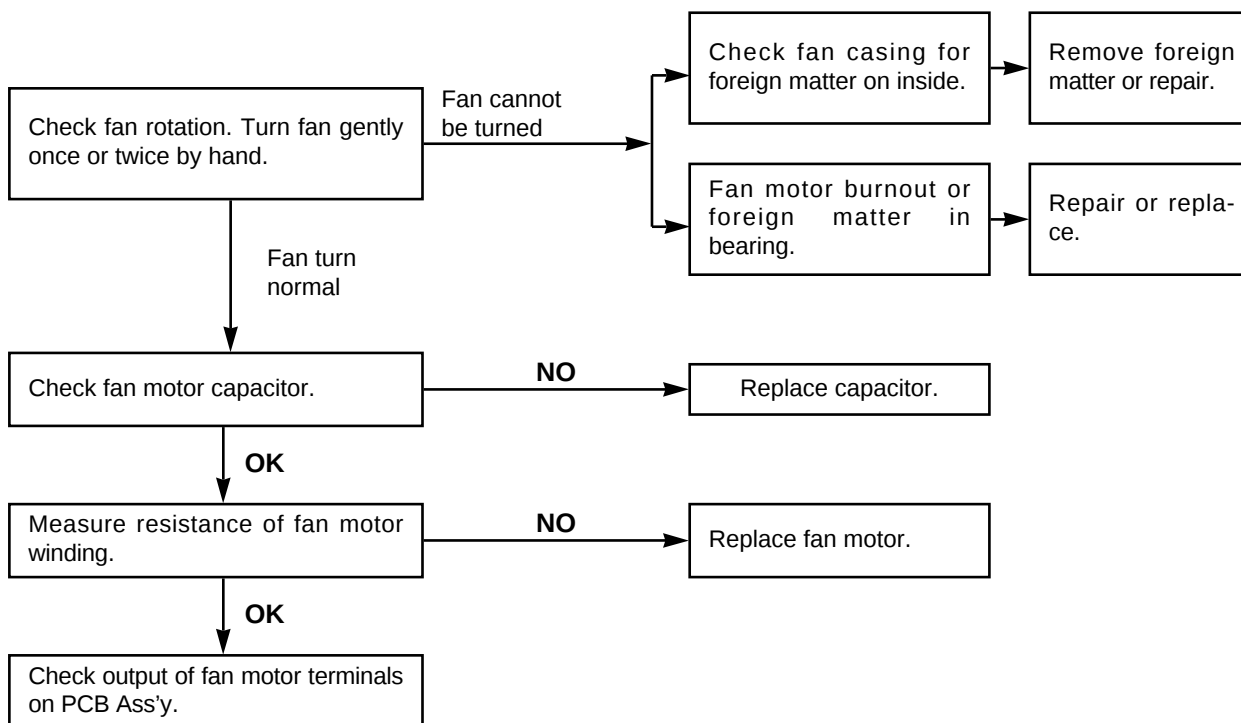
- During thermo OFF.
- During freeze prevention (for at least 6 minutes).
- During drain pump works (for at least 12 minutes).

b) PCB Ass'y in indoor unit is defective.

