DAIKIN

ED 42 - 019A

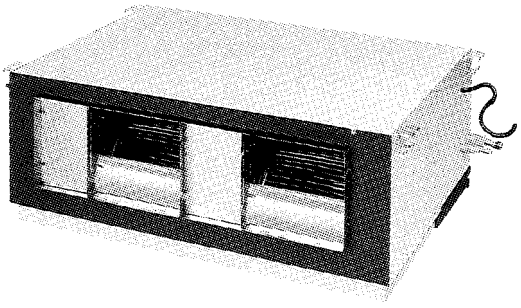
Engineering Data

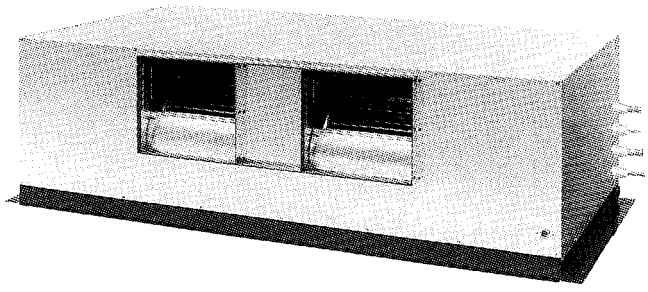
Packaged Air Conditioners
Duct Connection Type

(High Static Pressure Application)

FD-K Series

— Cooling Only —





DAIKIN INDUSTRIES, LTD.

Duct Connection Type High Static Pressure Application FD-K Series

1. Power Supply and Nomenclature

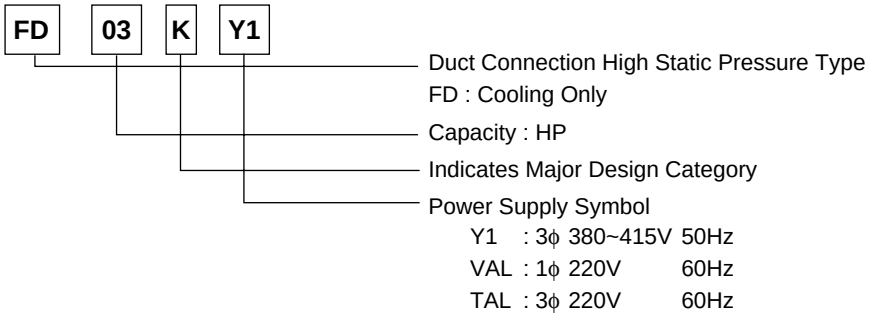
1.1 Power Supply

Symbol	Indoor Unit	Outdoor Unit	Power Supply
Y1	FD03KY1	R71FUY1	3ϕ 380~415V 50Hz (4 wires)
	FD04KY1	R100FUY1	
	FD05KY1	R125FUY1	
	FD06KY1	RU06KY1	
	FD08KY1	RU08KY1	
	FD08KY1	RU08KUY1 *	
	FD10KY1	RU10KY1	
	FD10KY1	RU10KUY1 *	
	FD15KY1	RU08KY1×2	
	FD15KY1	RU08KUY1×2 *	
	FD20KY1	RU10KY1×2	
	FD20KY1	RU10KUY1×2 *	
VAL	FD03KVAL	R71FUVAL	1ϕ 220V 60Hz
	FD04KVAL	R100FUVAL	
TAL	FD05KTAL	R125FUTAL	3ϕ 220V 60Hz
	FD06KTAL	RU06KTAL	
	FD08KTAL	RU08KTAL	
	FD08KTAL	RU08KUTAL *	
	FD10KTAL	RU10KTAL	
	FD10KTAL	RU10KUTAL *	
	FD15KTAL	RU08KTAL×2	
	FD15KTAL	RU08KUTAL×2 *	
	FD20KTAL	RU10KTAL×2	
	FD20KTAL	RU10KUTAL×2 *	

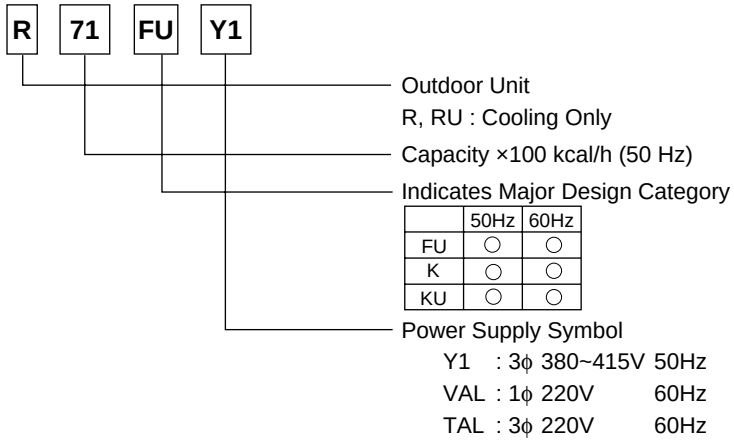
Note: 1. * : New Model or Changed Model
2. Power Supply Intake; Outdoor Unit

1.2 Nomenclature

Indoor Unit



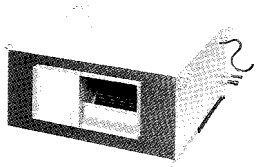
Outdoor Unit



2. External Appearance

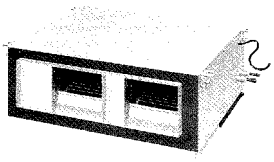
2.1 Indoor Unit

FD03K



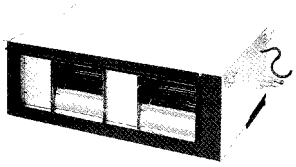
FD04K

FD05K

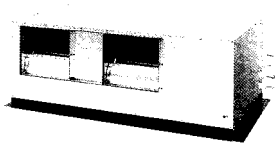


FD06K

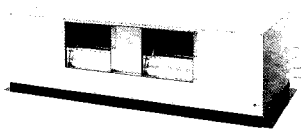
FD08K



FD10K



FD15K

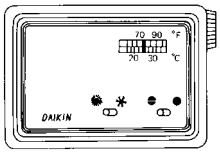


FD20K

2.2 Remote Controller

KRC47-3

KRC47-5



KRC17-2B

2.3 Outdoor Unit

R71FU

R100FU
R125FU

RU06K

RU08K
RU08KU

RU10K
RU10KU

3. Functions

3.1 FD-K Series

Points and Functions	Duct Connection High Static Pressure Type FD-K
Auto Restart	○
Central Remote Control	○ (Adaptor Kit is needed. Refer to P. 90)
PE fin	○
Adjustable External Static Pressure	○ (Required to change the pulley)

○ : Existing Functions

Cautions

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided and choose an outdoor unit with anti-corrosion treatment.

4. Specifications

4.1 50Hz

R-FU Series <50Hz>

Model	Indoor Unit			FD03KY1	FD04KY1	FD05KY1
	Outdoor Unit			R71FUY1	R100FUY1	R125FUY1
∗1 Cooling Capacity (1)/(2)/(3)			kW	8.1 / 7.9 / 6.7	11.0 / 10.8 / 9.5	14.0 / 13.8 / 11.8
			Btu/h	27,800 / 27,000 / 22,900	37,700 / 36,900 / 32,400	47,600 / 46,800 / 40,300
			kcal/h	7,000 / 6,800 / 5,800	9,500 / 9,300 / 8,200	12,000 / 11,800 / 10,100
Indoor Unit				**FD03KY1**	**FD04KY1**	**FD05KY1**
Dimensions		H×W×D	mm	450×650×850	450×900×850	450×900×850
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)		
	Row×Stages×Fin Pitch			2×24×2.0	2×24×2.0	2×24×2.0
	Face Area		m²	0.238	0.370	0.370
Fan	Type			Sirocco Fan		
	Drive			Belt Drive		
	Motor Output		kW	0.4	0.4	0.75
	Air Flow Rate		m³/min	26	30	46
			cfm	918	1,059	1,620
	Ext. Static Pressure		mmH2O	7	9	9
Weight			kg	51	59	72
Piping Connections		Liquid	mm	ϕ 9.5 (Brazing)	ϕ 9.5 (Brazing)	ϕ 9.5 (Brazing)
		Gas	mm	ϕ 15.9 (Brazing)	ϕ 19.1 (Brazing)	ϕ 19.1 (Brazing)
		Drain	mm	FPS3/4B	FPS3/4B	FPS3/4B
Remote Controller		Wired		KRC47-3	KRC47-3	KRC47-3
		Wireless		—	—	—
Outdoor Unit				**R71FUY1**	**R100FUY1**	**R125FUY1**
Color				Ivory		
Dimensions		H×W×D	mm	816×880×370	1,215×880×370	1,215×880×370
Coil	Type			Cross Fin Coil		
	Row×Stages×Fin Pitch			2×36×2.0	2×54×2.0	2×54×2.0
	Face Area		m²	0.653	0.979	0.979
Comp.	Model			H23A35QDBNA	H23A46QDBNA	H23A56QDBNA
	Type			Hermetically Sealed Type		
	Motor Output		kW	3.0	3.8	4.5
Fan	Model			P45J11SM	P45J11SM×2	P45J11SM×2
	Type			Propeller		
	Motor Output		W	50	75+35	75+60
	Air Flow Rate		m³/min	46	80	87
			cfm	1,620	2,824	3,071
Weight			kg	84	109	110
Piping Connections		Liquid	mm	ϕ 9.5 (Flare)	ϕ 9.5 (Flare)	ϕ 9.5 (Flare)
		Gas	mm	ϕ 15.9 (Flare)	ϕ 19.1 (Flare)	ϕ 19.1 (Flare)
		Drain	mm	ϕ 26.0 (Hole)	ϕ 26.0 (Hole)	ϕ 26.0 (Hole)
Safety Devices				Thermal Protector for Outdoor Fan Motor. Internal Pressure Relief Valve (Compressor). Motor Protector (Compressor). Over Current Relay for Indoor Fan Motor.		
Capacity Step			%	100 – 0	100 – 0	100 – 0
Refrigerant Control				Capillary Tube		
Ref. Piping	Standard Length		m	5	5	5
	Max. Length		m	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)
	Max. Height Difference		m	30	30	30
Refrigerant	Model			R22	R22	R22
	Charge		kg	2.1 (Factory Charge for 5m)	2.4 (Factory Charge for 5m)	2.8 (Factory Charge for 5m)
Ref. Oil	Model			SUNISO 3GS		
	Charge		L	1.48	1.63	1.63
Drawing No.				C : 4D004103A		

Note: 1. ∗1 The above data are based on the following conditions.

	Cooling	Piping Length	Hz–Volts	Standard
(1)	Indoor: 27°C(81°F)DB, 19.5°C(67°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	50Hz–380V	—
(2)	Indoor: 27°C(81°F)DB, 19.0°C(66°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	50Hz–380V	—
(3)	Indoor: 29°C(84°F)DB, 19.0°C(66°F)WB Outdoor: 46°C(115°F)DB, 24°C(75°F)WB	7.5m (Horizontal)	50Hz–380V	SSA 385/386

Capacities are gross capacities which do not include a deduction for indoor fan motor heat.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

RU-K Series <50Hz>

Model	Indoor Unit			FD06KY1	FD08KY1	FD10KY1	FD15KY1	FD20KY1
	Outdoor Unit			RU06KY1	RU08KY1	RU10KY1	RU08KY1×2	RU10KY1×2
∗1 Cooling Capacity (1)/(2)/(3)			kW	17.4 / 17.2 / 15.0	24.3 / 24.0 / 21.6	29.7 / 29.2 / 26.3	48.6 / 47.9 / 43.2	59.3 / 58.4 / 42.7
			Btu/h	59,500 / 58,800 / 51,200	83,000 / 81,800 / 73,700	101,200 / 99,600 / 89,800	166,000 / 163,500 / 147,500	202,400 / 199,400 / 145,800
			kcal/h	15,000 / 14,800 / 12,900	20,900 / 20,600 / 18,600	25,500 / 25,100 / 22,600	41,800 / 41,200 / 37,200	51,000 / 50,200 / 36,700
Indoor Unit				**FD06KY1**	**FD08KY1**	**FD10KY1**	**FD15KY1**	**FD20KY1**
Dimensions		H×W×D	mm	450×1,130×850	500×1,130×850	500×1,330×850	625×1,620×850	625×1,980×850
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)				
	Row×Stages×Fin Pitch			2×24×2.0	3×22×2.0	3×22×2.0	3×26×2.0	3×26×2.0
	Face Area		m²	0.491	0.443	0.540	0.784	0.990
Fan	Type			Sirocco Fan				
	Drive			Belt Drive				
	Motor Output		kW	0.75	1.5	1.5	2.2	3.7
	Air Flow Rate		m³/min	52	68	83	136	166
			cfm	1,836	2,400	2,930	4,800	5,860
	Ext. Static Pressure		mmH2O	9	10	10	15	15
Weight			kg	79	93	104	161	187
Piping Connections		Liquid	mm	ϕ 9.5 (Brazing)	ϕ 12.7 (Brazing)	ϕ 15.9 (Brazing)	2× ϕ 12.7 (Brazing)	2× ϕ 15.9 (Brazing)
		Gas	mm	ϕ 19.1 (Brazing)	ϕ 25.4 (Brazing)	ϕ 31.8 (Brazing)	2× ϕ 25.4 (Brazing)	2× ϕ 31.8 (Brazing)
		Drain	mm	FPS3/4B	FPS3/4B	FPS3/4B	FPS1B	FPS1B
Remote Controller		Wired		KRC47-3	KRC47-3	KRC47-3	KRC17-2B | KRC47-3	KRC17-2B | KRC47-3
		Wireless		—	—	—	—	—
Outdoor Unit				**RU06KY1**	**RU08KY1**	**RU10KY1**	**RU08KY1×2**	**RU10KY1×2**
Color				Ivory White				
Dimensions		H×W×D	mm	1,345×880×320	1,220×1,280×690	1,440×1,280×690	2×(1,220×1,280×690)	2×(1,440×1,280×690)
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)				
	Row×Stages×Fin Pitch			2×60×2.0	2×40×2.0	2×50×2.0	2×(2×40×2.0)	2×(2×50×2.0)
	Face Area		m²	1.16	1.57	1.97	2×1.57	2×1.97
Comp.	Model			JT200B-YE	JT265DYE-P1	JT335DYE-P1	2×(JT265DYE-P1)	2×(JT335DYE-P1)
	Type			Hermetically Sealed Scroll Type				
	Motor Output		kW	4.5	7.5	9.0	2×7.5	2×9.0
Fan	Model			P45J11SM	P52H11S	P52H11S	2×P52H11S	2×P52H11S
	Type			Propeller				
	Motor Output		W	85+65	230+190	230+190	2×(230+190)	2×(230+190)
	Air Flow Rate		m³/min	108	150	175	2×150	2×175
			cfm	3,812	5,295	6,177	2×5,295	2×6,177
Weight			kg	112	177	190	2×177	2×190
Piping Connections		Liquid	mm	ϕ 9.5 (Flare)	ϕ 12.7 (Brazing)	ϕ 15.9 (Brazing)	2× ϕ 12.7 (Brazing)	2× ϕ 15.9 (Brazing)
		Gas	mm	ϕ 19.1 (Flare)	ϕ 25.4 (Brazing)	ϕ 31.8 (Brazing)	2× ϕ 25.4 (Brazing)	2× ϕ 31.8 (Brazing)
		Drain	mm	—	—	—	—	—
Safety Devices				Thermal Protector for Compressor and Outdoor Fan Motor. High Pressure Switch. Low Pressure Switch. Over Current Relay (Compressor and Indoor Fan Motor). Reverse Phase Protector. Fuse.	Thermal Protector for Compressor and Outdoor Fan Motor. High Pressure Switch. Over Current Relay (Compressor and Indoor Fan Motor). Reverse Phase Protector. Fuse.			
Capacity Step			%	100 – 0	100 – 0	100 – 0	100 – 50 – 0	100 – 50 – 0
Refrigerant Control				Capillary Tube				
Ref. Piping	Standard Length		m	5	5	5	5	5
	Max. Length		m	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)
	Max. Height Difference		m	30	30	30	30	30
Refrigerant	Model			R22	R22	R22	R22	R22
	Charge		kg	3.0 (Factory Charge for 5m)	5.0 (Field Charge for 5m)	6.1 (Field Charge for 5m)	2×5.0 (Field Charge for 5m)	2×6.1 (Field Charge for 5m)
Ref. Oil	Model			SUNISO 4GSDID-K				
	Charge		L	1.6	4.0	4.0	2×4.0	2×4.0
Drawing No.				C : 4D006819A			C : 4D008677	

Note: 1. ∗1 The above data are based on the following conditions.

	Cooling	Piping Length	Hz–Volts	Standard
(1)	Indoor: 27°C(81°F)DB, 19.5°C(67°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	50Hz–380V	—
(2)	Indoor: 27°C(81°F)DB, 19.0°C(66°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	50Hz–380V	—
(3)	Indoor: 29°C(84°F)DB, 19.0°C(66°F)WB Outdoor: 46°C(115°F)DB, 24°C(75°F)WB	7.5m (Horizontal)	50Hz–380V	SSA 385/386

Capacities are gross capacities which do not include a deduction for indoor fan motor heat.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

RU-KU Series <50Hz>

Model	Indoor Unit			FD08KY1	FD10KY1	FD15KY1	FD20KY1
	Outdoor Unit			RU08KUY1	RU10KUY1	RU08KUY1×2	RU10KUY1×2
∗1 Cooling Capacity (1)/(2)/(3)			kW	24.3 / 24.0 / 21.6	29.7 / 29.2 / 26.3	48.6 / 47.9 / 43.2	59.3 / 58.4 / 42.7
			Btu/h	83,000 / 81,800 / 73,700	101,200 / 99,600 / 89,800	166,000 / 163,500 / 147,500	202,400 / 199,400 / 145,800
			kcal/h	20,900 / 20,600 / 18,600	25,500 / 25,100 / 22,600	41,800 / 41,200 / 37,200	51,000 / 50,200 / 36,700
Indoor Unit				**FD08KY1**	**FD10KY1**	**FD15KY1**	**FD20KY1**
Dimensions		H×W×D	mm	500×1,130×850	500×1,330×850	625×1,620×850	625×1,980×850
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)			
	Row×Stages×Fin Pitch			3×22×2.0	3×22×2.0	3×26×2.0	3×26×2.0
	Face Area		m²	0.443	0.540	0.784	0.990
Fan	Type			Sirocco Fan			
	Drive			Belt Drive			
	Motor Output		kW	1.5	1.5	2.2	3.7
	Air Flow Rate		m³/min	68	83	136	166
			cfm	2,400	2,930	4,800	5,860
	Ext. Static Pressure		mmH2O	10	10	15	15
Weight			kg	93	104	161	187
Piping Connections		Liquid	mm	ϕ 12.7 (Brazing)	ϕ 15.9 (Brazing)	2× ϕ 12.7 (Brazing)	2× ϕ 15.9 (Brazing)
		Gas	mm	ϕ 25.4 (Brazing)	ϕ 31.8 (Brazing)	2× ϕ 25.4 (Brazing)	2× ϕ 31.8 (Brazing)
		Drain	mm	FPS3/4B	FPS3/4B	FPS1B	FPS1B
Remote Controller		Wired		KRC47-3	KRC47-3	KRC17-2B / KRC47-3	KRC17-2B / KRC47-3
		Wireless		—	—	—	—
Outdoor Unit				**RU08KUY1**	**RU10KUY1**	**RU08KUY1×2**	**RU10KUY1×2**
Color				Ivory White			
Dimensions		H×W×D	mm	1,220×1,280×690	1,440×1,280×690	2×(1,220×1,280×690)	2×(1,440×1,280×690)
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)			
	Row×Stages×Fin Pitch			2×40×2.0	2×50×2.0	2×(2×40×2.0)	2×(2×50×2.0)
	Face Area		m²	1.57	1.97	2×1.57	2×1.97
Comp.	Model			JT265D-P1YE	JT335D-P1YE	2×(JT265D-P1YE)	2×(JT335D-P1YE)
	Type			Hermetically Sealed Scroll Type			
	Motor Output		kW	7.5	9.0	2×7.5	2×9.0
Fan	Model			P52H11S	P52H11S	2×P52H11S	2×P52H11S
	Type			Propeller			
	Motor Output		W	230+190	230+190	2×(230+190)	2×(230+190)
	Air Flow Rate		m³/min	150	175	2×150	2×175
			cfm	5,295	6,177	2×5,295	2×6,177
Weight			kg	185	200	2×185	2×200
Piping Connections		Liquid	mm	ϕ 12.7 (Flare)	ϕ 15.9 (Flare)	2× ϕ 12.7 (Flare)	2× ϕ 15.9 (Flare)
		Gas	mm	ϕ 25.4 (Brazing)	ϕ 31.8 (Brazing)	2× ϕ 25.4 (Brazing)	2× ϕ 31.8 (Brazing)
		Drain	mm	—	—	—	—
Safety Devices				Thermal Protector for Compressor and Outdoor Fan Motor. High Pressure Switch. Low Pressure Switch. Over Current Relay (Compressor and Indoor Fan Motor). Reverse Phase Protector. Fuse.			
Capacity Step			%	100 – 0	100 – 0	100 – 50 – 0	100 – 50 – 0
Refrigerant Control				Capillary Tube			
Ref. Piping	Standard Length		m	5	5	5	5
	Max. Length		m	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)
	Max. Height Difference		m	30	30	30	30
Refrigerant	Model			R22	R22	R22	R22
	Charge		kg	5.0 (Factory Charge for 5m)	6.1 (Factory Charge for 5m)	2×5.0 (Factory Charge for 5m)	2×6.1 (Factory Charge for 5m)
Ref. Oil	Model			SUNISO 4GSDID-K			
	Charge		L	4.0	4.0	2×4.0	2×4.0
Drawing No.				C : 4D045868		C : 4D045870	

Note: 1. ∗1 The above data are based on the following conditions.

	Cooling	Piping Length	Hz–Volts	Standard
(1)	Indoor: 27°C(81°F)DB, 19.5°C(67°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	50Hz–380V	—
(2)	Indoor: 27°C(81°F)DB, 19.0°C(66°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	50Hz–380V	—
(3)	Indoor: 29°C(84°F)DB, 19.0°C(66°F)WB Outdoor: 46°C(115°F)DB, 24°C(75°F)WB	7.5m (Horizontal)	50Hz–380V	SSA 385/386

Capacities are gross capacities which do not include a deduction for indoor fan motor heat.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

4.2 60Hz

R-FU Series <60Hz>

Model	Indoor Unit			FD03KVAL	FD04KVAL	FD05KTAL
	Outdoor Unit			R71FUVAL	R100FUVAL	R125FUTAL
∗1 Cooling Capacity (1)/(2)/(3)			kW	8.6 / 8.5 / 7.1	12.1 / 11.9 / 9.0	15.5 / 15.2 / 14.1
			Btu/h	29,400 / 29,000 / 24,200	41,300 / 40,600 / 30,700	52,800 / 52,000 / 48,100
			kcal/h	7,400 / 7,300 / 6,100	10,400 / 10,200 / 7,700	13,300 / 13,100 / 12,100
Indoor Unit				**FD03KVAL**	**FD04KVAL**	**FD05KTAL**
Dimensions		H×W×D	mm	450×650×850	450×900×850	450×900×850
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)		
	Row×Stages×Fin Pitch			2×24×2.0	2×24×2.0	2×24×2.0
	Face Area		m²	0.238	0.370	0.370
Fan	Type			Sirocco Fan		
	Drive			Belt Drive		
	Motor Output		kW	0.4	0.4	0.75
	Air Flow Rate		m³/min	26	30	46
			cfm	917	1,059	1,623
	Ext. Static Pressure		mmH2O	7	9	9
Weight			kg	54	62	72
Piping Connections		Liquid	mm	ϕ 9.5 (Brazing)	ϕ 9.5 (Brazing)	ϕ 9.5 (Brazing)
		Gas	mm	ϕ 15.9 (Brazing)	ϕ 19.1 (Brazing)	ϕ 19.1 (Brazing)
		Drain	mm	FPS3/4B	FPS3/4B	FPS3/4B
Remote Controller		Wired		KRC47-3	KRC47-3	KRC47-3
		Wireless		—	—	—
Outdoor Unit				**R71FUVAL**	**R100FUVAL**	**R125FUTAL**
Color				Ivory		
Dimensions		H×W×D	mm	816×880×370	1,215×880×370	1,215×880×370
Coil	Type			Cross Fin Coil		
	Row×Stages×Fin Pitch			2×36×2.0	2×54×2.0	2×54×2.0
	Face Area		m²	0.653	0.979	0.979
Comp.	Model			H23A35QABCA	H23A46QABCA	H23A62QDBLA
	Type			Hermetically Sealed Type		
	Motor Output		kW	3.4	4.5	6.0
Fan	Model			P45J11SM	P45J11SM×2	P45J11SM×2
	Type			Propeller		
	Motor Output		W	80	90+60	90+80
	Air Flow Rate		m³/min	55	92	98
			cfm	1,941	3,247	3,459
Weight			kg	87	117	110
Piping Connections		Liquid	mm	ϕ 9.5 (Flare)	ϕ 9.5 (Flare)	ϕ 9.5 (Flare)
		Gas	mm	ϕ 15.9 (Flare)	ϕ 19.1 (Flare)	ϕ 19.1 (Flare)
		Drain	mm	ϕ 26.0 (Hole)	ϕ 26.0 (Hole)	ϕ 26.0 (Hole)
Safety Devices				Thermal Protector for Outdoor Fan Motor. Internal Pressure Relief Valve (Compressor). Motor Protector (Compressor). Over Current Relay for Indoor Fan Motor.		
Capacity Step			%	100 – 0	100 – 0	100 – 0
Refrigerant Control				Capillary Tube		
Ref. Piping	Standard Length		m	5	5	5
	Max. Length		m	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)
	Max. Height Difference		m	30	30	30
Refrigerant	Model			R22	R22	R22
	Charge		kg	2.2 (Factory Charge for 5m)	2.9 (Factory Charge for 5m)	3.1 (Factory Charge for 5m)
Ref. Oil	Model			SUNISO 3GS		
	Charge		L	1.48	1.63	1.63
Drawing No.				C : 4D008260A		

Note: 1. ∗1 The above data are based on the following conditions.

	Cooling	Piping Length	Standard
(1)	Indoor: 27°C(81°F)DB, 19.5°C(67°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	—
(2)	Indoor: 27°C(81°F)DB, 19.0°C(66°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	—
(3)	Indoor: 29°C(84°F)DB, 19.0°C(66°F)WB Outdoor: 46°C(115°F)DB, 24°C(75°F)WB	7.5m (Horizontal)	SSA 385/386

Capacities are gross capacities which do not include a deduction for indoor fan motor heat.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

RU-K Series <60Hz>

Model	Indoor Unit			FD06KTAL	FD08KTAL	FD10KTAL	FD15KTAL	FD20KTAL
	Outdoor Unit			RU06KTAL	RU08KTAL	RU10KTAL	RU08KTAL×2	RU10KTAL×2
∗1 Cooling Capacity (1)/(2)/(3)			kW	17.4 / 17.3 / 15.7	24.3 / 24.0 / 21.9	29.7 / 29.2 / 26.7	48.6 / 47.9 / 43.8	59.3 / 58.4 / 53.3
			Btu/h	59,500 / 59,100 / 53,600	83,000 / 81,800 / 74,600	101,200 / 99,600 / 91,300	166,000 / 163,500 / 149,500	202,400 / 199,400 / 182,000
			kcal/h	15,000 / 14,900 / 13,500	20,900 / 20,600 / 18,800	25,500 / 25,100 / 23,000	41,800 / 41,200 / 37,700	51,000 / 50,200 / 45,800
Indoor Unit				**FD06KTAL**	**FD08KTAL**	**FD10KTAL**	**FD15KTAL**	**FD20KTAL**
Dimensions		H×W×D	mm	450×1,130×850	500×1,130×850	500×1,330×850	625×1,620×850	625×1,980×850
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)				
	Row×Stages×Fin Pitch			2×24×2.0	3×22×2.0	3×22×2.0	3×26×2.0	3×26×2.0
	Face Area		m²	0.491	0.443	0.540	0.784	0.990
Fan	Type			Sirocco Fan				
	Drive			Belt Drive				
	Motor Output		kW	0.75	1.5	1.5	2.2	3.7
	Air Flow Rate		m³/min	52	68	83	136	166
			cfm	1,835	2,400	2,930	4,800	5,860
	Ext. Static Pressure		mmH2O	9	10	10	15	15
Weight			kg	79	93	104	161	187
Piping Connections		Liquid	mm	ϕ 9.5 (Brazing)	ϕ 12.7 (Brazing)	ϕ 15.9 (Brazing)	2× ϕ 12.7 (Brazing)	2× ϕ 15.9 (Brazing)
		Gas	mm	ϕ 19.1 (Brazing)	ϕ 25.4 (Brazing)	ϕ 31.8 (Brazing)	2× ϕ 25.4 (Brazing)	2× ϕ 31.8 (Brazing)
		Drain	mm	FPS3/4B	FPS3/4B	FPS3/4B	FPS1B	FPS1B
Remote Controller		Wired		KRC47-3	KRC47-3	KRC47-3	KRC17-2B | KRC47-3	KRC17-2B | KRC47-3
		Wireless		—	—	—	—	—
Outdoor Unit				**RU06KTAL**	**RU08KTAL**	**RU10KTAL**	**RU08KTAL×2**	**RU10KTAL×2**
Color				Ivory White				
Dimensions		H×W×D	mm	1,345×880×320	1,220×1,280×690	1,440×1,280×690	2×(1,220×1,280×690)	2×(1,440×1,280×690)
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)				
	Row×Stages×Fin Pitch			2×26×2.0	2×40×2.0	2×50×2.0	2×(2×40×2.0)	2×(2×50×2.0)
	Face Area		m²	1.16	1.57	1.97	2×1.57	2×1.97
Comp.	Model			JT190B	JT236D-P1	JT300D-P1	2×(JT236D-P1)	2×(JT300D-P1)
	Type			Hermetically Sealed Scroll Type				
	Motor Output		kW	4.5	5.5	7.5	2×5.5	2×7.5
Fan	Model			P45J11SM	P52H11S	P52H11S	2×P52H11S	2×P52H11S
	Type			Propeller				
	Motor Output		W	100+100	230+190	230+190	2×(230+190)	2×(230+190)
	Air Flow Rate		m³/min	108	160	190	2×160	2×190
			cfm	3,812	5,648	6,707	2×5,648	2×6,707
Weight			kg	112	176	188	2×176	2×188
Piping Connections		Liquid	mm	ϕ 9.5 (Flare)	ϕ 12.7 (Brazing)	ϕ 15.9 (Brazing)	2× ϕ 12.7 (Brazing)	2× ϕ 15.9 (Brazing)
		Gas	mm	ϕ 19.1 (Flare)	ϕ 25.4 (Brazing)	ϕ 31.8 (Brazing)	2× ϕ 25.4 (Brazing)	2× ϕ 31.8 (Brazing)
		Drain	mm	—	—	—	—	—
Safety Devices				Thermal Protector for Compressor and Outdoor Fan Motor. High Pressure Switch. Low Pressure Switch. Over Current Relay (Compressor and Indoor Fan Motor). Reverse Phase Protector. Fuse.	Thermal Protector for Compressor and Outdoor Fan Motor. High Pressure Switch. Over Current Relay (Compressor and Indoor Fan Motor). Reverse Phase Protector. Fuse.			
Capacity Step			%	100 – 0	100 – 0	100 – 0	100 – 50 – 0	100 – 50 – 0
Refrigerant Control				Capillary Tube				
Ref. Piping	Standard Length		m	5	5	5	5	5
	Max. Length		m	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)
	Max. Height Difference		m	30	30	30	30	30
Refrigerant	Model			R22	R22	R22	R22	R22
	Charge		kg	3.0 (Factory Charge for 5m)	5.0 (Field Charge for 5m)	6.1 (Field Charge for 5m)	2×5.0 (Field Charge for 5m)	2×6.1 (Field Charge for 5m)
Ref. Oil	Model			SUNISO 4GSDID-K				
	Charge		L	1.6	4.0	4.0	2×4.0	2×4.0
Drawing No.				C : 4D006820A			C : 4D008678	

Note: 1. ∗1 The above data are based on the following conditions.

	Cooling	Piping Length	Standard
(1)	Indoor: 27°C(81°F)DB, 19.5°C(67°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	—
(2)	Indoor: 27°C(81°F)DB, 19.0°C(66°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	—
(3)	Indoor: 29°C(84°F)DB, 19.0°C(66°F)WB Outdoor: 46°C(115°F)DB, 24°C(75°F)WB	7.5m (Horizontal)	SSA 385/386

Capacities are gross capacities which do not include a deduction for indoor fan motor heat.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

RU-KU Series <60Hz>

Model	Indoor Unit			FD08KTAL	FD10KTAL	FD15KTAL	FD20KTAL
	Outdoor Unit			RU08KUTAL	RU10KUTAL	RU08KUTAL×2	RU10KUTAL×2
∗1 Cooling Capacity (1)/(2)/(3)			kW	24.3 / 24.0 / 21.9	29.7 / 29.2 / 26.7	48.6 / 47.9 / 43.8	59.3 / 58.4 / 53.3
			Btu/h	83,000 / 81,800 / 74,600	101,200 / 99,600 / 91,300	166,000 / 163,500 / 149,500	202,400 / 199,400 / 182,000
			kcal/h	20,900 / 20,600 / 18,800	25,500 / 25,100 / 23,000	41,800 / 41,200 / 37,700	51,000 / 50,200 / 45,800
Indoor Unit				**FD08KTAL**	**FD10KTAL**	**FD15KTAL**	**FD20KTAL**
Dimensions		H×W×D	mm	500×1,130×850	500×1,330×850	625×1,620×850	625×1,980×850
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)			
	Row×Stages×Fin Pitch			3×22×2.0	3×22×2.0	3×26×2.0	3×26×2.0
	Face Area		m²	0.443	0.540	0.784	0.990
Fan	Type			Sirocco Fan			
	Drive			Belt Drive			
	Motor Output		kW	1.5	1.5	2.2	3.7
	Air Flow Rate		m³/min	68	83	136	166
			cfm	2,400	2,930	4,800	5,860
	Ext. Static Pressure		mmH2O	10	10	15	15
Weight			kg	93	104	161	187
Piping Connections		Liquid	mm	ϕ 12.7 (Brazing)	ϕ 15.9 (Brazing)	2× ϕ 12.7 (Brazing)	2× ϕ 15.9 (Brazing)
		Gas	mm	ϕ 25.4 (Brazing)	ϕ 31.8 (Brazing)	2× ϕ 25.4 (Brazing)	2× ϕ 31.8 (Brazing)
		Drain	mm	FPS3/4B	FPS3/4B	FPS1B	FPS1B
Remote Controller		Wired		KRC47-3	KRC47-3	KRC17-2B / KRC47-3	KRC17-2B / KRC47-3
		Wireless		—	—	—	—
Outdoor Unit				**RU08KUTAL**	**RU10KUTAL**	**RU08KUTAL×2**	**RU10KUTAL×2**
Color				Ivory White			
Dimensions		H×W×D	mm	1,220×1,280×690	1,440×1,280×690	2×(1,220×1,280×690)	2×(1,440×1,280×690)
Coil	Type			Cross Fin Coil (Waffle Louver Fins and Hi-XA Tubes)			
	Row×Stages×Fin Pitch			2×40×2.0	2×50×2.0	2×(2×40×2.0)	2×(2×50×2.0)
	Face Area		m²	1.57	1.97	2×1.57	2×1.97
Comp.	Model			JT236D-P1	JT300D-P1	2×(JT236D-P1)	2×(JT300D-P1)
	Type			Hermetically Sealed Scroll Type			
	Motor Output		kW	5.5	7.5	2×5.5	2×7.5
Fan	Model			P52H11S	P52H11S	2×P52H11S	2×P52H11S
	Type			Propeller			
	Motor Output		W	230+190	230+190	2×(230+190)	2×(230+190)
	Air Flow Rate		m³/min	160	190	2×160	2×190
			cfm	5,648	6,707	2×5,648	2×6,707
Weight			kg	185	200	2×185	2×200
Piping Connections		Liquid	mm	ϕ 12.7 (Flare)	ϕ 15.9 (Flare)	2× ϕ 12.7 (Flare)	2× ϕ 15.9 (Flare)
		Gas	mm	ϕ 25.4 (Brazing)	ϕ 31.8 (Brazing)	2× ϕ 25.4 (Brazing)	2× ϕ 31.8 (Brazing)
		Drain	mm	—	—	—	—
Safety Devices				Thermal Protector for Compressor and Outdoor Fan Motor. High Pressure Switch. Low Pressure Switch. Over Current Relay (Compressor and Indoor Fan Motor). Reverse Phase Protector. Fuse.			
Capacity Step			%	100 – 0	100 – 0	100 – 50 – 0	100 – 50 – 0
Refrigerant Control				Capillary Tube			
Ref. Piping	Standard Length		m	5	5	5	5
	Max. Length		m	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)	50 (Equivalent Length 70m)
	Max. Height Difference		m	30	30	30	30
Refrigerant	Model			R22	R22	R22	R22
	Charge		kg	5.0 (Factory Charge for 5m)	6.1 (Factory Charge for 5m)	2×5.0 (Factory Charge for 5m)	2×6.1 (Factory Charge for 5m)
Ref. Oil	Model			SUNISO 4GSDID-K			
	Charge		L	4.0	4.0	2×4.0	2×4.0
Drawing No.				C : 4D045869		C : 4D045871	

Note: 1. ∗1 The above data are based on the following conditions.

	Cooling	Piping Length	Standard
(1)	Indoor: 27°C(81°F)DB, 19.5°C(67°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	—
(2)	Indoor: 27°C(81°F)DB, 19.0°C(66°F)WB Outdoor: 35°C(95°F)DB	5m (Horizontal)	—
(3)	Indoor: 29°C(84°F)DB, 19.0°C(66°F)WB Outdoor: 46°C(115°F)DB, 24°C(75°F)WB	7.5m (Horizontal)	SSA 385/386

Capacities are gross capacities which do not include a deduction for indoor fan motor heat.

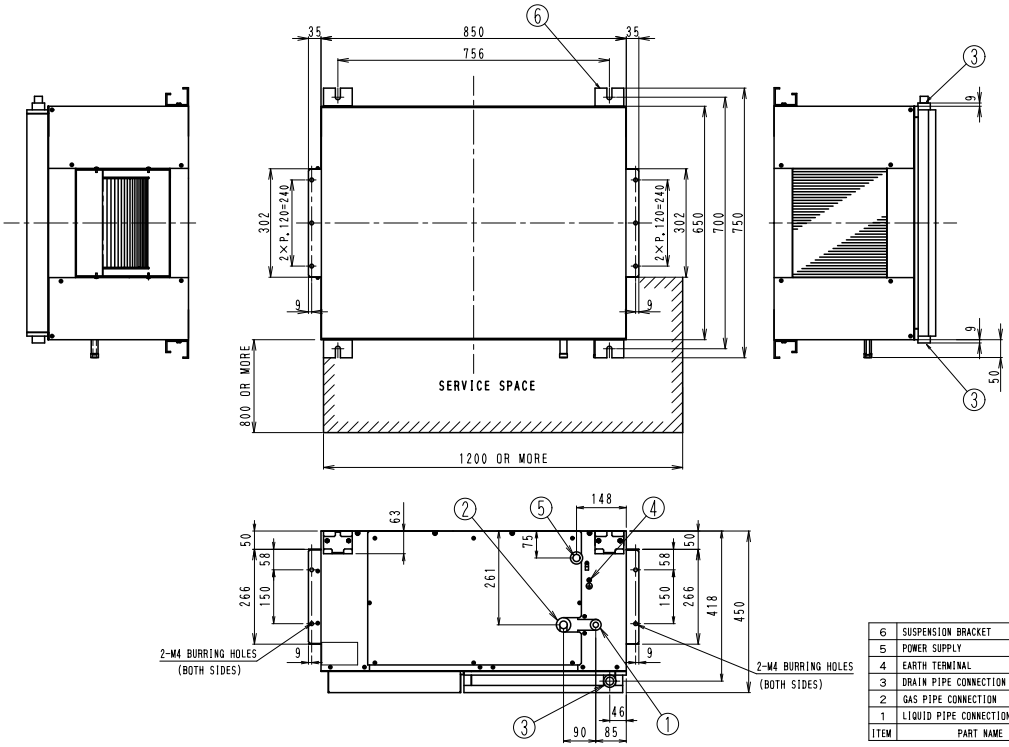
Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

5. Dimensions

5.1 Indoor Unit

FD03K

Unit (mm)

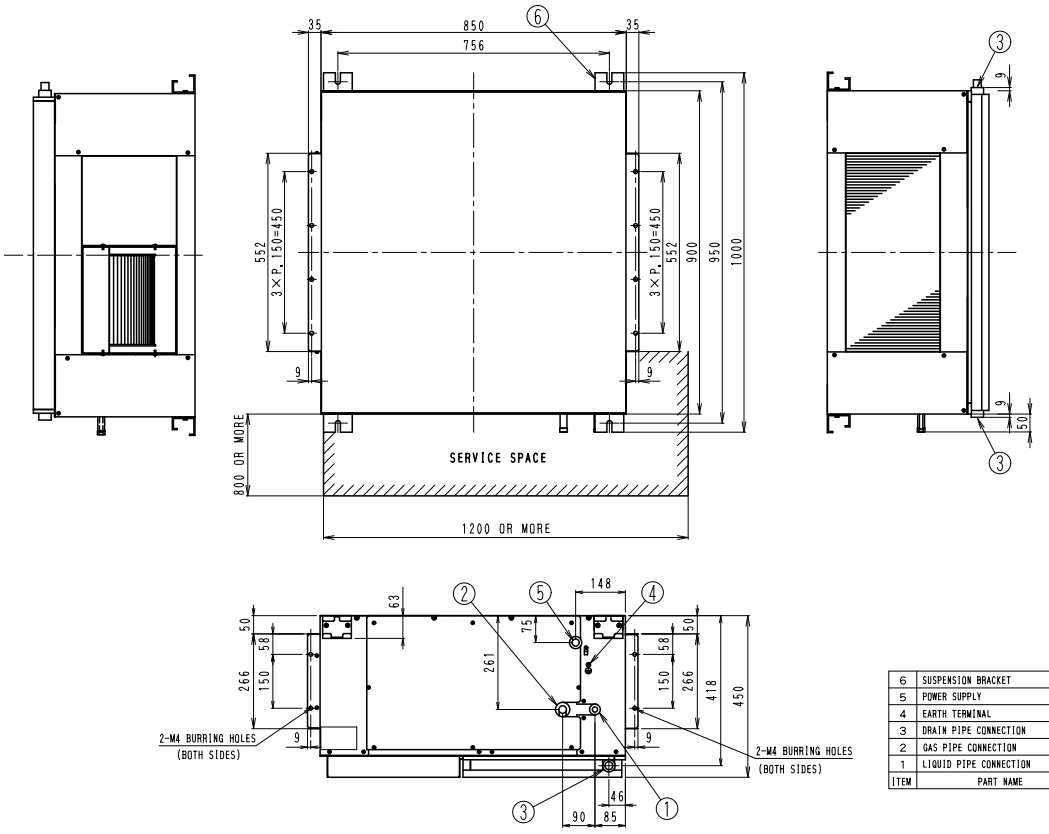


ITEM	PART NAME	REMARK
6	SUSPENSION BRACKET	FOR M10 BOLT
5	POWER SUPPLY	
4	EARTH TERMINAL	M4
3	DRAIN PIPE CONNECTION	PT 3/4 INTERNAL THREAD
2	GAS PIPE CONNECTION	ø15.9
1	LIQUID PIPE CONNECTION	ø9.5

3D004860A

FD04K

Unit (mm)

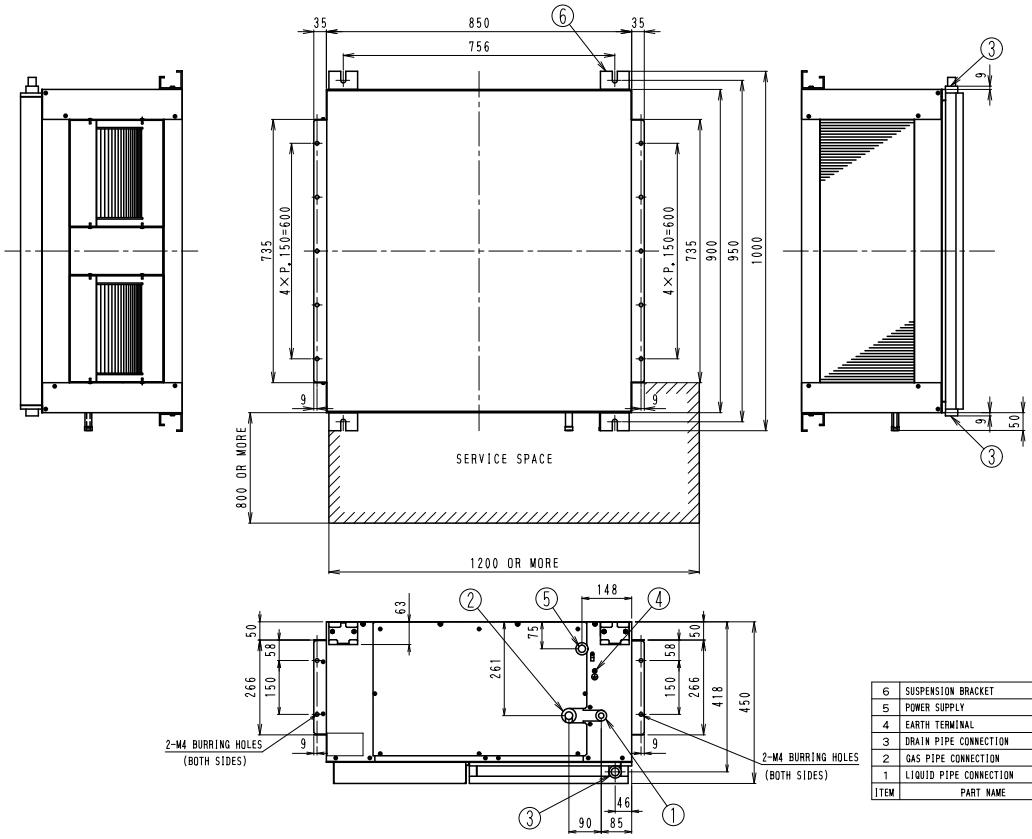


ITEM	PART NAME	REMARK
6	SUSPENSION BRACKET	FOR M10 BOLT
5	POWER SUPPLY	
4	EARTH TERMINAL	M4
3	DRAIN PIPE CONNECTION	PT 3/4 INTERNAL THREAD
2	GAS PIPE CONNECTION	ø19.1
1	LIQUID PIPE CONNECTION	ø9.5

3D004861A

FD05K

Unit (mm)

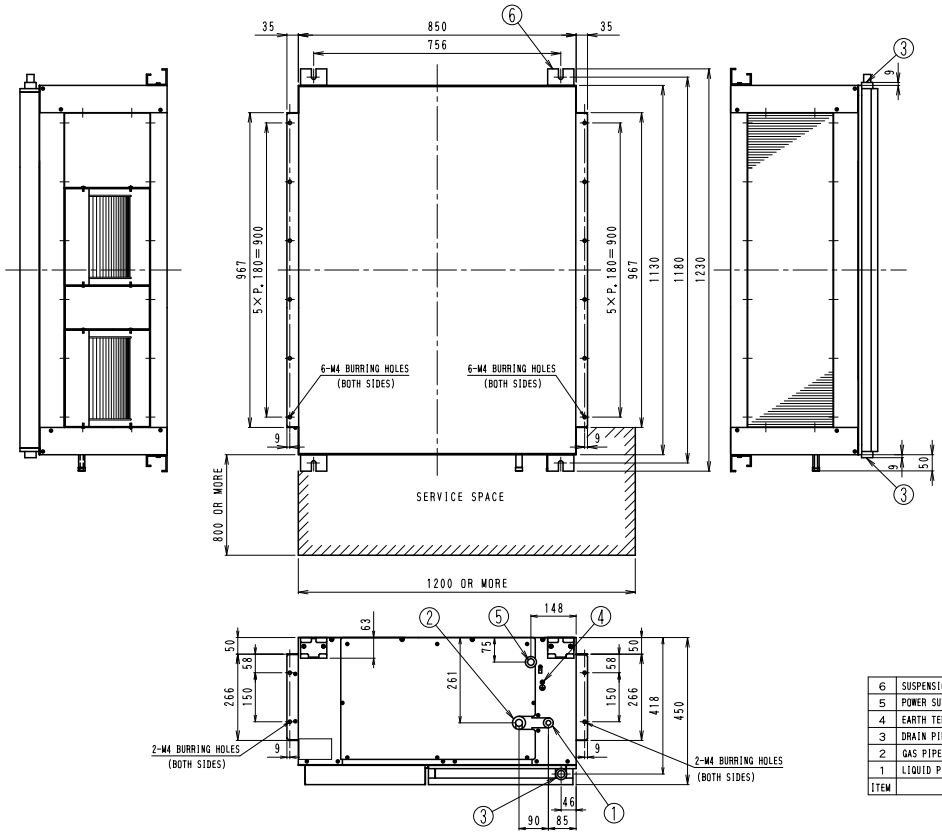


ITEM	PART NAME	REMARK
6	SUSPENSION BRACKET	FOR M10 BOLT
5	POWER SUPPLY	
4	EARTH TERMINAL	M4
3	DRAIN PIPE CONNECTION	PT 3/4 INTERNAL THREAD
2	GAS PIPE CONNECTION	ø19.1
1	LIQUID PIPE CONNECTION	ø9.5

3D004859A

FD06K

Unit (mm)

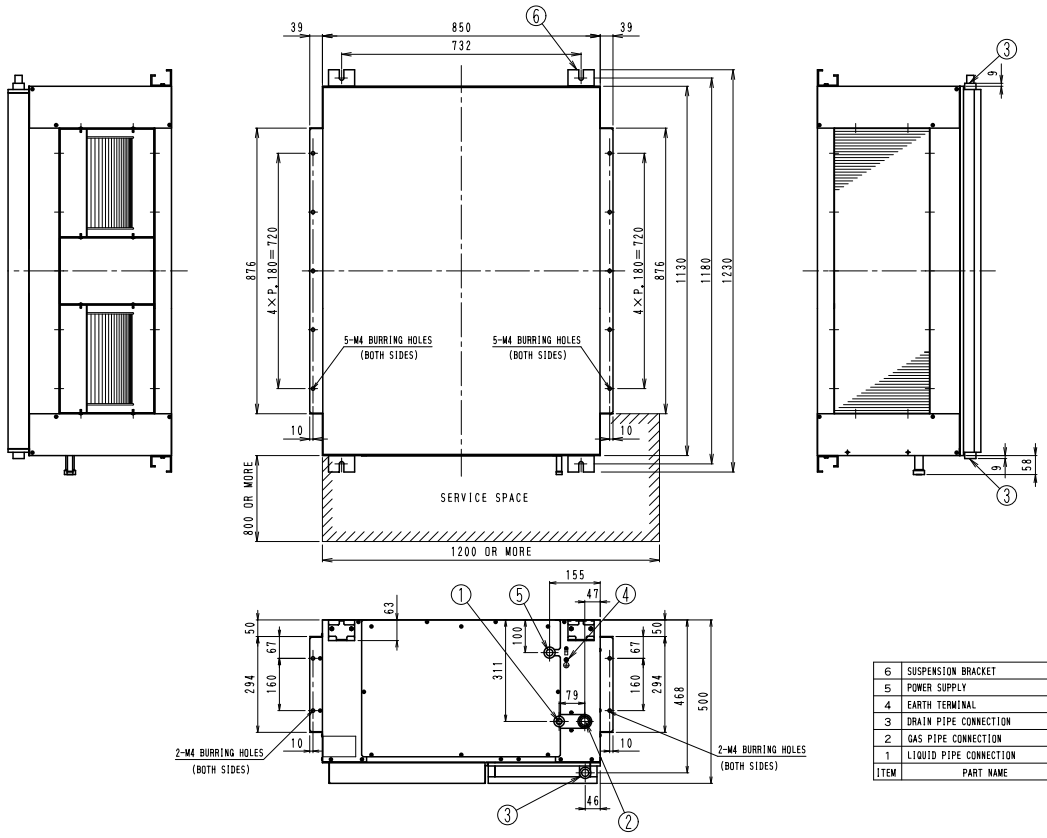


ITEM	PART NAME	REMARK
6	SUSPENSION BRACKET	FOR M10 BOLT
5	POWER SUPPLY	
4	EARTH TERMINAL	M4
3	DRAIN PIPE CONNECTION	PT 3/4 INTERNAL THREAD
2	GAS PIPE CONNECTION	ø19.1
1	LIQUID PIPE CONNECTION	ø9.5

3D006812

FD08K

Unit (mm)

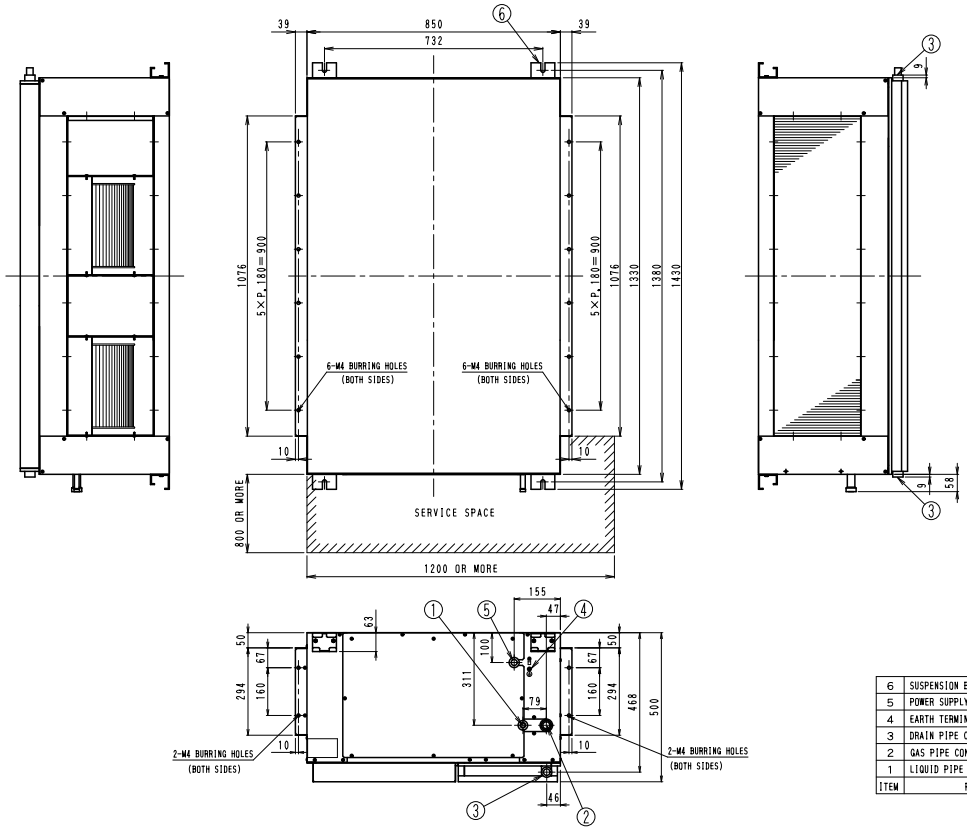


ITEM	PART NAME	REMARK
6	SUSPENSION BRACKET	FOR M10 BOLT
5	POWER SUPPLY	
4	EARTH TERMINAL	M4
3	DRAIN PIPE CONNECTION	PT 3/4 INTERNAL THREAD
2	GAS PIPE CONNECTION	ø25.4
1	LIQUID PIPE CONNECTION	ø12.7

3D006867

FD10K

Unit (mm)

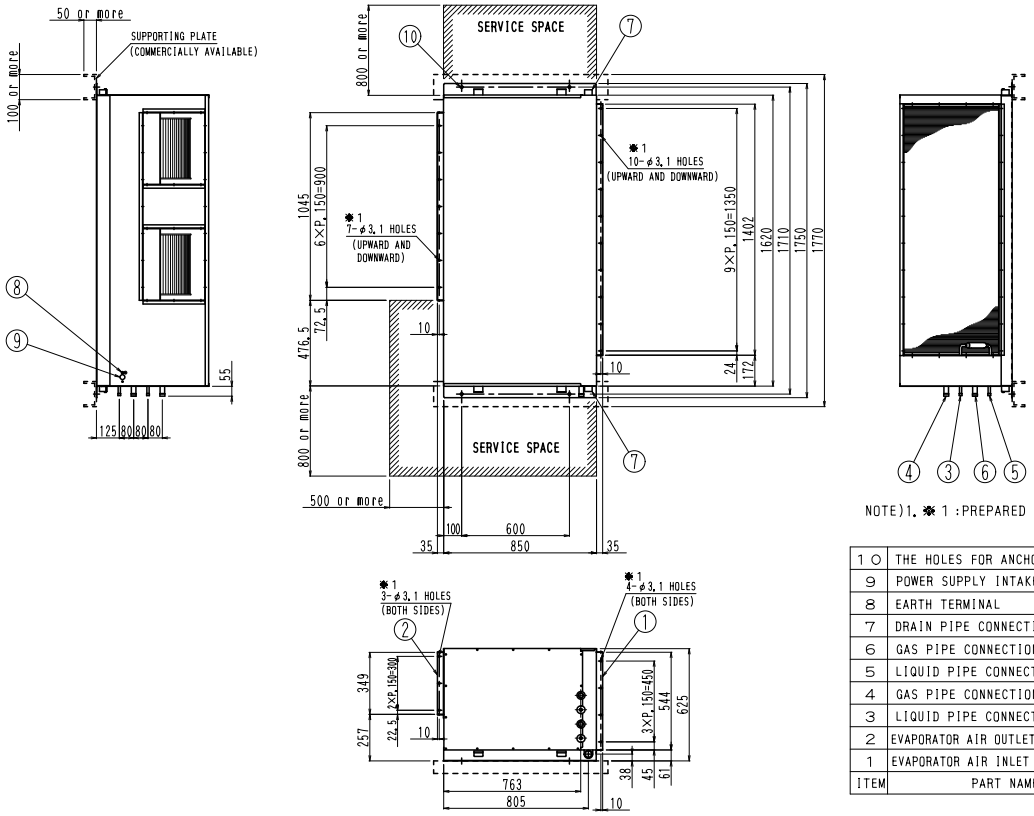


ITEM	PART NAME	REMARK
6	SUSPENSION BRACKET	FOR M10 BOLT
5	POWER SUPPLY	
4	EARTH TERMINAL	M4
3	DRAIN PIPE CONNECTION	PT 3/4 INTERNAL THREAD
2	GAS PIPE CONNECTION	ø31.8
1	LIQUID PIPE CONNECTION	ø15.9

3D006875

FD15K

Unit (mm)

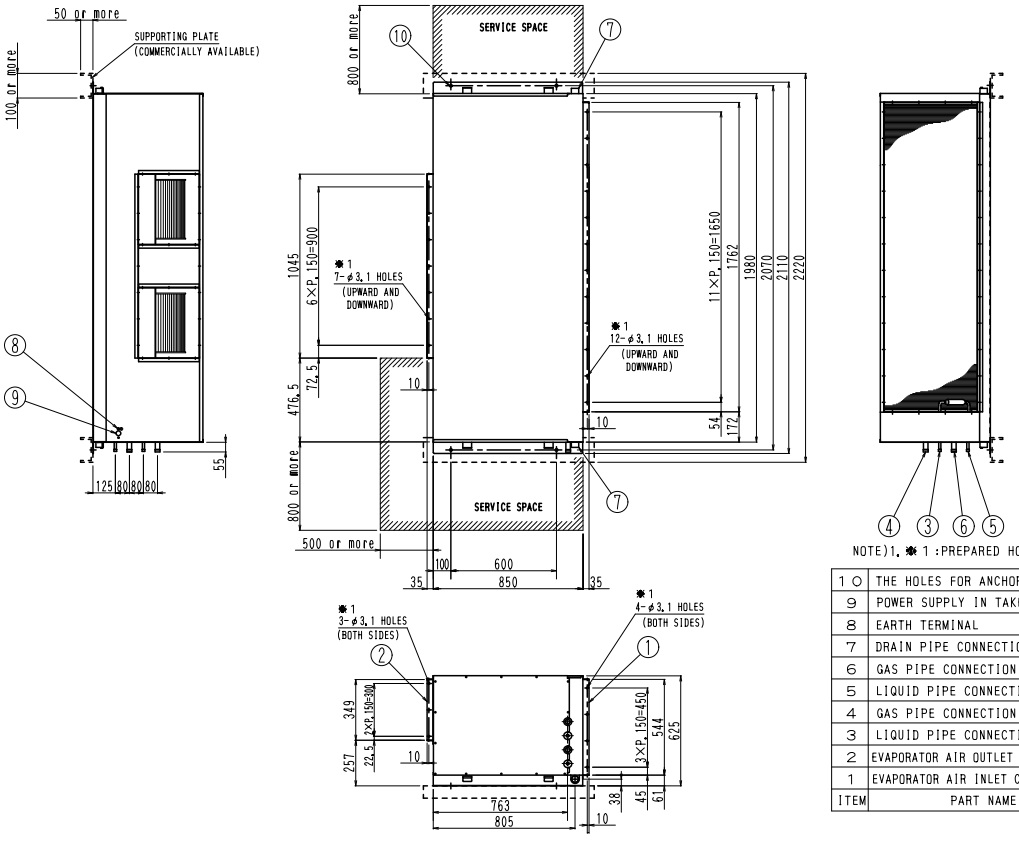


10	THE HOLES FOR ANCHOR BOLTS	4-φ15 HOLES(FOR M12)
9	POWER SUPPLY INTAKE	φ27 HOLE
8	EARTH TERMINAL	M5
7	DRAIN PIPE CONNECTION	FPS1B
6	GAS PIPE CONNECTION(NO. 2)	φ25.4
5	LIQUID PIPE CONNECTION(NO. 2)	φ12.7
4	GAS PIPE CONNECTION(NO. 1)	φ25.4
3	LIQUID PIPE CONNECTION(NO. 1)	φ12.7
2	EVAPORATOR AIR OUTLET CONNECTION	FOR SUPPLY DUCT
1	EVAPORATOR AIR INLET CONNECTION	FOR RETURN DUCT
ITEM	PART NAME	REMARK

3D010028

FD20K

Unit (mm)



10	THE HOLES FOR ANCHOR BOLTS	4-φ15 HOLES(FOR M12)
9	POWER SUPPLY IN TAKE	φ27 HOLE
8	EARTH TERMINAL	M5
7	DRAIN PIPE CONNECTION	FPS1B
6	GAS PIPE CONNECTION(NO. 2)	φ31.8
5	LIQUID PIPE CONNECTION(NO. 2)	φ15.9
4	GAS PIPE CONNECTION(NO. 1)	φ31.8
3	LIQUID PIPE CONNECTION(NO. 1)	φ15.9
2	EVAPORATOR AIR OUTLET CONNECTION	FOR SUPPLY DUCT
1	EVAPORATOR AIR INLET CONNECTION	FOR RETURN DUCT
ITEM	PART NAME	REMARK

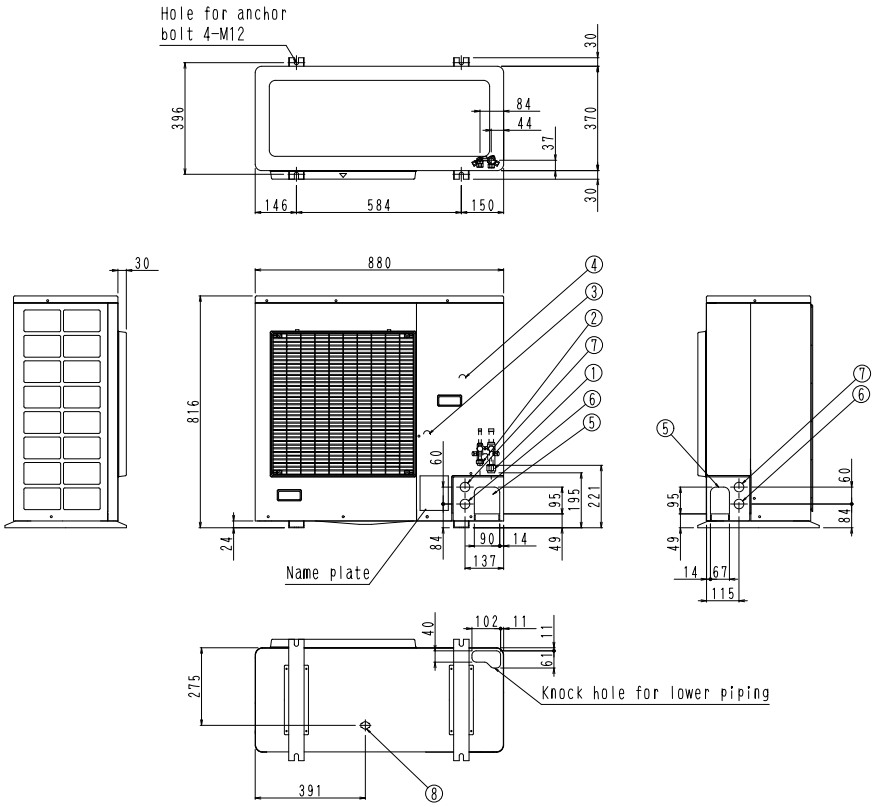
3D010029

5.2 Outdoor Unit

5.2.1 R-FU Series

R71FU

Unit (mm)

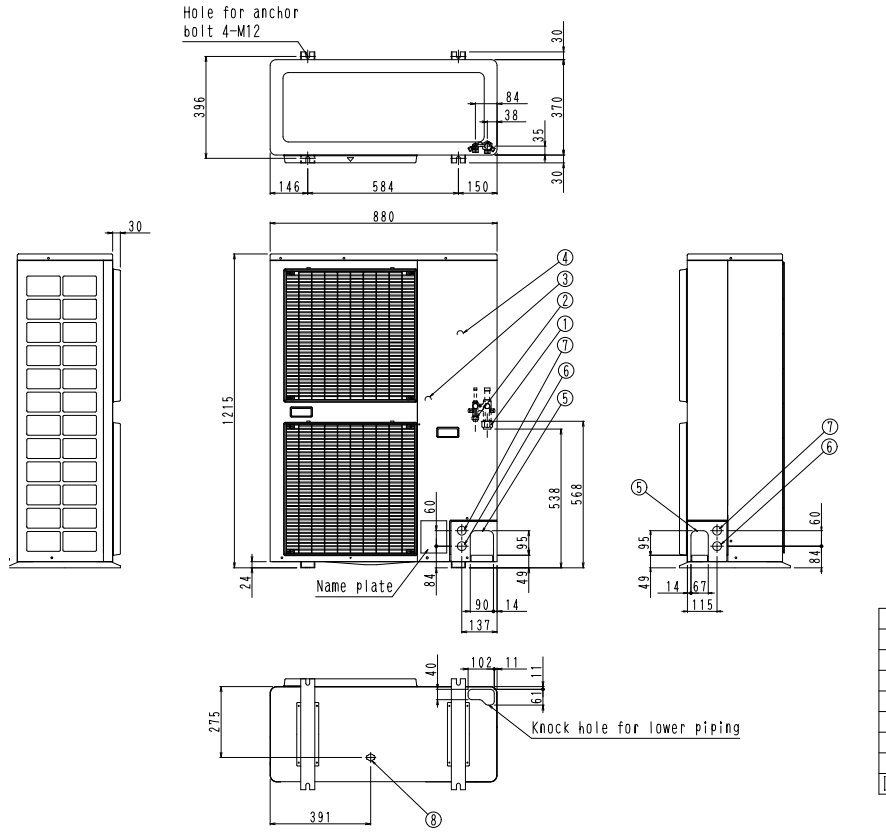


8	Drain outlet	φ 26
7	Control wiring intake	φ34 knock hole
6	Power supply wiring intake	φ34 knock hole
5	Refrigerant piping intake	
4	Grounding terminal	M5 (in switch box)
3	Service port (in the unit)	
2	Liquid pipe connection	φ9.5 Flare
1	Gas pipe connection	φ15.9 Flare
ITEM	PART NAME	REMARK

C : 3D001674A

R100FU
R125FU

Unit (mm)



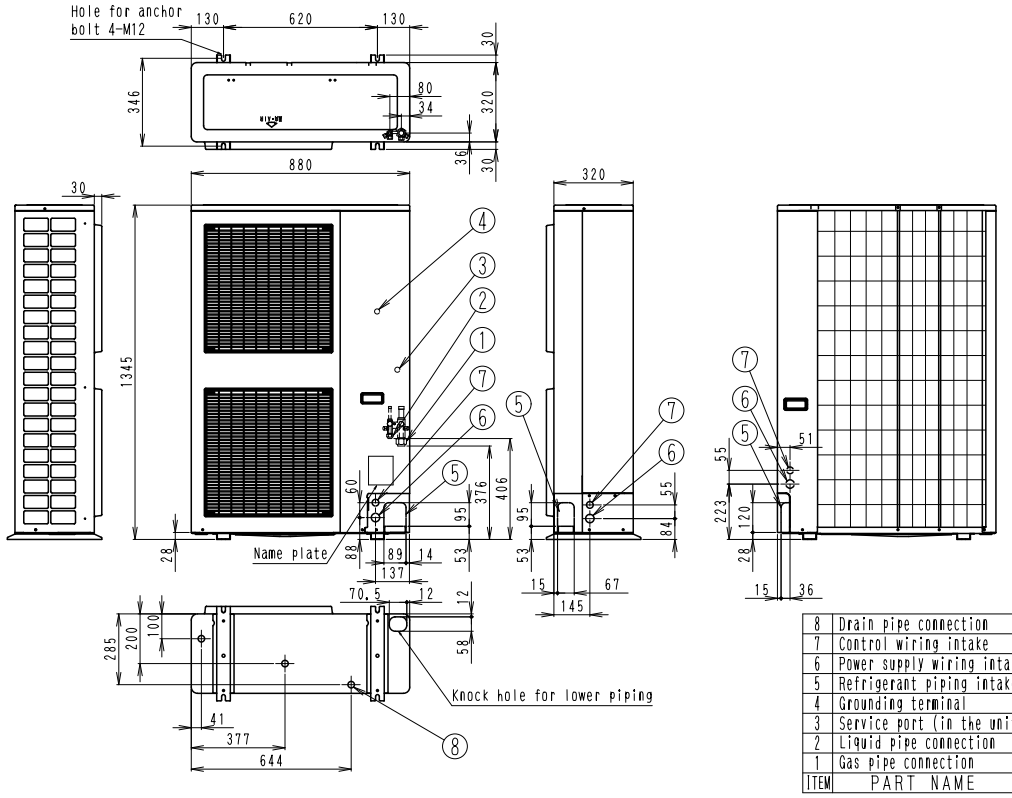
8	Drain outlet	φ 26
7	Control wiring intake	φ34 knock hole
6	Power supply wiring intake	φ34 knock hole
5	Refrigerant piping intake	
4	Grounding terminal	M5 (in switch box)
3	Service port (in the unit)	
2	Liquid pipe connection	φ9.5 Flare
1	Gas pipe connection	φ19.1 Flare
ITEM	PART NAME	REMARK

C : 3D001672A

5.2.2 RU-K Series

RU06K

Unit (mm)

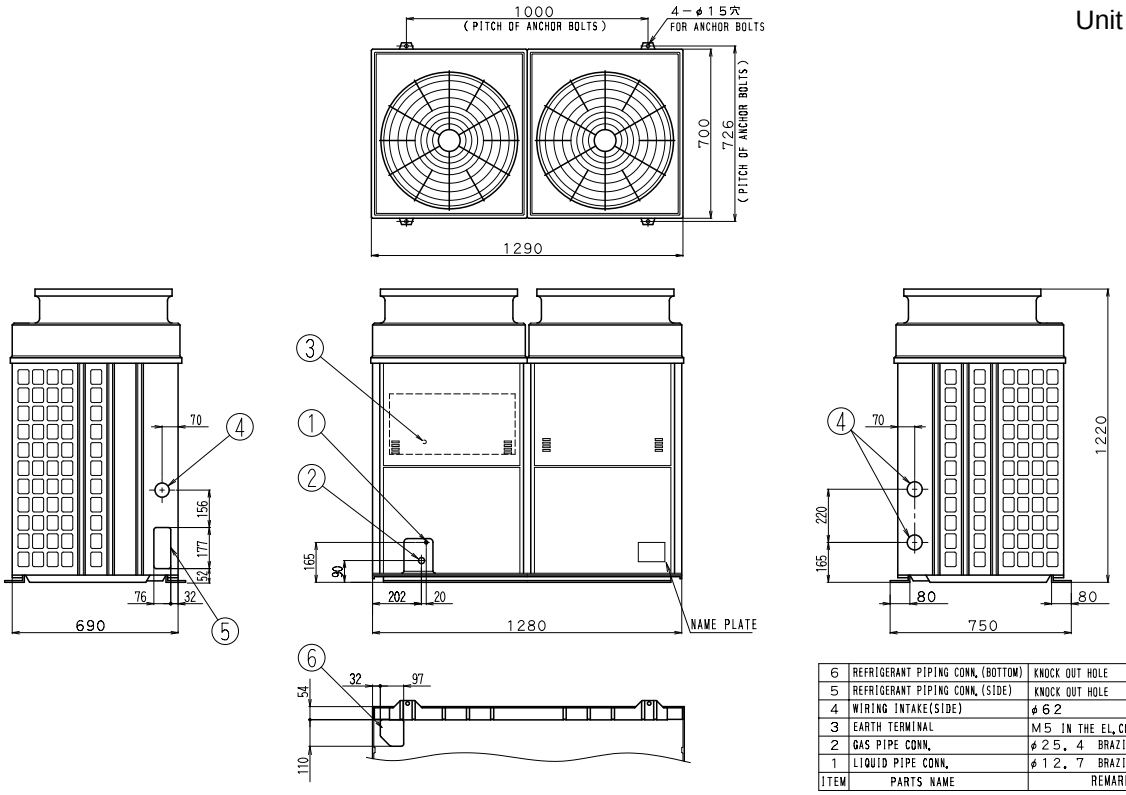


ITEM	PART NAME	REMARK
8	Drain pipe connection	O.D. φ26 3place
7	Control wiring intake	φ27 knock hole
6	Power supply wiring intake	φ34 knock hole
5	Refrigerant piping intake	
4	Grounding terminal	M5 (in switch box)
3	Service port (in the unit)	
2	Liquid pipe connection	φ9.5 Flare
1	Gas pipe connection	φ19.1 Flare

C : 3D007481

RU08K

Unit (mm)

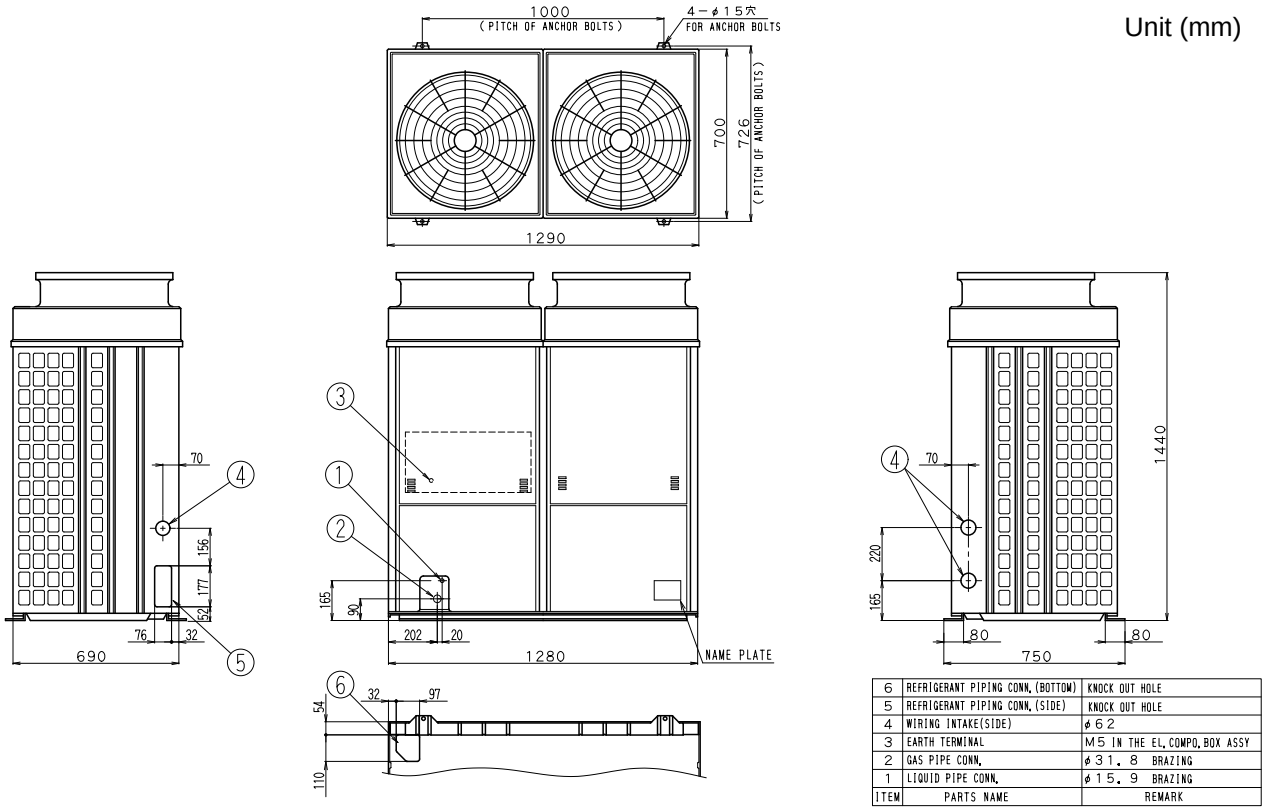


ITEM	PARTS NAME	REMARK
6	REFRIGERANT PIPING CONN. (BOTTOM)	KNOCK OUT HOLE
5	REFRIGERANT PIPING CONN. (SIDE)	KNOCK OUT HOLE
4	WIRING INTAKE(SIDE)	φ62
3	EARTH TERMINAL	M5 IN THE EL. COMPO. BOX ASSY
2	GAS PIPE CONN.	φ25.4 BRAZING
1	LIQUID PIPE CONN.	φ12.7 BRAZING

3D004870

RU10K

Unit (mm)



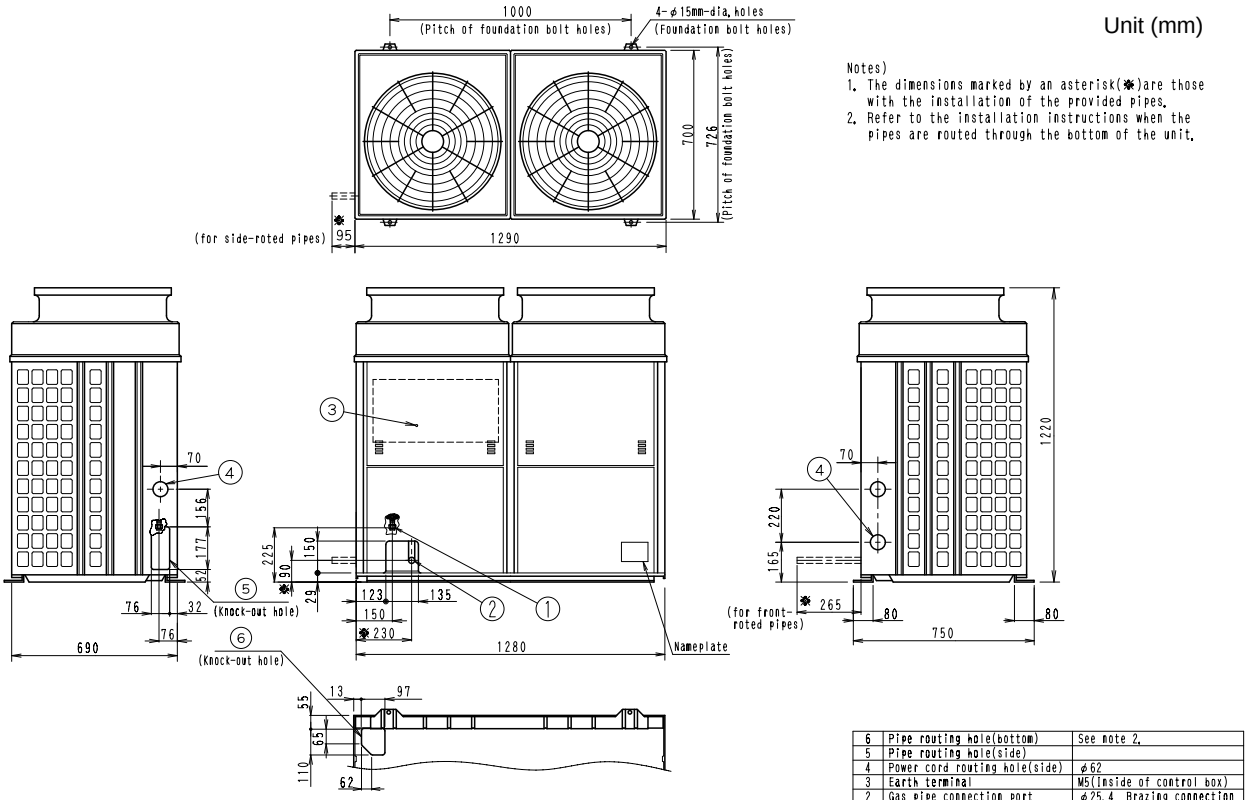
ITEM	PARTS NAME	REMARK
6	REFRIGERANT PIPING CONN. (BOTTOM)	KNOCK OUT HOLE
5	REFRIGERANT PIPING CONN. (SIDE)	KNOCK OUT HOLE
4	WIRING INTAKE(SIDE)	φ62
3	EARTH TERMINAL	M5 IN THE EL. COMPO. BOX ASSY
2	GAS PIPE CONN.	φ31.8 BRAZING
1	LIQUID PIPE CONN.	φ15.9 BRAZING

3D004871

5.2.3 RU-KU Series

RU08KU

Unit (mm)



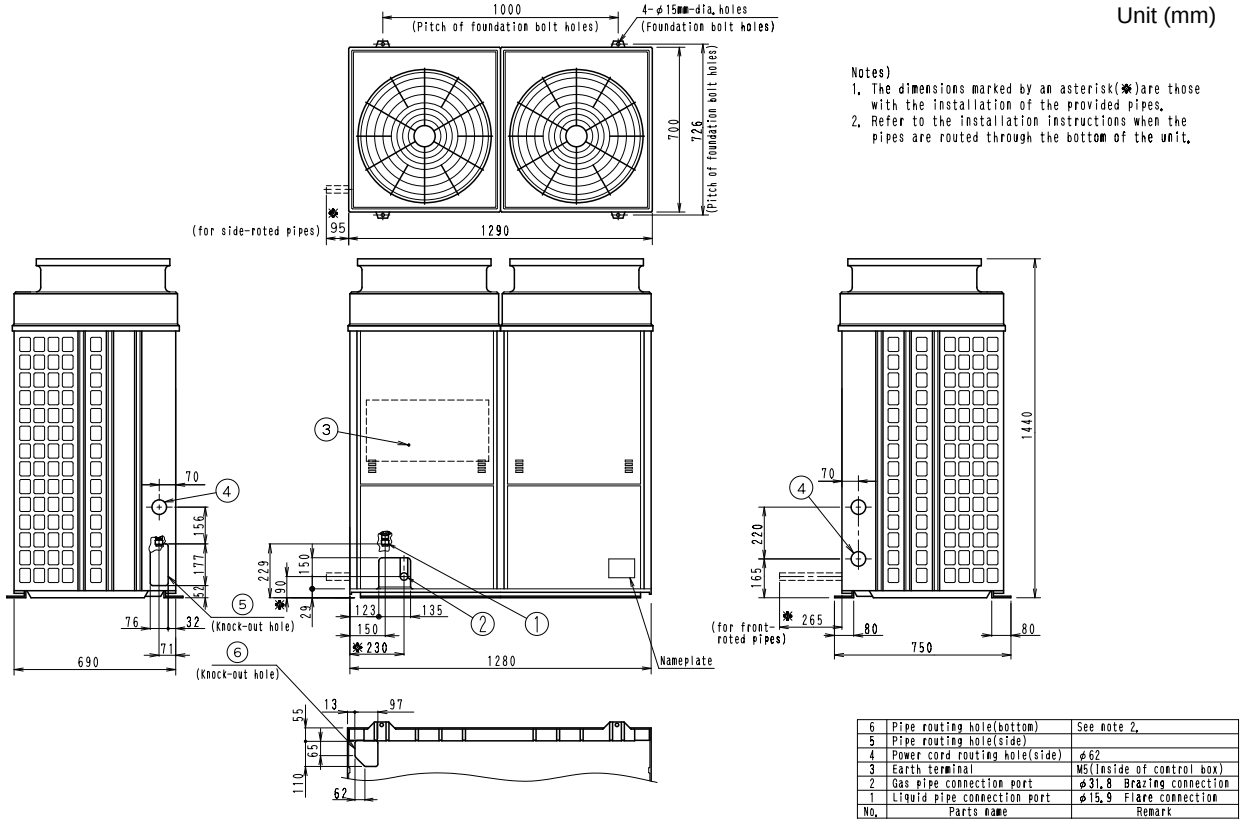
Notes)
1. The dimensions marked by an asterisk(✱)are those with the installation of the provided pipes.
2. Refer to the installation instructions when the pipes are routed through the bottom of the unit.

No.	Parts name	Remark
6	Pipe routing hole(bottom)	See note 2.
5	Pipe routing hole(side)	
4	Power cord routing hole(side)	φ62
3	Earth terminal	M5(Inside of control box)
2	Gas pipe connection port	φ25.4 Brazing connection
1	Liquid pipe connection port	φ12.7 Flare connection

3D045863

RU10KU

Unit (mm)



Notes)
1. The dimensions marked by an asterisk(✱)are those with the installation of the provided pipes.
2. Refer to the installation instructions when the pipes are routed through the bottom of the unit.

No.	Parts name	Remark
6	Pipe routing hole(bottom)	See note 2.
5	Pipe routing hole(side)	
4	Power cord routing hole(side)	φ62
3	Earth terminal	M5(Inside of control box)
2	Gas pipe connection port	φ31.8 Brazing connection
1	Liquid pipe connection port	φ15.9 Flare connection

3D045864

5.3 Installation Service Space

5.3.1 R71~125FU

INSTALLATION SERVICE SPACE

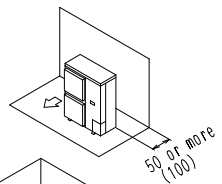
- The values represent the case for the R(Y)71 type through RY160 type. The dimensions in () are for the R(Y)100 type through RY160 type (The unit of the values is mm.).
  The values in<> are those when the air discharge direction of the grille is set downward.
  In a series installation, do not fix the discharge grille so that the air discharges to the side.

1. Where there is an obstacle on the suction side:

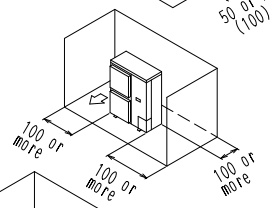
(a)No obstacle above

(1)Stand-alone installation

- Obstacle on the suction side only

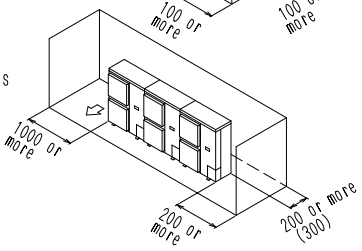


- Obstacle on both sides



(2)Series installation
(2 or more)

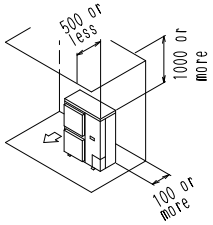
- Obstacle on both sides



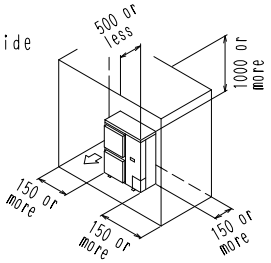
(b)Obstacle above, too

(1)Stand-alone installation

- Obstacle on the suction side, too

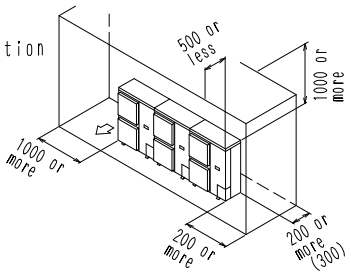


- Obstacle on the suction side and both sides



(2)Series installation
(2 or more)

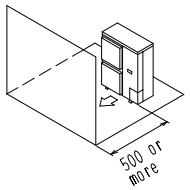
- Obstacle on the suction side and both sides



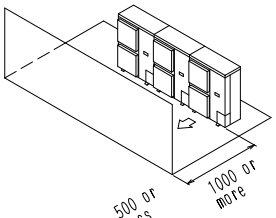
2. Where there is an obstacle on the discharge side:

(a)No obstacle above

(1)Stand-alone installation

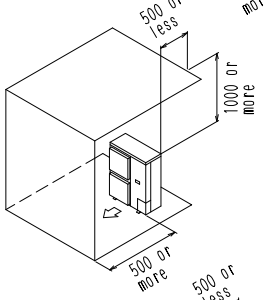


(2)Series installation
(2 or more)

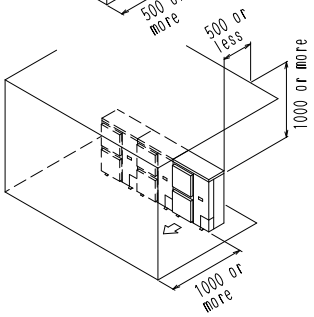


(b)Obstacle above, too

(1)Stand-alone installation



(2)Series instation
(2 or more)

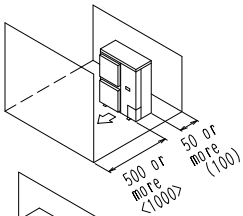


3. Where there are obstacles on both suction and discharge sides:

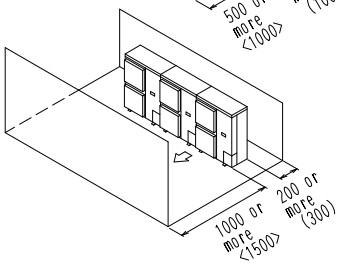
Pattern 1 Where the obstacles on the discharge side is higher than the unit:

(a)No obstacle above

(1)Stand-alone installation



(2)Series installation
(2 or more)



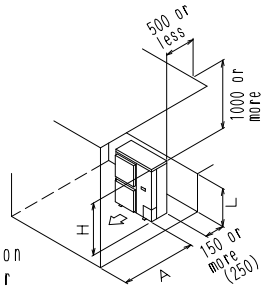
3D001951A-1

(b)Obstacle above, too

(1)Stand-alone installation

The relations between H, A and L are as follows:

	L	A
L≦H	0<L≦1/2H	750<1250>
	1/2H<L	1000<1500>
H<L	Set the stand as : L≦H.	

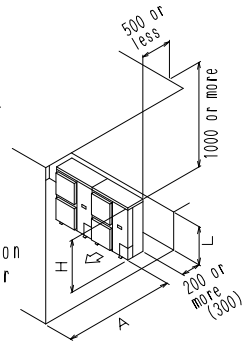


Close the bottom of the installation frame to prevent the discharged air from being bypassed.

(2)Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
L≦H	0<L≦1/2H	1000<1500>
	1/2H<L	1250<1750>
H<L	Set the stand as : L≦H.	