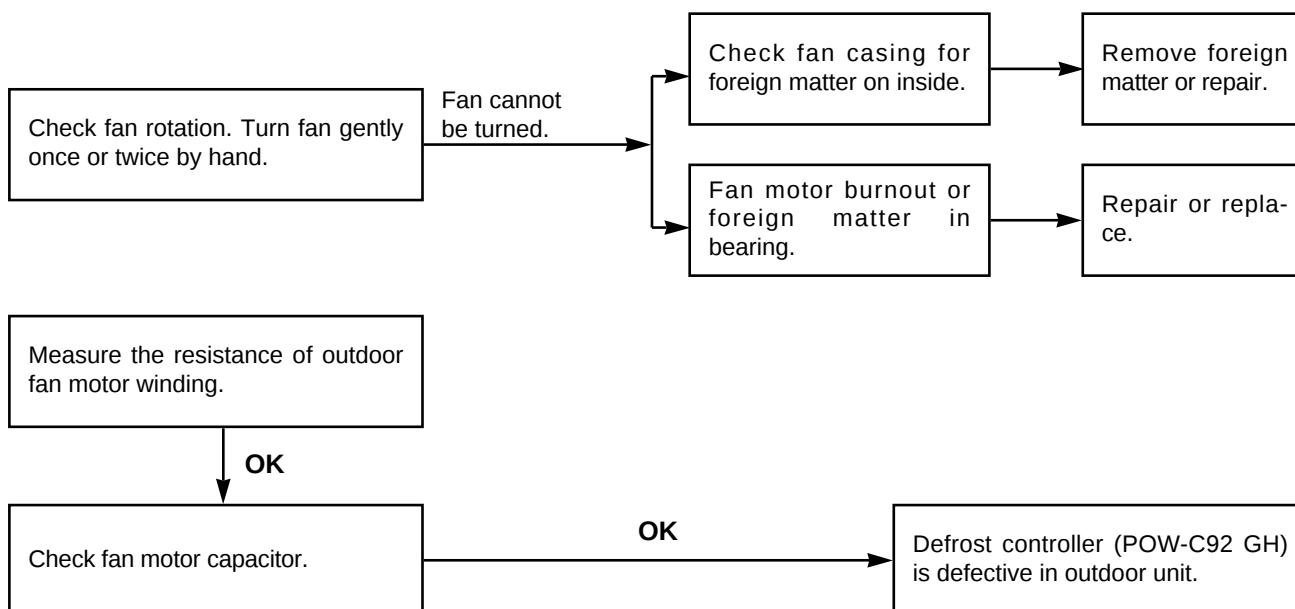


SOME PARTS OF AIR CONDITIONER DO NOT OPERATE

1) ONLY INDOOR FAN DOES NOT RUN