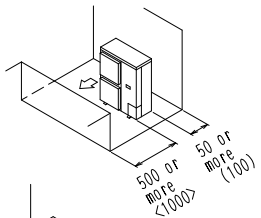


Close the bottom of the installation frame to prevent the discharged air from being bypassed.
Only two units can be installed for this series.

Pattern 2 Where the obstacle on the discharge side is lower than the unit:

(a)No obstacle above

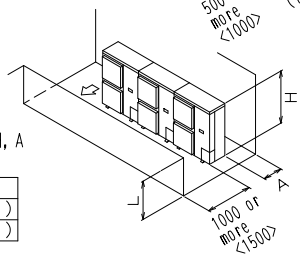
(1)Stand-alone installation



(2)Series installation (2 or more)

The relations between H, A and L are as follows:

L	A
0<L≦1/2H	150 (250)
1/2H<L	200 (300)

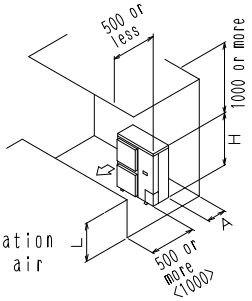


(b)Obstacle above, too

(1)Stand-alone installation

The relations between H, A and L are as follows:

	L	A
L≦H	0<L≦1/2H	50 (100)
	1/2H<L	100 (200)
H<L	Set the stand as: L≦H.	

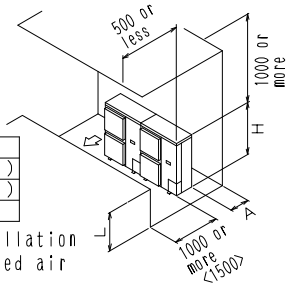


Close the bottom of the installation frame to prevent the discharged air from being bypassed.

(2)Series installation (2 or more)

The relations between H, A and L are as follows:

	L	A
L≦H	0<L≦1/2H	150 (250)
	1/2H<L	200 (300)
H<L	Set the stand as: L≦H.	



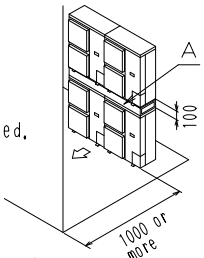
Close the bottom of the installation frame to prevent the discharged air from being bypassed.
Only two units can be installed for this series.

4. Double-decker installation

(a)Obstacle on the discharge side

Close the gap A to prevent the discharged air from being bypassed.

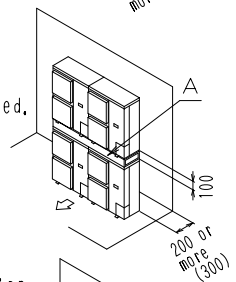
Do not stack more than two unit.



(b)Obstacle on the suction side

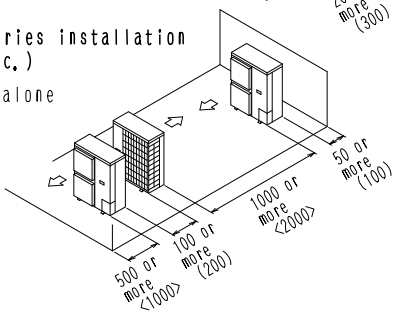
Close the gap A to prevent the discharged air from being bypassed.

Do not stack more than two unit.

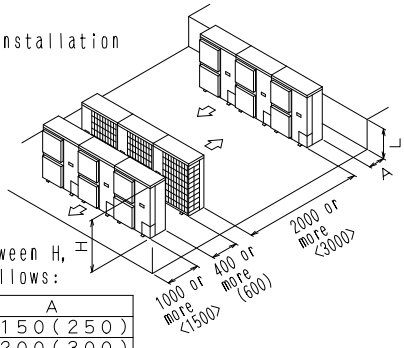


5. Multiple rows of series installation (on the rooftop, etc.)

(a)One row of stand-alone installaion



(b)Rows of series installation (2 or more)



The relations between H, A and L are as follows:

	L	A
L≦H	0<L≦1/2H	150 (250)
	1/2H<L	200 (300)
H<L	Cannot be installed	

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5.3.2 RU06K

INSTALLATION SERVICING SPACE

The figure inside < > indicate the dimension of discharge grille when it isinstalled facing downward. (Unit:mm)

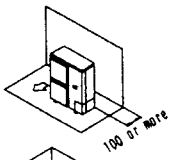
< PRECAUTION >
When installing link of multiple outdoor units, leave a space of 20mm or more between the units.

(A)In case obstacles exist in front of the air inlet

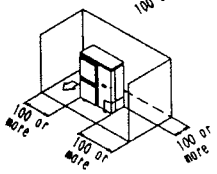
• Where there are no obstacles above the unit.

① Installation of single unit

• In case obstacles exist only in front of the air inlet.

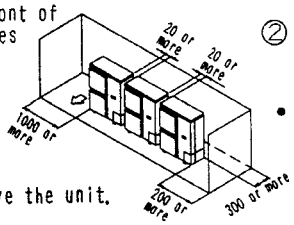


• In case obstacles exist in front of the air inlet and on both sides of the unit.



② Installation of multiple units in lateral connection. (2 units or more)

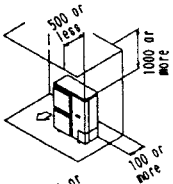
• In case obstacles exist in front of the air inlet and on both sides of the unit.



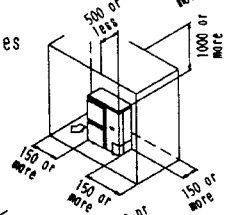
• Where there are obstscles above the unit.

① Installation of single unit

• In case obstacles exist in front of the air inlet

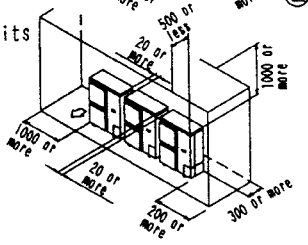


• in case obstacles exist in front of the air inlet and on both sides of the unit.



② Installation of multiple units in lateral connection. (2 units or more)

• In case obstacles exist in front of the air inlet and on both sides of the unit.

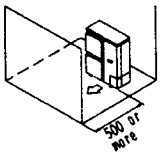


(B)In case obstacles exist in front of the outlet side.

• Where there are no obstacles above the unit.

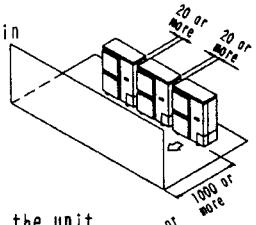
① Installation of single unit

• In case obstacles exist only in front of outlet side.



② Installation of multiple units in lateral connection. (2 units or more)

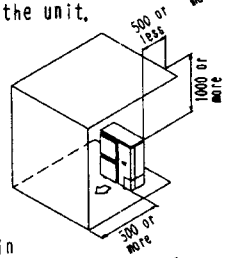
• In case obstacles exist only in front of outlet side.



• Where there are obstacles above the unit.

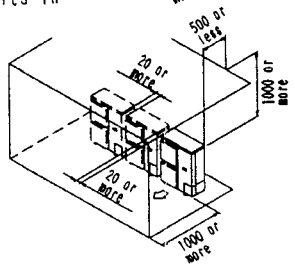
① Installation of single unit

• In case obstacles exist in front of outlet side.



② Installation of multiple units in lateral connection. (2 units or more)

• In case obstacles exist in front of outlet side.

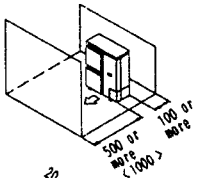


(C)In case obstacles exist in front of both the air inlet and outlet sides.

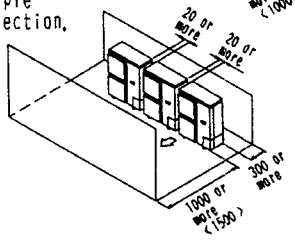
Pattern 1 Where obstacle in front of the air outlet is higher than the unit.

• Where there are no obstacles above the unit.

① Installation of single unit



② Installation of multiple units in lateral connection. (2 units or more)



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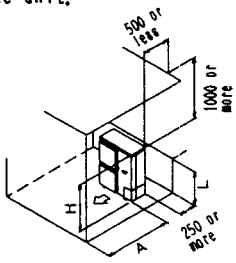
• Where there are obstacles above the unit.

① Installation of single unit

Relation of dimensions of H, A, and L are shown in the table below.

	L	A
L≦H	0<L≦1/2H	750<1250>
	1/2H<L	1000<1500>
H<L	Set the frame to be L≦H	

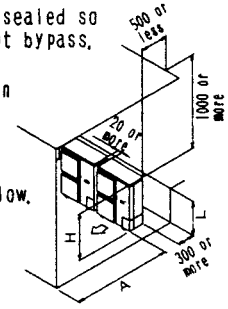


Get the lower part of the frame sealed so that air from the outlet does not bypass.

② Installation of multiple units in lateral connection. (2 units or less)

Relation of dimensions of H, A, and L are shown in the table below.

	L	A
L≦H	0<L≦1/2H	1000<1500>
	1/2H<L	1250<1750>
H<L	Set the frame to be L≦H	



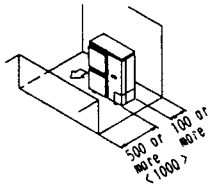
Get the lower part of the frame sealed so that air from the outlet does not bypass.

Do not install more than 2 units.

Pattern 2 Where obstacles in front of the air outlet is lower than the unit.

• Where there are no obstacles above the unit.

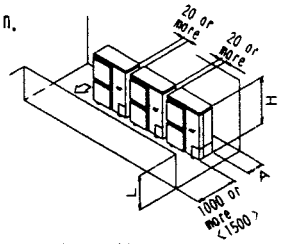
① Installation of single unit



② Installation of multiple units in lateral connection. (2 units or more)

Relation of dimensions of H, A, and L are shown in the table below.

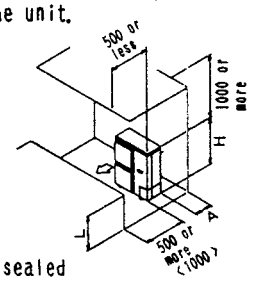
L	A
0<L≦1/2H	250
1/2H<L	300



• Where thre are obstacles above the unit.

① Installation of single unit
Relation of dimensions of H, A, and L are shown in the table below.

	L	A
L≦H	0<L≦1/2H	100
	1/2H<L	200
H<L	Set the frame to be L≦H	

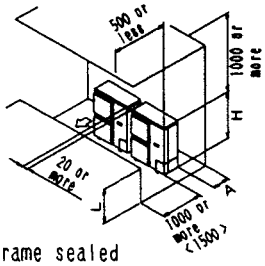


Get the lower part of the frame sealed so that air from the outlet does not bypass.

② Installation of multiple units in lateral connection. (2 units or less)

Relation of dimensions of H, A, and L are shown in the table below.

	L	A
L≦H	0<L≦1/2H	250
	1/2H<L	300
H<L	Set the frame to be L≦H	

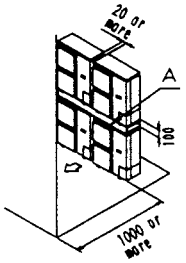


Get the lower part of the frame sealed so that air from the outlet does not bypass. Do not install more than 2 units.

(D) In case of stacked installation

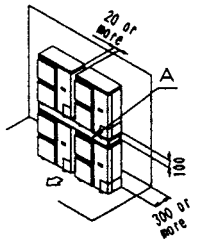
① In case obstacles exist in front of the outlet side. Do not stack more than one unit. About 100 mm is required as the dimension for laying the upper outdoor unit's drain pipe.

Get the portion A sealed so that air from the outlet does not bypass.



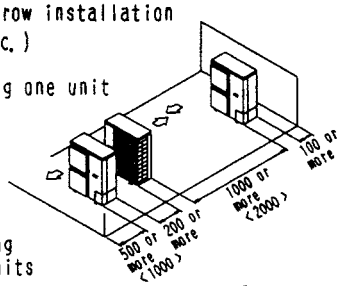
② In case obstacles exist in front of the air inlet. Do not stack more than one unit. About 100 mm is required as the dimension for laying the upper outdoor unit's drain pipe.

Get the portion A sealed so that air from the outlet does not bypass.



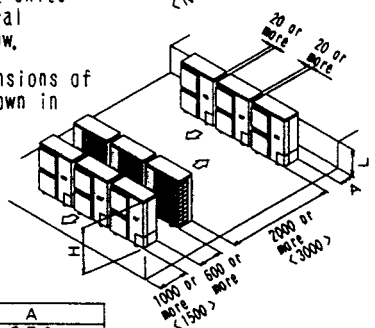
(E) In case of multiple-row installation (for roof top use, etc.)

① In case of installing one unit per row.



② In case of installing multiple units (2 units or more) in lateral connection per row.

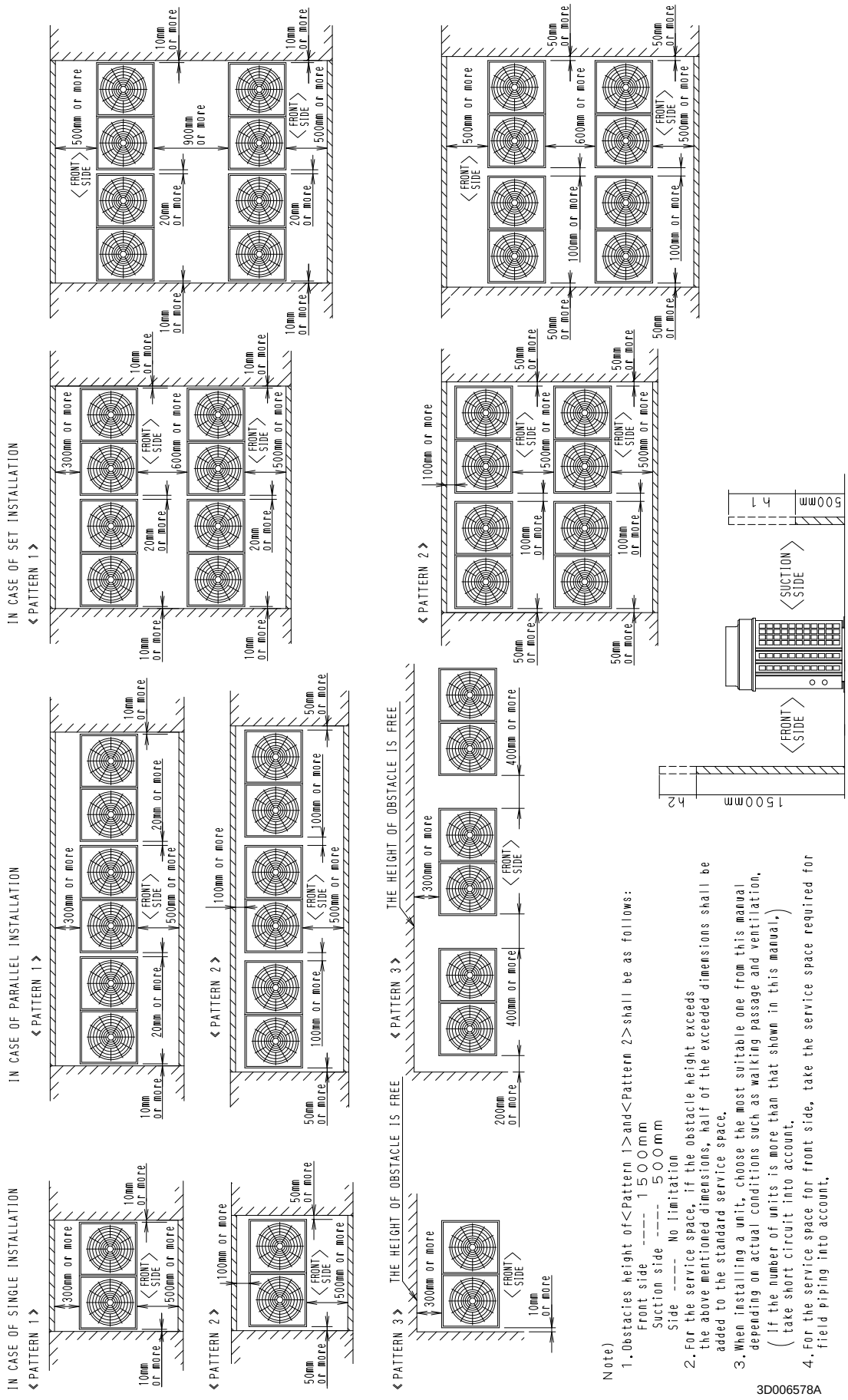
Relation of dimensions of H, A, and L are shown in the table below.



	L	A
L≦H	0<L≦1/2H	250
	1/2H<L	300
H<L	Installation impossible.	

3D007614-2

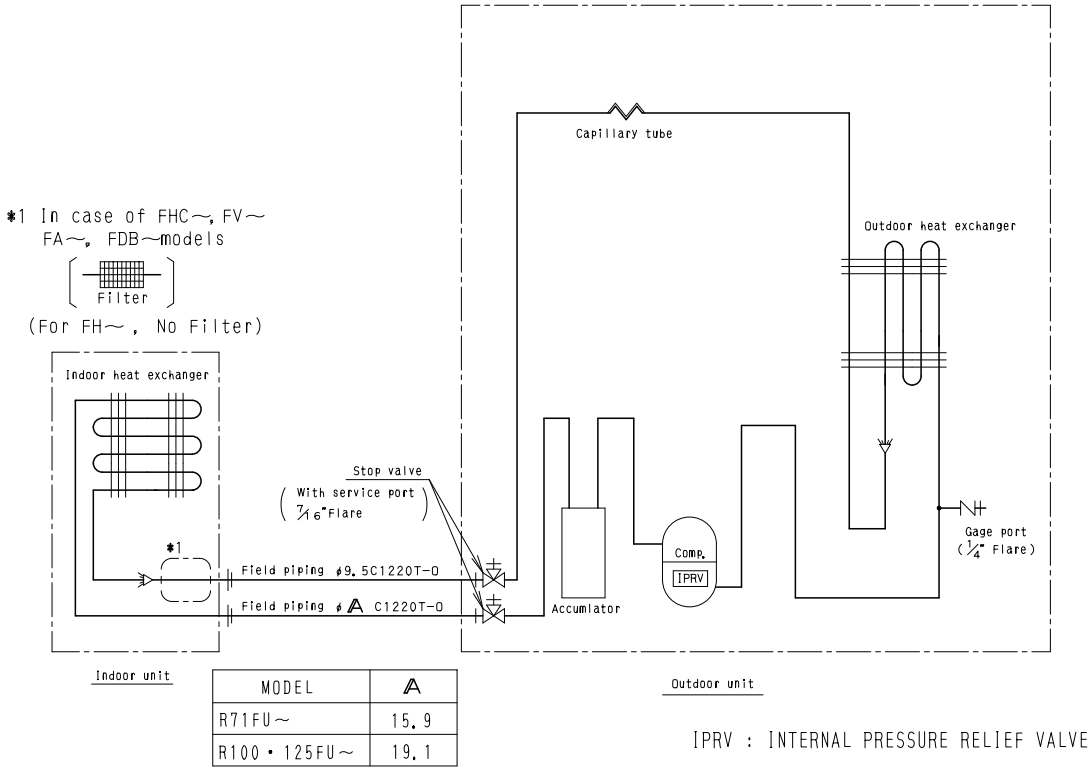
5.3.3 RU08 · 10K, RU08 · 10KU



6. Piping Diagrams

6.1 Indoor / Outdoor Unit

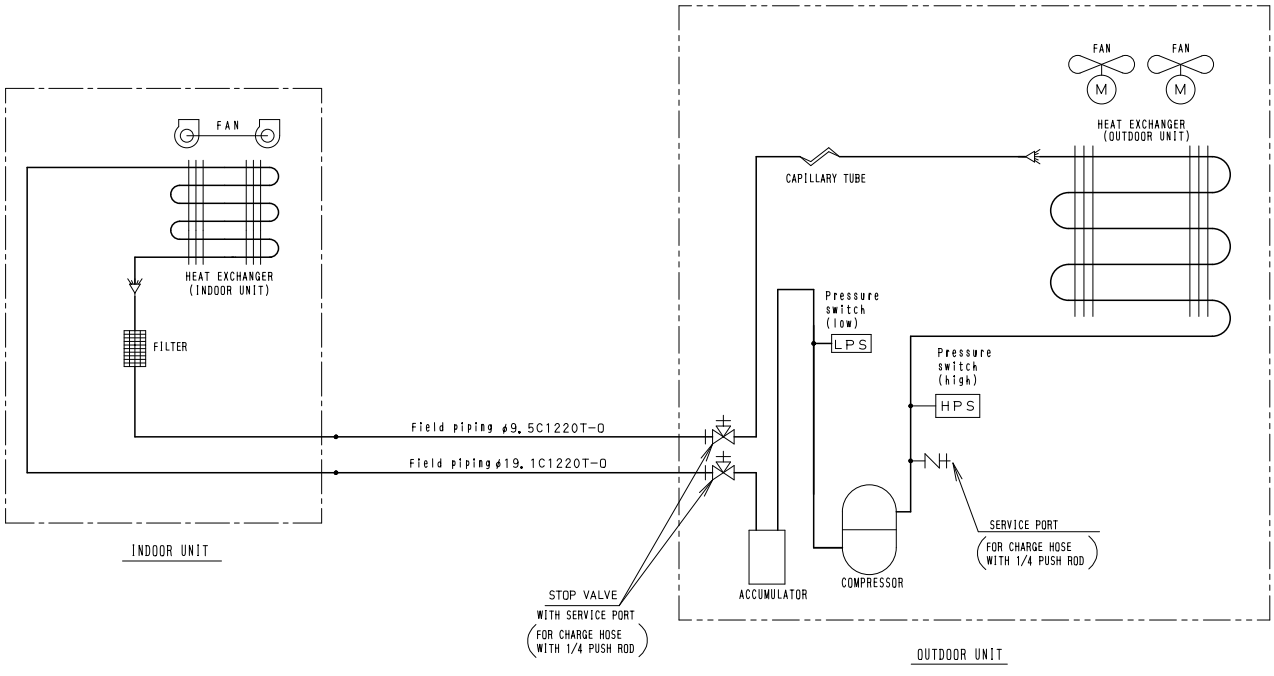
FD03K+R71FU
FD04K+R100FU
FD05K+R125FU



MODEL	A
R71FU~	15.9
R100・125FU~	19.1

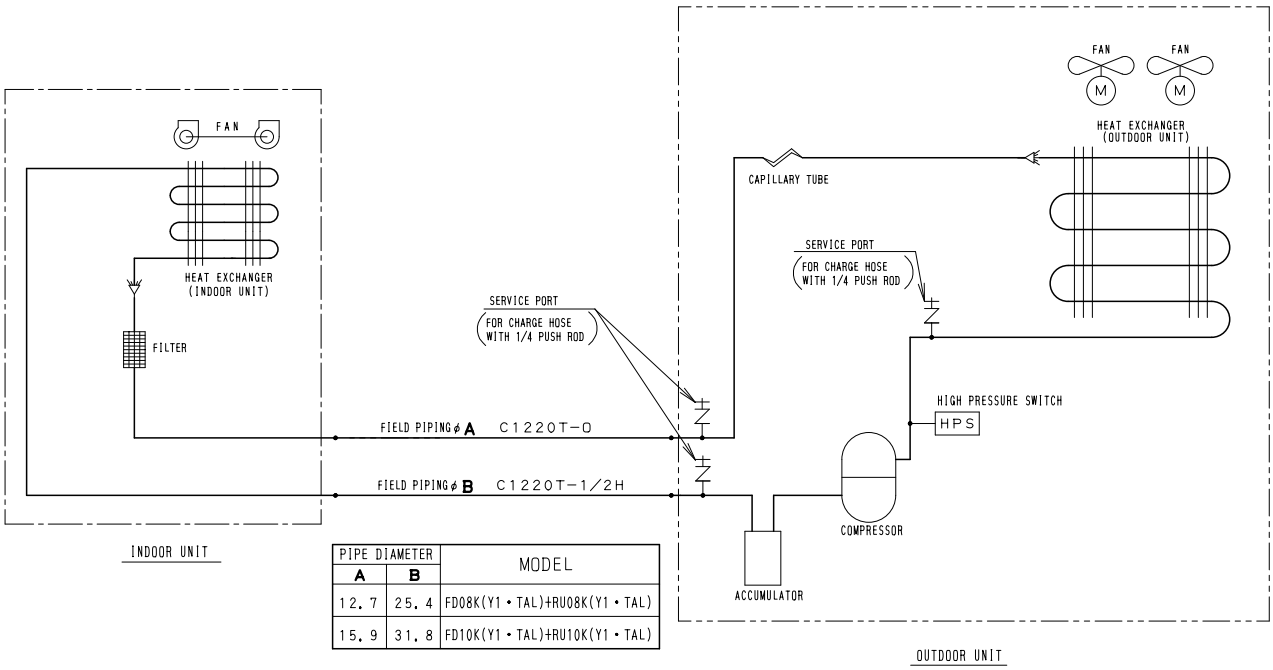
3D001310A

FD06K+RU06K



3D008103

FD08K+RU08K
FD10K+RU10K

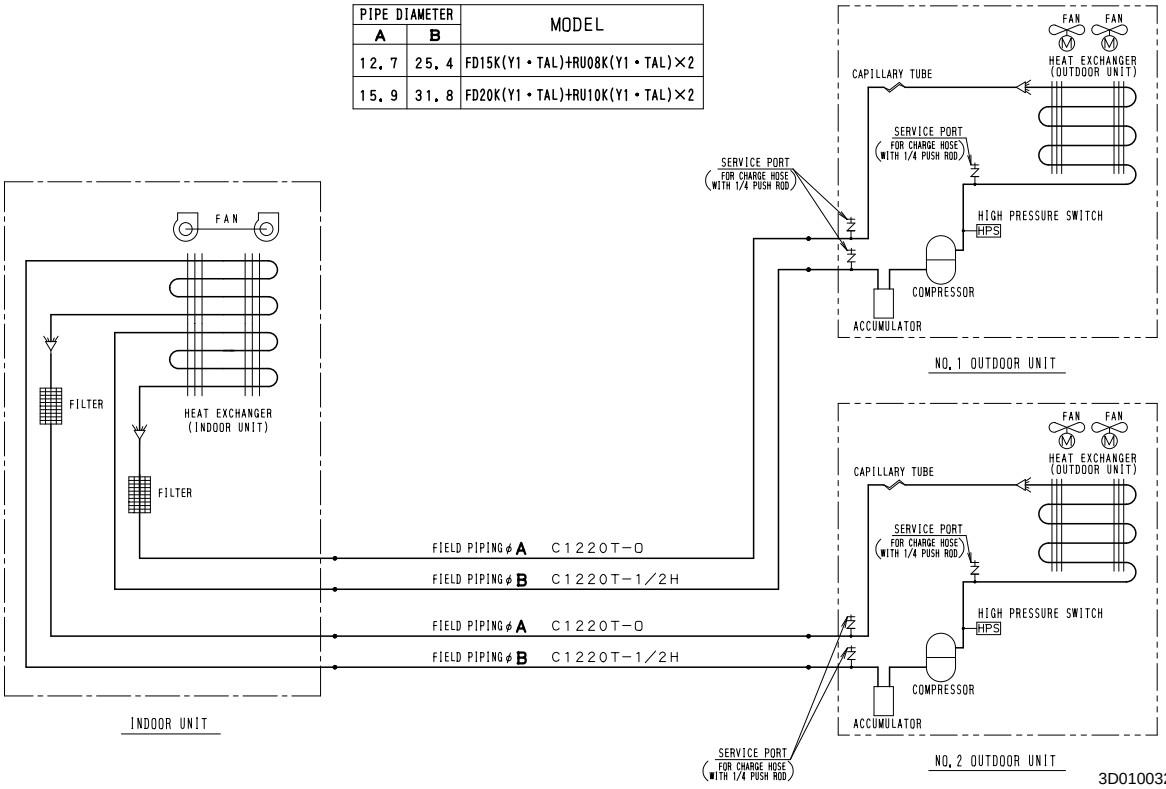


PIPE DIAMETER		MODEL
A	B	
12.7	25.4	FD08K(Y1・TAL)+RU08K(Y1・TAL)
15.9	31.8	FD10K(Y1・TAL)+RU10K(Y1・TAL)

3D004873

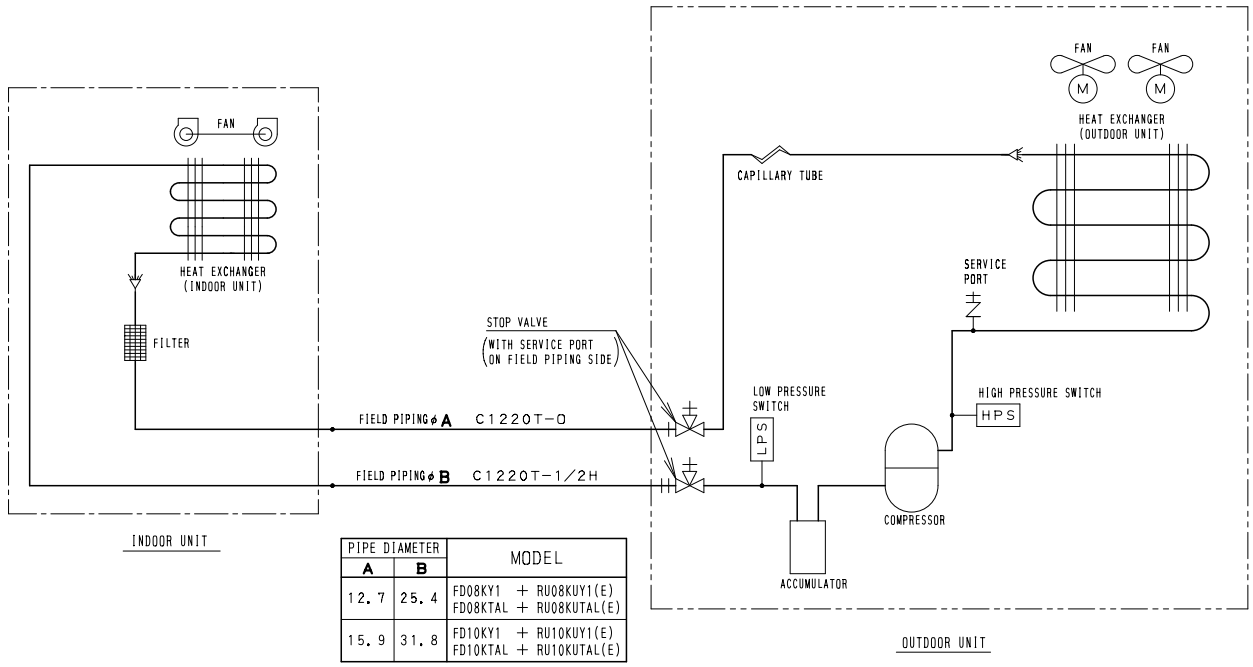
FD15K+RU08K×2
FD20K+RU10K×2

PIPE DIAMETER		MODEL
A	B	
12.7	25.4	FD15K(Y1・TAL)+RU08K(Y1・TAL)×2
15.9	31.8	FD20K(Y1・TAL)+RU10K(Y1・TAL)×2



3D010032

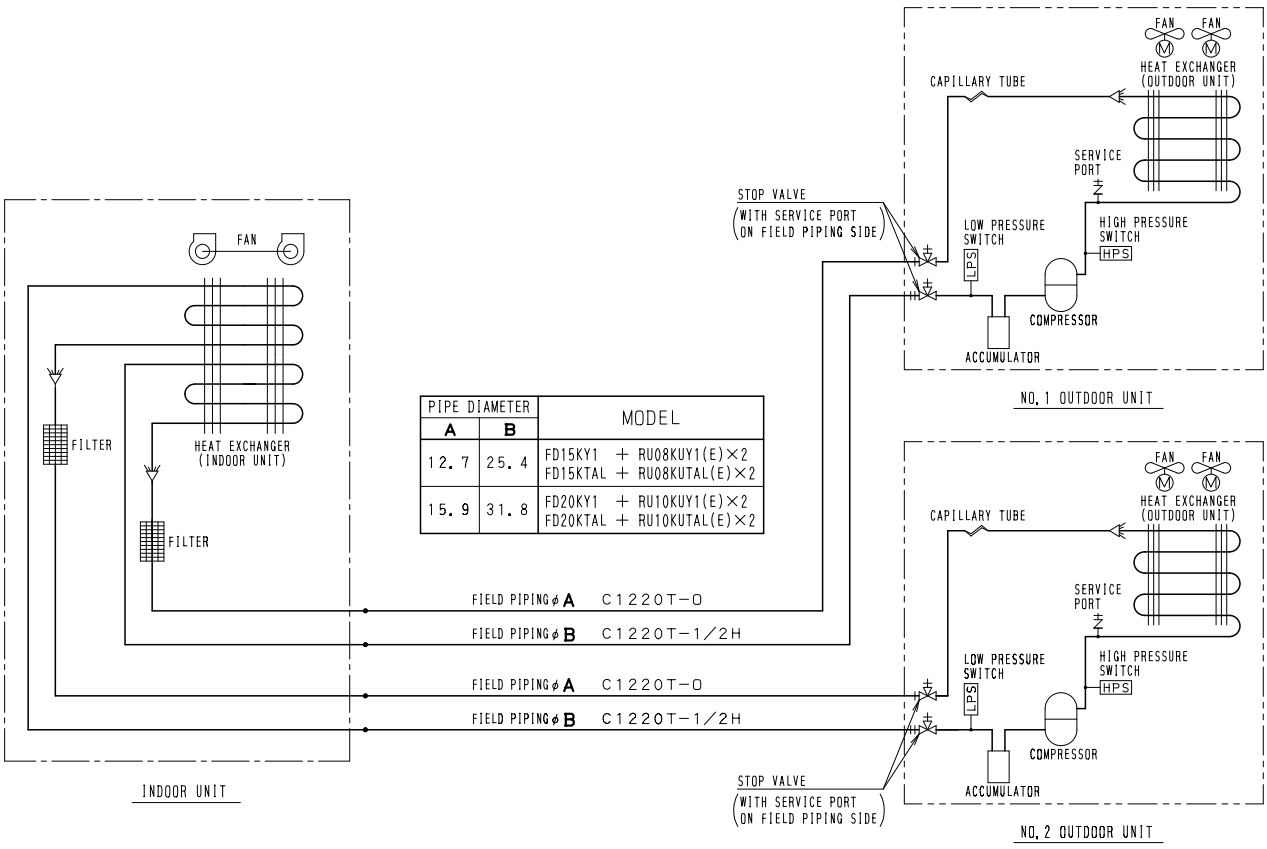
FD08K+RU08KU
FD10K+RU10KU



PIPE DIAMETER		MODEL
A	B	
12.7	25.4	FD08KY1 + RU08KUY1(E) FD08KTAL + RU08KUTAL(E)
15.9	31.8	FD10KY1 + RU10KUY1(E) FD10KTAL + RU10KUTAL(E)

3D045843

FD15K+RU08KU×2
FD20K+RU10KU×2



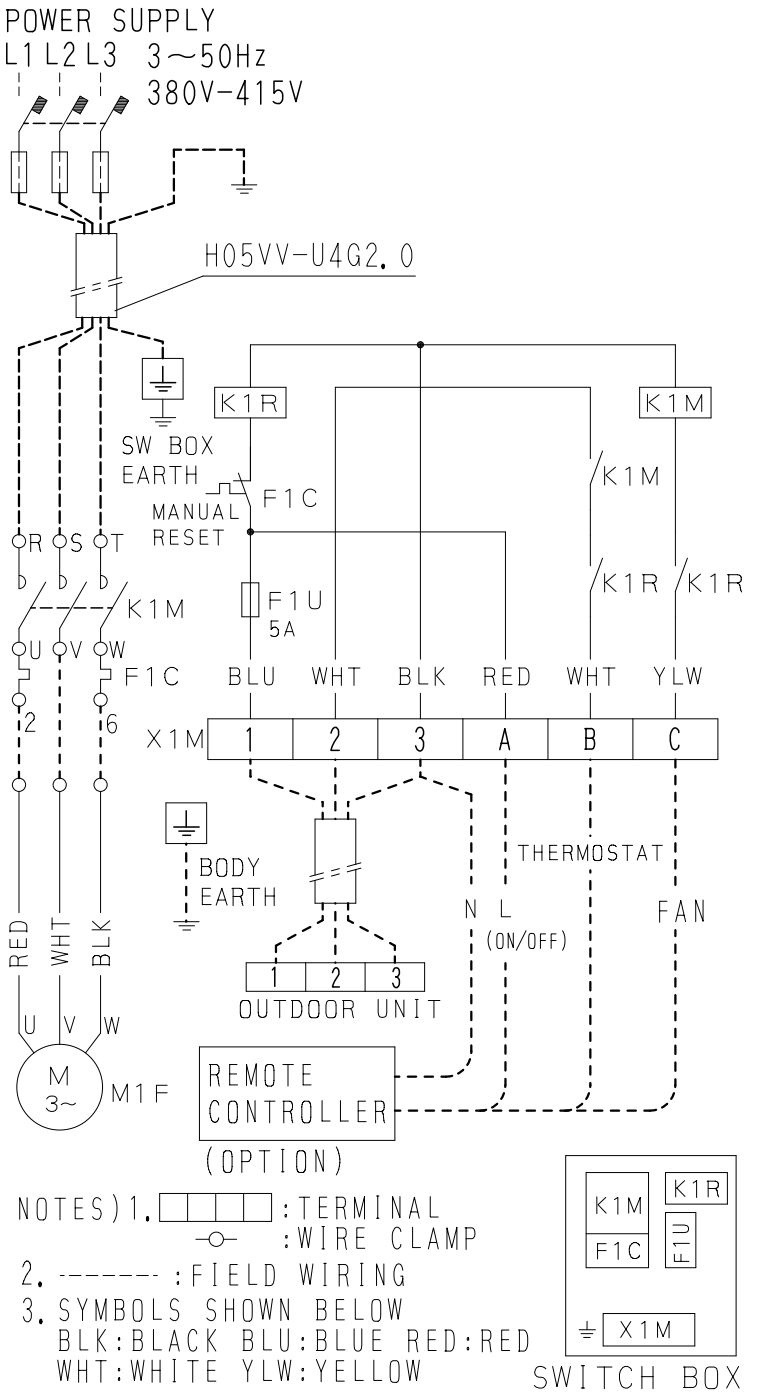
PIPE DIAMETER		MODEL
A	B	
12.7	25.4	FD15KY1 + RU08KUY1(E)×2 FD15KTAL + RU08KUTAL(E)×2
15.9	31.8	FD20KY1 + RU10KUY1(E)×2 FD20KTAL + RU10KUTAL(E)×2

3D045844

7. Wiring Diagrams

7.1 50Hz

FD03KY1
FD04KY1
FD05KY1

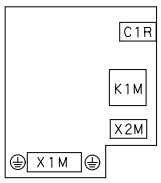


F1C	OVER CURRENT RELAY		
F1U	FUSE(5A, 250V)		
K1M	MAGNETIC CONTACTOR (M1F)(220V-240V)		
K1R	MAGNETIC RELAY(220V-240V)		
L1-RED		L2-WHT	L3-BLK
M1F	MOTOR (FAN)(380V-415V)		
X1M	TERMINAL STRIP		

3D003690B

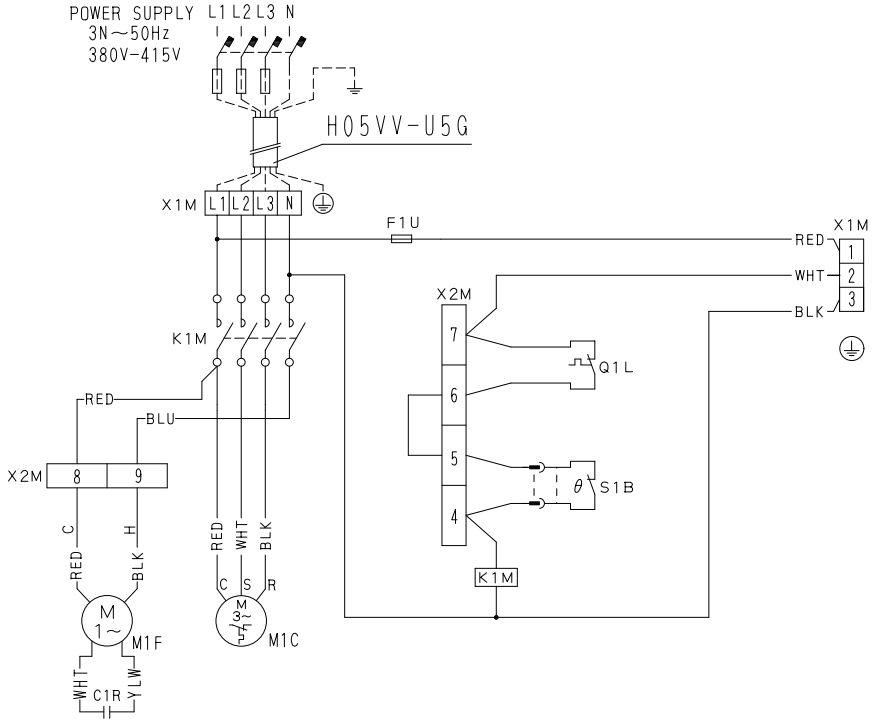
R71FUY1

L1-RED	L2-WHT	L3-BLK	N-BLU
C1R	CAPACITOR (M1F)		
F1U	FUSE (250V, 5A)		
K1M	MAGNETIC CONTACTOR (M1C)		
M1C	MOTOR (COMPRESSOR)		
M1F	MOTOR (FAN)		
Q1L	THERMO SWITCH (M1F)		
S1B	THERMO SWITCH (DISCHARGE PIPE)		
X1M	TERMINAL STRIP		
X2M	TERMINAL STRIP		



SWITCH BOX

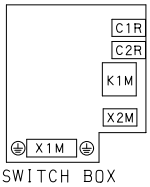
NOTES) 1. □□□□ : TERMINAL
○ : WIRE CLAMP
⊣⊢ : CONNECTOR
2. ----- : FIELD WIRING
3. SYMBOLS SHOW AS FOLLOWS
BLK:BLACK RED:RED
BLU:BLUE WHT:WHITE YLW:YELLOW
4. POWER SUPPLY FOR THE MODEL OF R71FUY1C IS 380V ONLY.



3D000995C

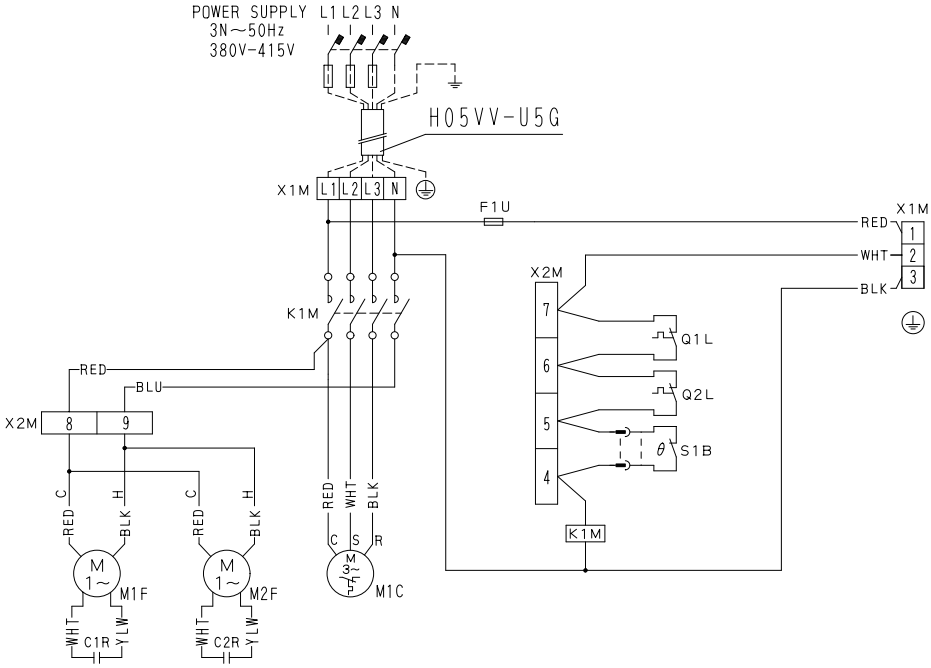
R100FUY1
R125FUY1

L1-RED	L2-WHT	L3-BLK	N-BLU
C1R・C2R	CAPACITOR (M1F・M2F)		
F1U	FUSE (250V, 5A)		
K1M	MAGNETIC CONTACTOR (M1C)		
M1C	MOTOR (COMPRESSOR)		
M1F・M2F	MOTOR (FAN)		
Q1L・Q2L	THERMO SWITCH (M1F・M2F)		
S1B	THERMO SWITCH (DISCHARGE PIPE)		
X1M	TERMINAL STRIP		
X2M	TERMINAL STRIP		



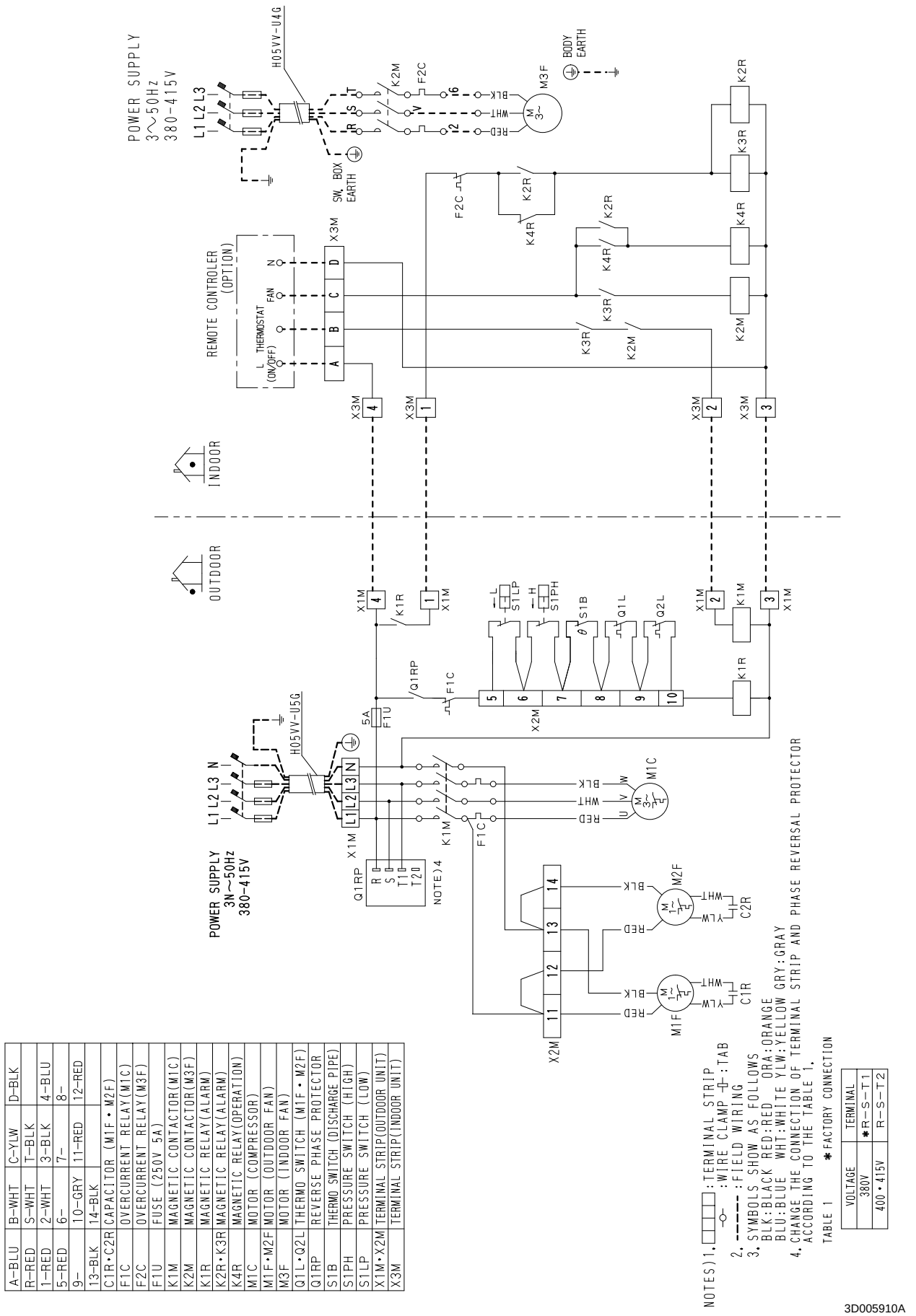
SWITCH BOX

NOTES) 1. □□□□ : TERMINAL
○ : WIRE CLAMP
⊣⊢ : CONNECTOR
2. ----- : FIELD WIRING
3. SYMBOLS SHOW AS FOLLOWS
BLK:BLACK RED:RED
BLU:BLUE WHT:WHITE YLW:YELLOW
4. POWER SUPPLY FOR THE MODELS OF R100・125FUY1 AND R125FUY1S IS 380V ONLY.



3D001007C

FD06KY1+RU06KY1



A-BLU	B-WHT	C-YLW	D-BLK
R-RED	S-WHT	T-BLK	
1-RED	2-WHT	3-BLK	4-BLU
5-RED	6-	7-	8-
9-	10-GRY	11-RED	12-RED
13-BLK	14-BLK		
C1R•C2R	CAPACITOR (M1F • M2F)		
F1C	OVERCURRENT RELAY(M1C)		
F2C	OVERCURRENT RELAY(M3F)		
F1U	FUSE (250V 5A)		
K1M	MAGNETIC CONTACTOR(M1C)		
K2M	MAGNETIC CONTACTOR(M3F)		
K1R	MAGNETIC RELAY(ALARM)		
K2R•K3R	MAGNETIC RELAY(ALARM)		
K4R	MAGNETIC RELAY(OPERATION)		
M1C	MOTOR (COMPRESSOR)		
M1F•M2F	MOTOR (OUTDOOR FAN)		
M3F	MOTOR (INDOOR FAN)		
Q1L•Q2L	THERMO SWITCH (M1F • M2F)		
Q1RP	REVERSE PHASE PROTECTOR		
S1B	THERMO SWITCH (DISCHARGE PIPE)		
S1PH	PRESSURE SWITCH (HIGH)		
S1LP	PRESSURE SWITCH (LOW)		
X1M•X2M	TERMINAL STRIP(OUTDOOR UNIT)		
X3M	TERMINAL STRIP(INDOOR UNIT)		

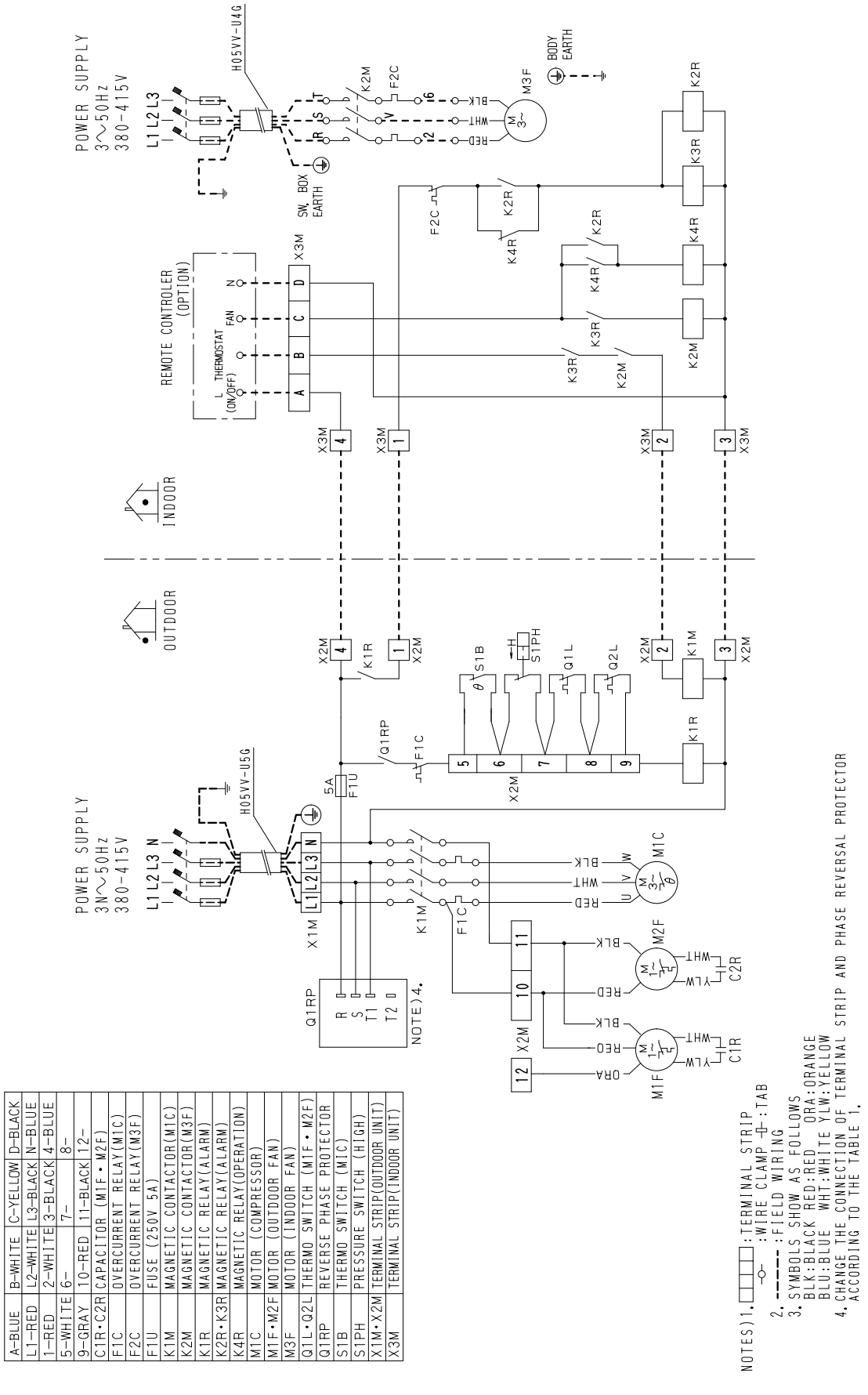
NOTES)1. □□□□ :TERMINAL STRIP
—○— :WIRE CLAMP —▷— :TAB
———— :FIELD WIRING
2. ----- :FIELD WIRING
3. SYMBOLS SHOW AS FOLLOWS
BLK:BLACK RED:RED ORA:ORANGE
BLU:BLUE WHT:WHITE YLW:YELLOW GRY:GRAY
4. CHANGE THE CONNECTION OF TERMINAL STRIP AND PHASE REVERSAL PROTECTOR ACCORDING TO THE TABLE 1.

TABLE 1 ✱FACTORY CONNECTION

VOLTAGE	TERMINAL
380V	✱R-S-T1
400•415V	R-S-T2

3D005910A

FD08KY1+RU08KY1
FD10KY1+RU10KY1



A-BLUE	B-WHITE	C-YELLOW	D-BLACK
L1-RED	L2-WHITE	L3-BLACK	N-BLUE
1-RED	2-WHITE	3-BLACK	4-BLUE
5-WHITE	6-	7-	8-
9-GRAY	10-RED	11-BLACK	12-
C1R・C2R	CAPACITOR (M1F・M2F)		
F1C	OVERCURRENT RELAY(M1C)		
F2C	OVERCURRENT RELAY(M3F)		
F1U	FUSE (250V 5A)		
K1M	MAGNETIC CONTACTOR(M1C)		
K2M	MAGNETIC CONTACTOR(M3F)		
K1R	MAGNETIC RELAY(ALARM)		
K2R・K3R	MAGNETIC RELAY(ALARM)		
K4R	MAGNETIC RELAY(OPERATION)		
M1C	MOTOR (COMPRESSOR)		
M1F・M2F	MOTOR (OUTDOOR FAN)		
M3F	MOTOR (INDOOR FAN)		
Q1L・Q2L	THERMO SWITCH (M1F・M2F)		
Q1RP	REVERSE PHASE PROTECTOR		
S1B	THERMO SWITCH (M1C)		
S1PH	PRESSURE SWITCH (HIGH)		
X1M・X2M	TERMINAL STRIP(OUTDOOR UNIT)		
X3M	TERMINAL STRIP(INDOOR UNIT)		

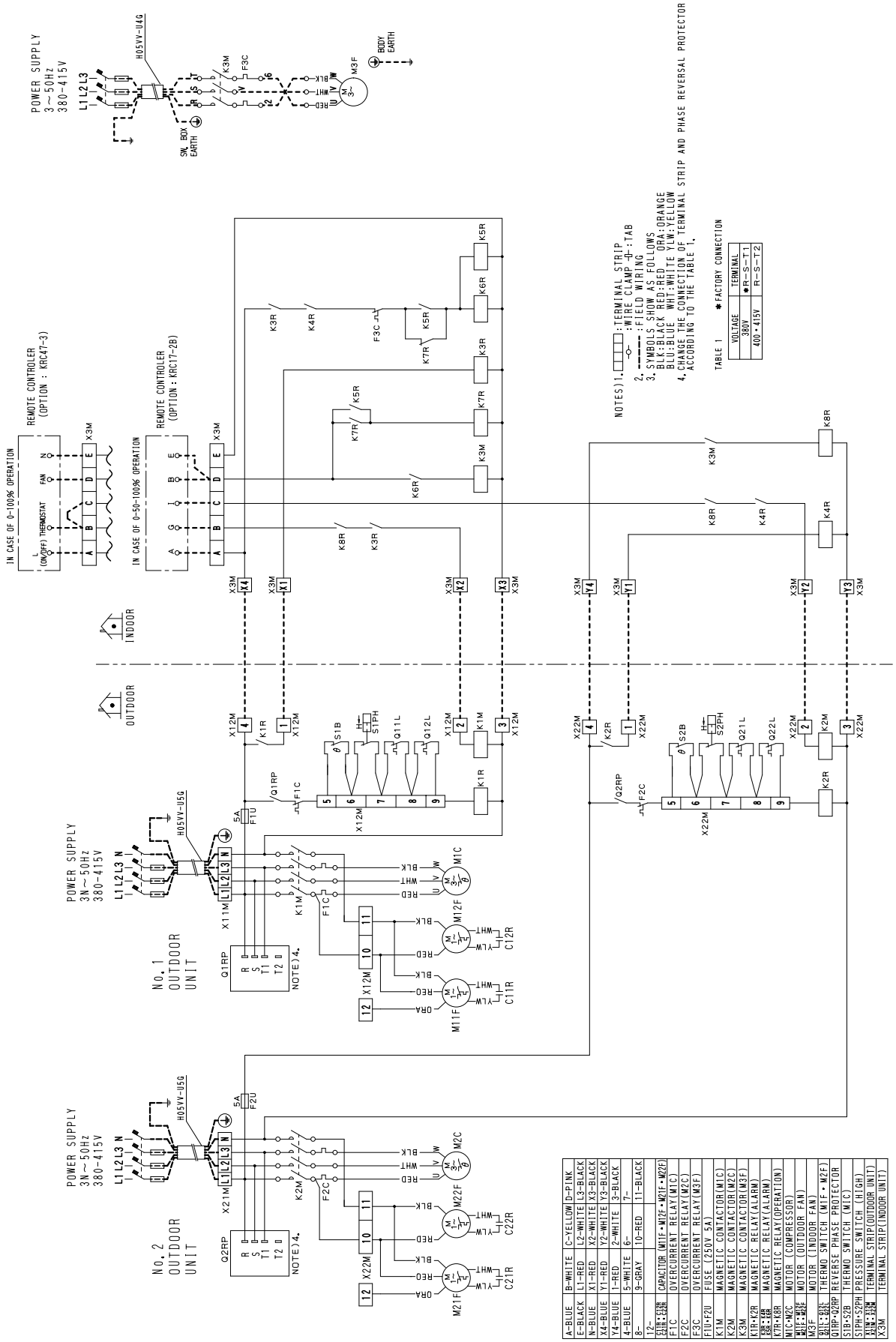
NOTES)1. □□□□ : TERMINAL STRIP
—○— : WIRE CLAMP —□— : TAB
2. ------ : FIELD WIRING
3. SYMBOLS SHOW AS FOLLOWS
BLK:BLACK RED:RED ORA:ORANGE
BLU:BLUE WHT:WHITE YLW:YELLOW
4. CHANGE THE CONNECTION OF TERMINAL STRIP AND PHASE REVERSAL PROTECTOR ACCORDING TO THE TABLE 1.

TABLE 1 ✱FACTORY CONNECTION

VOLTAGE	TERMINAL
380V	✱R-S-T1
400・415V	R-S-T2

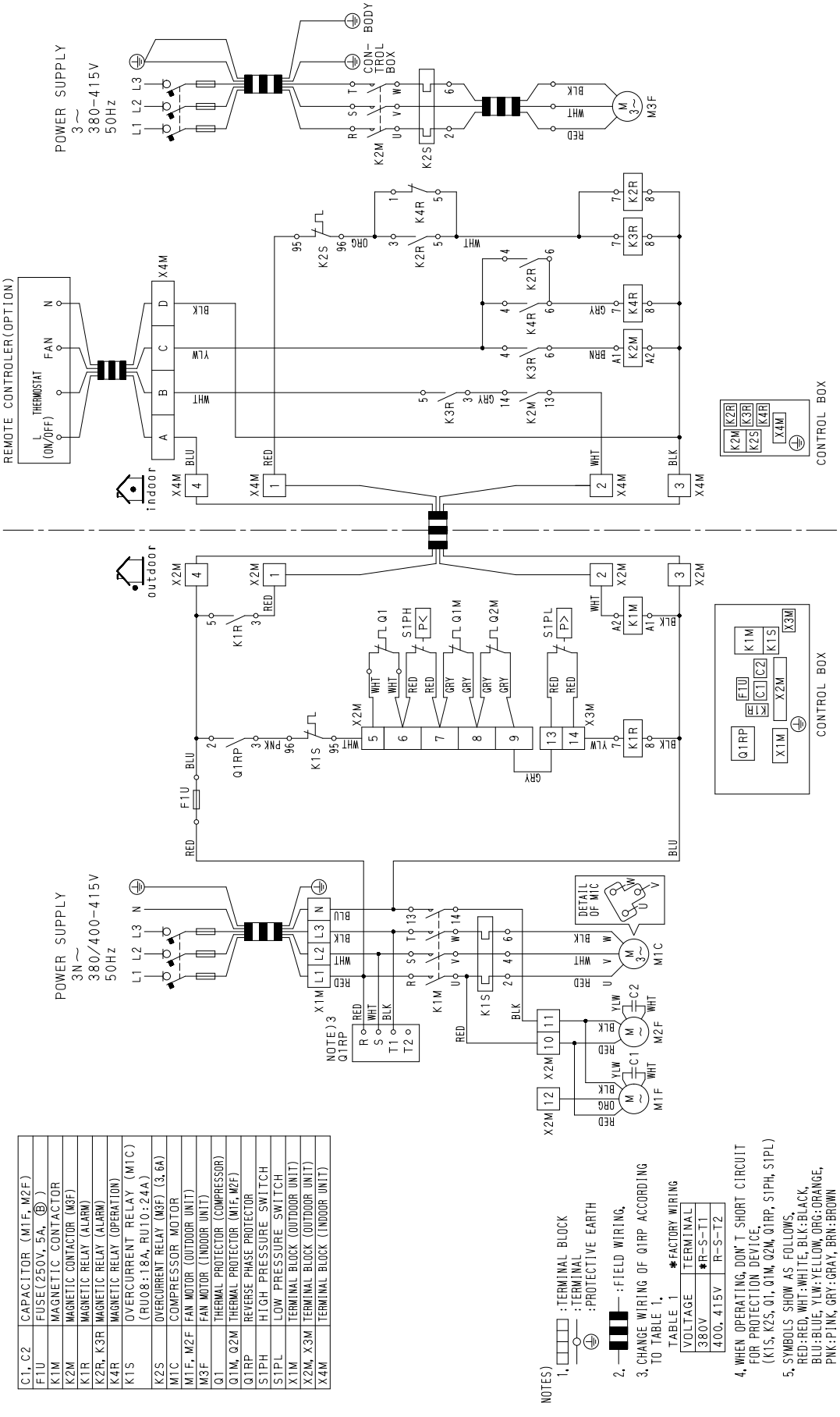
3D004826A

FD15KY1+RU08KY1×2
FD20KY1+RU10KY1×2



2D005700A

FD08KY1+RU08KUY1
FD10KY1+RU10KUY1



C1, C2	CAPACITOR (M1F, M2F)
F1U	FUSE(250V, 5A, Ⓑ)
K1M	MAGNETIC CONTACTOR
K2M	MAGNETIC CONTACTOR (M3F)
K1R	MAGNETIC RELAY (ALARM)
K2R, K3R	MAGNETIC RELAY (ALARM)
K4R	MAGNETIC RELAY (OPERATION)
K1S	OVERCURRENT RELAY (M1C) (FDU08:18A, RU10:24A)
K2S	OVERCURRENT RELAY (M3F) (3.6A)
M1C	COMPRESSOR MOTOR
M1F, M2F	FAN MOTOR (OUTDOOR UNIT)
M3F	FAN MOTOR (INDOOR UNIT)
Q1	THERMAL PROTECTOR (COMPRESSOR)
Q1M, Q2M	THERMAL PROTECTOR (M1F, M2F)
Q1RP	REVERSE PHASE PROTECTOR
S1PH	HIGH PRESSURE SWITCH
S1PL	LOW PRESSURE SWITCH
X1M	TERMINAL BLOCK (OUTDOOR UNIT)
X2M, X3M	TERMINAL BLOCK (OUTDOOR UNIT)
X4M	TERMINAL BLOCK (INDOOR UNIT)

NOTES)
1. □□□ :TERMINAL BLOCK
—⏚— :TERMINAL
:PROTECTIVE EARTH
2. ——— :FIELD WIRING.
3. CHANGE WIRING OF Q1RP ACCORDING TO TABLE 1.

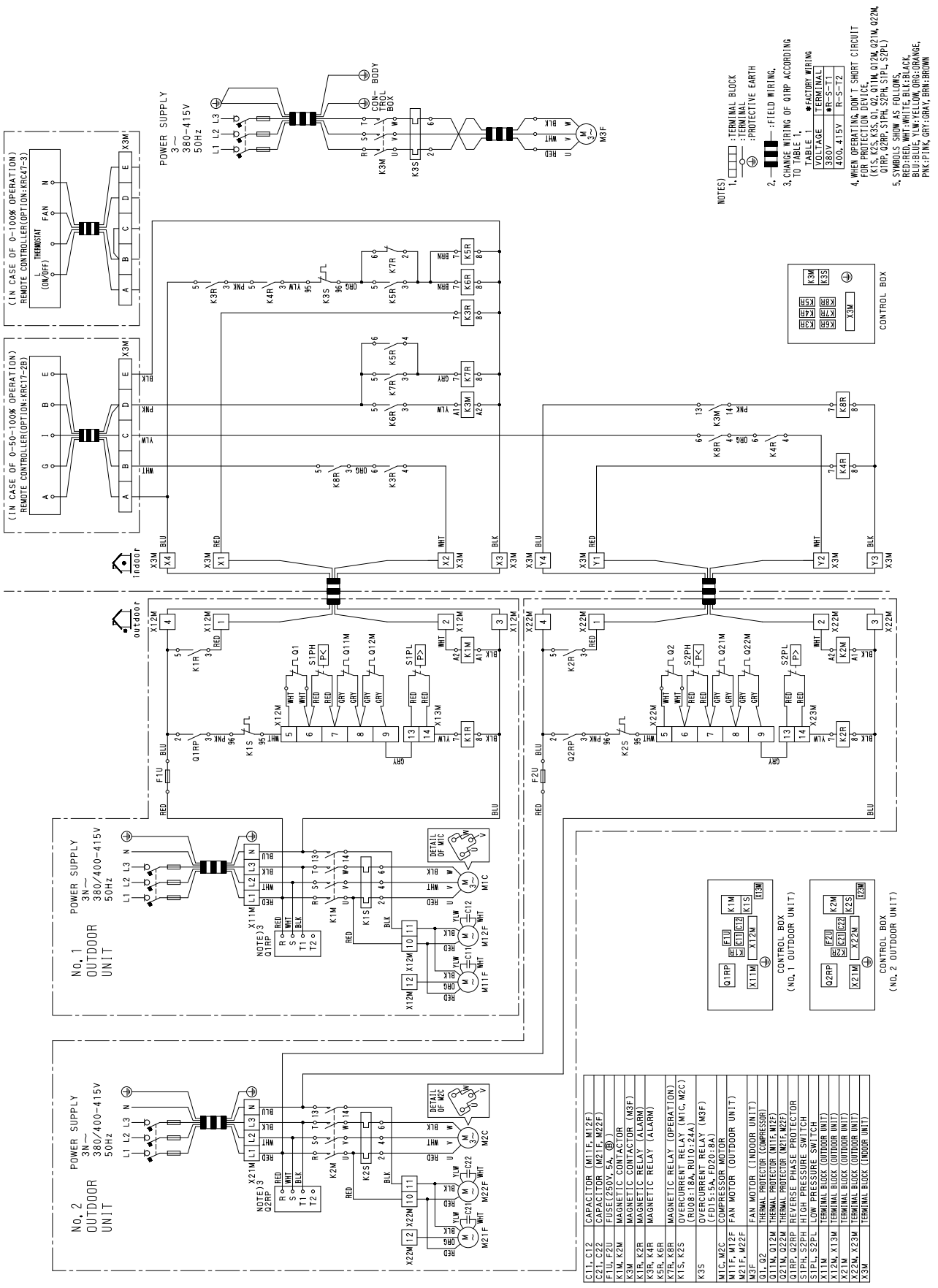
TABLE 1 *FACTORY WIRING

VOLTAGE	TERMINAL
380V	*R-S-T1
400, 415V	R-S-T2

4. WHEN OPERATING, DON'T SHORT CIRCUIT FOR PROTECTION DEVICE, (K1S, K2S, Q1, Q1M, Q2M, Q1RP, S1PH, S1PL)
5. SYMBOLS SHOW AS FOLLOWS, RED:RED, WHT:WHITE, BLK:BLACK, BLU:BLUE, YLW:YELLOW, ORG:ORANGE, PNK:PINK, GRY:GRAY, BRN:BROWN

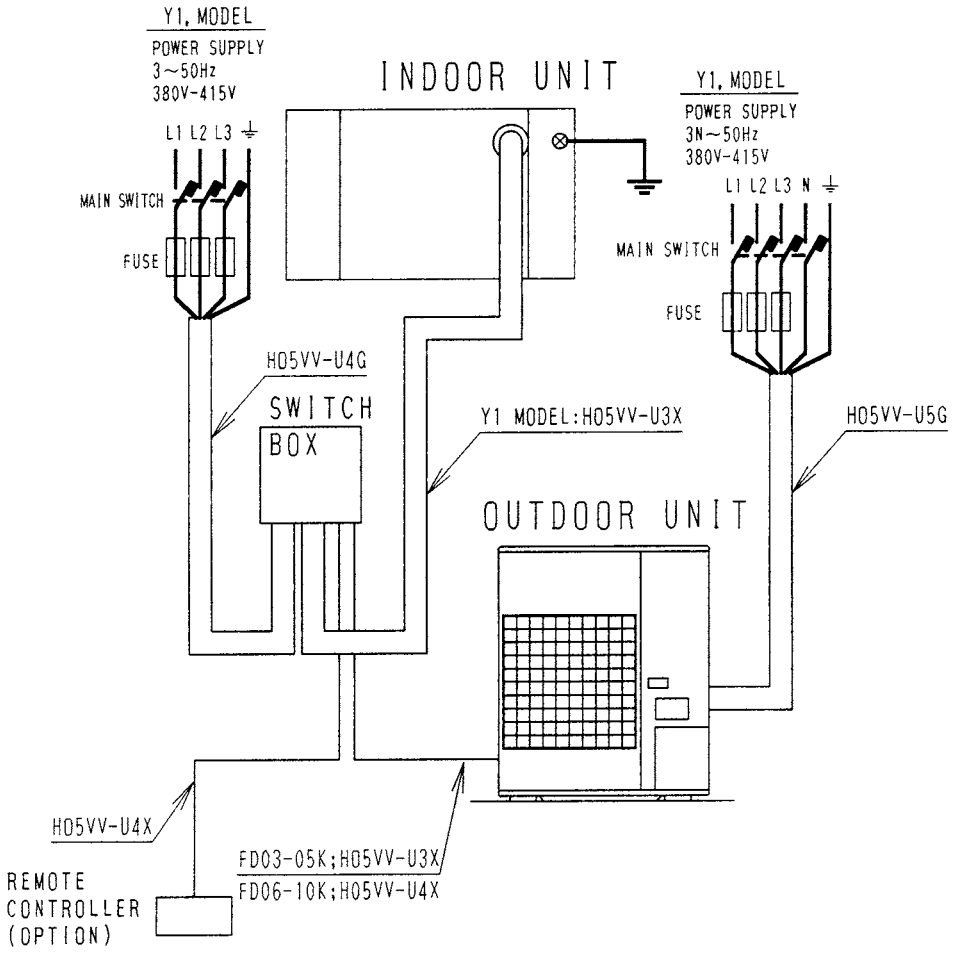
3D045568

FD15KY1+RU08KUY1×2
FD20KY1+RU10KUY1×2



2D045889

FD03~10KY1

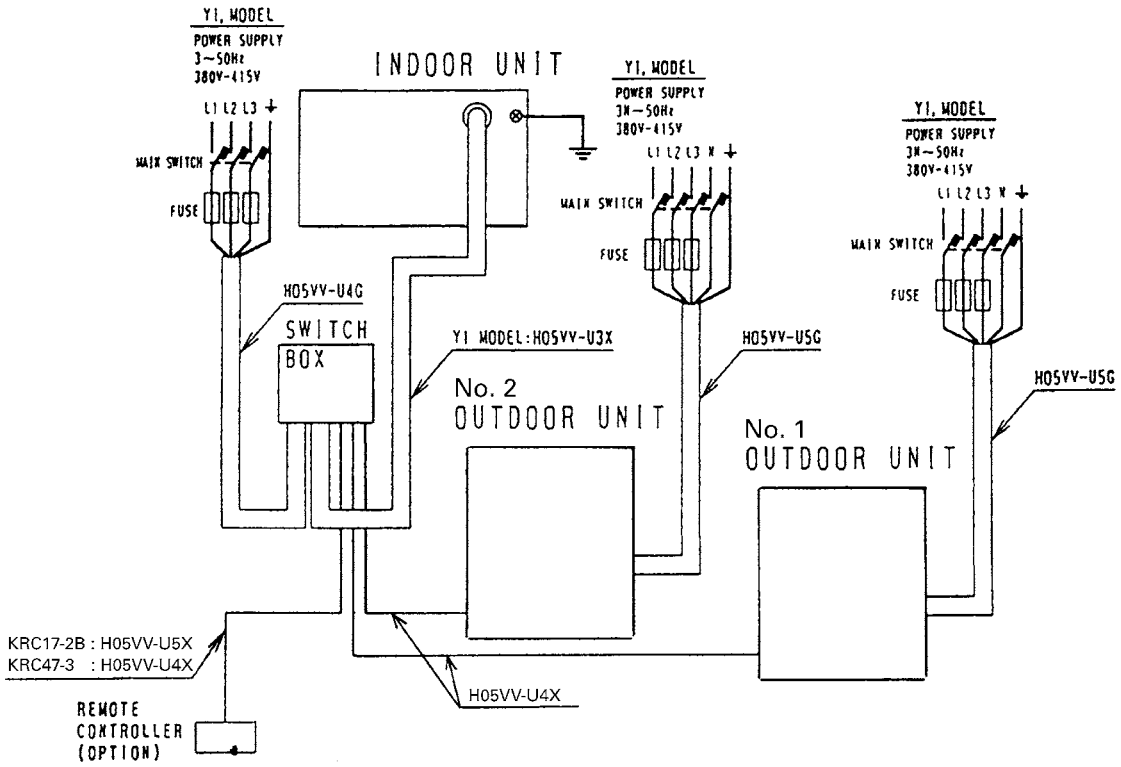


Notes 1) ——— Line voltage wiring
——— Control circuit wiring

2) All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
3) Use copper conductor only.
4) As for details, see wiring diagrams.
5) Install fuse and mainswitch for safety.
6) All field wiring and components must be provided by a licensed electrician.
7) Unit shall be grounded in compliance with the applicable local and national codes.
8) Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
9) The outdoor units for 3 phase, are equipped with a reverse phase protector to protect the compressor.
If the compressor does not operate during the test run, exchange two phase connections out of three.
10) Never share a common power source with other equipment.

C : 4D004694A

FD15 · 20KY1

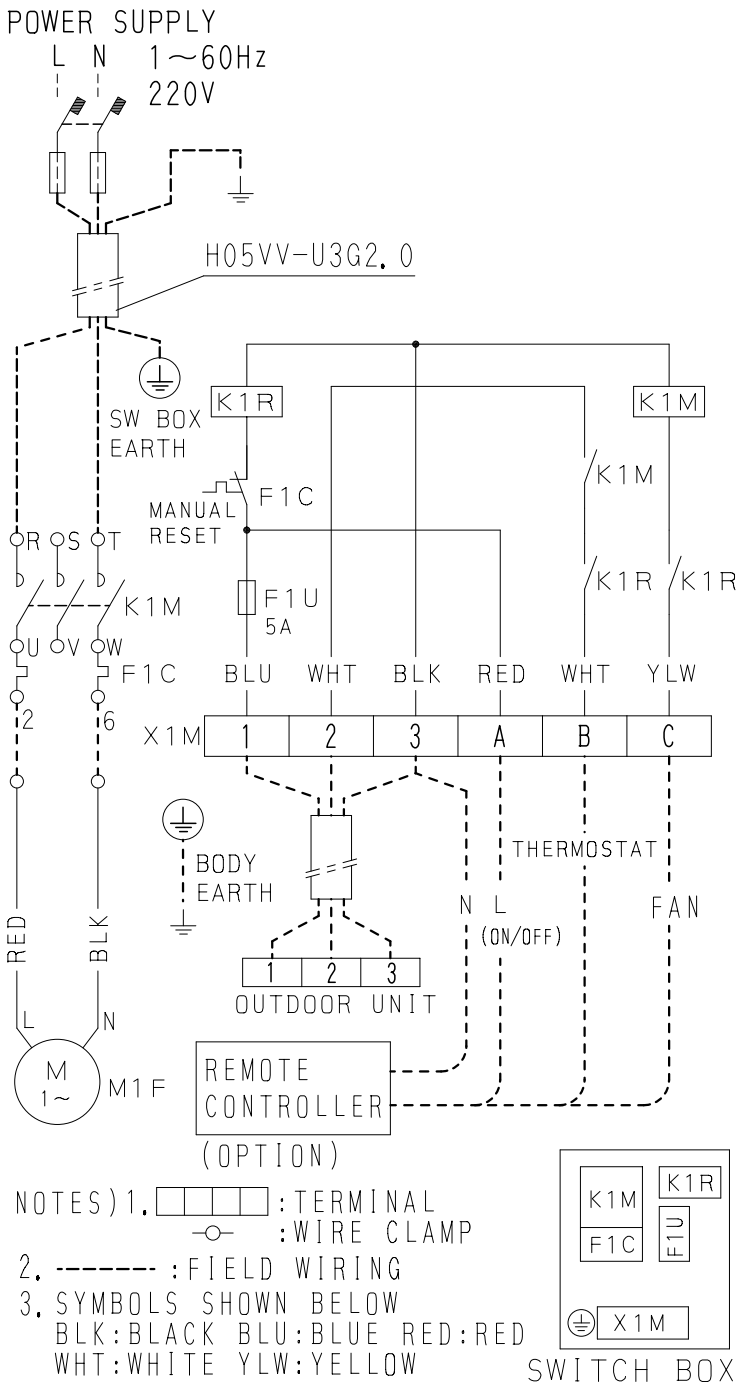


Notes 1) ——— Line voltage wiring
——— Control circuit wiring

2) All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
3) Use copper conductor only.
4) As for details, see wiring diagrams.
5) Install fuse and mainswitch for safety.
6) All field wiring and components must be provided by a licensed electrician.
7) Unit shall be grounded in compliance with the applicable local and national codes.
8) Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
9) The outdoor units for 3 phase, are equipped with a reverse phase protector to protect the compressor.
If the compressor does not operate during the test run, exchange two phase connections out of three.
10) Never share a common power source with other equipment.

7.2 60Hz

FD03KVAL
FD04KVAL

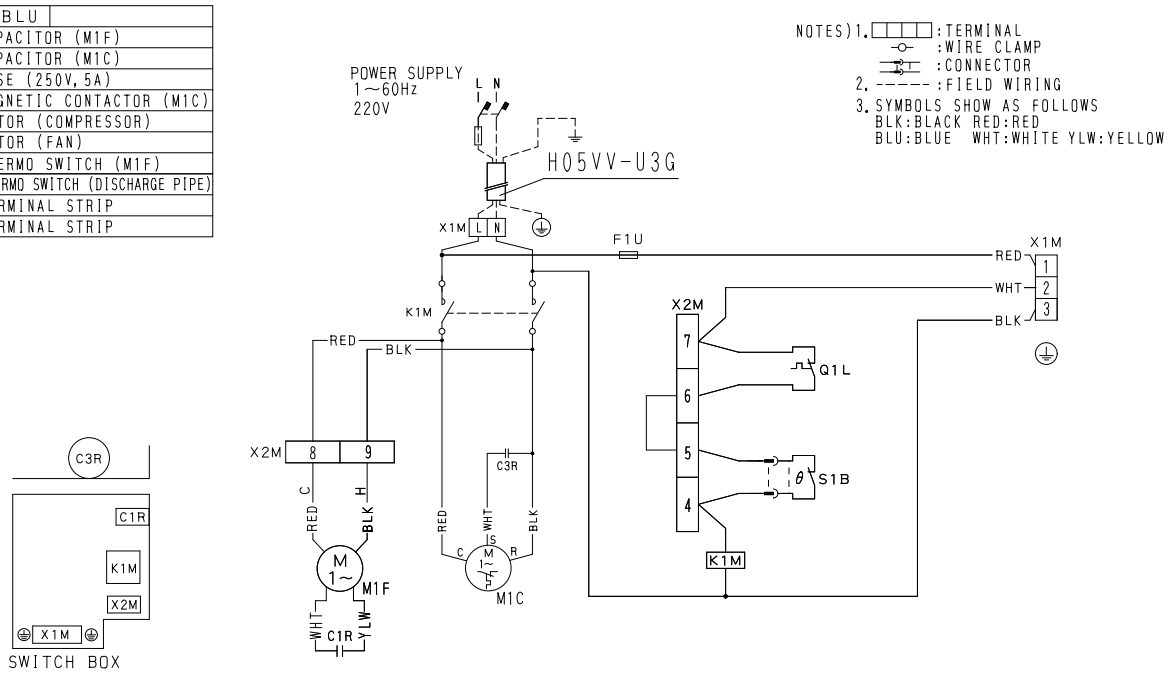


F1C	OVER CURRENT RELAY
F1U	FUSE(5A, 250V)
K1M	MAGNETIC CONTACTOR (M1F)(220V-240V)
K1R	MAGNETIC RELAY(220V-240V)
L-RED	N-BLK
M1F	MOTOR (FAN)(220V)
X1M	TERMINAL STRIP

3D006976

R71FUVAL

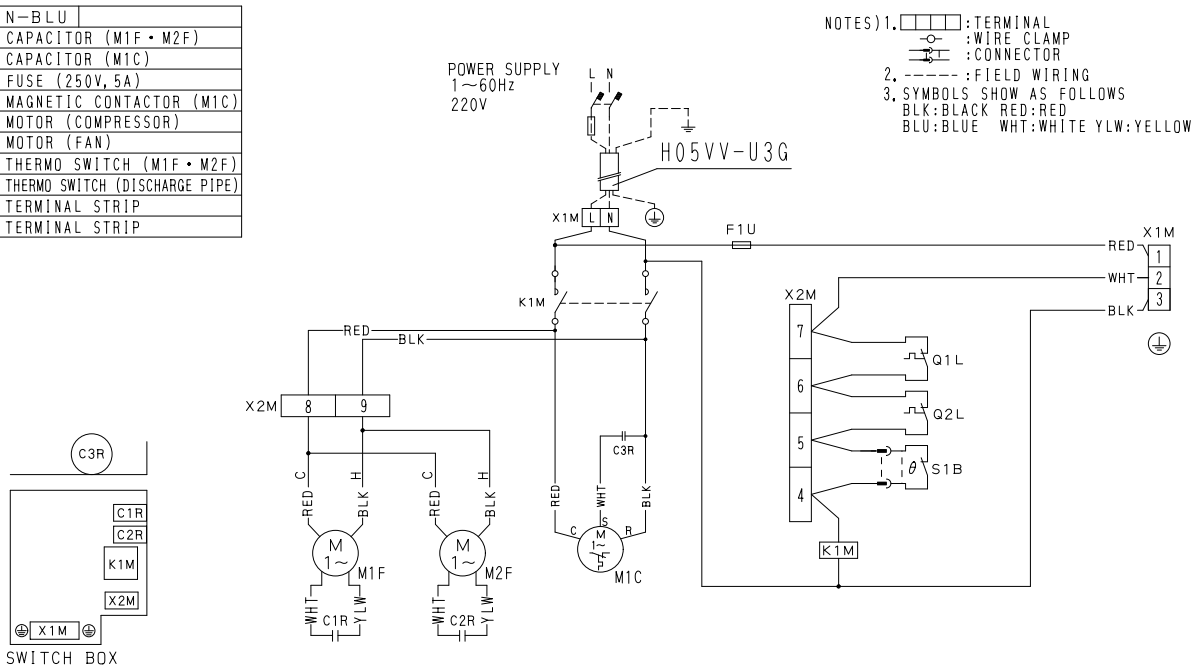
L-RED	N-BLU	
C1R	CAPACITOR (M1F)	
C3R	CAPACITOR (M1C)	
F1U	FUSE (250V, 5A)	
K1M	MAGNETIC CONTACTOR (M1C)	
M1C	MOTOR (COMPRESSOR)	
M1F	MOTOR (FAN)	
Q1L	THERMO SWITCH (M1F)	
S1B	THERMO SWITCH (DISCHARGE PIPE)	
X1M	TERMINAL STRIP	
X2M	TERMINAL STRIP	



3D005375C

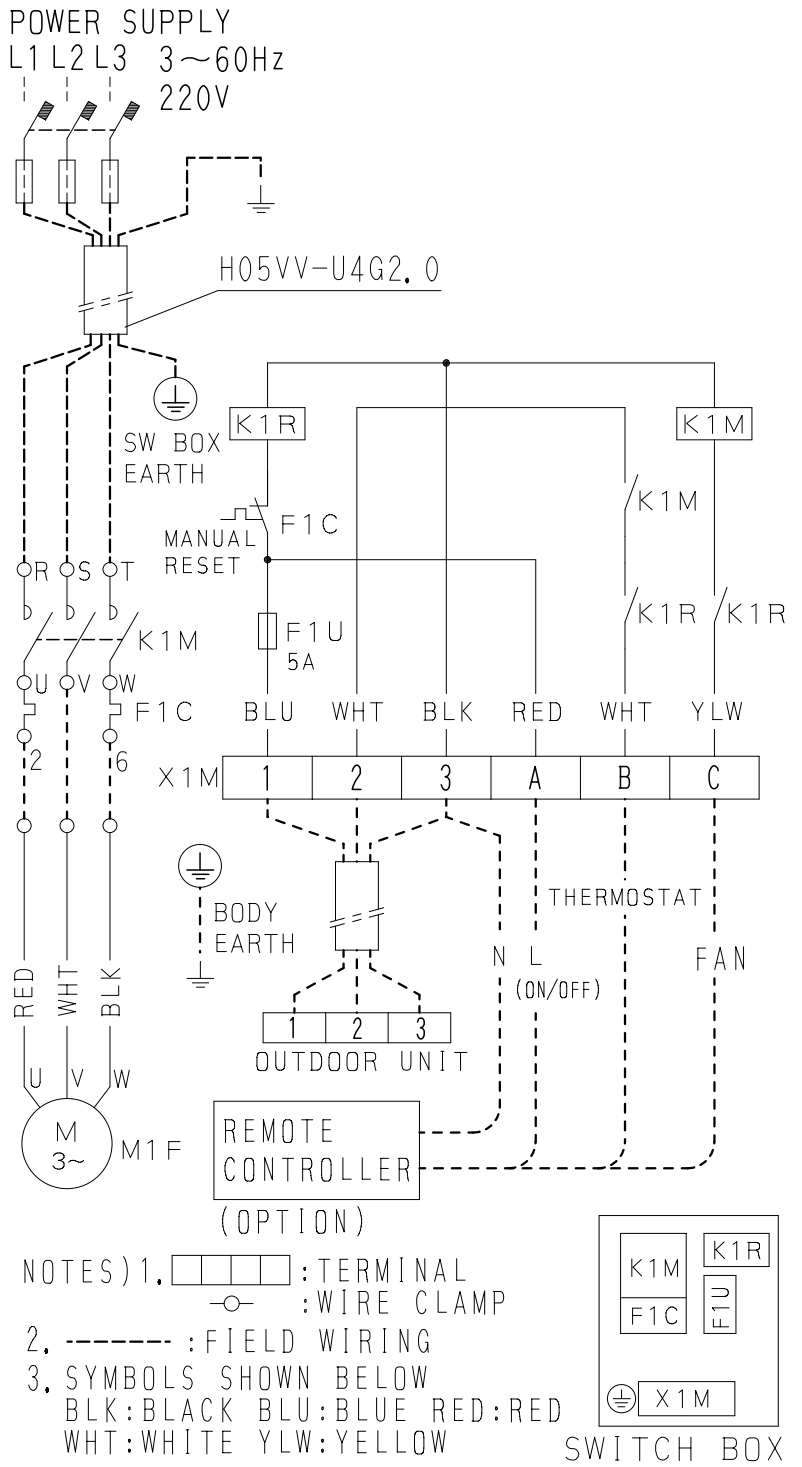
R100FUVAL

L-RED	N-BLU	
C1R・C2R	CAPACITOR (M1F・M2F)	
C3R	CAPACITOR (M1C)	
F1U	FUSE (250V, 5A)	
K1M	MAGNETIC CONTACTOR (M1C)	
M1C	MOTOR (COMPRESSOR)	
M1F・M2F	MOTOR (FAN)	
Q1L・Q2L	THERMO SWITCH (M1F・M2F)	
S1B	THERMO SWITCH (DISCHARGE PIPE)	
X1M	TERMINAL STRIP	
X2M	TERMINAL STRIP	