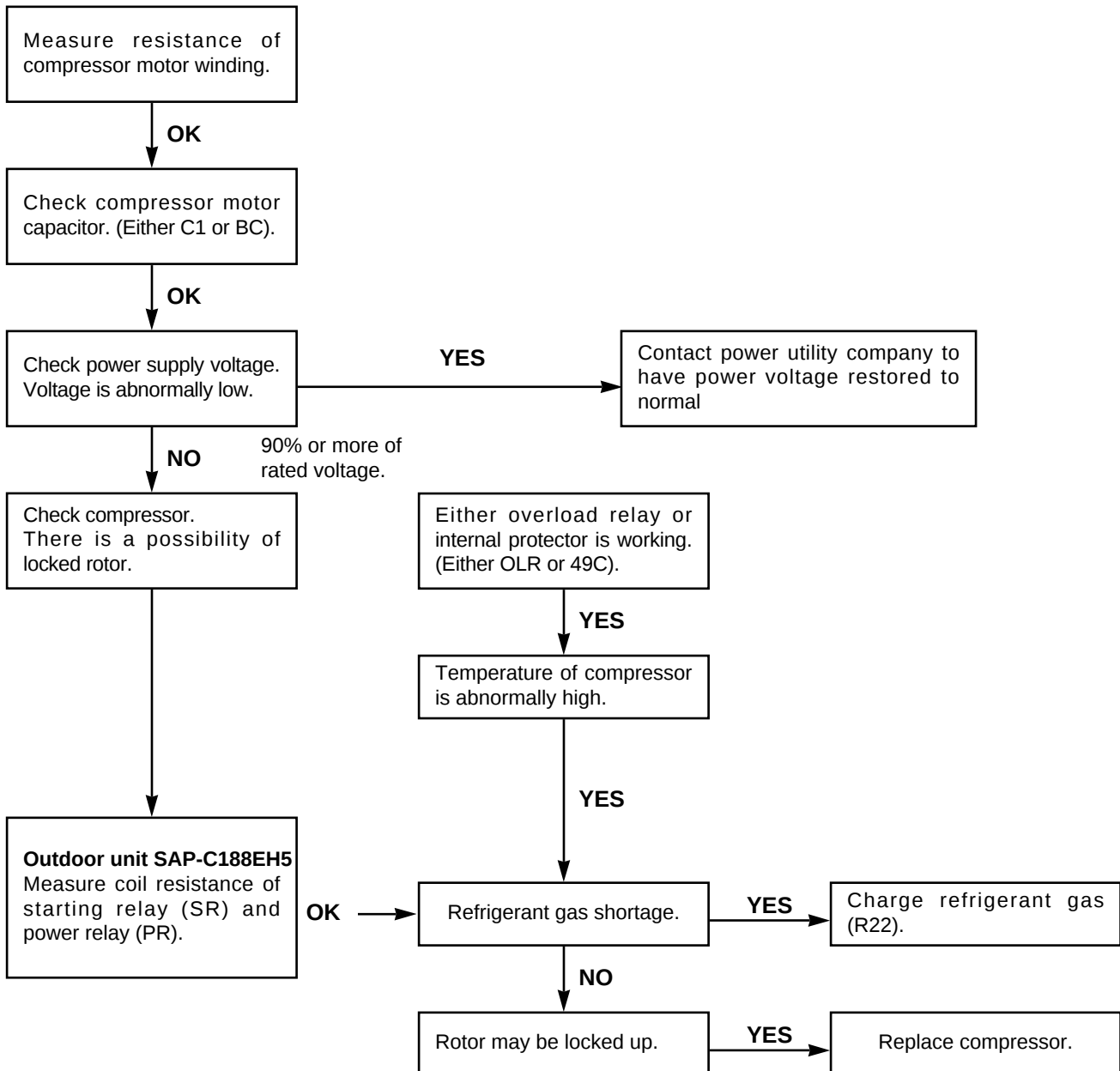


2) ONLY OUTDOOR FAN DOES NOT RUN

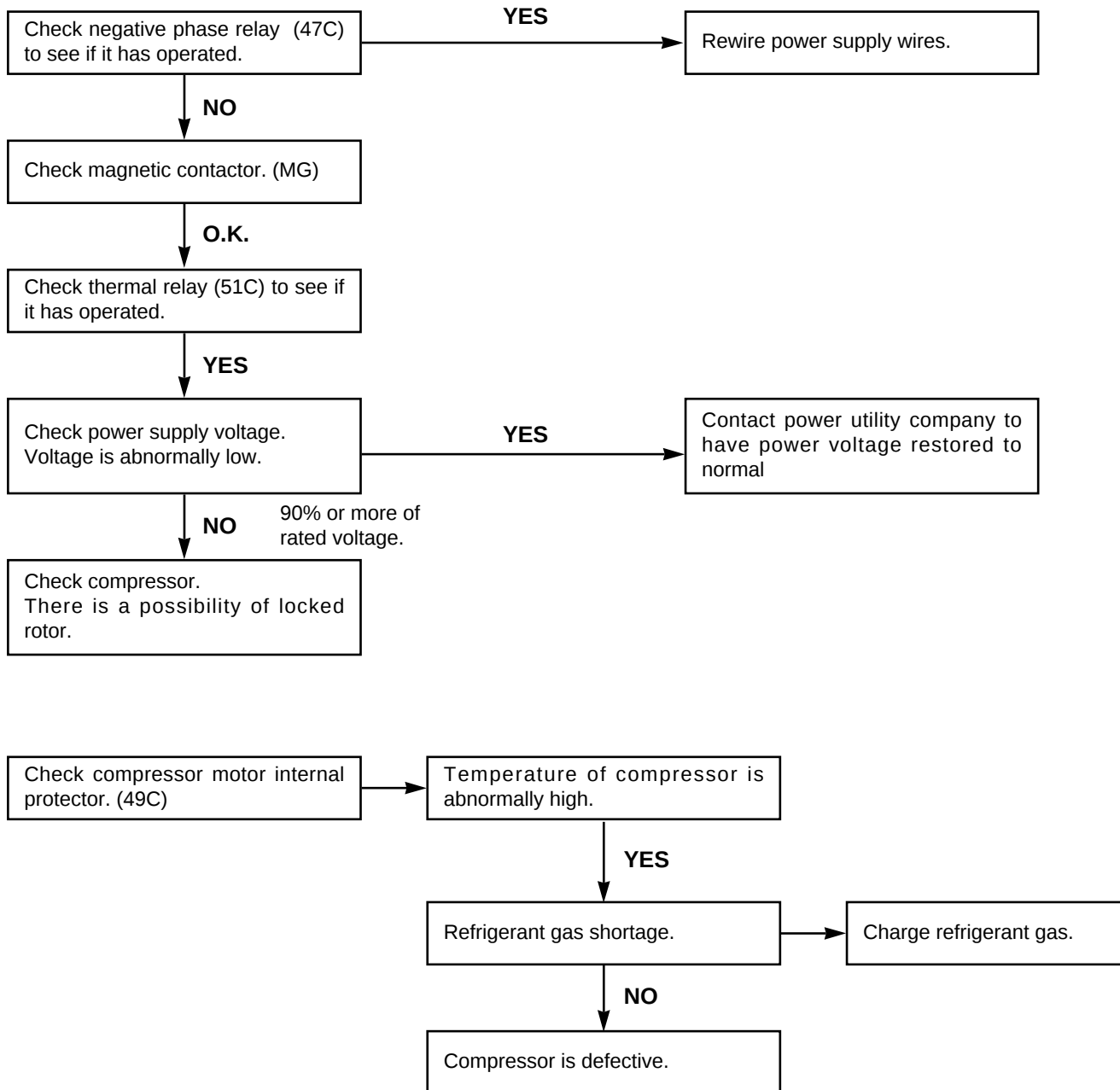