3D005376C

FD05KTAL

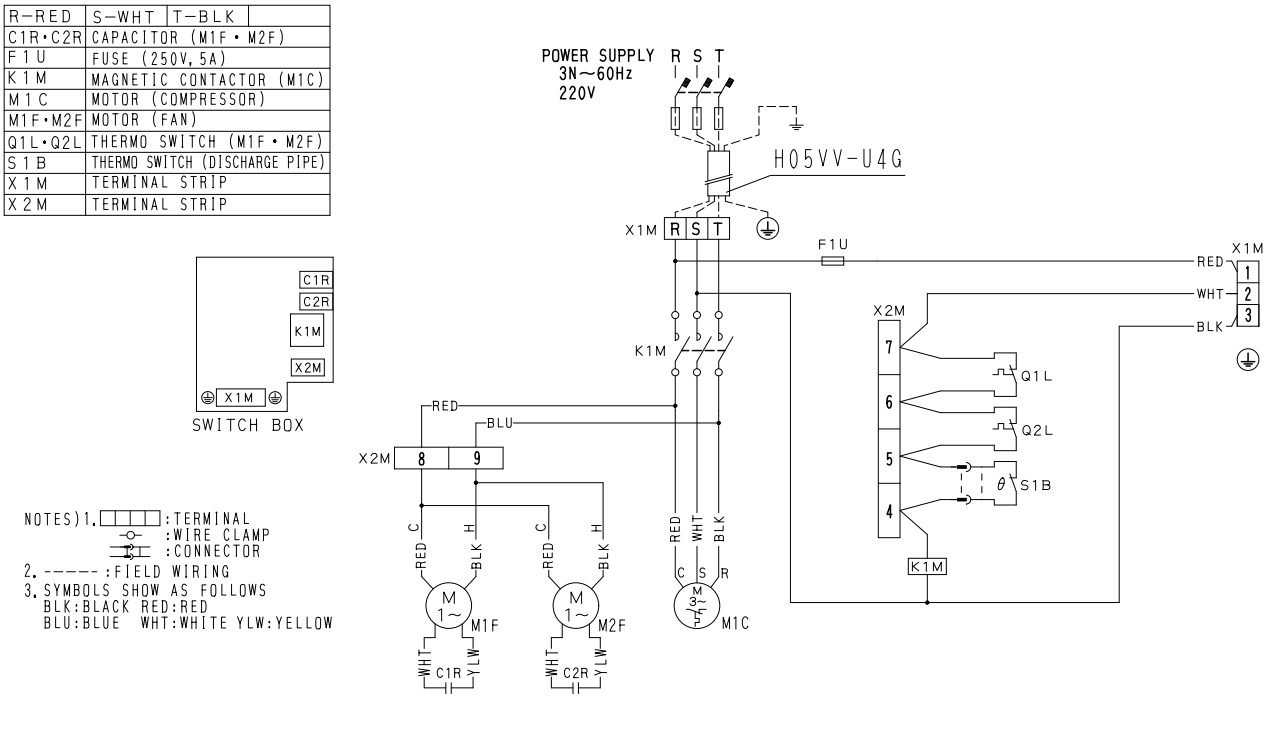


F1C	OVER CURRENT RELAY		
F1U	FUSE(5A, 250V)		
K1M	MAGNETIC CONTACTOR (M1F)(220V-240V)		
K1R	MAGNETIC RELAY(220V-240V)		
L1-RED	L2-WHT	L3-BLK	
M1F	MOTOR (FAN)(220V)		
X1M	TERMINAL STRIP		

3D006975

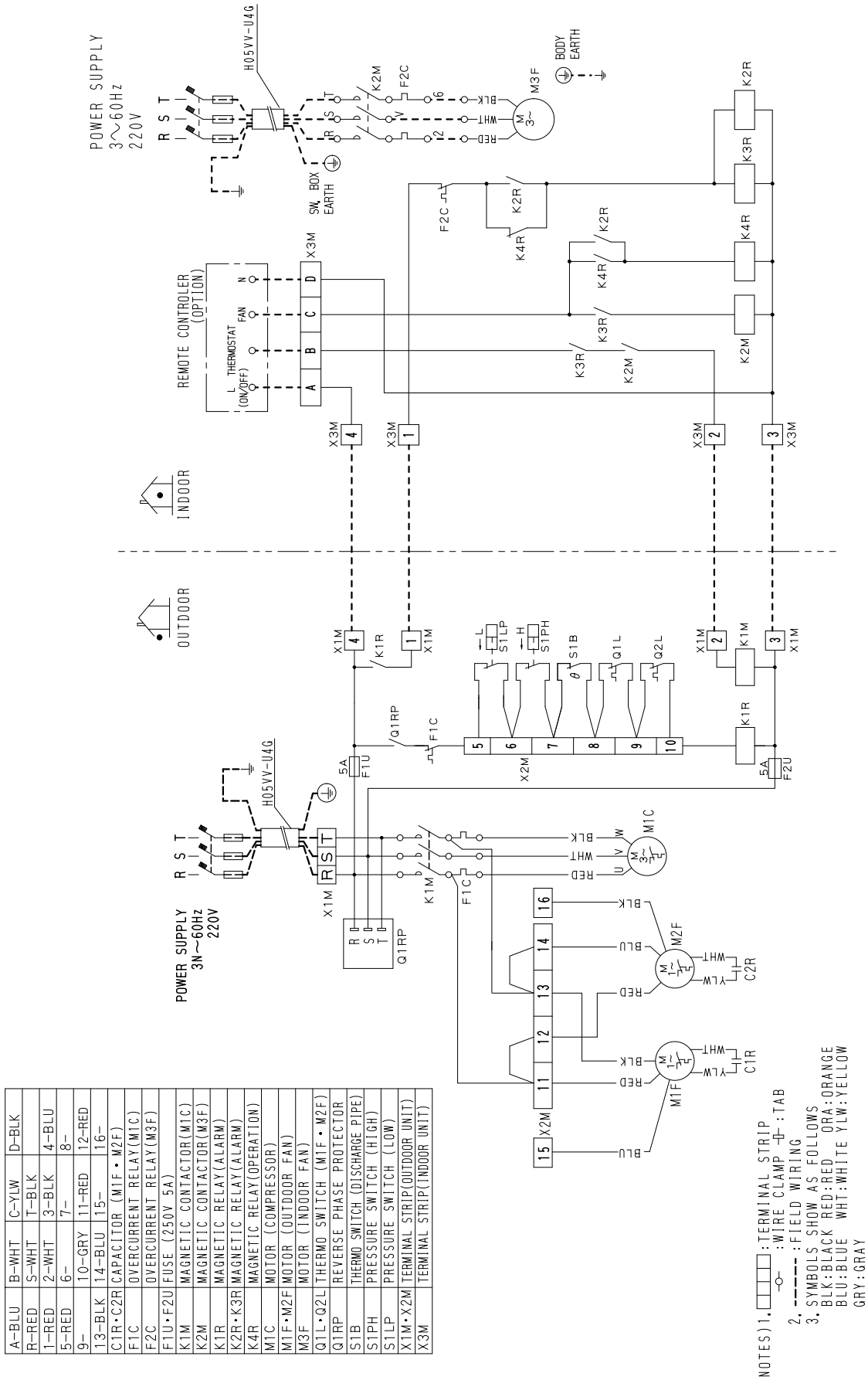
R125FUTAL

R-RED	S-WHT	T-BLK	
C1R・C2R	CAPACITOR (M1F・M2F)		
F1U	FUSE (250V, 5A)		
K1M	MAGNETIC CONTACTOR (M1C)		
M1C	MOTOR (COMPRESSOR)		
M1F・M2F	MOTOR (FAN)		
Q1L・Q2L	THERMO SWITCH (M1F・M2F)		
S1B	THERMO SWITCH (DISCHARGE PIPE)		
X1M	TERMINAL STRIP		
X2M	TERMINAL STRIP		



3D005377A

FD06KTAL+RU06KTAL

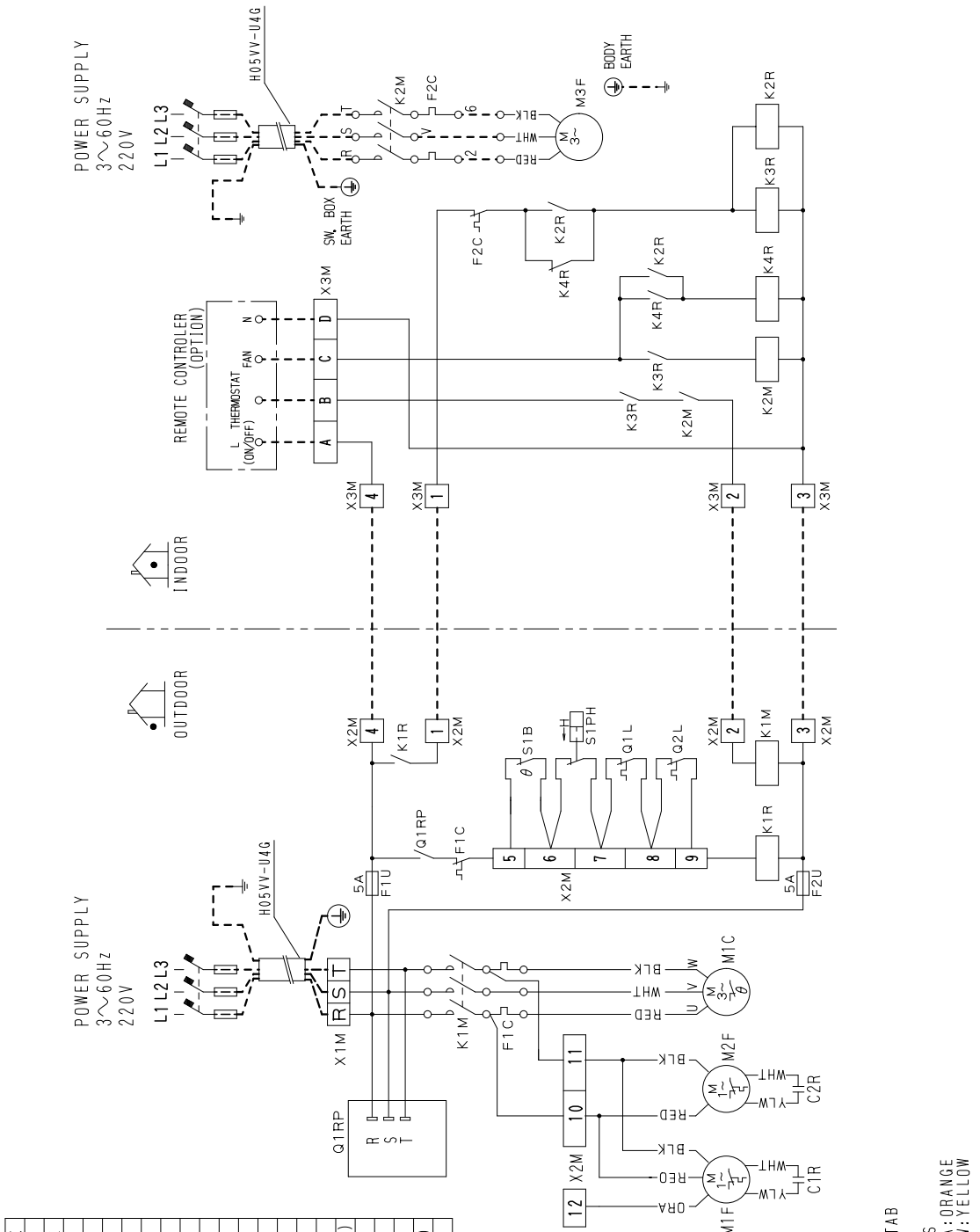


A-BLU	B-WHT	C-YLW	D-BLK
R-RED	S-WHT	T-BLK	
1-RED	2-WHT	3-BLK	4-BLU
5-RED	6-	7-	8-
9-	10-GRY	11-RED	12-RED
13-BLK	14-BLU	15-	16-
C1R・C2R	CAPACITOR (M1F・M2F)		
F1C	OVERCURRENT RELAY(M1C)		
F2C	OVERCURRENT RELAY(M3F)		
F1U・F2U	FUSE (250V 5A)		
K1M	MAGNETIC CONTACTOR(M1C)		
K2M	MAGNETIC CONTACTOR(M3F)		
K1R	MAGNETIC RELAY(ALARM)		
K2R・K3R	MAGNETIC RELAY(ALARM)		
K4R	MAGNETIC RELAY(OPERATION)		
M1C	MOTOR (COMPRESSOR)		
M1F・M2F	MOTOR (OUTDOOR FAN)		
M3F	MOTOR (INDOOR FAN)		
Q1L・Q2L	THERMO SWITCH (M1F・M2F)		
Q1RP	REVERSE PHASE PROTECTOR		
S1B	THERMO SWITCH (DISCHARGE PIPE)		
S1PH	PRESSURE SWITCH (HIGH)		
S1LP	PRESSURE SWITCH (LOW)		
X1M・X2M	TERMINAL STRIP(OUTDOOR UNIT)		
X3M	TERMINAL STRIP(INDOOR UNIT)		

NOTES)1. □□□□ :TERMINAL STRIP
—○— :WIRE CLAMP —⊣— :TAB
2. ------ :FIELD WIRING
3. SYMBOLS SHOW AS FOLLOWS
BLK:BLACK RED:RED ORA:ORANGE
BLU:BLUE WHT:WHITE YLW:YELLOW
GRY:GRAY

3D005909A

FD08KTAL+RU08KTAL
FD10KTAL+RU10KTAL



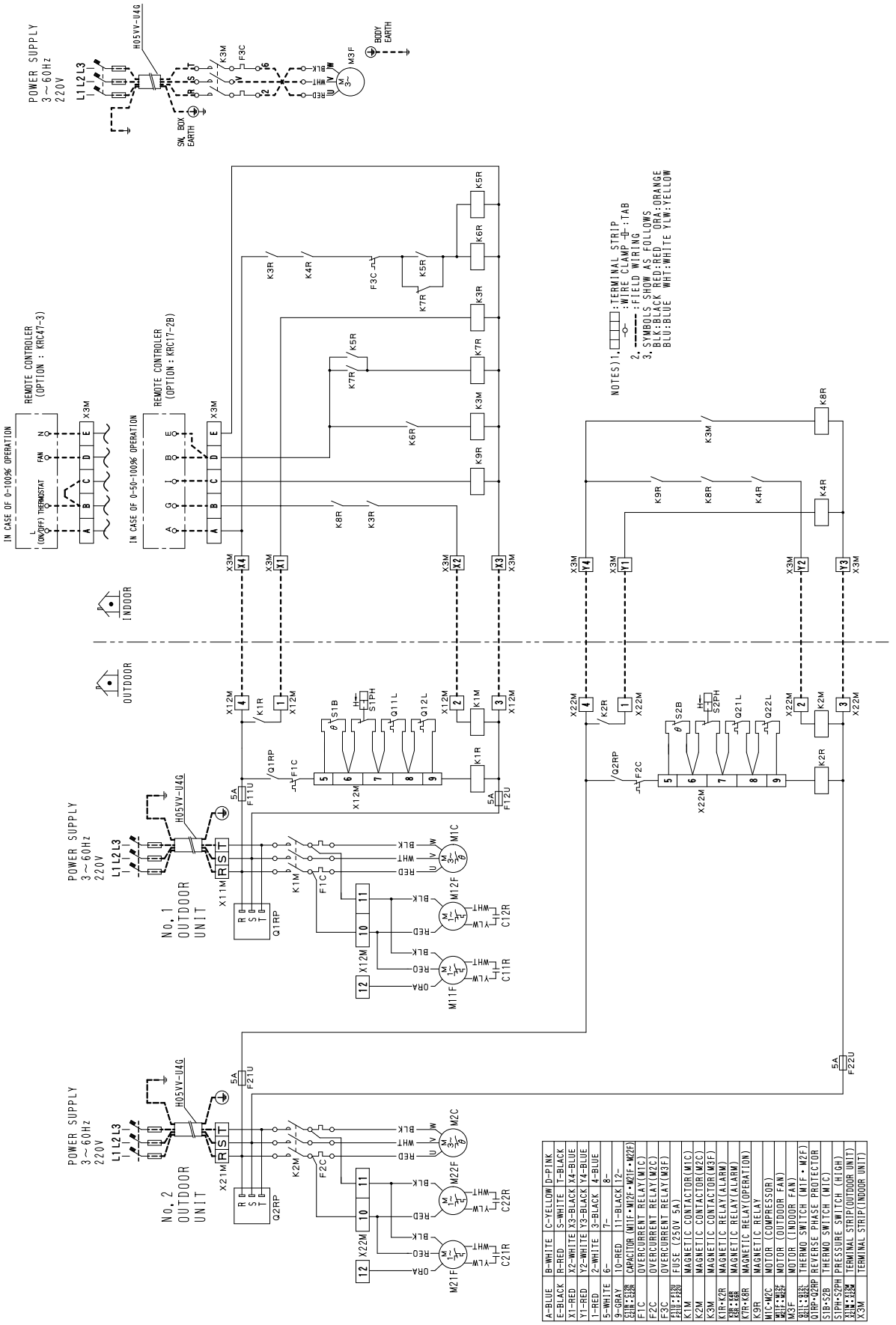
A-BLUE	B-WHITE	C-YELLOW	D-BLACK
R-RED	S-WHITE	T-BLACK	
1-RED	2-WHITE	3-BLACK	4-BLUE
5-WHITE	6-	7-	8-
9-GRAY	10-RED	11-BLACK	12-

C1R・C2R	CAPACITOR (M1F・M2F)
F1C	OVERCURRENT RELAY(M1C)
F2C	OVERCURRENT RELAY(M3F)
F1U・F2U	FUSE (250V 5A)
K1M	MAGNETIC CONTACTOR(M1C)
K2M	MAGNETIC CONTACTOR(M3F)
K1R	MAGNETIC RELAY(ALARM)
K2R・K3R	MAGNETIC RELAY(ALARM)
K4R	MAGNETIC RELAY(OPERATION)
M1C	MOTOR (COMPRESSOR)
M1F・M2F	MOTOR (OUTDOOR FAN)
M3F	MOTOR (INDOOR FAN)
Q1L・Q2L	THERMO SWITCH (M1F・M2F)
Q1RP	REVERSE PHASE PROTECTOR
S1B	THERMO SWITCH (M1C)
S1PH	PRESSURE SWITCH (HIGH)
X1M・X2M	TERMINAL STRIP(OUTDOOR UNIT)
X3M	TERMINAL STRIP(INDOOR UNIT)

NOTES) 1. □□□□ :TERMINAL STRIP
:WIRE CLAMP ⏚ :TAB
2. ——— :FIELD WIRING
3. SYMBOLS SHOW AS FOLLOWS
BLK:BLACK RED:RED ORA:ORANGE
BLU:BLUE WHT:WHITE YLW:YELLOW

3D004827A

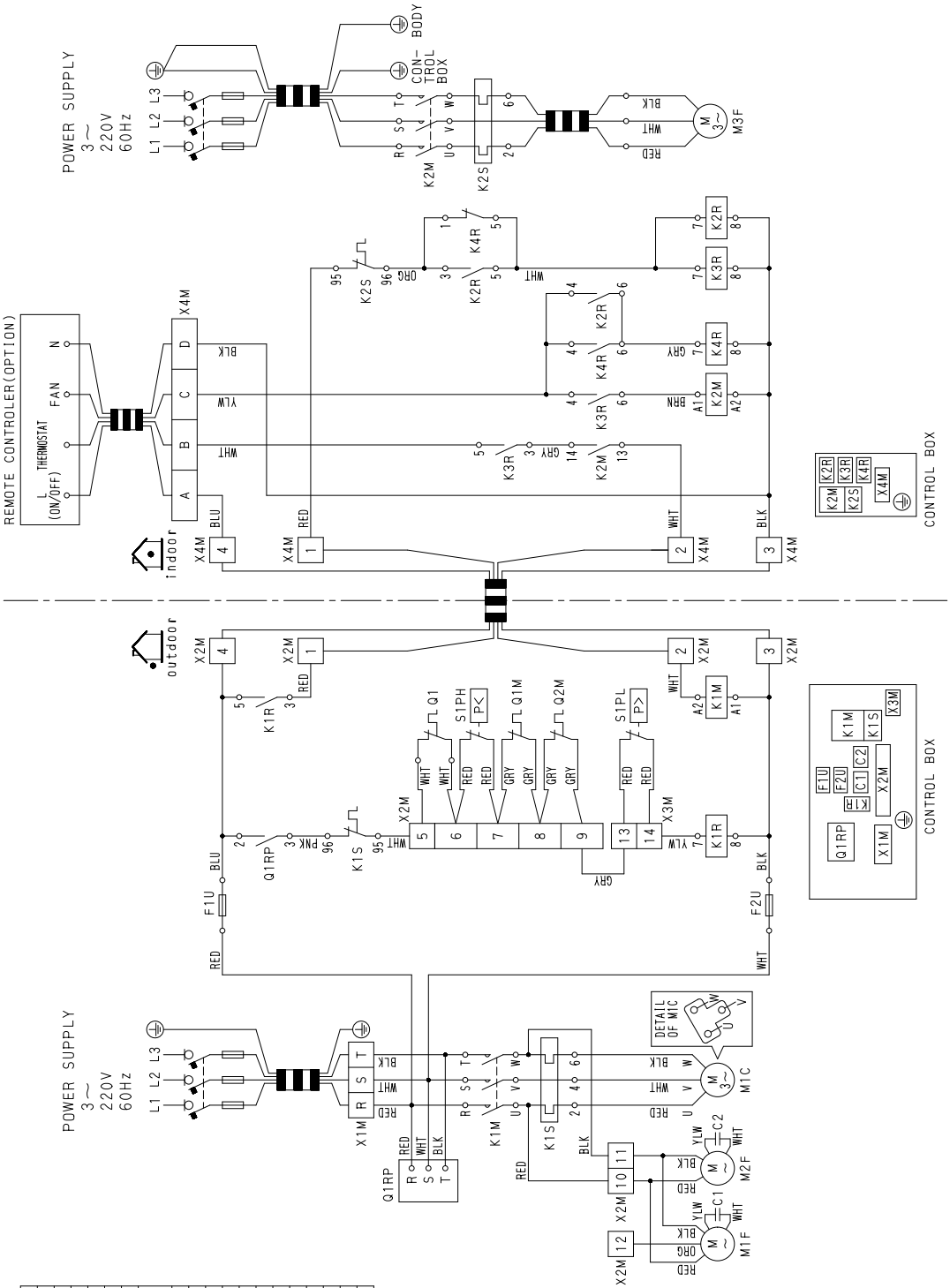
FD15KTAL+RU08KTAL×2
FD20KTAL+RU10KTAL×2



A-BLUE	B-WHITE	C-YELLOW	D-PINK
E-BLACK	R-RED	S-WHITE	T-BLACK
X1-RED	X2-WHITE	X3-BLACK	X4-BLUE
Y1-RED	Y2-WHITE	Y3-BLACK	Y4-BLUE
1-RED	2-WHITE	3-BLACK	4-BLUE
5-WHITE	6-	7-	8-
9-GRAY	10-RED	11-BLACK	12-
C1R・C2R	CAPACITOR (M1F・M2F・M21F・M22F)		
F1C	OVERCURRENT RELAY(M1C)		
F2C	OVERCURRENT RELAY(M2C)		
F3C	OVERCURRENT RELAY(M3F)		
F1U・F2U	FUSE (250V 5A)		
F21U・F22U	FUSE (250V 5A)		
K1M	MAGNETIC CONTACTOR(M1C)		
K2M	MAGNETIC CONTACTOR(M2C)		
K3M	MAGNETIC CONTACTOR(M3F)		
K1R・K2R	MAGNETIC RELAY(ALARM)		
K6R・K8R	MAGNETIC RELAY(ALARM)		
K7R・K8R	MAGNETIC RELAY(OPERATION)		
K9R	MAGNETIC RELAY		
M1C・M2C	MOTOR (COMPRESSOR)		
M1F・M2F	MOTOR (OUTDOOR FAN)		
M3F	MOTOR (INDOOR FAN)		
Q1RP・Q2RP	THERMO SWITCH (M1F・M2F)		
Q1RP・Q2RP	REVERSE PHASE PROTECTOR		
S1B・S2B	THERMO SWITCH (M1C)		
S1PH・S2PH	PRESSURE SWITCH (HIGH)		
X1M・X2M	TERMINAL STRIP(OUTDOOR UNIT)		
X3M	TERMINAL STRIP(INDOOR UNIT)		

2D008184A

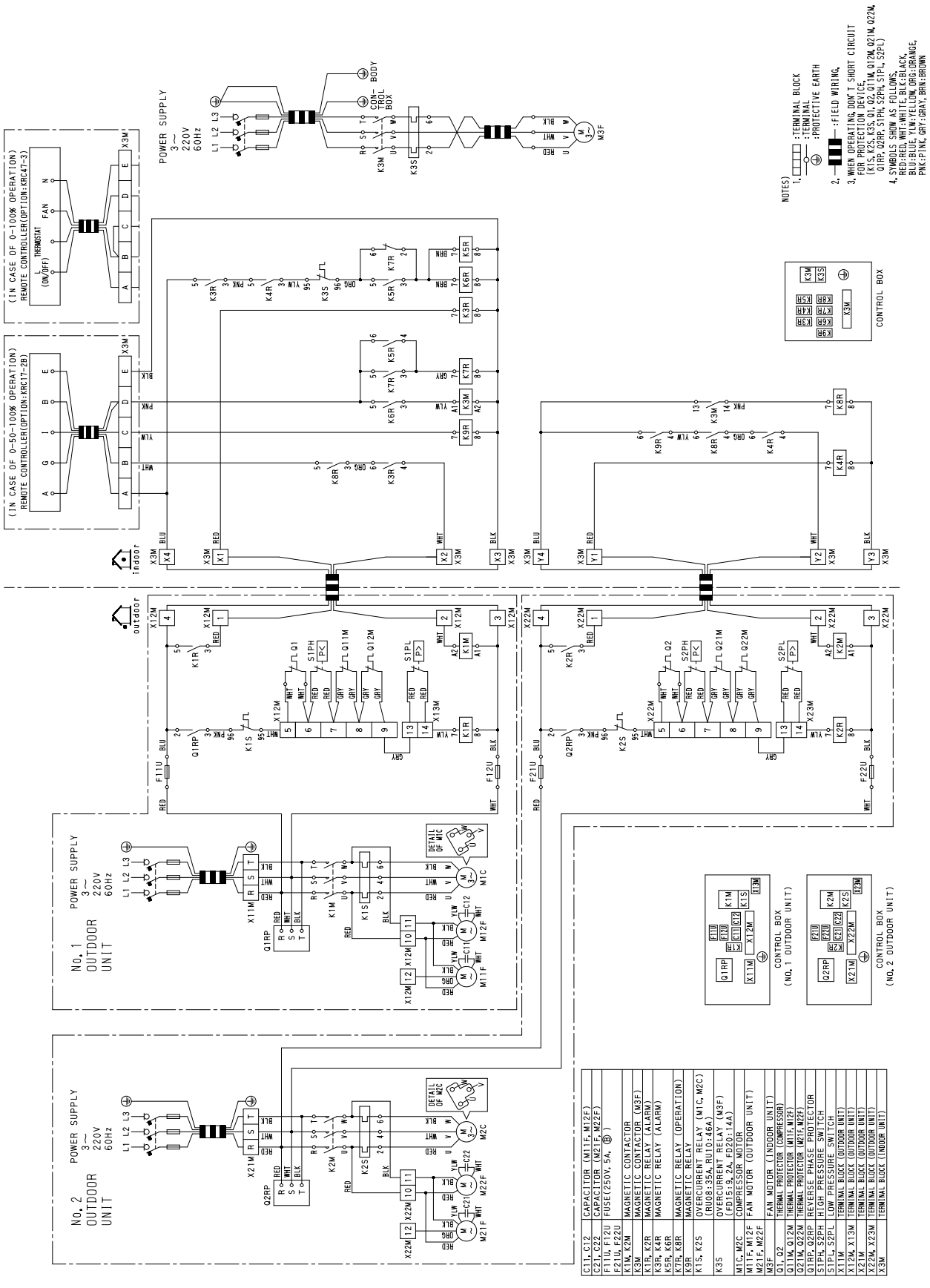
FD08KTAL+RU08KUTAL
FD10KTAL+RU10KUTAL



C1, C2	CAPACITOR (M1F, M2F)
F1U, F2U	FUSE(250V, 5A, Ⓑ)
K1M	MAGNETIC CONTACTOR
K2M	MAGNETIC CONTACTOR (M3F)
K1R	MAGNETIC RELAY (ALARM)
K2R, K3R	MAGNETIC RELAY (ALARM)
K4R	MAGNETIC RELAY (OPERATION)
K1S	OVERCURRENT RELAY (M1C) (RU08:35A, RU10:46A)
K2S	OVERCURRENT RELAY (M3F) (6.0A)
M1C	COMPRESSOR MOTOR
M1F, M2F	FAN MOTOR (OUTDOOR UNIT)
M3F	FAN MOTOR (INDOOR UNIT)
Q1	THERMAL PROTECTOR (COMPRESSOR)
Q1M, Q2M	THERMAL PROTECTOR (M1F, M2F)
Q1RP	REVERSE PHASE PROTECTOR
S1PH	HIGH PRESSURE SWITCH
S1PL	LOW PRESSURE SWITCH
X1M	TERMINAL BLOCK (OUTDOOR UNIT)
X2M, X3M	TERMINAL BLOCK (OUTDOOR UNIT)
X4M	TERMINAL BLOCK (INDOOR UNIT)

3D045569

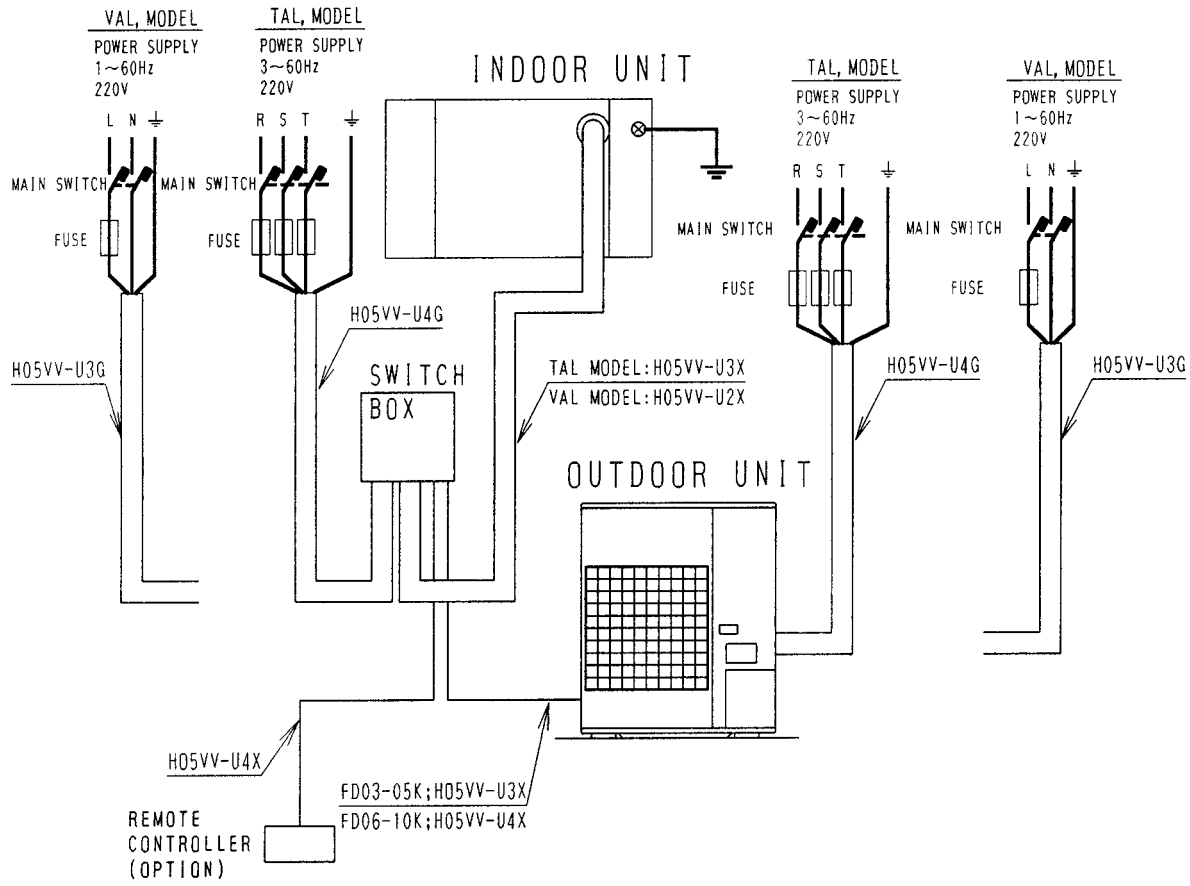
FD15KTAL+RU08KUTAL×2
FD20KTAL+RU10KUTAL×2



C11, C12	CAPACITOR (M11F, M12F)
C21, C22	CAPACITOR (M21F, M22F)
F11U, F12U	FUSE(250V, 5A, ⓑ)
F21U, F22U	
K1M, K2M	MAGNETIC CONTACTOR
K3M	MAGNETIC CONTACTOR (M3F)
K1R, K2R	MAGNETIC RELAY (ALARM)
K3R, K4R	MAGNETIC RELAY (ALARM)
K5R, K6R	
K7R, K8R	MAGNETIC RELAY (OPERATION)
K9R	MAGNETIC RELAY
K1S, K2S	OVERCURRENT RELAY (M1C, M2C) (RU08:35A, RU10:46A)
K3S	OVERCURRENT RELAY (M3F) (FD15:9.2A, FD20:14A)
M1C, M2C	COMPRESSOR MOTOR
M11F, M12F	FAN MOTOR (OUTDOOR UNIT)
M21F, M22F	
M3F	FAN MOTOR (INDOOR UNIT)
Q1, Q2	THERMAL PROTECTOR (COMPRESSOR)
Q11M, Q12M	THERMAL PROTECTOR (M11F, M12F)
Q21M, Q22M	THERMAL PROTECTOR (M21F, M22F)
Q1RP, Q2RP	REVERSE PHASE PROTECTOR
S1PH, S2PH	HIGH PRESSURE SWITCH
S1PL, S2PL	LOW PRESSURE SWITCH
X11M	TERMINAL BLOCK (OUTDOOR UNIT)
X12M, X13M	TERMINAL BLOCK (OUTDOOR UNIT)
X21M	TERMINAL BLOCK (OUTDOOR UNIT)
X22M, X23M	TERMINAL BLOCK (OUTDOOR UNIT)
X3M	TERMINAL BLOCK (INDOOR UNIT)

2D045890

FD03 · 04KVAL
FD05~10KTAL

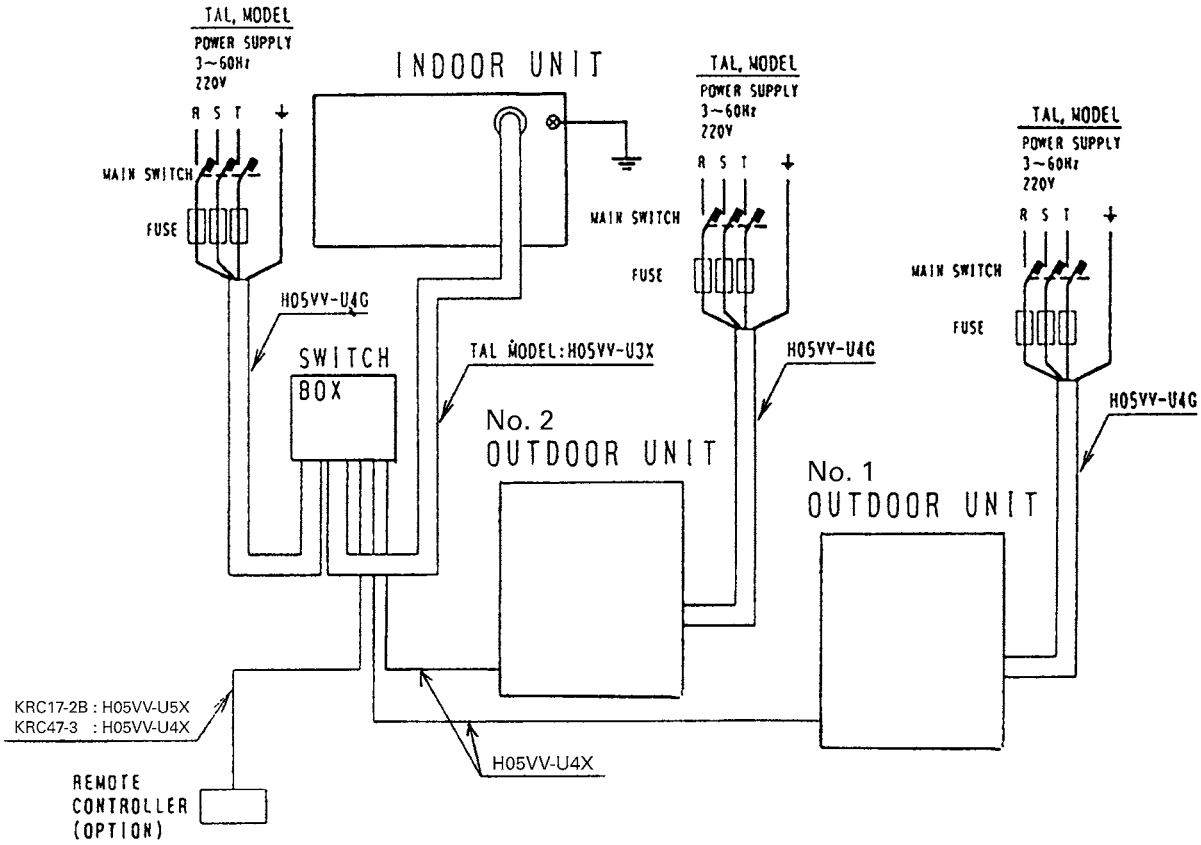


Notes 1) ——— Line voltage wiring
——— Control circuit wiring

2) All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
3) Use copper conductor only.
4) As for details, see wiring diagrams.
5) Install fuse and mainswitch for safety.
6) All field wiring and components must be provided by a licensed electrician.
7) Unit shall be grounded in compliance with the applicable local and national codes.
8) Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
9) The outdoor units for 3 phase, are equipped with a reverse phase protector to protect the compressor.
If the compressor does not operate during the test run, exchange two phase connections out of three.
10) Never share a common power source with other equipment.

4D008264

FD15 · 20KTAL



Notes 1) ——— Line voltage wiring
——— Control circuit wiring

2) All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
3) Use copper conductor only.
4) As for details, see wiring diagrams.
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8) Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
9) The outdoor units for 3 phase, are equipped with a reverse phase protector to protect the compressor.
If the compressor does not operate during the test run, exchange two phase connections out of three.
10) Never share a common power source with other equipment.

8. Capacity Table

8.1 50Hz

FD03KY1+R71FUY1

Cooling Capacity 〔50Hz〕

INDOOR		Outdoor temperature (℃DB)																							
EWB (℃)	EDB (℃)	21			25			30			35			40			45			50			52		
		TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14.0	20	7.6	5.3	1.93	7.3	5.2	2.02	7.0	5.0	2.14	6.7	4.9	2.27	6.3	4.7	2.41	6.0	4.5	2.56	5.7	4.4	2.73	5.5	4.3	2.80
16.0	22	8.1	5.5	2.00	7.8	5.4	2.09	7.5	5.2	2.22	7.2	5.0	2.35	6.8	4.9	2.50	6.4	4.7	2.66	6.1	4.7	2.83	6.0	4.5	2.90
18.0	25	8.7	5.7	2.07	8.4	5.6	2.16	8.0	5.4	2.30	7.7	5.2	2.44	7.3	5.0	2.59	7.0	4.9	2.76	6.6	4.7	2.94	6.4	4.7	3.01
19.0	27	9.0	5.8	2.10	8.7	5.6	2.20	8.3	5.5	2.34	7.9	5.3	2.48	7.6	5.1	2.64	7.2	5.0	2.81	6.9	4.8	2.99	6.7	4.7	3.06
19.5	27	9.2	5.9	2.12	8.8	5.8	2.22	8.5	5.6	2.36	8.1	5.5	2.50	7.7	5.3	2.66	7.3	5.1	2.84	7.0	5.0	3.02	6.8	4.9	3.09
22.0	30	10.0	6.0	2.21	9.7	5.9	2.32	9.3	5.7	2.46	8.8	5.6	2.62	8.4	5.4	2.78	8.0	5.2	2.96	7.6	5.1	3.15	7.4	5.0	3.23
24.0	32	10.7	6.2	2.29	10.3	6.1	2.40	9.9	5.9	2.55	9.5	5.7	2.71	8.9	5.6	2.88	8.5	5.4	3.07	8.1	5.2	3.26	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not includea deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC'=SHC correction for other dry bulb. (DB')
=0.02xAFRx(1−BF)x(DB'−EDB)
Add SHC' to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m
6. Air flow rate and (BF) are taburated below.

	FD
AFR	26
(BF)	(0.19)

3D004635

FD04KY1+R100FUY1

Cooling Capacity 〔50Hz〕

INDOOR		Outdoor temperature (℃DB)																							
EWB (℃)	EDB (℃)	21			25			30			35			40			45			50			52		
		TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14.0	20	10.2	6.9	2.65	9.9	6.7	2.80	9.5	6.4	2.97	9.0	6.2	3.13	8.6	6.0	3.28	8.2	5.8	3.41	7.7	5.6	3.52	7.6	5.5	3.56
16.0	22	10.9	7.1	2.75	10.6	7.0	2.91	10.2	6.8	3.09	9.7	6.4	3.27	9.3	6.2	3.42	8.8	6.0	3.56	8.3	5.8	3.69	8.2	5.7	3.73
18.0	25	11.8	7.4	2.86	11.4	7.2	3.03	10.9	7.0	3.23	10.5	6.8	3.41	10.0	6.6	3.58	9.5	6.3	3.73	9.0	6.1	3.86	8.8	6.0	3.92
19.0	27	12.2	7.5	2.92	11.8	7.3	3.09	11.3	7.1	3.29	10.8	6.9	2.58	10.4	6.7	3.66	9.9	6.4	3.81	9.4	6.2	3.96	9.2	6.1	4.01
19.5	27	12.4	7.7	2.95	12.0	7.5	3.12	11.5	7.3	3.33	11.0	7.1	3.52	10.5	6.9	3.70	10.1	6.7	3.86	9.6	6.4	4.00	9.4	6.3	4.06
22.0	30	13.5	7.8	3.11	13.1	7.6	3.30	12.6	7.4	3.52	12.1	7.2	3.72	11.5	7.0	3.91	11.1	6.8	4.09	10.4	6.6	4.25	10.2	6.4	4.30
24.0	32	14.5	8.0	3.26	14.0	7.8	3.45	13.4	7.6	3.68	12.9	7.4	3.90	12.4	7.2	4.10	11.8	7.0	4.28	11.2	6.8	4.45	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not includea deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC'=SHC correction for other dry bulb. (DB')
=0.02xAFRx(1−BF)x(DB'−EDB)
Add SHC' to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m
6. Air flow rate and (BF) are taburated below.

	FD
AFR	30
(BF)	(0.13)

3D004641

FD05KY1+R125FUY1

Cooling Capacity 〔50Hz〕

INDOOR EWB (℃)	INDOOR EDB (℃)	Outdoor temperature (℃DB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI	52 TC	52 SHC	52 PI
14.0	20	13.1	9.3	3.14	12.7	9.1	3.36	12.1	8.7	3.59	11.6	8.5	3.77	11.0	8.2	3.90	10.5	7.9	3.98	9.8	7.6	4.02	9.6	7.5	4.02
16.0	22	14.0	9.6	3.25	13.6	9.4	3.48	13.1	9.1	3.72	12.4	8.7	3.91	11.9	8.5	4.06	11.2	8.2	4.16	10.6	7.9	4.21	10.4	7.8	4.22
18.0	25	15.0	9.9	3.37	14.6	9.7	3.61	13.9	9.4	3.86	13.4	9.2	4.07	12.7	8.9	4.23	12.1	8.5	4.34	11.3	8.2	4.41	11.1	8.1	4.42
19.0	27	15.6	10.2	3.43	15.1	9.8	3.67	14.5	9.6	3.94	13.8	9.3	4.15	13.2	9.0	4.32	12.5	8.7	4.44	11.8	8.4	4.51	11.6	8.3	4.53
19.5	27	15.9	10.4	3.46	15.3	10.2	3.71	14.7	9.8	3.97	14.0	9.6	4.19	13.4	9.3	4.36	12.7	9.0	4.49	12.0	8.6	4.57	11.8	8.5	4.59
22.0	30	17.2	10.6	3.63	16.6	10.4	3.89	16.0	10.0	4.18	15.2	9.7	4.41	14.6	9.4	4.60	13.8	9.2	4.74	13.1	8.9	4.84	12.7	8.7	4.86
24.0	32	18.4	10.8	3.78	17.7	10.6	4.05	17.1	10.4	4.35	16.3	10.0	4.60	15.6	9.8	4.80	14.8	9.5	4.95	14.0	9.2	5.06	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
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PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not includea deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC'=SHC correction for other dry bulb. (DB')
=0.02xAFRx(1−BF)x(DB'−EDB)
Add SHC' to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m
6. Air flow rate and (BF) are taburated below.

	FD
AFR	46
(BF)	(0.19)

3D004639

FD06KY1+RU06KY1

Cooling Capacity 〔50Hz〕

AFR (BF)	INDOOR EWB(℃)	INDOOR EDB(℃)	Outdoor temperature (℃DB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI	52 TC	52 SHC	52 PI
47 (0.15)	14.0	20	15.8	12.0	4.1	15.5	11.9	4.5	14.9	11.5	4.9	14.4	11.3	5.4	14.0	10.9	5.9	13.1	10.4	6.5	12.5	10.0	7.1	12.3	9.9	7.3
	16.0	22	16.7	12.1	4.2	16.4	12.0	4.5	15.8	11.5	5.0	15.3	11.4	5.5	14.8	10.9	6.0	13.9	10.4	6.6	13.3	10.2	7.2	13.1	9.9	7.4
	18.0	25	17.8	12.8	4.3	17.4	12.6	4.6	16.9	12.3	5.1	16.4	12.0	5.6	15.8	11.7	6.1	14.8	11.1	6.7	14.1	10.7	7.3	14.0	10.6	7.5
	19.0	27	18.5	13.1	4.3	17.9	12.8	4.7	17.4	12.6	5.1	16.9	12.4	5.7	16.3	12.1	6.2	15.2	11.4	6.8	14.7	11.1	7.4	14.3	11.1	7.6
	19.5	27	18.7	13.1	4.4	18.3	12.8	4.7	17.7	12.6	5.2	17.2	12.4	5.7	16.5	12.1	6.2	15.5	11.4	6.8	14.9	11.1	7.4	14.7	11.1	7.6
	22.0	30	20.2	13.4	4.5	19.7	13.1	4.8	19.2	12.9	5.3	18.5	12.6	5.8	17.8	12.3	6.4	16.7	11.7	7.0	16.0	11.4	7.5	15.8	11.2	7.8
	24.0	32	21.4	13.4	4.6	20.8	13.1	4.9	20.2	12.9	5.4	19.5	12.6	5.9	18.8	12.3	6.5	17.7	11.7	7.1	——	——	——	——	——	——
52 (0.16)	14.0	20	16.2	12.6	4.1	15.7	12.2	4.5	15.2	12.0	4.9	14.7	11.6	5.4	14.2	11.4	5.9	13.3	10.8	6.5	12.7	10.4	7.1	12.5	10.3	7.3
	16.0	22	17.2	12.6	4.2	16.6	12.3	4.6	16.2	12.0	5.0	15.6	11.7	5.5	15.1	11.5	6.0	14.1	11.1	6.6	13.5	10.4	7.2	13.3	10.4	7.4
	18.0	25	18.3	13.4	4.3	17.8	13.0	4.7	17.2	12.8	5.1	16.6	12.4	5.6	16.2	12.1	6.2	15.0	11.5	6.7	14.3	11.1	7.4	14.2	11.1	7.6
	19.0	27	18.7	13.5	4.4	18.4	13.4	4.7	17.8	13.0	5.2	17.2	12.8	5.7	16.5	12.4	6.2	15.5	11.8	6.8	14.9	11.5	7.4	14.7	11.5	7.6
	19.5	27	19.1	13.5	4.4	18.6	13.4	4.7	17.9	13.0	5.2	17.4	12.8	5.7	16.7	12.4	6.2	15.8	11.8	6.8	15.1	11.5	7.4	14.9	11.5	7.7
	22.0	30	20.6	14.0	4.5	20.1	13.7	4.9	19.4	13.4	5.3	18.7	13.1	5.9	18.1	12.7	6.4	16.9	12.1	7.0	16.2	11.8	7.6	16.0	11.7	7.8
	24.0	32	21.7	14.0	4.6	21.3	13.7	5.0	20.6	13.4	5.5	20.0	13.1	6.0	19.2	12.7	6.5	18.0	12.1	7.1	——	——	——	——	——	——
62 (0.18)	14.0	20	16.6	13.3	4.2	16.2	12.9	4.5	15.7	12.7	5.0	15.1	12.4	5.5	14.5	12.1	6.0	13.5	11.4	6.6	13.1	11.2	7.1	12.9	10.9	7.4
	16.0	22	17.6	13.4	4.3	17.2	13.0	4.6	16.6	12.8	5.1	16.2	12.4	5.6	15.5	12.1	6.1	14.4	11.4	6.7	13.9	11.2	7.2	13.5	10.9	7.5
	18.0	25	18.7	14.1	4.4	18.4	14.0	4.7	17.7	13.6	5.2	17.1	13.1	5.7	16.5	12.9	6.2	15.4	12.2	6.8	14.8	12.0	7.4	14.4	11.7	7.6
	19.0	27	19.4	14.5	4.4	18.8	14.2	4.8	18.3	13.8	5.2	17.7	13.5	5.7	17.1	13.3	6.3	15.9	12.6	6.9	15.2	12.1	7.4	15.0	12.1	7.7
	19.5	27	19.7	14.5	4.4	19.2	14.2	4.8	18.5	13.8	5.3	17.8	13.5	5.8	17.2	13.3	6.3	16.1	12.6	6.9	15.3	12.1	7.5	15.1	12.1	7.7
	22.0	30	21.2	14.8	4.6	20.6	14.7	4.9	20.0	14.4	5.4	19.3	14.1	5.9	18.5	13.7	6.4	17.3	12.9	7.0	16.7	12.6	7.6	16.2	12.3	7.9
	24.0	32	22.3	14.8	4.7	21.7	14.7	5.0	21.2	14.4	5.5	20.3	14.1	6.0	19.7	13.7	6.6	18.3	13.6	7.2	——	——	——	——	——	——

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not includea deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC'=SHC correction for other dry bulb. (DB')
=0.02xAFRx(1−BF)x(DB'−EDB)
Add SHC' to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m

C : 3D008106

FD08KY1+RU08KY1
FD08KY1+RU08KUY1

Cooling Capacity 〔50Hz〕

AFR (BF)	INDOOR EWB(℃)	INDOOR EDB(℃)	Outdoor temperature (℃CDB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI	52 TC	52 SHC	52 PI
61 (0.20)	14.0	20	22.1	16.7	5.5	21.6	16.5	5.9	20.9	16.2	6.4	20.2	15.7	7.1	19.4	15.2	7.8	18.6	14.8	8.5	17.7	14.3	9.4	17.3	14.1	9.7
	16.0	22	23.5	16.7	5.6	22.9	16.5	6.0	22.2	16.2	6.5	21.5	15.7	7.2	20.7	15.3	7.9	19.8	14.8	8.7	18.8	14.3	9.5	18.5	14.1	9.8
	18.0	25	24.9	17.7	5.7	24.4	17.4	6.1	23.6	17.0	6.7	22.8	16.6	7.3	22.0	16.2	8.0	21.0	15.8	8.8	20.1	15.2	9.6	19.8	15.0	10.0
	19.0	27	25.7	18.1	5.8	25.1	17.8	6.2	24.3	17.4	6.7	23.6	17.0	7.4	22.7	16.6	8.1	21.7	16.2	8.9	20.8	15.7	9.7	20.3	15.6	10.1
	19.5	27	26.0	18.1	5.8	25.5	17.8	6.2	24.7	17.4	6.8	23.8	17.0	7.4	23.0	16.6	8.1	22.1	16.2	8.9	21.2	15.7	9.8	20.7	15.6	10.1
	22.0	30	28.0	18.5	5.9	27.4	18.1	6.3	26.6	17.7	6.9	25.7	17.3	7.6	24.8	16.9	8.3	23.8	16.5	9.1	22.8	16.0	9.9	22.3	15.9	10.3
	24.0	32	29.8	18.5	6.1	29.1	18.1	6.5	28.1	17.7	7.1	27.2	17.3	7.7	26.3	16.9	8.5	25.2	16.5	9.3	/	/	/	/	/	/
68 (0.21)	14.0	20	22.6	17.4	5.5	22.1	17.1	5.9	21.4	16.7	6.5	20.6	16.3	7.1	19.8	15.3	7.8	19.0	15.3	8.6	18.0	14.8	9.4	17.7	14.7	9.7
	16.0	22	24.0	17.4	5.6	23.4	17.1	6.0	22.7	16.7	6.6	21.9	16.3	7.2	21.0	15.5	7.9	20.1	15.5	8.7	19.2	14.9	9.5	18.8	14.7	9.9
	18.0	25	25.5	18.4	5.7	24.9	18.0	6.1	24.1	17.7	6.7	23.3	17.2	7.4	22.3	16.4	8.1	21.5	16.4	8.8	20.5	15.9	9.7	20.1	15.7	10.0
	19.0	27	26.3	18.8	5.8	25.6	18.5	6.2	24.8	18.1	6.8	24.0	17.7	7.4	23.0	16.9	8.1	22.1	16.9	8.9	21.2	16.4	9.8	20.7	16.2	10.1
	19.5	27	26.6	18.8	5.8	25.9	18.5	6.2	25.1	18.1	6.8	24.3	17.7	7.5	23.4	16.9	8.2	22.4	16.9	8.9	21.5	16.4	9.8	21.0	16.2	10.1
	22.0	30	28.6	19.2	6.0	27.9	18.8	6.4	27.1	18.5	7.0	26.2	18.0	7.6	25.2	17.2	8.3	24.2	17.2	9.1	23.1	16.7	10.0	22.7	16.6	10.3
	24.0	32	30.2	19.2	6.1	29.5	18.8	6.5	28.6	18.5	7.1	27.7	18.0	7.8	26.6	17.2	8.5	25.6	17.2	9.3	/	/	/	/	/	/
82 (0.24)	14.0	20	23.3	18.5	5.6	22.7	18.1	6.0	22.0	17.8	6.5	21.2	17.3	7.2	20.3	16.9	7.9	19.4	16.4	8.6	18.5	15.8	9.5	18.1	15.6	9.8
	16.0	22	24.7	18.5	5.7	24.1	18.1	6.1	23.3	17.8	6.6	22.4	17.3	7.3	21.6	16.9	8.0	20.7	16.4	8.8	19.7	15.9	9.6	19.3	15.7	9.9
	18.0	25	26.2	19.5	5.8	25.6	19.3	6.2	24.8	18.8	6.8	23.8	18.4	7.4	23.0	17.9	8.1	22.0	17.6	8.9	21.0	17.1	9.7	20.6	16.9	10.1
	19.0	27	27.0	20.1	5.8	26.4	19.8	6.3	25.5	19.3	6.8	24.7	18.8	7.5	23.7	18.5	8.2	22.7	18.0	9.0	21.7	17.6	9.8	21.3	17.3	10.2
	19.5	27	27.3	20.1	5.9	26.7	19.8	6.3	25.8	19.3	6.9	24.9	18.8	7.5	24.0	18.5	8.2	23.0	18.0	9.0	22.0	17.6	10.0	21.6	17.3	10.2
	22.0	30	29.4	20.5	6.0	28.7	20.2	6.5	27.8	19.8	7.0	26.7	19.3	7.7	25.8	18.8	8.4	24.8	18.5	9.2	23.7	18.0	10.1	23.3	17.8	10.4
	24.0	32	31.2	20.5	6.2	30.3	20.2	6.6	29.4	19.8	7.2	28.4	19.3	7.8	27.3	18.8	8.6	26.3	18.5	9.4	/	/	/	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC'=SHC correction for other dry bulb. (DB')
=0.02×AFR×(1−BF)×(DB'−EDB)
Add SHC' to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m
6. Air flow rate and (BF) are tabulated below.

	FD
AFR	68
(BF)	(0.21)

C : 3D006485

FD10KY1+RU10KY1
FD10KY1+RU10KUY1

Cooling Capacity 〔50Hz〕

AFR (BF)	INDOOR EWB(℃)	INDOOR EDB(℃)	Outdoor temperature (℃CDB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI	52 TC	52 SHC	52 PI
75 (0.20)	14.0	20	27.0	20.5	7.2	26.4	20.1	7.8	25.6	19.7	8.5	24.7	19.2	9.3	23.7	18.6	10.3	22.7	18.0	11.3	21.6	17.4	12.4	21.2	17.1	12.8
	16.0	22	28.6	20.5	7.4	28.0	20.1	7.9	27.1	19.7	8.7	26.2	19.2	9.5	25.2	18.7	10.4	24.2	18.1	11.4	23.0	17.4	12.5	22.6	17.2	13.0
	18.0	25	30.5	21.6	7.5	29.8	21.3	8.1	28.8	20.7	8.8	27.8	20.2	9.7	26.9	19.8	10.6	25.7	19.2	11.6	24.5	18.6	12.7	24.1	18.4	13.2
	19.0	27	31.4	22.1	7.6	30.7	21.7	8.1	29.8	21.3	8.9	28.7	20.8	9.8	27.7	20.2	10.7	26.5	19.8	11.7	25.5	19.2	12.8	24.9	19.0	13.3
	19.5	27	31.9	22.1	7.6	31.0	21.7	8.2	30.1	21.3	8.9	29.2	20.8	9.8	28.0	20.2	10.7	27.0	19.8	11.8	25.8	19.2	12.9	25.2	19.0	13.4
	22.0	30	34.3	22.6	7.8	33.5	22.1	8.4	32.4	21.6	9.2	31.4	21.2	10.0	30.2	20.6	11.0	29.1	20.1	12.0	27.8	19.7	13.1	27.3	19.4	13.6
	24.0	32	36.3	22.6	8.0	35.5	22.1	8.6	34.4	21.6	9.3	33.3	21.2	10.2	32.0	20.6	11.2	30.7	20.1	12.2	/	/	/	/	/	/
83 (0.21)	14.0	20	27.6	21.3	7.3	26.9	20.9	7.8	26.0	20.3	8.6	25.1	19.9	9.4	24.2	19.3	10.3	23.1	18.7	11.3	22.0	18.1	12.4	21.5	17.9	12.9
	16.0	22	29.2	21.3	7.4	28.5	20.9	8.0	27.7	20.5	8.7	26.7	19.9	9.5	25.7	19.4	10.5	24.5	18.8	11.5	23.4	18.1	12.6	22.9	17.9	13.1
	18.0	25	31.0	22.4	7.6	30.3	22.0	8.1	29.3	21.5	8.9	28.4	21.0	9.7	27.3	20.6	10.7	26.2	20.0	11.7	25.0	19.4	12.8	24.5	19.2	13.3
	19.0	27	32.0	22.9	7.7	31.3	22.6	8.2	30.2	22.1	9.0	29.2	21.6	9.8	28.1	21.0	10.8	27.0	20.6	11.8	25.8	20.0	12.9	25.3	19.8	13.4
	19.5	27	32.4	22.9	7.7	31.6	22.6	8.2	30.7	22.1	9.0	29.7	21.6	9.9	28.5	21.0	10.8	27.4	20.6	11.8	26.2	20.0	12.9	25.7	19.8	13.4
	22.0	30	34.9	23.4	7.9	34.1	23.0	8.5	33.0	22.6	9.2	31.9	22.0	10.1	30.7	21.5	11.0	29.5	21.0	12.1	28.3	20.5	13.2	27.7	20.2	13.7
	24.0	32	36.9	23.4	8.1	36.0	23.0	8.6	34.9	22.6	9.4	33.7	22.0	10.3	32.6	21.5	11.2	31.3	21.0	12.3	/	/	/	/	/	/
100 (0.24)	14.0	20	28.4	22.6	7.4	27.7	22.2	7.9	26.9	21.6	8.6	25.8	21.2	9.5	24.9	20.6	10.4	23.7	20.0	11.4	22.6	19.3	12.5	22.1	19.1	13.0
	16.0	22	30.1	22.7	7.5	29.4	22.2	8.0	28.4	21.6	8.8	27.4	21.2	9.6	26.4	20.6	10.6	25.2	20.1	11.6	24.1	19.4	12.7	23.5	19.1	13.1
	18.0	25	32.0	23.8	7.7	31.2	23.5	8.2	30.2	23.0	9.0	29.2	22.4	9.8	28.0	21.9	10.7	26.9	21.4	11.8	25.7	20.8	12.9	25.1	20.5	13.3
	19.0	27	32.9	24.5	7.7	32.2	24.2	8.3	31.0	23.6	9.0	30.0	23.0	9.9	29.0	22.6	10.8	27.7	22.0	11.9	26.5	21.4	13.0	25.9	21.2	13.4
	19.5	27	33.4	24.5	7.8	32.6	24.2	8.3	31.5	23.6	9.1	30.5	23.0	9.9	29.3	22.6	10.9	28.1	22.0	11.9	26.9	21.4	13.3	26.3	21.2	13.5
	22.0	30	35.9	25.0	8.0	35.0	24.7	8.5	33.8	24.2	9.3	32.7	23.6	10.2	31.5	23.0	11.1	30.2	22.6	12.2	29.0	22.0	13.4	28.4	21.7	13.8
	24.0	32	37.9	25.0	8.2	37.0	24.7	8.7	35.9	24.2	9.5	34.7	23.6	10.4	33.4	23.0	11.3	32.0	22.6	12.4	/	/	/	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC'=SHC correction for other dry bulb. (DB')
=0.02×AFR×(1−BF)×(DB'−EDB)
Add SHC' to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m
6. Air flow rate and (BF) are tabulated below.

	FD
AFR	83
(BF)	(0.21)

C : 3D006486

FD15KY1+(RU08KY1)×2
FD15KY1+(RU08KUY1)×2

Cooling Capacity 〔50Hz〕

AFR (BF)	INDOOR EWB (℃)	INDOOR EDB (℃)	Outdoor temperature (℃DB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI	52 TC	52 SHC	52 PI
122 (0.20)	14.0	20	44.2	33.5	11.0	43.3	33.0	11.8	41.9	32.3	12.8	40.5	31.4	14.2	38.8	30.5	15.6	37.2	29.5	17.0	35.3	28.6	18.8	34.7	28.1	19.4
	16.0	22	47.0	33.5	11.2	45.8	33.0	12.0	44.4	32.3	13.0	43.0	31.4	14.4	41.4	30.7	15.8	39.5	29.5	17.4	37.7	28.6	19.0	37.0	28.1	19.6
	18.0	25	49.8	35.3	11.4	48.8	34.9	12.2	47.2	34.0	13.4	45.6	33.3	14.6	44.0	32.3	16.0	42.1	31.6	17.6	40.2	30.5	19.2	39.5	30.0	20.0
	19.0	27	51.4	36.3	11.6	50.2	35.6	12.4	48.6	34.9	13.4	47.2	34.0	14.8	45.3	33.3	16.2	43.5	32.3	17.8	41.6	31.4	19.4	40.7	31.2	20.2
	19.5	27	52.1	36.3	11.6	50.9	35.6	12.4	49.3	34.9	13.6	47.7	34.0	14.8	46.0	33.3	16.2	44.2	32.3	17.8	42.3	31.4	19.6	41.4	31.2	20.2
	22.0	30	56.0	37.0	11.8	54.9	36.3	12.6	53.3	35.3	13.8	51.4	34.7	15.2	49.5	33.7	16.6	47.7	33.0	18.2	45.6	32.1	19.8	44.7	31.9	20.6
	24.0	32	59.5	37.0	12.2	58.1	36.3	13.0	56.3	35.3	14.2	54.4	34.7	15.4	52.6	33.7	17.0	50.5	33.0	18.6	/	/	/	/	/	/
136 (0.21)	14.0	20	45.1	34.9	11.0	44.2	34.2	11.8	42.8	33.5	13.0	41.2	32.6	14.2	39.5	30.7	15.6	37.9	30.7	17.2	36.0	29.5	18.8	35.3	29.3	19.4
	16.0	22	47.9	34.9	11.2	46.7	34.2	12.0	45.3	33.5	13.2	43.7	32.6	14.4	42.1	30.9	15.8	40.2	30.9	17.4	38.4	29.8	19.0	37.7	29.3	19.8
	18.0	25	50.9	36.7	11.4	49.8	36.0	12.2	48.1	35.3	13.4	46.5	34.4	14.8	44.7	32.8	16.2	43.0	32.8	17.6	40.9	31.9	19.4	40.2	31.4	20.0
	19.0	27	52.6	37.7	11.6	51.2	37.0	12.4	49.5	36.3	13.6	47.9	35.3	14.8	46.0	33.7	16.2	44.2	33.7	17.8	42.3	32.8	19.6	41.4	32.3	20.2
	19.5	27	53.3	37.7	11.6	51.9	37.0	12.4	50.2	36.3	13.6	48.6	35.3	15.0	46.7	33.7	16.4	44.9	33.7	17.8	43.0	32.8	19.6	42.1	32.3	20.2
	22.0	30	57.2	38.4	12.0	55.8	37.7	12.8	54.2	37.0	14.0	52.3	36.0	15.2	50.5	34.4	16.6	48.4	34.4	18.2	46.3	33.5	20.0	45.3	33.3	20.6
	24.0	32	60.5	38.4	12.2	59.1	37.7	13.0	57.2	37.0	14.2	55.3	36.0	15.6	53.3	34.4	17.0	51.2	34.4	18.6	/	/	/	/	/	/
164 (0.24)	14.0	20	46.5	37.0	11.2	45.3	36.3	12.0	44.0	35.6	13.0	42.3	34.7	14.4	40.7	33.7	15.8	38.8	32.8	17.2	37.0	31.6	19.0	36.3	31.2	19.6
	16.0	22	49.3	37.0	11.4	48.1	36.3	12.2	46.5	35.6	13.2	44.9	34.7	14.6	43.3	33.7	16.0	41.4	32.8	17.6	39.3	31.9	19.2	38.6	31.4	19.8
	18.0	25	52.3	39.1	11.6	51.2	38.6	12.4	49.5	37.7	13.6	47.7	36.7	14.8	46.0	35.8	16.2	44.0	35.1	17.8	42.1	34.2	19.4	41.2	33.7	20.2
	19.0	27	54.0	40.2	11.6	52.8	39.5	12.6	50.9	38.6	13.6	49.3	37.7	15.0	47.4	37.0	16.4	45.3	36.0	18.0	43.5	35.1	19.6	42.6	34.7	20.4
	19.5	27	54.7	40.2	11.8	53.5	39.5	12.6	51.6	38.6	13.8	49.8	37.7	15.0	47.9	37.0	16.4	46.0	36.0	18.0	44.0	35.1	20.0	43.3	34.7	20.4
	22.0	30	58.8	40.9	12.0	57.4	40.5	13.0	55.6	39.5	14.0	53.5	38.6	15.4	51.6	37.7	16.8	49.5	37.0	18.4	47.4	36.0	20.2	46.5	35.6	20.8
	24.0	32	62.3	40.9	12.4	60.7	40.5	13.2	58.8	39.5	14.4	56.7	38.6	15.6	54.7	37.7	17.2	52.6	37.0	18.8	/	/	/	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02×AFR×(1−BF)×(DB*−EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m

3D008116

FD20KY1+(RU10KY1)×2
FD20KY1+(RU10KUY1)×2

Cooling Capacity 〔50Hz〕

AFR (BF)	INDOOR EWB (℃)	INDOOR EDB (℃)	Outdoor temperature (℃DB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI	52 TC	52 SHC	52 PI
150 (0.20)	14.0	20	54.0	40.9	14.4	52.8	40.2	15.6	51.2	39.3	17.0	49.3	38.4	18.6	47.4	37.2	20.6	45.3	36.0	22.6	43.3	34.9	24.8	42.3	34.2	25.6
	16.0	22	57.2	40.9	14.8	56.0	40.2	15.8	54.2	39.3	17.4	52.3	38.4	19.0	50.5	37.4	20.8	48.4	36.3	22.8	46.0	34.9	25.0	45.1	34.4	26.0
	18.0	25	60.9	43.3	15.0	59.5	42.6	16.2	57.7	41.4	17.6	55.6	40.5	19.4	53.7	39.5	21.2	51.4	38.4	23.2	49.1	37.2	25.4	48.1	36.7	26.4
	19.0	27	62.8	44.2	15.2	61.4	43.5	16.2	59.5	42.6	17.8	57.4	41.6	19.6	55.3	40.5	21.4	53.0	39.5	23.4	50.9	38.4	25.6	49.8	37.9	26.6
	19.5	27	63.7	44.2	15.2	62.1	43.5	16.4	60.2	42.6	17.8	58.4	41.6	19.6	56.0	40.5	21.4	54.0	39.5	23.6	51.6	38.4	25.8	50.5	37.9	26.8
	22.0	30	68.6	45.1	15.6	67.0	44.2	16.8	64.9	43.3	18.4	62.8	42.3	20.0	60.5	41.2	22.0	58.1	40.2	24.0	55.6	39.3	26.2	54.7	38.8	27.2
	24.0	32	72.6	45.1	16.0	70.9	44.2	17.2	68.8	43.3	18.6	66.5	42.3	20.4	64.0	41.2	22.4	61.4	40.2	24.4	/	/	/	/	/	/
166 (0.21)	14.0	20	55.1	42.6	14.6	53.7	41.9	15.6	52.1	40.7	17.2	50.2	39.8	18.8	48.4	38.6	20.6	46.3	37.4	22.6	44.0	36.3	24.8	43.0	35.8	25.8
	16.0	22	58.4	42.6	14.8	57.0	41.9	16.0	55.3	40.9	17.4	53.5	39.8	19.0	51.4	38.8	21.0	49.1	37.7	23.0	46.7	36.3	25.2	45.8	35.8	26.2
	18.0	25	62.1	44.9	15.2	60.7	44.0	16.2	58.6	43.0	17.8	56.7	42.1	19.4	54.7	41.2	21.4	52.3	40.0	23.4	50.0	38.8	25.6	49.1	38.4	26.6
	19.0	27	64.0	45.8	15.4	62.6	45.1	16.4	60.5	44.2	18.0	58.4	43.3	19.6	56.3	42.1	21.6	54.0	41.2	23.6	51.6	40.0	25.8	50.7	39.5	26.8
	19.5	27	64.9	45.8	15.4	63.3	45.1	16.4	61.4	44.2	18.0	59.3	43.3	19.8	57.0	42.1	21.6	54.9	41.2	23.6	52.3	40.0	25.8	51.4	39.5	26.8
	22.0	30	69.8	46.7	15.8	68.1	46.0	17.0	66.0	45.1	18.4	63.7	44.0	20.2	61.4	43.0	22.0	59.1	42.1	24.2	56.5	40.9	26.4	55.3	40.5	27.4
	24.0	32	73.7	46.7	16.2	72.1	46.0	17.2	69.8	45.1	18.8	67.4	44.0	20.6	65.1	43.0	22.4	62.6	42.1	24.6	/	/	/	/	/	/
200 (0.24)	14.0	20	56.7	45.1	14.8	55.3	44.4	15.8	53.7	43.3	17.2	51.6	42.3	19.0	49.8	41.2	20.8	47.4	40.0	22.8	45.1	38.6	25.0	44.2	38.1	26.0
	16.0	22	60.2	45.3	15.0	58.8	44.4	16.0	56.7	43.3	17.6	54.9	42.3	19.2	52.8	41.2	21.2	50.5	40.2	23.2	48.1	38.8	25.4	47.0	38.1	26.2
	18.0	25	64.0	47.7	15.4	62.3	47.0	16.4	60.5	46.0	18.0	58.4	44.9	19.6	56.0	43.7	21.4	53.7	42.8	23.6	51.4	41.6	25.8	50.2	40.9	26.6
	19.0	27	65.8	49.1	15.4	64.4	48.4	16.6	62.1	47.2	18.0	60.0	46.0	19.8	57.9	45.1	21.6	55.3	44.0	23.8	53.0	42.8	26.0	51.9	42.3	26.8
	19.5	27	66.7	49.1	15.6	65.1	48.4	16.6	63.0	47.2	18.2	60.9	46.0	19.8	58.6	45.1	21.8	56.3	44.0	23.8	53.7	42.8	26.6	52.6	42.3	27.0
	22.0	30	71.9	50.0	16.0	70.0	49.3	17.0	67.7	48.4	18.6	65.3	47.2	20.4	63.0	46.0	22.2	60.5	45.1	24.4	57.9	44.0	26.8	56.7	43.5	27.6
	24.0	32	75.8	50.0	16.4	74.0	49.3	17.4	71.9	48.4	19.0	69.3	47.2	20.8	66.7	46.0	22.6	64.0	45.1	24.8	/	/	/	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02×AFR×(1−BF)×(DB*−EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m

3D010085

8.2 60Hz

FD03KVAL+R71FUVAL

Cooling Capacity 〔60Hz〕

INDOOR EWB (℃)	INDOOR EDB (℃)	Outdoor temperature (℃DB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI
14.0	20	8.0	5.6	2.50	7.7	5.5	2.61	7.4	5.3	2.76	7.0	5.2	2.93	6.7	5.0	3.11	6.4	4.8	3.31	6.1	4.6	3.53
16.0	22	8.6	5.6	2.59	8.3	5.6	2.71	8.0	5.3	2.87	7.6	5.2	3.04	7.3	5.0	3.24	6.9	4.8	3.45	6.6	4.7	3.67
18.0	25	9.2	6.0	2.68	8.9	5.9	2.80	8.5	5.6	2.97	8.2	5.5	3.16	7.8	5.3	3.36	7.5	5.2	3.57	7.0	5.0	3.81
19.0	27	9.5	6.1	2.73	9.2	6.0	2.85	8.8	5.7	3.02	8.5	5.6	3.22	8.1	5.4	3.42	7.7	5.3	3.65	7.4	5.1	3.88
19.5	27	9.6	6.1	2.75	9.3	6.0	2.88	9.0	5.8	3.05	8.6	5.6	3.25	8.2	5.4	3.46	7.9	5.3	3.68	7.5	5.1	3.92
22.0	30	10.6	6.2	2.88	10.2	6.1	3.01	9.7	6.0	3.20	9.4	5.7	3.40	9.0	5.6	3.61	8.5	5.4	3.85	8.1	5.2	4.09
24.0	32	11.3	6.2	2.98	10.9	6.1	3.11	10.5	6.0	3.31	10.1	5.7	3.52	9.6	5.6	3.75	9.1	5.4	3.99	/	/	/

Symbols:
AFR: Air flow rate (m^3/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02×AFR×(1−BF)×(DB*−EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m

6. Air flow rate(AFR) and "BF" are tabulated below.

	FD
AFR (BF)	26 (0.19)

3D008256

FD04KVAL+R100FUVAL

Cooling Capacity 〔60Hz〕

INDOOR EWB (℃)	INDOOR EDB (℃)	Outdoor temperature (℃DB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI
14.0	20	11.1	7.6	3.28	10.7	7.4	3.51	10.3	7.2	3.76	9.9	7.0	3.96	9.5	6.8	4.24	9.0	6.6	4.51	8.6	6.4	4.74
16.0	22	12.0	7.6	3.41	11.5	7.5	3.65	11.2	7.2	3.90	10.6	7.1	4.13	10.2	6.9	4.42	9.7	6.6	4.69	9.3	6.4	4.92
18.0	25	12.8	8.0	3.55	12.4	7.9	3.80	12.0	7.6	4.06	11.5	7.4	4.28	11.0	7.2	4.56	10.4	7.0	4.88	9.9	6.8	5.11
19.0	27	13.2	8.2	3.62	12.8	8.0	3.87	12.4	7.8	4.14	11.9	7.5	4.37	11.4	7.3	4.69	10.8	7.1	4.97	10.3	6.9	5.24
19.5	27	13.6	8.3	3.66	13.1	8.1	3.91	12.6	7.9	4.18	12.1	7.6	4.42	11.6	7.4	4.74	11.1	7.2	5.01	10.5	6.9	5.24
22.0	30	14.7	8.6	3.87	14.3	8.3	4.13	13.7	8.1	4.41	13.2	7.8	4.65	12.6	7.6	5.01	12.1	7.4	5.24	11.4	7.1	5.52
24.0	32	15.9	8.6	4.06	15.3	8.3	4.32	14.8	8.1	4.60	14.2	7.8	4.85	13.6	7.6	5.20	12.9	7.4	5.47	/	/	/

Symbols:
AFR: Air flow rate (m^3/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02×AFR×(1−BF)×(DB*−EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m

6. Air flow rate(AFR) and "BF" are tabulated below.

	FD
AFR (BF)	30 (0.13)

3D008257

FD05KTAL+R125FUTAL

Cooling Capacity 〔60Hz〕

INDOOR EWB (℃)	INDOOR EDB (℃)	Outdoor temperature (℃DB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI
14.0	20	14.3	9.9	4.58	13.9	9.7	4.83	13.4	9.4	5.11	12.8	9.1	5.34	12.4	8.8	5.78	11.9	8.7	6.06	11.6	8.4	6.33
16.0	22	15.4	10.0	4.77	14.9	9.7	5.02	14.3	9.4	5.31	13.8	9.1	5.56	13.2	8.9	5.96	12.9	8.7	6.30	12.6	8.4	6.57
18.0	25	16.5	10.6	4.95	15.9	10.3	5.27	15.3	9.9	5.50	14.8	9.6	5.77	14.2	9.4	6.21	13.8	9.1	6.54	13.5	9.0	6.88
19.0	27	17.1	10.7	5.04	16.5	10.4	5.30	15.8	10.0	5.61	15.2	9.8	5.88	14.6	9.5	6.33	14.2	9.3	6.66	13.9	9.1	7.00
19.5	27	17.3	10.8	5.10	16.8	10.4	5.35	16.1	10.2	5.66	15.5	9.9	5.93	15.0	9.6	6.39	14.5	9.4	6.79	14.1	9.2	7.06
22.0	30	18.8	10.9	5.33	18.3	10.6	5.61	17.5	10.4	5.92	16.9	10.2	6.21	16.2	9.7	6.70	15.7	9.6	7.09	15.3	9.3	7.43
24.0	32	20.1	10.9	5.53	19.5	10.6	5.81	18.7	10.4	6.14	18.0	10.2	6.44	17.3	9.7	6.94	16.8	9.6	7.34	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02xAFRx(1-BF)x(DB*-EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m
6. Air flow rate(AFR) and "BF" are tabulated below.

	FD
AFR	46
(BF)	(0.19)

3D008258

FD06KTAL+RU06KTAL

Cooling Capacity 〔60Hz〕

AFR (BF)	INDOOR EWB(℃)	INDOOR EDB(℃)	Outdoor temperature (℃CDB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI
	14.0	20	15.8	12.0	4.7	15.6	11.9	5.0	15.0	11.4	5.5	14.5	11.2	6.1	14.1	10.8	6.7	13.0	10.2	7.4	12.3	9.8	8.0
	16.0	22	16.9	12.0	4.8	16.5	11.9	5.1	16.0	11.5	5.6	15.5	11.3	6.2	14.9	10.8	6.8	13.8	10.2	7.5	13.1	9.8	8.2
	18.0	25	17.9	12.7	4.9	17.6	12.4	5.3	17.1	12.3	5.8	16.4	11.9	6.3	15.8	11.5	7.0	14.6	10.8	7.7	14.0	10.5	8.4
47	19.0	27	18.5	13.0	5.0	18.0	12.9	5.3	17.6	12.4	5.9	17.0	12.2	6.4	16.3	11.9	7.1	15.1	11.2	7.8	14.3	10.7	8.5
(0.15)	19.5	27	18.8	13.0	5.0	18.4	12.9	5.4	17.8	12.4	5.9	17.2	12.2	6.5	16.5	11.9	7.1	15.4	11.2	7.8	14.6	10.7	8.5
	22.0	30	20.2	13.1	5.2	19.9	13.1	5.5	19.2	12.7	6.1	18.6	12.4	6.7	17.8	12.1	7.3	16.5	11.4	8.0	15.7	10.9	8.7
	24.0	32	21.5	13.1	5.3	20.9	13.1	5.7	20.3	12.7	6.2	19.5	12.4	6.8	18.8	12.1	7.5	17.4	11.4	8.2	——	——	——
	14.0	20	16.2	12.4	4.7	15.8	12.2	5.1	15.5	11.9	5.6	14.8	11.5	6.1	14.3	11.3	6.7	13.1	10.5	7.4	12.5	10.2	8.1
	16.0	22	17.2	12.6	4.8	16.9	12.3	5.2	16.3	11.9	5.7	15.7	11.6	6.3	15.1	11.4	6.9	14.0	10.6	7.6	13.2	10.2	8.2
	18.0	25	18.4	13.3	4.9	17.9	12.9	5.3	17.3	12.7	5.8	16.6	12.3	6.4	16.0	11.9	7.0	14.8	11.2	7.7	14.1	10.8	8.4
52	19.0	27	18.8	13.4	5.0	18.5	13.3	5.4	17.8	12.8	5.9	17.3	12.6	6.5	16.5	12.3	7.1	15.4	11.5	7.8	14.6	11.2	8.5
(0.16)	19.5	27	19.1	13.4	5.0	18.7	13.3	5.4	18.0	12.8	5.9	17.4	12.6	6.5	16.9	12.3	7.1	15.6	11.5	7.9	14.9	11.2	8.5
	22.0	30	20.6	13.8	5.2	20.1	13.5	5.6	19.4	13.3	6.1	18.8	13.0	6.7	18.0	12.4	7.3	16.7	11.8	8.1	15.9	11.5	8.8
	24.0	32	21.9	13.8	5.3	21.4	13.5	5.7	20.7	13.3	6.3	20.0	13.0	6.9	19.1	12.4	7.5	17.7	11.8	8.3	——	——	——
	14.0	20	16.6	13.1	4.8	16.3	12.9	5.1	15.8	12.7	5.6	15.3	12.3	6.2	14.7	12.0	6.8	13.5	11.1	7.5	12.9	10.8	8.1
	16.0	22	17.7	13.3	4.9	17.3	13.0	5.2	16.9	12.8	5.7	16.2	12.3	6.3	15.6	12.0	6.9	14.4	11.1	7.6	13.6	10.8	8.3
	18.0	25	18.8	14.0	5.0	18.5	13.8	5.4	17.8	13.4	5.9	17.2	13.0	6.5	16.4	12.7	7.1	15.2	12.0	7.8	14.4	11.5	8.5
62	19.0	27	19.4	14.4	5.1	19.0	14.0	5.4	18.5	13.8	6.0	17.7	13.5	6.5	17.1	13.0	7.2	15.7	12.3	7.9	15.0	12.0	8.6
(0.18)	19.5	27	19.8	14.4	5.1	19.2	14.0	5.5	18.7	13.8	6.0	17.9	13.5	6.6	17.2	13.0	7.2	15.9	12.3	7.9	15.1	12.0	8.6
	22.0	30	21.3	14.7	5.3	20.7	14.5	5.6	20.1	14.1	6.2	19.3	13.7	6.8	18.6	13.4	7.4	17.2	12.7	8.1	16.4	12.3	8.8
	24.0	32	22.4	14.7	5.4	21.9	14.5	5.8	21.3	14.1	6.3	20.5	13.7	6.9	19.5	13.4	7.6	18.2	12.7	8.3	——	——	——

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02xAFRx(1-BF)x(DB*-EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m

C : 3D008105

FD08KTAL+RU08KTAL
FD08KTAL+RU08KUTAL

Cooling Capacity (60Hz)

AFR (BF)	INDOOR EWB(°C)	INDOOR EDB(°C)	Outdoor temperature (°CDB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI
	14.0	20	22.1	16.7	6.1	21.6	16.5	6.5	20.9	16.2	7.2	20.2	15.7	7.9	19.4	15.2	8.7	18.6	14.8	9.5	17.7	14.3	10.5
	16.0	22	23.5	16.7	6.2	22.9	16.5	6.7	22.2	16.2	7.3	21.5	15.7	8.0	20.7	15.3	8.8	19.8	14.8	9.7	18.8	14.3	10.6
	18.0	25	24.9	17.7	6.3	24.4	17.4	6.8	23.6	17.0	7.4	22.8	16.6	8.2	22.0	16.2	8.9	21.0	15.8	9.8	20.1	15.2	10.8
61	19.0	27	25.7	18.1	6.4	25.1	17.8	6.9	24.3	17.4	7.5	23.6	17.0	8.2	22.7	16.6	9.0	21.7	16.2	9.9	20.8	15.7	10.8
(0.20)	19.5	27	26.0	18.1	6.4	25.5	17.8	6.9	24.7	17.4	7.5	23.8	17.0	8.3	23.0	16.6	9.1	22.1	16.2	9.9	21.2	15.7	10.9
	22.0	30	28.0	18.5	6.6	27.4	18.1	7.1	26.6	17.7	7.7	25.7	17.3	8.5	24.8	16.9	9.3	23.8	16.5	10.1	22.8	16.0	11.1
	24.0	32	29.8	18.5	6.8	29.1	18.1	7.2	28.1	17.7	7.9	27.2	17.3	8.6	26.3	16.9	9.4	25.2	16.5	10.3	/	/	/
	14.0	20	22.6	17.4	6.1	22.1	17.1	6.6	21.4	16.7	7.2	20.6	16.3	7.9	19.8	15.3	8.7	19.0	15.3	9.6	18.0	14.8	10.5
	16.0	22	24.0	17.4	6.3	23.4	17.1	6.7	22.7	16.7	7.3	21.9	16.3	8.1	21.0	15.5	8.8	20.1	15.5	9.7	19.2	14.9	10.6
	18.0	25	25.5	18.4	6.4	24.9	18.0	6.8	24.1	17.7	7.5	23.3	17.2	8.2	22.3	16.4	9.0	21.5	16.4	9.9	20.5	15.9	10.8
68	19.0	27	26.3	18.8	6.5	25.6	18.5	6.9	24.8	18.1	7.6	24.0	17.7	8.3	23.0	16.9	9.1	22.1	16.9	9.9	21.2	16.4	10.9
(0.21)	19.5	27	26.6	18.8	6.5	25.9	18.5	6.9	25.1	18.1	7.6	24.3	17.7	8.3	23.4	16.9	9.1	22.4	16.9	10.0	21.5	16.4	10.9
	22.0	30	28.6	19.2	6.7	27.9	18.8	7.1	27.1	18.5	7.8	26.2	18.0	8.5	25.2	17.2	9.3	24.2	17.2	10.2	23.1	16.7	11.1
	24.0	32	30.2	19.2	6.8	29.5	18.8	7.3	28.6	18.5	7.9	27.7	18.0	8.7	26.6	17.2	9.5	25.6	17.2	10.4	/	/	/
	14.0	20	23.3	18.5	6.2	22.7	18.1	6.6	22.0	17.8	7.3	21.2	17.3	8.0	20.3	16.9	8.8	19.4	16.4	9.6	18.5	15.8	10.5
	16.0	22	24.7	18.5	6.3	24.1	18.1	6.8	23.3	17.8	7.4	22.4	17.3	8.1	21.6	16.9	8.9	20.7	16.4	9.8	19.7	15.9	10.7
	18.0	25	26.2	19.5	6.5	25.6	19.3	6.9	24.8	18.8	7.6	23.8	18.4	8.3	23.0	17.9	9.1	22.0	17.6	9.9	21.0	17.1	10.9
82	19.0	27	27.0	20.1	6.5	26.4	19.8	7.0	25.5	19.3	7.6	24.7	18.8	8.3	23.7	18.5	9.1	22.7	18.0	10.0	21.7	17.6	11.0
(0.24)	19.5	27	27.3	20.1	6.6	26.7	19.8	7.0	25.8	19.3	7.7	24.9	18.8	8.4	24.0	18.5	9.2	23.0	18.0	10.1	22.0	17.6	11.2
	22.0	30	29.4	20.5	6.7	28.7	20.2	7.2	27.8	19.8	7.9	26.7	19.3	8.6	25.8	18.8	9.4	24.8	18.5	10.3	23.7	18.0	11.3
	24.0	32	31.2	20.5	6.9	30.3	20.2	7.4	29.4	19.8	8.0	28.4	19.3	8.7	27.3	18.8	9.6	26.3	18.5	10.4	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (°WB)
EDB: Entering dry bulb temp. (°DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02×AFR×(1−BF)×(DB*−EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m
6. Air flow rate and (BF) are tabulated below.

	FD
AFR	68
(BF)	(0.21)

C : 3D008115

FD10KTAL+RU10KTAL
FD10KTAL+RU10KUTAL

Cooling Capacity (60Hz)

AFR (BF)	INDOOR EWB(°C)	INDOOR EDB(°C)	Outdoor temperature (°CDB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI
	14.0	20	27.0	20.5	7.6	26.4	20.1	8.1	25.6	19.7	8.9	24.7	19.2	9.8	23.7	18.6	10.7	22.7	18.0	11.8	21.6	17.4	13.4
	16.0	22	28.6	20.5	7.7	28.0	20.1	8.3	27.1	19.7	9.1	26.2	19.2	9.9	25.2	18.7	10.9	24.2	18.1	12.0	23.0	17.4	13.6
	18.0	25	30.5	21.6	7.9	29.8	21.3	8.4	28.8	20.7	9.2	27.8	20.2	10.1	26.9	19.8	11.1	25.7	19.2	12.2	24.5	18.6	13.8
75	19.0	27	31.4	22.1	8.0	30.7	21.7	8.5	29.8	21.3	9.3	28.7	20.8	10.2	27.7	20.2	11.2	26.5	19.8	12.3	25.5	19.2	13.9
(0.20)	19.5	27	31.9	22.1	8.0	31.0	21.7	8.6	30.1	21.3	9.4	29.2	20.8	10.2	28.0	20.2	11.2	27.0	19.8	12.3	25.8	19.2	14.0
	22.0	30	34.3	22.6	8.2	33.5	22.1	8.8	32.4	21.6	9.6	31.4	21.2	10.5	30.2	20.6	11.5	29.1	20.1	12.6	27.8	19.7	14.2
	24.0	32	36.3	22.6	8.4	35.5	22.1	9.0	34.4	21.6	9.8	33.3	21.2	10.7	32.0	20.6	11.7	30.7	20.1	12.8	/	/	/
	14.0	20	27.6	21.3	7.6	26.9	20.9	8.2	26.0	20.3	9.0	25.1	19.9	9.8	24.2	19.3	10.8	23.1	18.7	11.8	22.0	18.1	13.5
	16.0	22	29.2	21.3	7.8	28.5	20.9	8.3	27.7	20.5	9.1	26.7	19.9	10.0	25.7	19.4	11.0	24.5	18.8	12.0	23.4	18.1	13.7
	18.0	25	31.0	22.4	7.9	30.3	22.0	8.5	29.3	21.5	9.3	28.4	21.0	10.2	27.3	20.6	11.1	26.2	20.0	12.2	25.0	19.4	13.9
83	19.0	27	32.0	22.9	8.0	31.3	22.6	8.6	30.2	22.1	9.4	29.2	21.6	10.3	28.1	21.0	11.2	27.0	20.6	12.3	25.8	20.0	14.0
(0.21)	19.5	27	32.4	22.9	8.0	31.6	22.6	8.6	30.7	22.1	9.4	29.7	21.6	10.3	28.5	21.0	11.3	27.4	20.6	12.4	26.2	20.0	14.0
	22.0	30	34.9	23.4	8.3	34.1	23.0	8.8	33.0	22.6	9.6	31.9	22.0	10.5	30.7	21.5	11.5	29.5	21.0	12.6	28.3	20.5	14.3
	24.0	32	36.9	23.4	8.4	36.0	23.0	9.0	34.9	22.6	9.8	33.7	22.0	10.7	32.6	21.5	11.8	31.3	21.0	12.8	/	/	/
	14.0	20	28.4	22.6	7.7	27.7	22.2	8.2	26.9	21.6	9.0	25.8	21.2	9.9	24.9	20.6	10.9	23.7	20.0	11.9	22.6	19.3	13.5
	16.0	22	30.1	22.7	7.8	29.4	22.2	8.4	28.4	21.6	9.2	27.4	21.2	10.1	26.4	20.6	11.0	25.2	20.1	12.1	24.1	19.4	13.7
	18.0	25	32.0	23.8	8.0	31.2	23.5	8.6	30.2	23.0	9.4	29.2	22.4	10.2	28.0	21.9	11.2	26.9	21.4	12.3	25.7	20.8	14.0
100	19.0	27	32.9	24.5	8.1	32.2	24.2	8.7	31.0	23.6	9.5	30.0	23.0	10.3	29.0	22.6	11.3	27.7	22.0	12.4	26.5	21.4	14.1
(0.24)	19.5	27	33.4	24.5	8.1	32.6	24.2	8.7	31.5	23.6	9.5	30.5	23.0	10.4	29.3	22.6	11.4	28.1	22.0	12.5	26.9	21.4	14.1
	22.0	30	35.9	25.0	8.3	35.0	24.7	8.9	33.8	24.2	9.7	32.7	23.6	10.6	31.5	23.0	11.6	30.2	22.6	12.7	29.0	22.0	14.4
	24.0	32	37.9	25.0	8.5	37.0	24.7	9.1	35.9	24.2	9.9	34.7	23.6	10.8	33.4	23.0	11.8	32.0	22.6	12.9	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (°WB)
EDB: Entering dry bulb temp. (°DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Caution
TC and SHC are shown by kW.