3) ONLY COMPRESSOR DOES NOT RUN

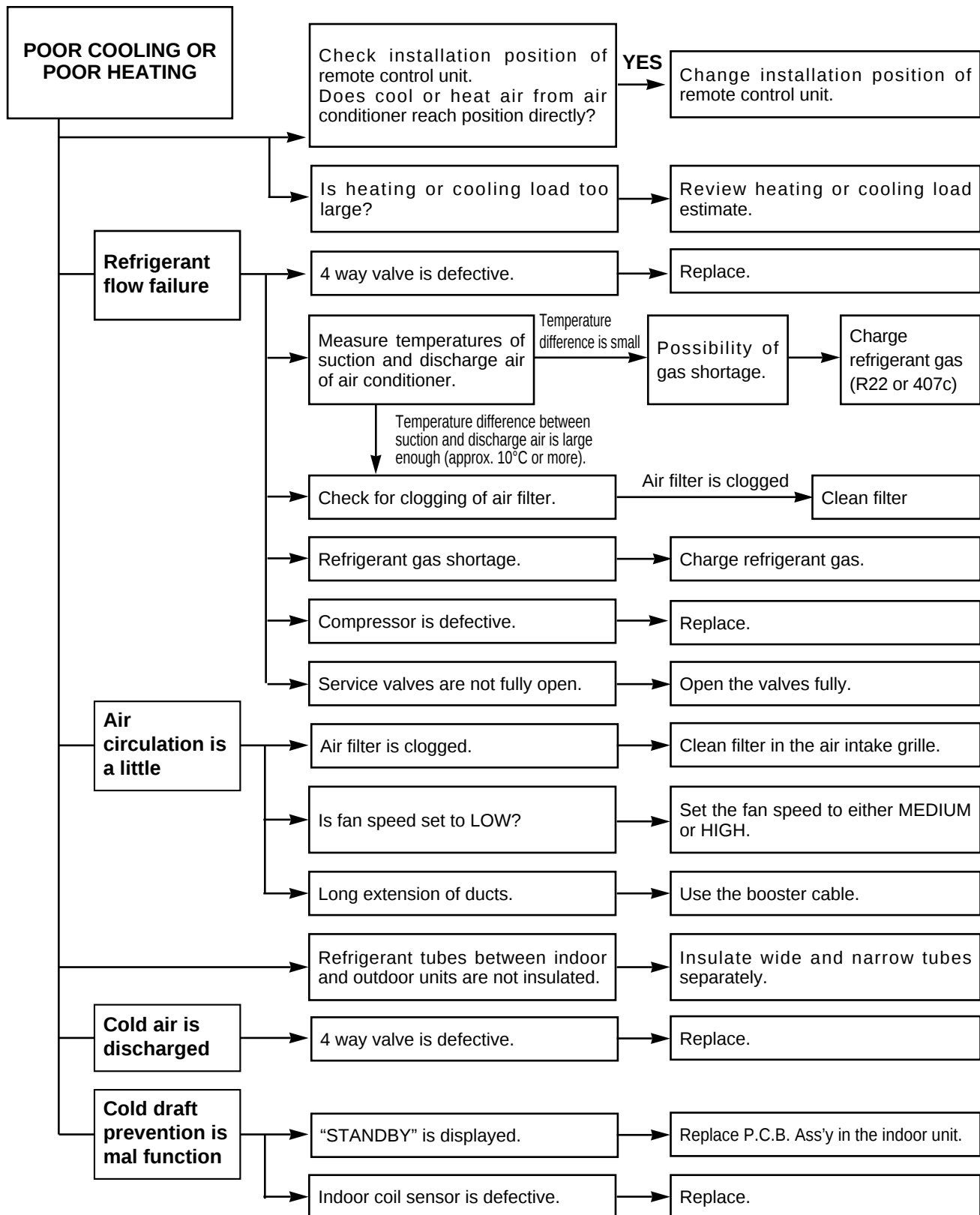
a) Single phase systems 230V - 1 - 50 Hz



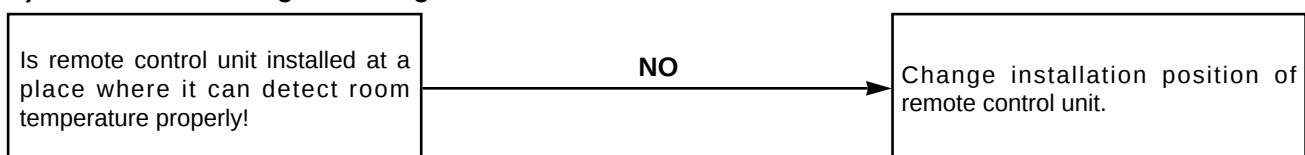
b) Three-phase systems 400V - 3N - 50 Hz



a)



b) Excessive cooling or heating





IF A SENSOR IS DEFECTIVE

Indoor coil temp. thermistor (TH) is defective.

Open

When thermistor opens, the air conditioner will be in the following conditions as the controller tries to detect extremely low indoor coil temperature.

IN COOLING MODE - Function of freeze prevention continues to work. That is the controller turns both compressor and outdoor fan motor periodically ON and OFF for several minutes.

Short

When thermistor is short, the air conditioner will be in the following conditions as the controller tries to detect extremely high indoor coil temperature.

IN COOLING MODE - Function of freeze prevention will not work even when the frost builds up on indoor heat exchanger coil.

Room temp. thermistors are defective (BTH and RTH).

Open

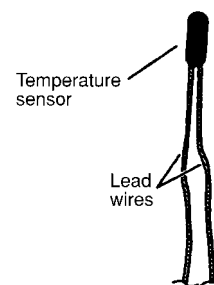
When thermistor opens, the air conditioner will be in the following conditions as the controller tries to detect extremely low room temperature.

IN COOLING MODE - The air conditioner soon stops and will not start again. (Thermo. OFF).
Neither outdoor fan nor compressor runs.

Short

When thermistor is short, the air conditioner will be in the following conditions as the controller tries to detect extremely high room temperature.

IN COOLING MODE - The air conditioner continues to operate. (Thermo. ON).
Both the outdoor fan and compressor do not stop.
As a result, the room becomes too cold.



Thermistor Structure

NOTE

Definition of Open or Short Circuit of Sensor (Thermistor)

- | | |
|-------|--|
| OPEN | - A lead wire is broken or disconnected or the circuit inside the temperature sensor is open. |
| SHORT | - The protective cover of a lead wire has been damaged, and the exposed wire is touching another metal part, or both lead wires have become exposed and are touching each other. Alternatively, the circuit inside the temperature sensor is closed. |

1) Measurement of Insulation Resistance

- The insulation is in good condition if the resistance exceeds 1 MΩ.

(a) Power Supply Wires

Clamp the earthed wire of the power supply wires with the lead clip of the insulation resistance tester and measure the resistance by placing a probe on either of the power wires (Fig. 1). Then measure the resistance between the earthed wire and the other power wires (Fig. 1).

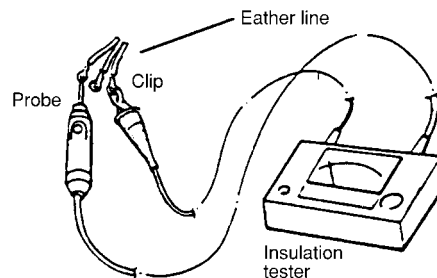


Fig. 1

(b) Indoor Unit

Clamp an aluminium plate fin or copper tube with the lead clip of the insulation resistance tester and measure the resistance by placing a probe on ①, and then ② on the terminal plate (Fig. 2).

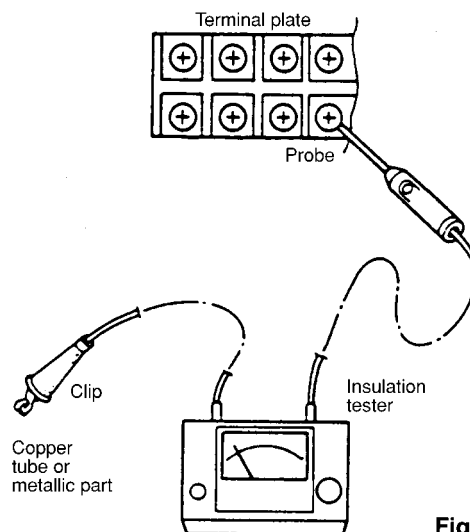


Fig. 2

(c) Outdoor Unit

Clamp a metallic part of the unit with the lead clip of the insulation resistance tester and measure the resistance by placing a probe on ①, and then ② on the terminal plate (Fig. 2).