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02×AFR×(1−BF)×(DB*−EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m
6. Air flow rate and (BF) are tabulated below.

	FD
AFR	83
(BF)	(0.21)

C : 3D008114

FD15KTAL+(RU08KTAL)×2
FD15KTAL+(RU08KUTAL)×2

Cooling Capacity 〔60Hz〕

AFR (BF)	INDOOR EWB (℃)	INDOOR EDB (℃)	Outdoor temperature (℃DB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI
122 (0.20)	14.0	20	44.2	33.5	12.2	43.3	33.0	13.0	41.9	32.3	14.4	40.5	31.4	15.8	38.8	30.5	17.4	37.2	29.5	19.0	35.3	28.6	21.0
	16.0	22	47.0	33.5	12.4	45.8	33.0	13.4	44.4	32.3	14.6	43.0	31.4	16.0	41.4	30.7	17.6	39.5	29.5	19.4	37.7	28.6	21.2
	18.0	25	49.8	35.3	12.6	48.8	34.9	13.6	47.2	34.0	14.8	45.6	33.3	16.4	44.0	32.3	17.8	42.1	31.6	19.6	40.2	30.5	21.6
	19.0	27	51.4	36.3	12.8	50.2	35.6	13.8	48.6	34.9	15.0	47.2	34.0	16.4	45.3	33.3	18.0	43.5	32.3	19.8	41.6	31.4	21.6
	19.5	27	52.1	36.3	12.8	50.9	35.6	13.8	49.3	34.9	15.0	47.7	34.0	16.6	46.0	33.3	18.2	44.2	32.3	19.8	42.3	31.4	21.8
	22.0	30	56.0	37.0	13.2	54.9	36.3	14.2	53.3	35.3	15.4	51.4	34.7	17.0	49.5	33.7	18.6	47.7	33.0	20.2	45.6	32.1	22.2
	24.0	32	59.5	37.0	13.6	58.1	36.3	14.4	56.3	35.3	15.8	54.4	34.7	17.2	52.6	33.7	18.8	50.5	33.0	20.6	/	/	/
136 (0.21)	14.0	20	45.1	34.9	12.2	44.2	34.2	13.2	42.8	33.5	14.4	41.2	32.6	15.8	39.5	30.7	17.4	37.9	30.7	19.2	36.0	29.5	21.0
	16.0	22	47.9	34.9	12.6	46.7	34.2	13.4	45.3	33.5	14.6	43.7	32.6	16.2	42.1	30.9	17.6	40.2	30.9	19.4	38.4	29.8	21.2
	18.0	25	50.9	36.7	12.8	49.8	36.0	13.6	48.1	35.3	15.0	46.5	34.4	16.4	44.7	32.8	18.0	43.0	32.8	19.8	40.9	31.9	21.6
	19.0	27	52.6	37.7	13.0	51.2	37.0	13.8	49.5	36.3	15.2	47.9	35.3	16.6	46.0	33.7	18.2	44.2	33.7	19.8	42.3	32.8	21.8
	19.5	27	53.3	37.7	13.0	51.9	37.0	13.8	50.2	36.3	15.2	48.6	35.3	16.6	46.7	33.7	18.2	44.9	33.7	20.0	43.0	32.8	21.8
	22.0	30	57.2	38.4	13.4	55.8	37.7	14.2	54.2	37.0	15.6	52.3	36.0	17.0	50.5	34.4	18.6	48.4	34.4	20.4	46.3	33.5	22.2
	24.0	32	60.5	38.4	13.6	59.1	37.7	14.6	57.2	37.0	15.8	55.3	36.0	17.4	53.3	34.4	19.0	51.2	34.4	20.8	/	/	/
164 (0.24)	14.0	20	46.5	37.0	12.4	45.3	36.3	13.2	44.0	35.6	14.6	42.3	34.7	16.0	40.7	33.7	17.6	38.8	32.8	19.2	37.0	31.6	21.0
	16.0	22	49.3	37.0	12.6	48.1	36.3	13.6	46.5	35.6	14.8	44.9	34.7	16.2	43.3	33.7	17.8	41.4	32.8	19.6	39.3	31.9	21.4
	18.0	25	52.3	39.1	13.0	51.2	38.6	13.8	49.5	37.7	15.2	47.7	36.7	16.6	46.0	35.8	18.2	44.0	35.1	19.8	42.1	34.2	21.8
	19.0	27	54.0	40.2	13.0	52.8	39.5	14.0	50.9	38.6	15.2	49.3	37.7	16.6	47.4	37.0	18.2	45.3	36.0	20.0	43.5	35.1	22.0
	19.5	27	54.7	40.2	13.2	53.5	39.5	14.0	51.6	38.6	15.4	49.8	37.7	16.8	47.9	37.0	18.4	46.0	36.0	20.2	44.0	35.1	22.4
	22.0	30	58.8	40.9	13.4	57.4	40.5	14.4	55.6	39.5	15.8	53.5	38.6	17.2	51.6	37.7	18.8	49.5	37.0	20.6	47.4	36.0	22.6
	24.0	32	62.3	40.9	13.8	60.7	40.5	14.8	58.8	39.5	16.0	56.7	38.6	17.4	54.7	37.7	19.2	52.6	37.0	20.8	/	/	/

Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02×AFR×(1−BF)×(DB*−EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m

3D008117

FD20KTAL+(RU10KTAL)×2
FD20KTAL+(RU10KUTAL)×2

Cooling Capacity 〔60Hz〕

AFR (BF)	INDOOR EWB (℃)	INDOOR EDB (℃)	Outdoor temperature (℃DB) 21 TC	21 SHC	21 PI	25 TC	25 SHC	25 PI	30 TC	30 SHC	30 PI	35 TC	35 SHC	35 PI	40 TC	40 SHC	40 PI	45 TC	45 SHC	45 PI	50 TC	50 SHC	50 PI
150 (0.20)	14.0	20	54.0	40.9	15.2	52.8	40.2	16.2	51.2	39.3	17.8	49.3	38.4	19.6	47.4	37.2	21.4	45.3	36.0	23.6	43.3	34.9	26.8
	16.0	22	57.2	40.9	15.4	56.0	40.2	16.6	54.2	39.3	18.2	52.3	38.4	19.8	50.5	37.4	21.8	48.4	36.3	24.0	46.0	34.9	27.2
	18.0	25	60.9	43.3	15.8	59.5	42.6	16.8	57.7	41.4	18.4	55.6	40.5	20.2	53.7	39.5	22.2	51.4	38.4	24.4	49.1	37.2	27.6
	19.0	27	62.8	44.2	16.0	61.4	43.5	17.0	59.5	42.6	18.6	57.4	41.6	20.4	55.3	40.5	22.4	53.0	39.5	24.6	50.9	38.4	27.8
	19.5	27	63.7	44.2	16.0	62.1	43.5	17.2	60.2	42.6	18.8	58.4	41.6	20.4	56.0	40.5	22.4	54.0	39.5	24.6	51.6	38.4	28.0
	22.0	30	68.6	45.1	16.4	67.0	44.2	17.6	64.9	43.3	19.2	62.8	42.3	21.0	60.5	41.2	23.0	58.1	40.2	25.2	55.6	39.3	28.4
	24.0	32	72.6	45.1	16.8	70.9	44.2	18.0	68.8	43.3	19.6	66.5	42.3	21.4	64.0	41.2	23.4	61.4	40.2	25.6	/	/	/
166 (0.21)	14.0	20	55.1	42.6	15.2	53.7	41.9	16.4	52.1	40.7	18.0	50.2	39.8	19.6	48.4	38.6	21.6	46.3	37.4	23.6	44.0	36.3	27.0
	16.0	22	58.4	42.6	15.6	57.0	41.9	16.6	55.3	40.9	18.2	53.5	39.8	20.0	51.4	38.8	22.0	49.1	37.7	24.0	46.7	36.3	27.4
	18.0	25	62.1	44.9	15.8	60.7	44.0	17.0	58.6	43.0	18.6	56.7	42.1	20.4	54.7	41.2	22.2	52.3	40.0	24.4	50.0	38.8	27.8
	19.0	27	64.0	45.8	16.0	62.6	45.1	17.2	60.5	44.2	18.8	58.4	43.3	20.6	56.3	42.1	22.4	54.0	41.2	24.6	51.6	40.0	28.0
	19.5	27	64.9	45.8	16.0	63.3	45.1	17.2	61.4	44.2	18.8	59.3	43.3	20.6	57.0	42.1	22.6	54.9	41.2	24.8	52.3	40.0	28.0
	22.0	30	69.8	46.7	16.6	68.1	46.0	17.6	66.0	45.1	19.2	63.7	44.0	21.0	61.4	43.0	23.0	59.1	42.1	25.2	56.5	40.9	28.6
	24.0	32	73.7	46.7	16.8	72.1	46.0	18.0	69.8	45.1	19.6	67.4	44.0	21.4	65.1	43.0	23.6	62.6	42.1	25.6	/	/	/
200 (0.24)	14.0	20	56.7	45.1	15.4	55.3	44.4	16.4	53.7	43.3	18.0	51.6	42.3	19.8	49.8	41.2	21.8	47.4	40.0	23.8	45.1	38.6	27.0
	16.0	22	60.2	45.3	15.6	58.8	44.4	16.8	56.7	43.3	18.4	54.9	42.3	20.2	52.8	41.2	22.0	50.5	40.2	24.2	48.1	38.8	27.4
	18.0	25	64.0	47.7	16.0	62.3	47.0	17.2	60.5	46.0	18.8	58.4	44.9	20.4	56.0	43.7	22.4	53.7	42.8	24.6	51.4	41.6	28.0
	19.0	27	65.8	49.1	16.2	64.4	48.4	17.4	62.1	47.2	19.0	60.0	46.0	20.6	57.9	45.1	22.6	55.3	44.0	24.8	53.0	42.8	28.2
	19.5	27	66.7	49.1	16.2	65.1	48.4	17.4	63.0	47.2	19.0	60.9	46.0	20.8	58.6	45.1	22.8	56.3	44.0	25.0	53.7	42.8	28.2
	22.0	30	71.9	50.0	16.6	70.0	49.3	17.8	67.7	48.4	19.4	65.3	47.2	21.2	63.0	46.0	23.2	60.5	45.1	25.4	57.9	44.0	28.8
	24.0	32	75.8	50.0	17.0	74.0	49.3	18.2	71.9	48.4	19.8	69.3	47.2	21.6	66.7	46.0	23.6	64.0	45.1	25.8	/	/	/

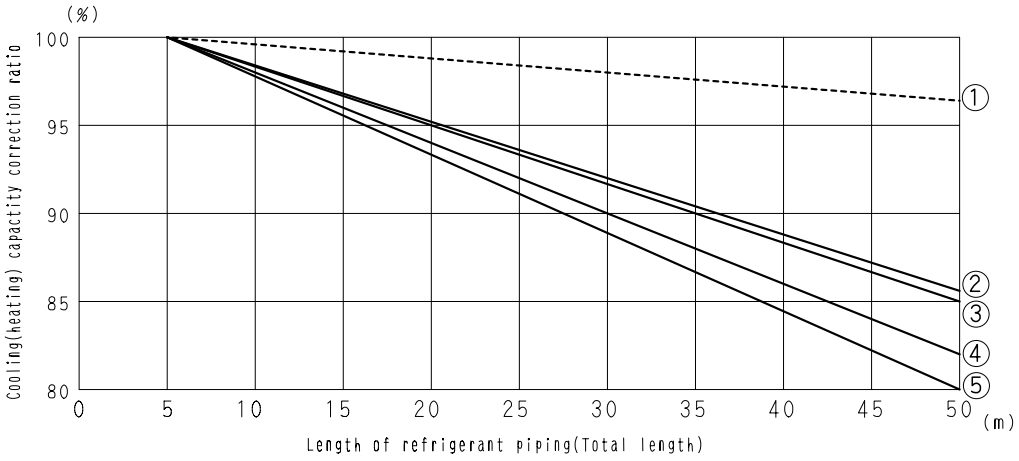
Symbols:
AFR: Air flow rate (m³/min.)
BF : Bypass factor
EWB: Entering wet bulb temp. (℃WB)
EDB: Entering dry bulb temp. (℃DB)
TC : Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
PI : Power input (kW)
(Comp.+outdoor fan motor).

Notes:
1. Ratings shown are gross capacities which do not include a deduction for indoor fan motor heat.
2. ▭ shows nominal capacities.
3. SHC is based on each EWB and EDB.
SHC*=SHC correction for other dry bulb. (DB*)
=0.02×AFR×(1−BF)×(DB*−EDB)
Add SHC* to SHC.
4. Direct interpolation is permissible.
Do not extrapolate.
5. Capacities are based on the following conditions.
Corresponding refrigerant piping length :5m
Level difference :0m

3D010086

8.3 Capacity Correction Factor by The Length of Refrigerant Piping

The cooling capacity of the unit has to be corrected in accordance with the length of refrigerant piping.
(The distance between the indoor unit and the outdoor unit)



	MODEL
①	RY71FU(Y1・V1・VAL) RY100FU(Y1・VAL) RY125FU(Y1・TAL) RY200KU(Y1・TAL・YAL) RY250KU(Y1・TAL・YAL)
②	R100FU(Y1・V1・VAL) RY100FU(Y1・VAL) R200KU(Y1・TAL・YAL) RY200KU(Y1・TAL・YAL)
③	RU08K(Y1・TAL) RU08KU(Y1・TAL) RU10K(Y1・TAL) RU10KU(Y1・TAL) R250KU(Y1・TAL・YAL) RY250KU(Y1・TAL・YAL)
④	R71FU(Y1・V1・VAL) R125FU(Y1・TAL) RY71FU(Y1・V1・VAL) RY125FU(Y1・TAL)
⑤	RU06K(Y1・TAL)

Notes:

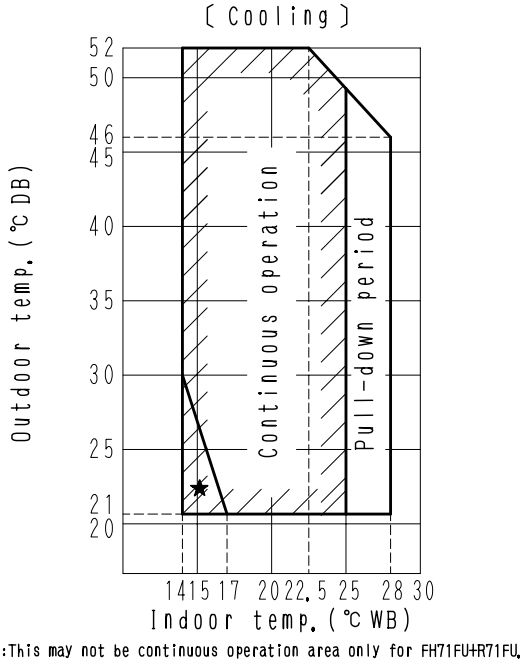
1. ——— Line: Correction ratio for cooling capacity
   ------- Line: Correction ratio for heating capacity
2. The correction ratio remains the same whether the outdoor unit is to be installed above or below the indoor unit.
3. Calculation method for cooling(heating) capacity
   Capacity = Cooling(heating) capacity obtained from the capacity table × cooling(heating) capacity correction ratio.

3D006500C

9. Operation Limits

9.1 Operation Limits

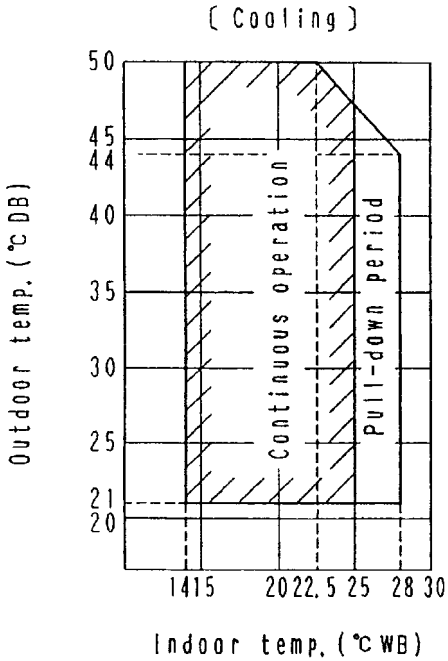
FD03KY1+R71FUY1
FD04KY1+R100FUY1
FD05KY1+R125FUY1



★:This may not be continuous operation area only for FH71FU+R71FU.

3D001318

FD03KVAL+R71FUVAL
FD04KVAL+R100FUVAL
FD05KTAL+R125FUTAL



3D006659

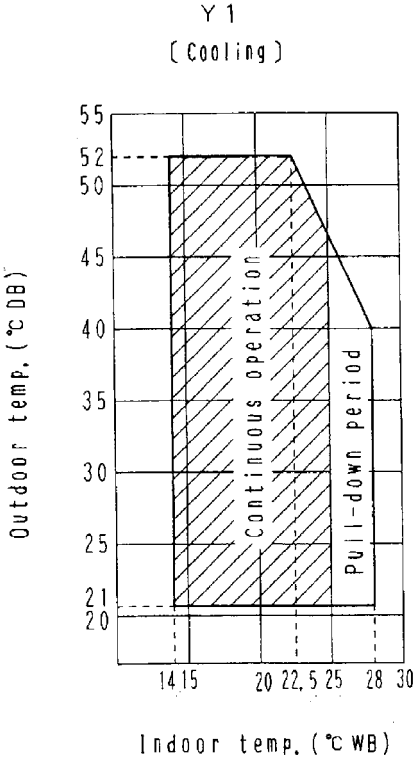
FD06KY1+RU06KY1
FD08KY1+RU08KY1
FD10KY1+RU10KY1
FD15KY1+RU08KY1×2
FD20KY1+RU10KY1×2

FD08KY1+RU08KUY1
FD10KY1+RU10KUY1
FD15KY1+RU08KUY1×2
FD20KY1+RU10KUY1×2

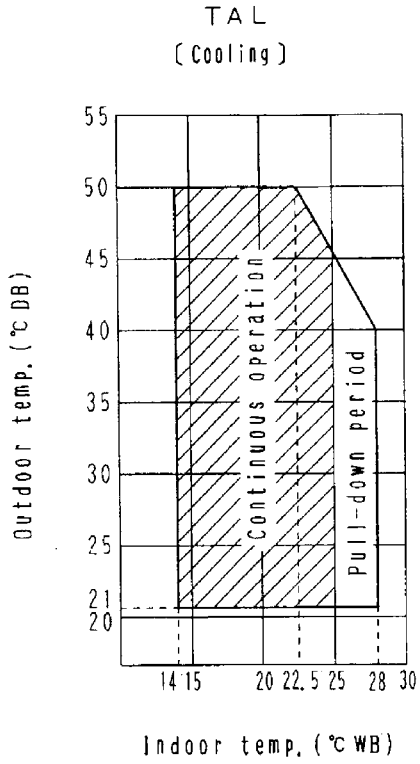
FD06KTAL+RU06KTAL
FD08KTAL+RU08KTAL
FD10KTAL+RU10KTAL
FD15KTAL+RU08KTAL×2
FD20KTAL+RU10KTAL×2

FD08KTAL+RU08KUTAL
FD10KTAL+RU10KUTAL
FD15KTAL+RU08KUTAL×2
FD20KTAL+RU10KUTAL×2

Y1



TAL



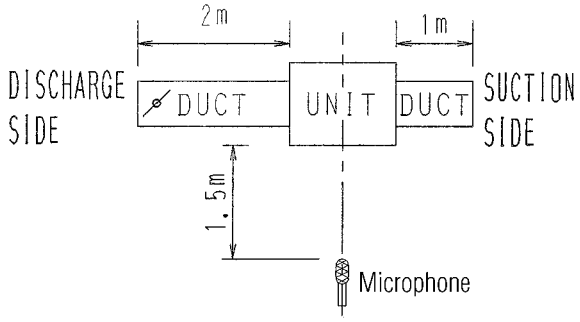
3D006577

10. Sound Level

10.1 Overall Sound Level

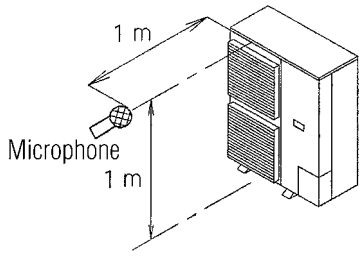
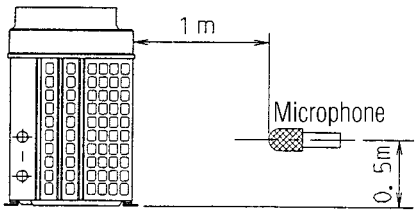
■ **Indoor Unit**

dB(A)

Model	50/60Hz	Measuring Location
FD03K	46	
FD04K	49	
FD05K	49	
FD06K	51	
FD08K	51	
FD10K	53	
FD15K	58	
FD20K	60	

■ **Outdoor Unit**

dB(A)

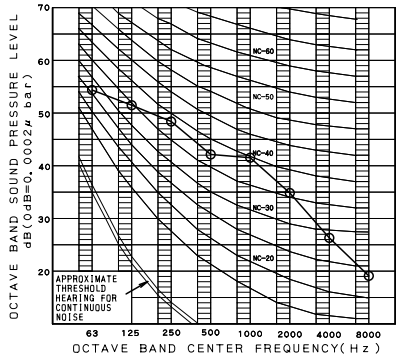
Model	50/60Hz	Measuring Location
R71FU	52/53	
R100FU	56/57	
R125FU	57/59	
RU06K	59	
RU08K RU08KU	60 60	
RU10K RU10KU	61 61	

Note : Operation noise differes with operation and ambient conditions.

10.2 Octave Band Level

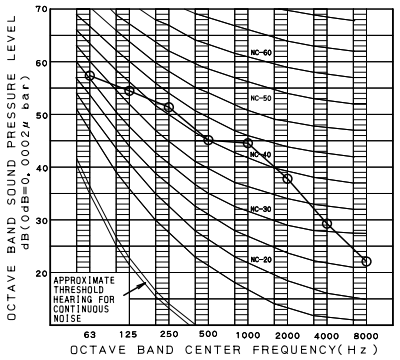
10.2.1 Indoor Unit

FD03KY1
FD03KVAL



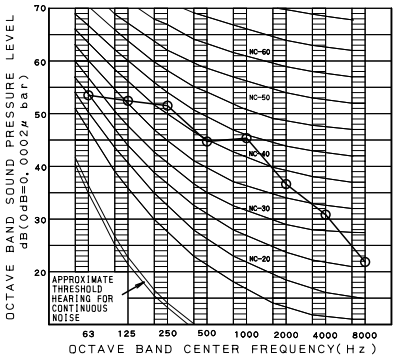
4D004893A

FD04KY1
FD04KVAL



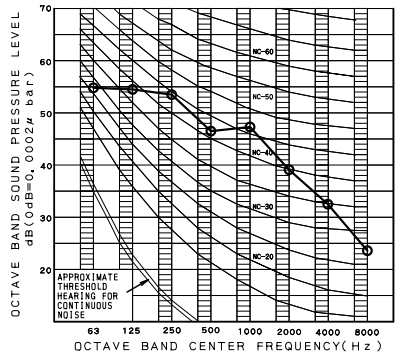
4D004894A

FD05KY1
FD05KTAL



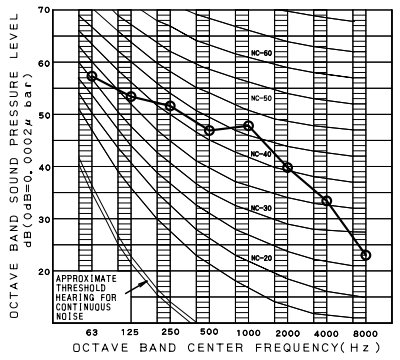
4D004895A

FD06KY1
FD06KTAL



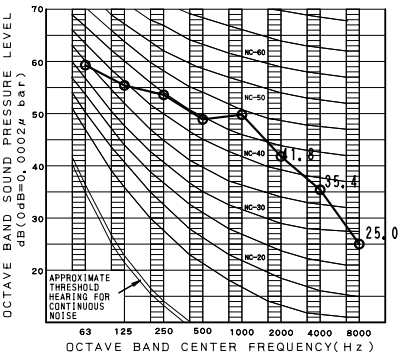
4D007420

FD08KY1
FD08KTAL



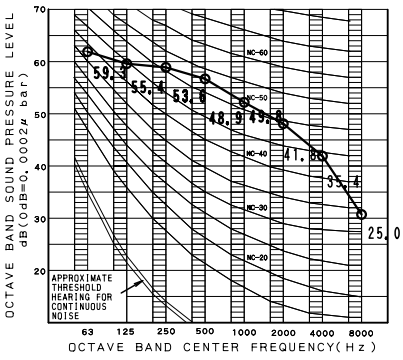
4D006804

FD10KY1
FD10KTAL



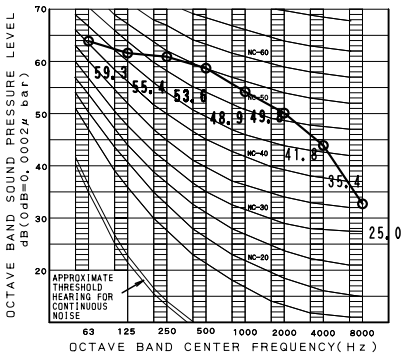
4D006805

FD15KY1
FD15KTAL



4D010079

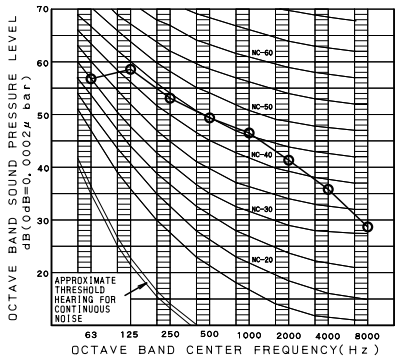
FD20KY1
FD20KTAL



4D010080

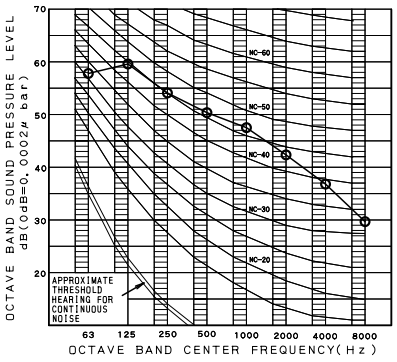
10.2.2 Outdoor Unit

R71FUY1



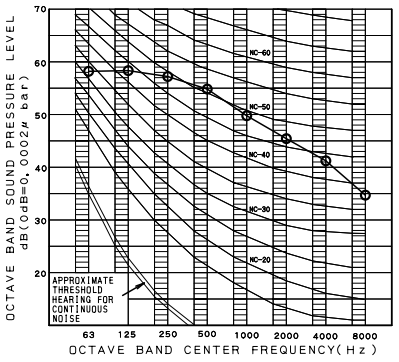
4D002309

R71FUVAL



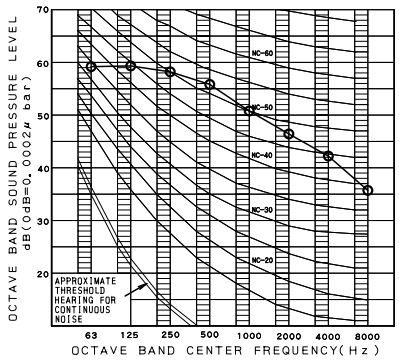
4D007392

R100FUY1



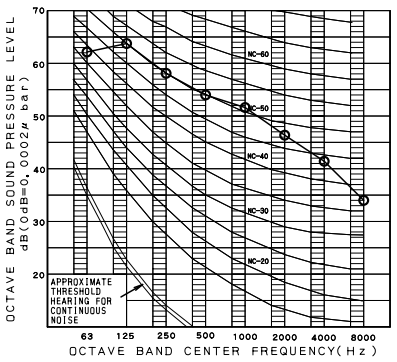
4D002416

R100FUVAL



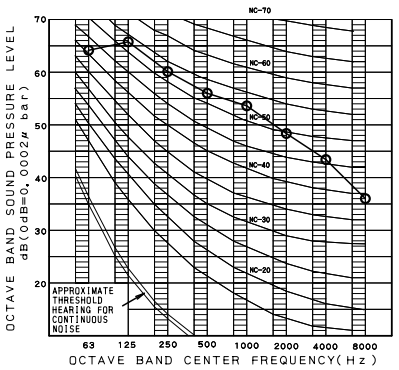
4D007393

R125FUY1



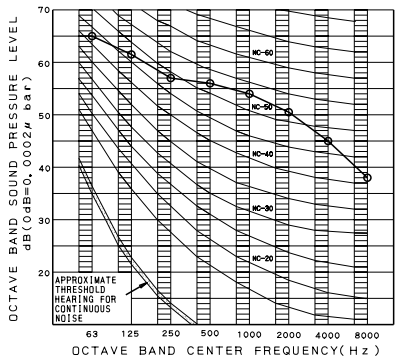
4D002417

R125FUTAL



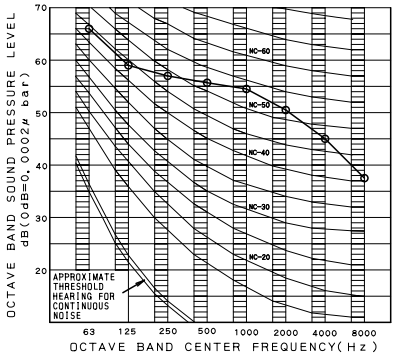
4D007394

RU06KY1



4D007480

RU06KTAL



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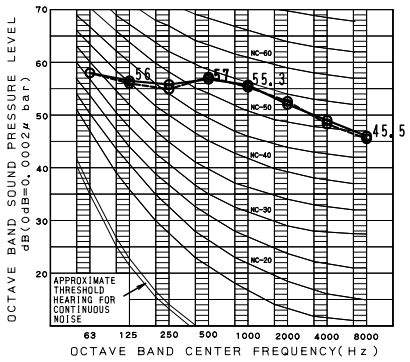
RU08KY1 RU08KUY1
RU08KTAL RU08KUTAL

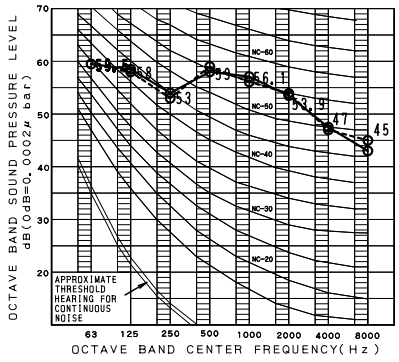
○—○ : 50Hz
○···○ : 60Hz



4D006806

RU10KY1 RU10KUY1
RU10KTAL RU10KUTAL

○—○ : 50Hz
○···○ : 60Hz



4D006807

11. Electric Characteristics

11.1 Indoor Unit

Model	Unit			Power supply			EFM	
	Type	Volts-Ph-Hz	Voltage range	MCA	TOCA	MFA	kW	FLA
FD03K FD04K	VAL	220-1-60	Max. 242V Min. 198V	4.5	3.4	15	0.4	3.6
FD03K FD04K	Y1	380-3-50 400-3-50 415-3-50	Max. 456V Min. 342V	1.5	1.2	15	0.4	1.2
FD05K FD06K				2.3	1.8	15	0.75	1.8
FD08K FD10K				4.4	3.6	15	1.5	3.5
FD15K				6.1	5.0	15	2.2	4.9
FD20K				10.0	8.0	30	3.7	8.0
FD05K FD06K	TAL	220-3-60	Max. 242V Min. 198V	3.9	3.2	15	0.75	3.1
FD08K FD10K				7.5	6.0	15	1.5	6.0
FD15K				10.8	9.2	30	2.2	8.6
FD20K				17.0	14.0	50	3.7	13.6

Symbols :
MCA : Min. Circuit Amps
TOCA : Total Overcurrent Amps
MFA : Max. Fuse Amps (See note 4)
EFM : Evaporator Fan Motor
FLA : Full Load Amps
kW : Fan Motor Rated Output

Note :
1. TOCA means the total value of each OC set.
2. Voltage range
   Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits.
3. Maximum allowable voltage unbalance between phases is 2%.
4. MCA / MFA (FD)
   MCA = 1.25 × FLA
   MFA ≦ 4 × FLA (Min. 15A) (Next lower standard fuse rating)
5. Select wire size based on the value of MCA.
6. Instead of fuse, use Circuit Breaker.

3D004385A

11.2 Outdoor Unit

Model	Unit			Starting method	Power supply			Comp. (each)		CFM (each)	
	Type	Volts-Ph-Hz	Voltage range		MCA	TOCA	MFA	LRA	RLA	kW	FLA
R71FU	Y1	380-3-50 400-3-50 415-3-50	Max. 456V Min. 342V	Direct	6.3	7.0	15	35	4.5	0.050	0.6
R100FU					8.5	7.0	15	45	5.8	0.075 + 0.035	0.7 + 0.5
R125FU					10.4	9.5	15	62	7.2	0.075 + 0.060	0.7 + 0.7
R71FU	VAL	220-1-60	Max. 242V Min. 198V	Direct	18.9	24.0	30	87	14.5	0.080	0.8
R100FU					26.8	37.0	45	118	20.3	0.090 + 0.060	0.8 + 0.6
R125FU	TAL	220-3-60	Max. 242V Min. 198V	Direct	20.5	24.3	35	124	15.1	0.090 + 0.080	0.8 + 0.8

Unit		Starting method	Power supply					Compressor		OFM	
Model	Type		Hz-Volts	Voltage range	MCA	TOCA	MFA	LRA	RLA	kW	FLA
RU06K	Y1	Direct	50-380/220 50-400/230 50-415/240	Max. 50Hz456V Min. 50Hz342V	13.8	16.5	25	70 74 78	9.8 9.9 10.1	0.065 + 0.085	0.7 + 0.8
RU08K RU08KU			50-380/220 50-400/230 50-415/240	Max. 50Hz456V Min. 50Hz342V	18.6	20.5	30	112 117 122	12.4 12.2 12.9	0.19 + 0.23	1.2 + 1.3
RU10K RU10KU			50-380/220 50-400/230 50-415/240	Max. 50Hz456V Min. 50Hz342V	24.4	26.5	40	148 155 161	16.5 15.8 17.5	0.19 + 0.23	1.2 + 1.3
RU06K	TAL	Direct	60-220	Max. 60Hz242V Min. 60Hz198V	25.0	29.7	45	158	18.7	0.10 + 0.10	0.9 + 0.8
RU08K RU08KU			60-220	Max. 60Hz242V Min. 60Hz198V	32.7	38.4	50	206	23.4	0.19 + 0.23	1.6 + 1.8
RU10K RU10KU			60-220	Max. 60Hz242V Min. 60Hz198V	38.9	49.4	60	263	28.4	0.19 + 0.23	1.6 + 1.8

Symbols :

MCA : Min. Ckt (Circuit) Amps
TOCA : Total Over-current Amps
MFA : Max. Fuse Amps (See note 5)
LRA : Locked Rotor Amps
RLA : Rated Load Amps
CFM : Condenser Fan Motor
OFM : Outdoor Fan Motor
FLA : Full Load Amps
kW : Fan Motor Rated Output

Note:

1. RLA is based on the following conditions:
   Indoor temp. 27°CDB/19.5°CWB
   Outdoor temp. 35°CDB
2. TOCA means the total value of each OC set.
3. Voltage range
   The units are usable where the power supply voltage is within the above range.
4. Maximum allowable voltage unbalance between phases is 2%.
5. MCA/MFA
   MCA = 1.25 × RLA + ea. FLA
   MFA ≦ 2.25 × RLA + ea. FLA
   (Next lower standard fuse rating : Min. 15A)
6. Select wire size based on the larger value of MCA or TOCA.
7. Instead of fuse, use Circuit Breaker.

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12. Fan Performance

12.1 Fan Performance

MODEL	AIR FLOW (m^3/min)	FAN SPEED MOTOR OUTPUT	ESP (mmH_2O)								STANDARD POINT (FACTORY SETTING)
			0	5	10	15	20	25	30	35	
FD03K	23	(RPM)	660	810	960	1090	1220				AIR FLOW = 26 m^3/min ESP = 7 mmH_2O FAN SPEED = 920 RPM
		(kW)	0.07	0.10	0.14	0.18	0.22				
	26	(RPM)	730	860	1000	1130	1240				
		(kW)	0.09	0.13	0.17	0.22	0.26				
	31	(RPM)	840	960	1080	1190	1290				
		(kW)	0.14	0.19	0.23	0.28	0.34				
FD04K	27	(RPM)	550	720	860	980	1100				AIR FLOW = 30 m^3/min ESP = 9 mmH_2O FAN SPEED = 870 RPM
		(kW)	0.06	0.09	0.13	0.17	0.22				
	30	(RPM)	620	770	890	1010	1110				
		(kW)	0.08	0.12	0.15	0.20	0.25				
	36	(RPM)	740	870	980	1090	1190				
		(kW)	0.13	0.17	0.22	0.27	0.33				
FD05K	41	(RPM)	640	820	970	1120	1230				AIR FLOW = 46 m^3/min ESP = 9 mmH_2O FAN SPEED = 1030 RPM
		(kW)	0.10	0.17	0.24	0.32	0.40				
	46	(RPM)	740	910	1050	1180	1290				
		(kW)	0.14	0.22	0.30	0.39	0.48				
	55	(RPM)	900	1030	1150	1270	1390				
		(kW)	0.25	0.35	0.45	0.54	0.65				
FD06K	47	(RPM)	690	840	980	1110	1230				AIR FLOW = 52 m^3/min ESP = 9 mmH_2O FAN SPEED = 1020 RPM
		(kW)	0.12	0.19	0.27	0.36	0.45				
	52	(RPM)	770	900	1020	1150	1260				
		(kW)	0.16	0.23	0.32	0.42	0.51				
	62	(RPM)	900	1010	1130	1230	1340				
		(kW)	0.26	0.35	0.45	0.56	0.67				
FD08K	61	(RPM)	720	860	970	1070	1160	1260	1330	1420	AIR FLOW = 68 m^3/min ESP = 10 mmH_2O FAN SPEED = 1030 RPM
		(kW)	0.29	0.40	0.52	0.63	0.75	0.86	0.97	1.07	
	68	(RPM)	800	920	1030	1120	1220	1300	1380	1450	
		(kW)	0.41	0.53	0.66	0.79	0.92	1.05	1.17	1.29	
	82	(RPM)	950	1050	1140	1220	1300	1380			
		(kW)	0.67	0.82	0.97	1.12	1.29	1.44			
FD10K	75	(RPM)	740	850	950	1050	1140	1230	1310	1390	AIR FLOW = 83 m^3/min ESP = 10 mmH_2O FAN SPEED = 1010 RPM
		(kW)	0.36	0.48	0.61	0.75	0.90	1.04	1.18	1.32	
	83	(RPM)	810	920	1010	1100	1190	1280	1350	1410	
		(kW)	0.50	0.64	0.78	0.94	1.09	1.25	1.41	1.50	
	100	(RPM)	990	1060	1150	1220					
		(kW)	0.85	1.01	1.19	1.36					
FD15K	123	(RPM)	660	740	830	900	980	1050	1130	1190	AIR FLOW = 136 m^3/min ESP = 15 mmH_2O FAN SPEED = 920 RPM
		(kW)	0.68	0.83	1.00	1.14	1.34	1.51	1.76	1.95	
	136	(RPM)	710	780	850	920	1000	1070	1140	1210	
		(kW)	0.93	1.04	1.20	1.36	1.57	1.76	1.96	2.17	
	163	(RPM)	850	910	980	1040					
		(kW)	1.55	1.72	1.93	2.11					
FD20K	150	(RPM)	640	720	790	860	930	990	1060	1120	AIR FLOW = 166 m^3/min ESP = 15 mmH_2O FAN SPEED = 920 RPM
		(kW)	0.92	1.07	1.23	1.39	1.57	1.75	1.96	2.15	
	166	(RPM)	720	790	860	920	980	1040	1100	1160	
		(kW)	1.35	1.43	1.62	1.79	1.98	2.17	2.38	2.59	
	199	(RPM)	890	940	1050	1100	1160	1210			
		(kW)	2.25	2.44	2.87	3.08	3.34	3.55			

ESP: EXTERNAL STATIC PRESSURE

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3D010463A-1

MODEL	OPERATION RANGE			FAN MOTOR SECIFICATIONS			PULLEY SPECIFICATIONS						
							MOTOR PULLEY			FAN PULLEY			BELT SIZE
	AIR FLOW (m^3/min)	RPM	MAX. ALLOWABLE RPM	TYPE	RPM	kW	TYPE	SHAFT D.	PITCH D.	TYPE	SHAFT D.	PITCH D.	
FD03KY1	23 - 31	660-1290	1290	3 PHASE 50 Hz	1410	0.4	A	14	90	A	20	140	A39
FD04KY1	27 - 36	550-1190	1190				A	14	80				A38
FD05KY1	41 - 55	640-1390	1390		1410	0.75	A	19	100				A39
FD06KY1	47 - 62	690-1340	1340				A	19	100				A39
FD08KY1	61 - 82	720-1450	1450		1420	1.5	A	24	118	A	20	160	A45
FD10KY1	75 - 100	740-1410	1410				A	24	118				A45
FD15KY1	123 - 163	660-1210	1210	3 PHASE 50 Hz	1430	2.2	B	28	160	2B	30	250	B44
FD20KY1	150 - 199	640-1210	1210		1430	3.7	2B	28	160				B42
FD03KVAL	23 - 31	660-1290	1290	1 PHASE 60 Hz	1710	0.4	A	16	75	A	20	140	A38
FD04KVAL	27 - 36	550-1190	1190				A	16	75				A38
FD05KTAL	41 - 55	640-1390	1390	3 PHASE 60 Hz	1710	0.75	A	19	85	A	20	140	A38
FD06KTAL	47 - 62	690-1340	1340				A	19	85				A38
FD08KTAL	61 - 82	720-1450	1450		1730	1.5	A	24	100	A	20	160	A44
FD10KTAL	75 - 100	740-1410	1410				A	24	100				A44
FD15KTAL	123 - 163	660-1210	1210	3 PHASE 60 Hz	1730	2.2	B	28	132	2B	30	250	B44
FD20KTAL	150 - 199	640-1210	1210		1730	3.7	2B	28	132				B42

3D004695C-2
3D010463A-2

TYPE	SHAFT D.	PITCH D.
2B	28	132

- Pitch Diameter (mm)
- Shaft Diameter (mm)
- A(B):A(B)type pulley
- No. of belts (Blank : Single belt, 2 : Double belts)

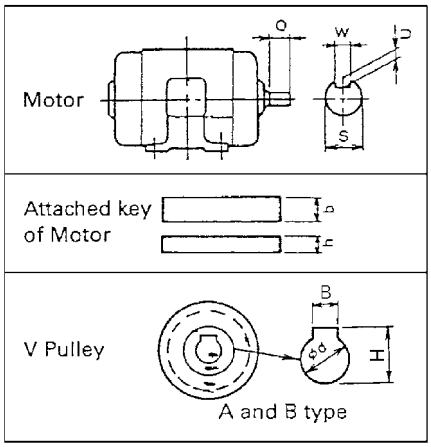
$$D1 = \frac{D2 \times N2}{N1}$$

D1 : Pitch Diameter of Motor Pulley (mm)
D2 : Pitch Diameter of Fan Pulley (mm)
N1 : Revolution speed of Fan motor (rpm)
N2 : Fan revolution speed (rpm)

12.2 Fan Motor Specifications

Power Supply		VAL	Y1	Y1 • TAL	Y1 • TAL	Y1 • TAL	Y1 • TAL
Rated Motor Output		0.4	0.4	0.75	1.5	2.2	3.7
Shaft Outer Diameter:	ϕ s (mm)	16	14	19	24	28	28
Shaft Length:	Q (mm)	40	30	40	50	60	60
Keyway Width:	W (mm)	5	5	6	8	8	8
Keyway Depth:	U (mm)	3	3	3.5	4	4	4
Insulation Class:		E	B	B	B	B	B
Key Width:	b (mm)	5	5	6	8	8	8
Key Height:	h (mm)	5	5	6	7	7	7
Shaft Hole Diameter:	ϕ d (mm)	16	14	19	24	28	28
Keyway	B (mm)	5	5	6	8	8	8
Keyway Height:	H (mm)	18	16	21.5	27	31	31

Motor: Totally enclosed fan-cooled motor.