(d) Measurement of Insulation Resistance for Electrical Parts

Disconnect the lead wires of the desired electric part from terminal plate, PCB Ass'y, capacitor, etc. Similarly disconnect the connector. Then measure the insulation resistance. (Fig. 1 to 4). Refer to Electric Wiring Diagram.

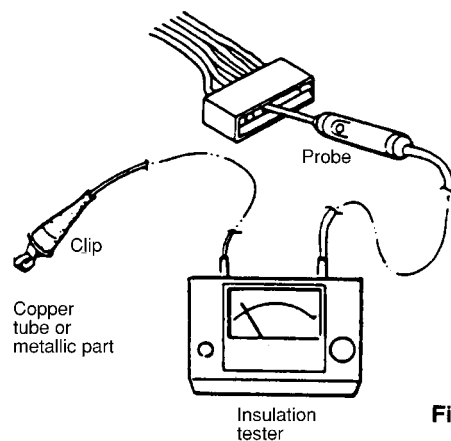


Fig. 3

If the probe cannot enter the poles because the hole is too narrow then use a probe with a thinner pin.

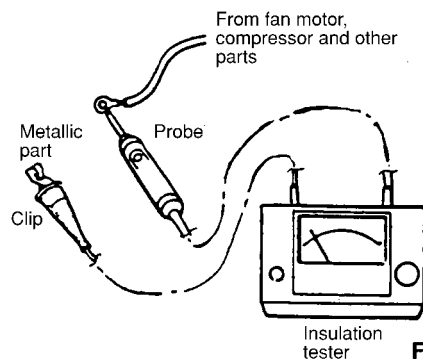


Fig. 4

2) Checking Continuity of Fuse on PCB Ass'y

- Remove PCB Ass'y from electrical component box. Then pull out the fuse from PCB Ass'y (Fig. 5).

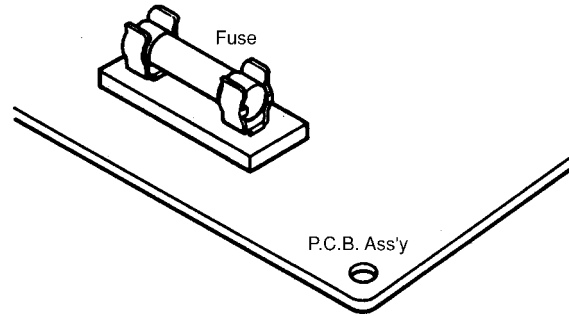


Fig. 5

- Check continuity of fuse by the multimeter (Fig. 6).

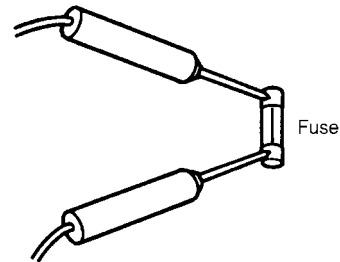


Fig. 6

3) Checking Motor Capacitor

Remove the lead wires from the capacitor terminals, and then place a probe on the capacitor terminals as shown in Fig. 7. Observe the deflection of the pointer, setting the resistance measuring range of the multimeter to the maximum value. The capacitor is "good" if the pointer bounces to a great extent and then gradually returns to its original position. The range of deflection and deflection time differ according to capacity of the capacitor.

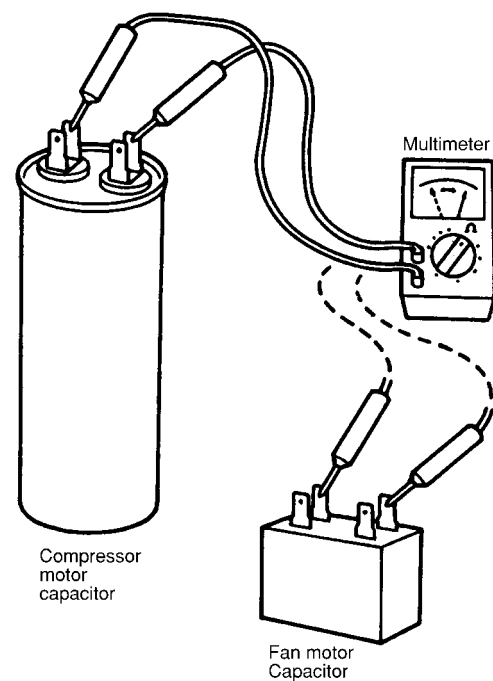


Fig. 7

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www.argoclima.it