12.3 How to Select Motor Pulley

1. Select the fan revolution speed by air flow rate and external static pressure.
2. Select Motor Pulley by Fan revolution speed.

$$D_1 = \frac{D_2 \times N_2}{N_1}$$

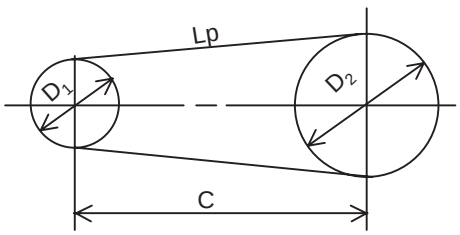
D_1 : Pitch Diameter of Motor Pulley (mm)
D_2 : Pitch Diameter of Fan Pulley (mm)
N_1 : Revolution Speed of Fan Motor (rpm)
N_2 : Fan Revolution Speed

Relation between outer diameter and pitch diameter of each Pulley are as follows:
A type (Pitch Diameter) = Outer Diameter of Pulley - 9mm
B type (Pitch Diameter) = Outer Diameter of Pulley - 11mm

How to Select V-belt

When changing the motor pulley, the standard V- belt may not be used.
In that case, select V-belt in accordance with the following formula:

V-belt Size (Length)



Model Name	Wheel Base (C)	
	Y1	TAL • VAL
FD03K	310	310
FD04K	310	310
FD05K	300	300
FD06K	300	300
FD08K	340	340
FD10K	340	340
FD15K	225	215
FD20K	225	215

$$Lp = 2C + 1.57 (D_1 + D_2) + \frac{(D_1 - D_2)^2}{4C}$$

LP : Effective Center Periphery Length (mm)
D_1 : Pitch Diameter of Motor Pulley (mm)
D_2 : Pitch Diameter of Fan Pulley (mm)
C : Wheel Base (mm)

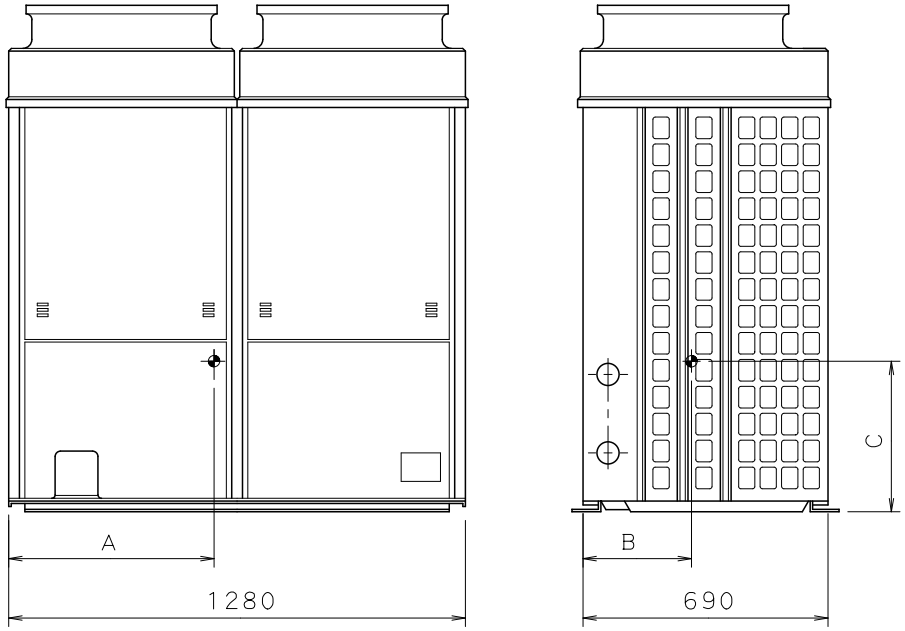
Note : The unit of V-belt length (Nominal number) is usually shown in "inch".

(P0022)

13. Installation

13.1 Center of Gravity

Unit (mm)



MODEL	A	B	C
RU08K(Y1・TAL) RU08KU(Y1・TAL) RY200KU(Y1・TAL・YAL) R200KU(Y1・TAL・YAL)	600	310	380
RU10K(Y1・TAL) RU10KU(Y1・TAL) RY250KU(Y1・TAL・YAL) R250KU(Y1・TAL・YAL)			510

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13.2 Installation

⚠CAUTION

- If the unit is installed in a place with high humidity or if the air filter becomes clogged resulting in lower air flow rate, the discharge air temperature of unit will decrease and the temperature difference between the discharge air and ambient air will increase creating build up of condensation.
- In such cases, an additional drain pan should be installed beneath the unit or a high-insulation unit should be used (manufactured to order).
- In addition, the ceiling opening below the unit should be wide enough to carry out service of the unit.
  (Refer to Dimension drawings for the Service Space)

NOTES:
The regular service intervals are;
- Cleaning of the filters every 2 weeks.
- Cleaning of the drain pan every 3 months.
- Cleaning of the outdoor-unit heat exchanger every 2 weeks.

13.2.1 FD03~05K

1 INDOOR UNIT INSTALLATION

(1) Fit the hanger bracket into the suspension bolt (refer to Fig. 5).
Using washers, secure and tighten both the upper and lower nuts to the suspension bolt.
(2) Adjust the unit to the desired height.
(3) Make sure that the unit is level (refer to Fig. 6).
- Adjust the unit using a level. If it is installed unevenly, water may leak from the unit.
- When making adjustments, test all four corners of the unit with the level or use a vinyl tube filled with water.

(4) Secure and tighten the upper nuts.

Fig. 5

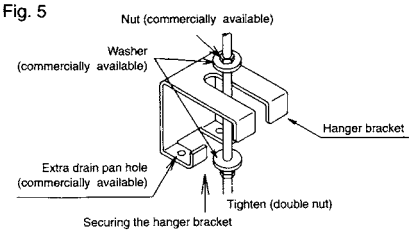
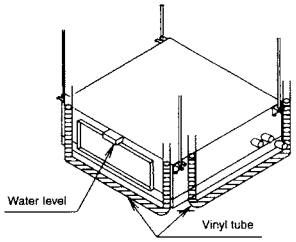


Fig. 6



2 REFRIGERANT PIPING WORK

< For outdoor units, see the outdoor unit installation manual.>

⚠ WARNING
Do not mix gas other than the specified refrigerant into the refrigerant cycle.
Ventilate the area should any refrigerant leak during installation.

- Piping should be brazed onto the indoor unit.
Check the size of the refrigerant piping with the chart below.
- Use seamless copper piping only.

	Refrigerant piping size	
	Gas pipe	Fluid pipe
FD03 type	φ15.9 × t1.0, L=10	φ9.5 × t0.8, L=7
FD04 type	φ19.1 × t1.0, L=10	φ9.5 × t0.8, L=7
FD05 type	φ19.1 × t1.0, L=10	φ9.5 × t0.8, L=7

(See Fig. 8 in reference to "L")

⚠ WARNING
Do not heat the plugs before cutting off their ends in order to release pressure, otherwise the plugs may burst.

- Remove the cardboard and cut the end of the plug(s) before heating the pipes to remove the plugs(s) (refer to Fig. 7).
- After brazing the pipes as shown in Fig. 8, use the fitting insulation to secure the pipe inside of the unit (see Figs. 9 and 10).
Install the clamps as close to the body as possible to absorb leaking condensation.
- Wrap the fitting insulation's joints with tape (commercially available), making sure that there is no gap between the fitting insulation. (see Fig. 9-2)

Fig. 7

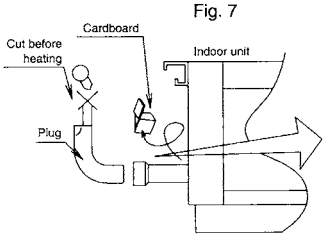


Fig. 8

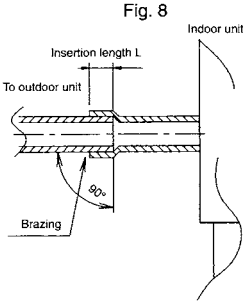


Fig. 9-1

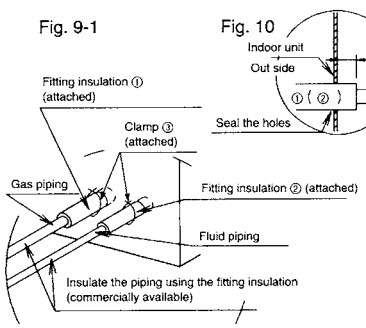


Fig. 10

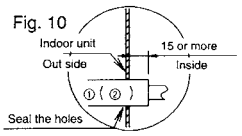
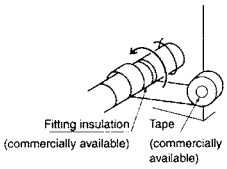


Fig. 9-2

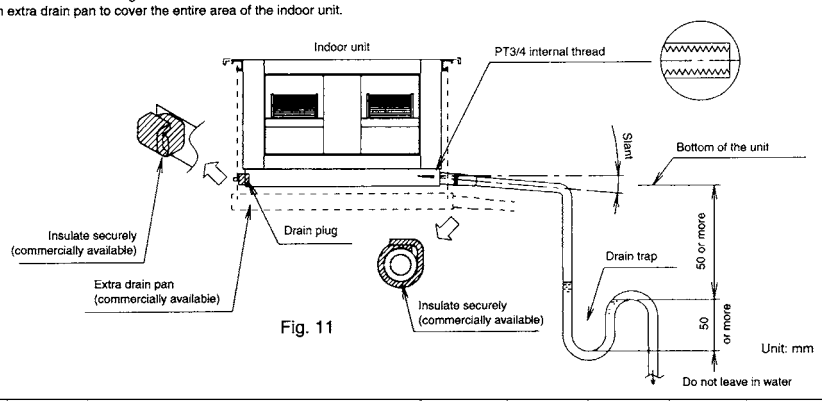


3 DRAIN PIPING WORK

⚠ WARNING
The drain pipe must be installed as shown in the diagram below to avoid water damage caused by leaks and condensation.

- Assemble the unit as shown in Fig. 11.
- The drain pipe outlet can be installed on either the left or right side. The drain plug can be removed and placed on either the left or right side as well.
- For best results, try to keep the piping as short as possible. Slant the piping at an angle to improve flow (the drain pipe provided with the indoor unit has a PT 3/4 internal thread). See Fig. 11.
- Securely insulate the drain pipe.
- It is necessary to provide a drain trap in the drain outlet to relieve negative pressure that exists within the unit compared to the outside atmospheric pressure when the unit is operating. If a drain trap is not provided, splashes or an odor may be produced.
- Keep pipes as straight as possible for easy cleaning and to prevent the accumulation of dirt and debris.
- After closing the drain pipe on the opposite side of the unit, completely wrap the drain pipes with insulation (see Fig. 11).
- Pour water in the drain pan to test for smooth drainage.
- In humid environments, use an extra drain pan to cover the entire area of the indoor unit.

Fig. 11



1PN01449-1

4 ELECTRIC WIRING

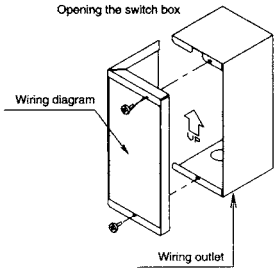
- All commercially available supplies, materials and electrical parts must conform to local codes.
- Use copper wire only.
- For electric wiring work, refer to the "WIRING DIAGRAM" attached to the unit.
- For remote controller wiring, refer to the remote controller's installation manual.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of controlling the power supply to the entire system must be installed.
- Refer to the installation manual attached to the outdoor unit for the size of the power supply electrical wire to be used to connect with the outdoor unit, the capacity of the circuit breaker/switch, and wiring instructions.

<Methods of unit wiring and connecting remote controller cords>

Open the switch box cover by removing the screws (see Fig. 12).

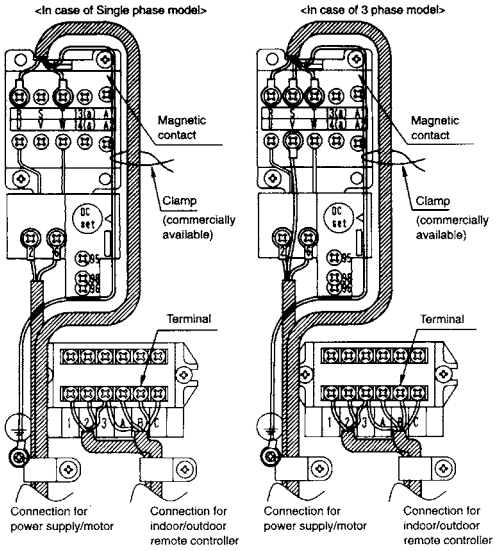
- For connection between the power supply and the motor, refer to Fig. 13.
  Connect the wiring to the corresponding phase on the magnetic contact.
- For connection between the indoor/outdoor remote controller, refer to Fig. 13. Use the corresponding numbers on the outdoor unit to connect the outdoor wires to the indoor terminal.
  Refer to the manual attached to the remote controller (optional) and the wiring diagram for the indoor unit.
- Push the wires through the wiring outlet located on the bottom of the switch box (see Figs. 12 and 13).
  After the wires are connected, keep them stored within the switch box to prevent damage.

Fig. 12



Example of wiring in the switch box

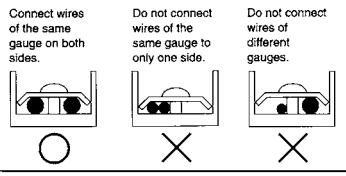
Fig. 13



<<⚠ WARNING>>

Observe the notes mentioned below while connecting wire to the power supply terminal board.

- Do not connect wires of different gauges to the same power supply terminal.
  (Looseness in the connection may cause overheating.)
- When connecting wires of the same gauge, connect them according to the figure below.



NOTE) A commercially available remote controller can be used if its specifications are compatible with those shown in the wiring diagram and technical materials.

- REMOTE CONTROLLER WIRING SPECIFICATIONS

	Wire	Size (mm²)
Unit remote controller	UL1015AWG18 or equivalent	0.75 each

⚠ CAUTION

Be sure to use a 3-minute delay timer when starting the compressor, otherwise the compressor may not start.

- Install the switch box in an easily accessible location (see Fig. 14). If there is no place nearby that might provide easy access to the switch box, install it onto the air inlet side of the indoor unit using the two holes on the side plate.

⚠ WARNING

Do not install the switch box on the air outlet side of the coil (heat exchanger), or under any of the surrounding piping to avoid electrical fire or shock caused by leaking condensation.

- Install the wiring of the switch box facedown.
- Clamp the earth and power supply wires together to provide support and relieve tension at the earth terminal (see Fig. 15).

Fig. 14 Position of the switch box in relation to the indoor unit

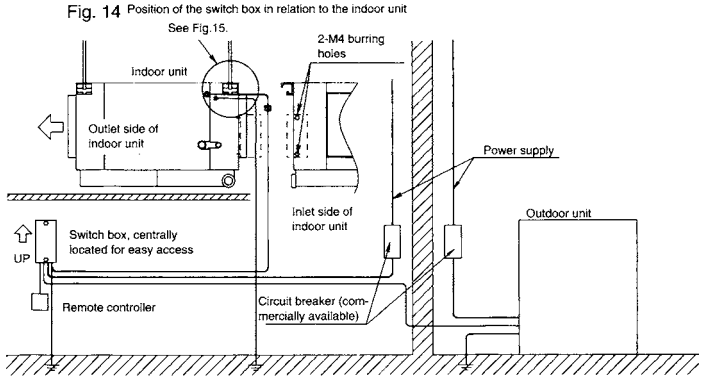
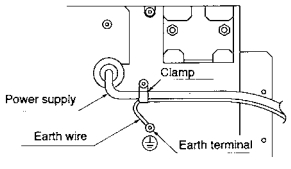


Fig. 15



5 TEST OPERATION

- Check to make sure that all installation procedures have been completed according to the installation manuals for the indoor unit, outdoor unit and the remote controller.
- Turn on the remote controller to check the rotational direction of the fan and for proper air flow. If the fan rotates in the wrong direction, change the power phase supply connection (3 phase models).
- After connection changes or any other adjustments are made, allow the unit to run in order to confirm that it is operating properly.

1PN01449-2

13.2.2 FD06~10K

1 INDOOR UNIT INSTALLATION

(1) Fit the hanger bracket into the suspension bolt (refer to Fig. 5).
Using washers, secure and tighten both the upper and lower nuts to the suspension bolt.
(2) Adjust the unit to the desired height.
(3) Make sure that the unit is level (refer to Fig. 6).
- Adjust the unit using a level. If it is installed unevenly, water may leak from the unit.
- When making adjustments, test all four corners of the unit with the level or use a vinyl tube filled with water.

(4) Secure and tighten the upper nuts.

Fig. 5

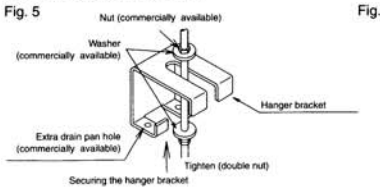
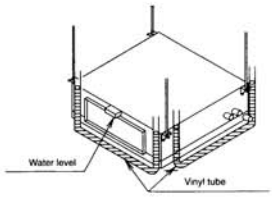


Fig. 6



2 REFRIGERANT PIPING WORK

< For outdoor units, see the outdoor unit installation manual.>

⚠ WARNING

Do not mix gas other than the specified refrigerant into the refrigerant cycle.

Ventilate the area should any refrigerant leak during installation.

- Piping should be brazed onto the indoor unit.
  Check the size of the refrigerant piping with the chart below.
- Use seamless copper piping only.

	Refrigerant piping size	
	Gas pipe	Fluid pipe
FD06 type	ϕ19.1 × t1.0, L=10	ϕ9.5 × t0.8, L=7
FD08 type	ϕ25.4 × t1.2, L=12	ϕ12.7 × t0.9, L=8
FD10 type	ϕ31.8 × t1.4, L=12	ϕ15.9 × t0.95, L=8

(See Fig. 8 in reference to "L")

- Remove the cardboard and cut the end of the plug(s) before heating the pipes to remove the plugs(s) (refer to Fig. 7).
- After brazing the pipes as shown in Fig. 8, use the fitting insulation to secure the pipe inside of the unit (see Figs. 9 and 10).
  Install the fitting insulation as close to the body as possible to absorb leaking condensation.
  Fitting insulation is provided (also commercially available).

Fig. 7

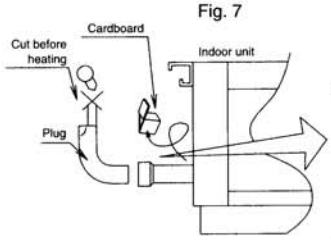


Fig. 8

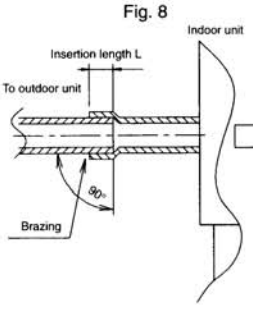


Fig. 9

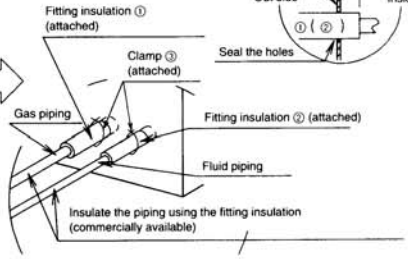
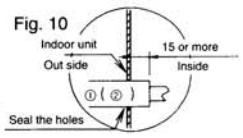


Fig. 10



NOTE) Gas and fluid piping placement is opposite from the diagram for model type FD08-10.

3 DRAIN PIPING WORK

⚠ WARNING

The drain pipe must be installed as shown in the diagram below to avoid water damage caused by leaks and condensation.

- Assemble the unit as shown in Fig. 11.
- The drain pipe outlet can be installed on either the left or right side. The drain plug can be removed and placed on either the left or right side as well.
- For best results, try to keep the piping as short as possible. Slant the piping at an angle to improve airflow (the drain pipe provided with the indoor unit is PT 3/4 internal thread). See Fig. 11.
- Securely insulate the drain pipe.
- It is necessary to provide a drain trap in the drain outlet to relieve negative pressure that exists within the unit compared to the outside atmospheric pressure when the unit is operating.
- Keep pipes as straight as possible for easy cleaning and to prevent the accumulation of dirt and debris.
- After closing the drain pipe on the opposite side of the unit, completely wrap the drain pipes with insulation (see Fig. 11).
- Pour water in the drain pan to test for smooth drainage.
- In humid environments, use an extra drain pan to cover the entire area of the indoor unit.

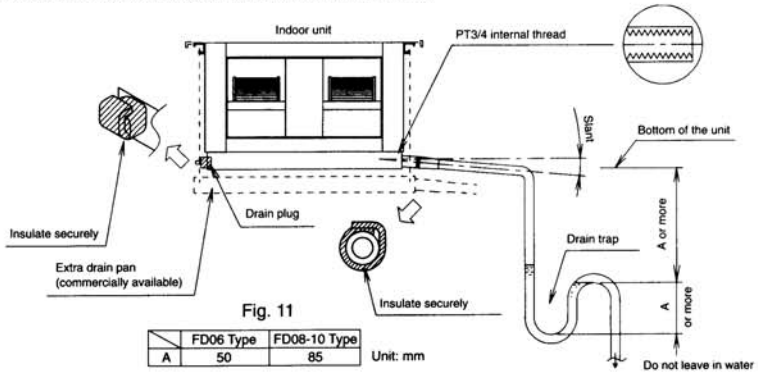


Fig. 11

	FD06 Type	FD08-10 Type
A	50	85

Unit: mm

1PN01214-1

4 ELECTRIC WIRING

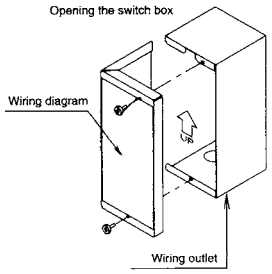
- All commercially available supplies, materials and electrical parts must conform to local codes.
- Use copper wire only.
- For electric wiring work, refer to the "WIRING DIAGRAM" attached to the unit.
- For remote controller wiring, refer to the remote controller's installation manual.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of controlling the power supply to the entire system must be installed.
- Refer to the installation manual attached to the outdoor unit for the size of the power supply electrical wire to be used to connect with the outdoor unit, the capacity of the circuit breaker/switch, and wiring instructions.

<Methods of unit wiring and connecting remote controller cords>

Open the switch box cover by removing the screws (see Fig. 12).

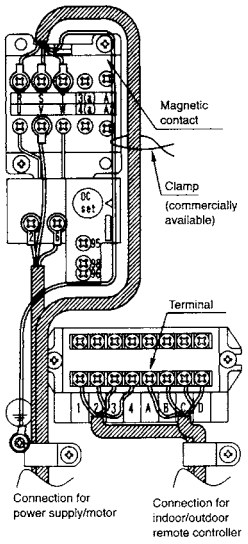
- For connection between the power supply and the motor, refer to Fig. 13. Connect the wiring to the corresponding phase on the magnetic contact.
- For connection between the indoor/outdoor remote controller, refer to Fig. 13. Use the corresponding numbers on the outdoor unit to connect the outdoor wires to the indoor terminal.
  Refer to the manual attached to the remote controller (optional) and the wiring diagram for the indoor unit.
- Push the wires through the wiring outlet located on the bottom of the switch box (see Figs. 12 and 13).
  After the wires are connected, keep them stored within the switch box to prevent damage.

Fig. 12



Example of wiring in the switch box

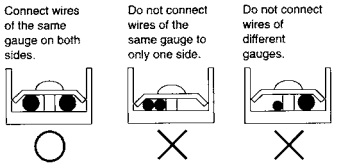
Fig. 13



<<⚠ WARNING>>

Observe the notes mentioned below while connecting wire to the power supply terminal board.

- Do not connect wires of different gauges to the same power supply terminal. (Looseness in the connection may cause overheating.)
- When connecting wires of the same gauge, connect them according to the figure on the right.



NOTE) A commercially available remote controller can be used if its specifications are compatible with those shown in the wiring diagram and technical materials.

- REMOTE CONTROLLER WIRING SPECIFICATIONS

	Wire	Size (mm²)
Unit remote controller	UL1015AWG18 or equivalent	0.75 each

⚠ CAUTION

Be sure to use a 3-minute delay timer when starting the compressor, otherwise the compressor may not start.

- Install the switch box in an easily accessible location (see Fig. 14). If there is no place nearby that might provide easy access to the switch box, install it onto the air inlet side of the indoor unit using the two holes on the side plate.

⚠ WARNING

Do not install the switch box on the air outlet side of the coil (heat exchanger), or under any of the surrounding piping to avoid electrical fire or shock caused by leaking condensation.

- Install the wiring of the switch box facedown.
- Clamp the earth and power supply wires together to provide support and relieve tension at the earth terminal (see Fig. 15).

Position of the switch box in relation to the indoor unit

Fig. 14

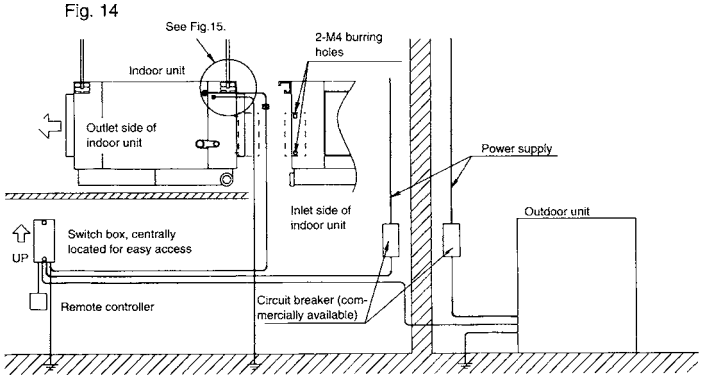
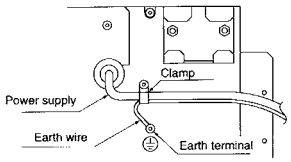


Fig. 15



5 TEST OPERATION

- Check to make sure that all installation procedures have been completed according to the installation manuals for the indoor unit, outdoor unit and the remote controller.
- Turn on the remote controller to check the rotational direction of the fan and for proper air flow. If the fan rotates in the wrong direction, change the power phase supply connection (3 phase models).
- After connection changes or any other adjustments are made, allow the unit to run in order to confirm that it is operating properly.

1PN01214-2

13.2.3 FD15 · 20K

1 INDOOR UNIT INSTALLATION

(1) Secure the unit and supporting plate (commercially available) at four places with M12 screws.
(2) Fit the supporting plate into the suspension bolt (refer to Fig. 6). Using washers, secure and tighten both the upper and lower nuts to the suspension bolt.
(3) Adjust the unit to the desired height.
(4) Make sure that the unit is level (refer to Fig. 7).
- Adjust the unit using a level. If it is installed unevenly, water may leak from the unit.
- When making adjustments, test all four corners of the unit with the level or use a vinyl tube filled with water.

(5) Secure and tighten the upper nuts.

Fig. 5

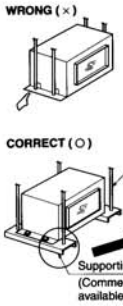


Fig. 6

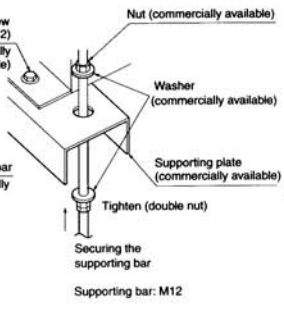
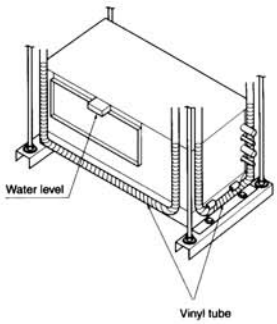
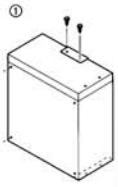


Fig. 7

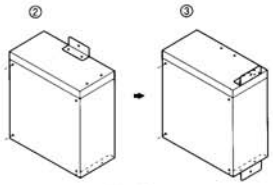


Switch box:
① Remove the screws and the bracket.
② Turn over the bracket so that it is upside-down, then re-install it.



When attaching the switch box to the main unit:
② Re-install the screws.
③ Remove the screws on the side of the box, then turn over the bracket so that it is upside-down and install it on the side of the box.

⚠ CAUTION
When the unit is installed, use set place as follows.



⚠ WARNING
When attaching the switch box to the main unit, be sure to use the enclosed screws (M5×8).

2 REFRIGERANT PIPING WORK

< For outdoor units, see the outdoor unit installation manual.>

⚠ WARNING
Do not mix gas other than the specified refrigerant into the refrigerant cycle.
Ventilate the area should any refrigerant leak during installation.
- Piping should be brazed onto the indoor unit. Check the size of the refrigerant piping with the chart on the right.
- Use seamless copper piping only.
- Before heating the pipes to remove the plugs and connection pipe, remove the service plate and cut the plug ends (refer to Fig. 8).
- After brazing the pipes as shown in Fig. 9, use the fitting insulation to secure the pipe inside of the unit (see Figs. 10 and 11). Clamp the fitting insulation with the attached clamp ③ inside the indoor unit, as shown in Fig. 10-1.
- Wrap the fitting insulation's joints with tape (commercially available), making sure that there is no gap between the fitting insulation. (see Fig. 10-2)

	Refrigerant piping size	
	Gas pipe	Liquid pipe
FD15 type	(ϕ25.4 × t1.2, L=12) × 2	(ϕ12.7 × t0.8, L=8) × 2
FD20 type	(ϕ31.8 × t1.4, L=12) × 2	(ϕ15.9 × t1.0, L=8) × 2

(See Fig. 9 in reference to "L")

⚠ WARNING
Do not heat the plugs before cutting off their ends in order to release pressure, otherwise the plugs may burst.

Fig. 8

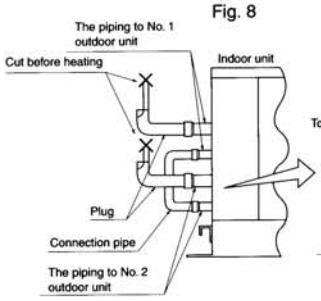


Fig. 9

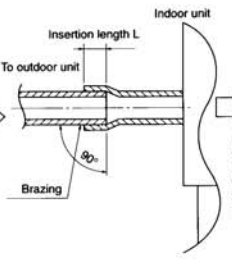


Fig. 10-1

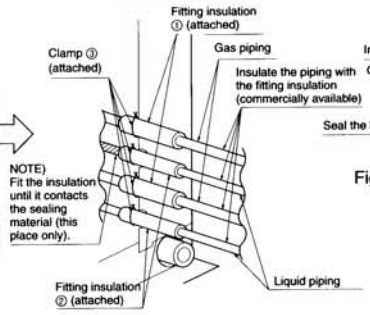


Fig. 11

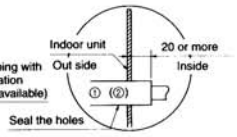
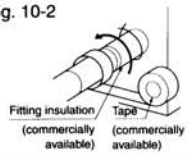


Fig. 10-2



3 DRAIN PIPING WORK

⚠ WARNING
The drain pipe must be installed as shown in the diagram on the right to avoid water damage caused by leaks and condensation.
- Assemble the unit as shown in Fig. 12.
- The drain pipe outlet can be installed on either the left or right side. The drain plug can be removed and placed on either the left or right side as well.
- For best results, try to keep the piping as short as possible. Slant the piping at an angle to improve flow (the drain pipe provided with the indoor unit has a PS 1B internal thread). See Fig. 12.
- Securely insulate the drain pipe.
- It is necessary to provide a drain trap in the drain outlet to relieve negative pressure that exists within the unit compared to the outside atmospheric pressure when the unit is operating. If a drain trap is not provided, splashes or an odor may be produced.
- Keep pipes as straight as possible for easy cleaning and to prevent the accumulation of dirt and debris.
- After closing the drain pipe on the opposite side of the unit, completely wrap the drain pipes with insulation (see Fig. 12).
- Pour water in the drain pan to test for smooth drainage.
- In humid environments, use an extra drain pan to cover the entire area of the indoor unit.

Drain piping connection
PS 1B internal thread + PT 1B external thread
(indoor unit) (commercially available)

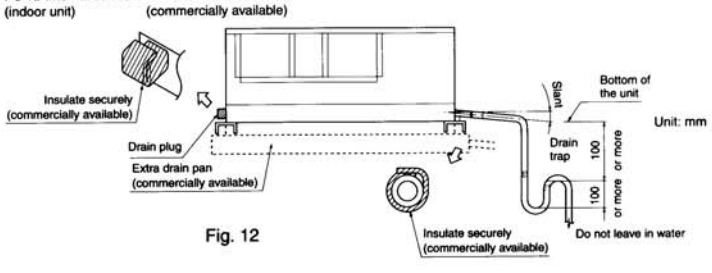


Fig. 12

1PN01665A-1

4 ELECTRIC WIRING

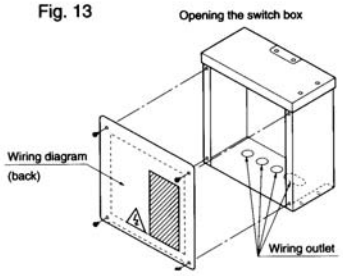
- All commercially available supplies, materials and electrical parts must conform to local codes.
- Use copper wire only.
- For electric wiring work, refer to the "WIRING DIAGRAM" attached to the unit.
- For remote controller wiring, refer to the remote controller's installation manual.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of controlling the power supply to the entire system must be installed.
- Refer to the installation manual attached to the outdoor unit for the size of the power supply electrical wire to be used to connect with the outdoor unit, the capacity of the circuit breaker/switch, and wiring instructions.

<Methods of unit wiring and connecting remote controller cords>

Open the switch box cover by removing the screws (see Fig. 13).

- For connection between the power supply and the motor, refer to Fig. 14.
  In order for the fan to rotate in the correct direction, change the corresponding phase according to the wiring diagram.
- For connection between the indoor/outdoor remote controller, refer to Fig. 14. Use the corresponding numbers on the outdoor unit to connect the outdoor wires to the indoor terminal.
  Refer to the manual attached to the remote controller (optional) and the wiring diagram for the indoor unit.
- Push the wires through the wiring outlet located on the bottom of the switch box (see Figs. 13 and 14).
  After the wires are connected, keep them stored within the switch box to prevent damage.

Fig. 13

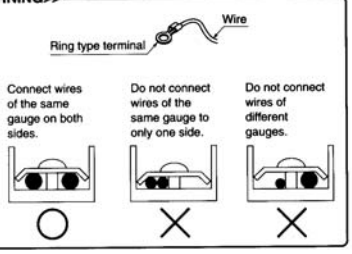


<<⚠ WARNING>>

- Use ring type terminals for connections to the power supply terminal block.
  Where they can not be used, refer to the following.

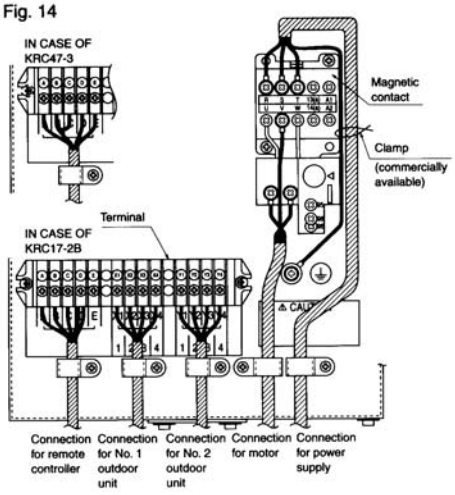
Observe the notes mentioned below while connecting wire to the power supply terminal board.

- Do not connect wires of different gauges to the same power supply terminal.
  (Looseness in the connection may cause overheating.)
- When connecting wires of the same gauge, connect them according to the figure on the right.



Example of wiring in the switch box

Fig. 14



NOTE) A commercially available remote controller can be used if its specifications are compatible with those shown in the wiring diagram and technical materials.

- REMOTE CONTROLLER WIRING SPECIFICATIONS

	Wire	Size (mm²)
Unit remote controller	UL1015AWG18 or equivalent	0.75 each

⚠ CAUTION

Be sure to use a 3-minute delay timer when starting the compressor, otherwise the compressor may not start.

- Install the switch box in an easily accessible location (see Fig. 15). If there is no place nearby that might provide easy access to the switch box, install it onto the air outlet side of the indoor unit using the two holes on the front plate.

⚠ WARNING

Do not install the switch box under any of the surrounding piping to avoid electrical fire or shock caused by leaking condensation.

- Install the wiring of the switch box facedown.
- Clamp the earth and power supply wires together to provide support and relieve tension at the earth terminal (see Fig. 16).

Fig. 15 Position of the switch box in relation to the indoor unit

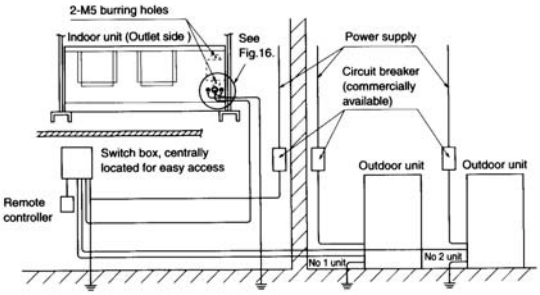
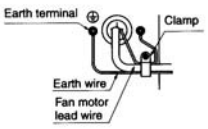


Fig. 16



5 TEST OPERATION

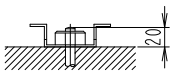
- Check to make sure that all installation procedures have been completed according to the installation manuals for the indoor unit, outdoor unit and the remote controller.
- Turn on the remote controller to check the rotational direction of the fan and for proper air flow. If the fan rotates in the wrong direction, change the power phase supply connection (3 phase models).
- After connection changes or any other adjustments are made, allow the unit to run in order to confirm that it is operating properly.

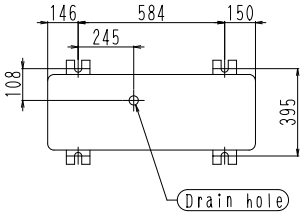
1PN01665A-2

13.2.4 R71~125FU

1 INSTALLATION

1. Check the strength and level of the foundation so that the air conditioner works without vibration or noise.
2. Fix the unit rigidly to the foundation with the foundation bolts as shown in the drawing at right.
   - Prepare 4 sets of M12 foundation bolts, nuts and washers available in the market.
   - The projection of the foundation bolts should be 20 mm.





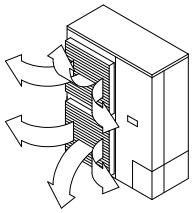
≪ Air Flow Direction Adjustment by Discharge Grille ≫

- Before removing the discharge grill, stop the unit and check if the fan is not running. ⚠WARNING
- The air flow direction can be changed as shown below by changing the setting of the discharge grille on the front of the outdoor unit.

1. Remove the screws in the four corners of discharge grille and take it out .
2. Change the grille setting to set the air flow direction. Then, tighten the screws.
   - In a series installation, do not install the equipment so that the air discharges to the side.

(Upward)
This setting is used at shipment from the factory.

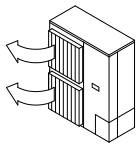
(Sideways-left)
Turn the discharge grille 90 degrees counterclockwise.



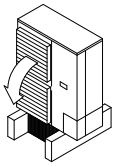
(Sideways-right)
Turn the discharge grille 90 degrees clockwise.

(Downward)
Turn the discharge grille 180 degrees.

(Examples of installation with air direction adjustment)



Take care to prevent short-circuiting.



Close the gap below the outdoor unit to prevent short-circuiting.

1PN01323B

2 REFRIGERANT PIPING SIZE AND PERMISSIBLE LENGTH

● Use the phosphorus deoxidized seamless copper tube.

1. Confirm the proper refrigerant piping size as follows.

(a) Refrigerant piping size

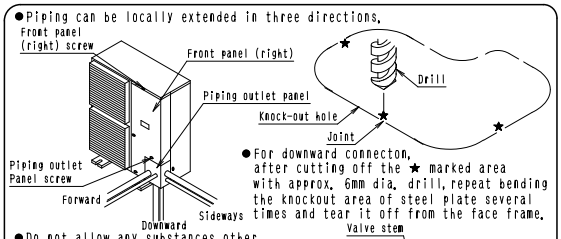
Outdoor unit	Refrigerant piping size	
	Gas pipe	Liquid pipe
71 type	φ15.9×t1.0	φ9.5×t0.8
100・125 type	φ19.1×t1.0	

(b) Permissible piping length

Type	Max. permissible piping length	Max. height difference
Pair type	50 m	30 m

3 REFRIGERANT PIPING

● Piping can be locally extended in three directions.



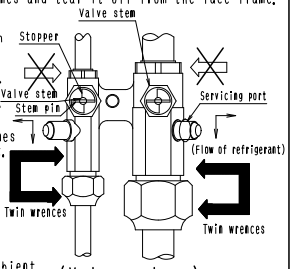
● For downward connecton, after cutting off the ★ marked area with approx. 6mm dia. drill, repeat bending the knockout area of steel plate several times and tear it off from the face frame.

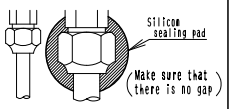
● Do not allow any substances other than the specified refrigerant such as air to mix into the refrigerant circuit. ⚠CAUTION

<Cautions for handling Stop Valve >

1. The stop valves for indoor-outdoor connecting piping are closed at shipment from the factory. The names of parts are as shown on the right.
2. Use two wrenches at the points indicated by the solid arrows (⬅) when loosening or tightening the flare nuts.
3. Do not apply the wrenches to the positions indicated by the hollow arrows (⤫).

☆For cooling operation under low ambient temperature or any other operation under low plessure, apply silicon sealing pad, etc. to prevent the freezing of flare nut gas pipe portion of the stop valve.





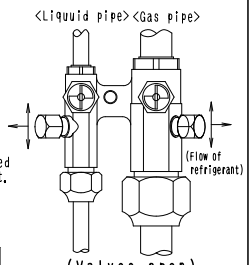
<Operating of Stop Valve>

1. Opening

(a) Turn the valve stem 1/4 turn counterclockwise, using a ⊖ driver.
(b) Stop when the pin hits the stopper. The valve is open.

2. Closing

(a) Turn the valve stem 1/4 turn clockwise, using a ⊖ driver.
(b) Stop when the pin hits the stopper. The valve is closed.

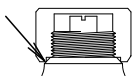


CAUTIONS FOR HANDLING VALVE COVER

1. The valve cover is sealed where indicated by the arrow. Take care not to damage it.
2. After operating the valve, be sure to tighten the valve cover properly. Tightening torque : 1960-2450 N・cm (200-250kgf・cm)

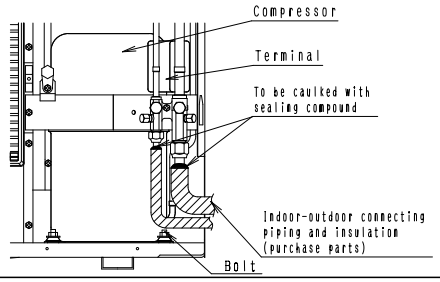
CAUTIONS FOR HANDLING SERVICE PORT

1. Work with the charge hose with a pushbar.
2. After the work, tighten the valve cover in place. Tightening torque: 980-1470 N・cm (100-150 kgf・cm)



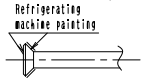
CAUTIONS FOR CONNECTING PIPES

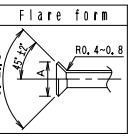
1. Make sure that the indoor-outdoor connecting pipes do not touch the terminals of the compressor.
2. The connecting pipes must not touch the bolts of the compressor.
3. If the outdoor unit is installed higher than the indoor unit, the condensate from a stop valve may run down along the piping through the clearance between insulation and piping into the indoor unit. Under such conditions, an appropriate measure must be taken to prevent the condensate from running down into the indoor unit, for example, the clearance between the pipe and the insulation must be caulked with sealing compound.



CAUTIONS FOR FLARE CONNECTION

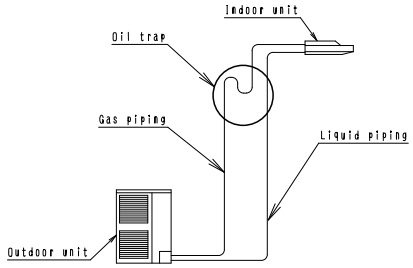
1. See the following table for the flare dimensions.
2. When connecting the flare nut, **apply refrigerating machine oil to the flare (inside and outside)** and first screw the nut 3 or 4 turns by hand.
3. See the following table for the tightening torque. **(Excessive tightening could crack the flare.)**
4. After completing the installtion, carry out a gas leak inspection of the piping connections with nitrogen and such.



Pipe size	Tightening torque	Flare dimensions A(mm)	Flare form
φ 9.5	3270~3990N・cm (333 ~407 kgf・cm)	12.0~12.4	
φ15.9	6180~7540N・cm (630 ~770 kgf・cm)	18.6~19.0	
φ19.1	9720~11860N・cm (990 ~1210 kgf・cm)	22.9~23.3	

CAUTIONS FOR NECESSITY OF TRAP

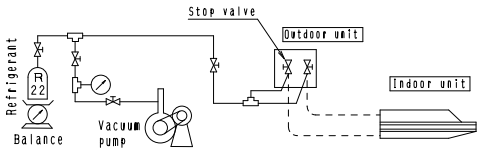
● Since there is fear of the oil held inside the riser piping flowing back into the compressor when stopped and causing liquid compression phenomenon, or cases of deterioration of oil retgurn, it will be necessary to provide a trap at an appropriate place in the riser gas piping.



Note) A trap is not necessary when the outdoor unit is installed in a higher position than the indoor unit.

4 AIR PURGE

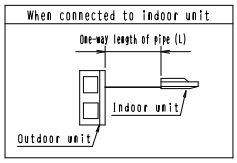
1. Carry out an air purge of the refrigerant system, using a vacuum pump.



5 CHARGING OF REFRIGERANT

● This unit requires additional charging of refrigerant according to the length of pipe connected at the site. Take the following steps for proper charging. Refer to Figure 1 for refrigerant pipe one-way length.

Figure 1



1. Refrigerant charge amount

Additionl charging of refrigerant

(a) Select the appropriate refrigerant charging amount from Table 1 and charge the refrigerant.
(b) Mark circle on the selected amount in the tabies which in a nameplate affixed inside the front panel(right) for future servicing.

Table 1 Additional charging amount <unit : kg>

The maximum allowable pipe length is 50 meters.

Length of pipe connected (L)	5 m	10 m	15 m	20 m	25 m	30 m	35 m	40 m	45 m	50m
Heat pump type	—	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25
Straight cooling type	—	0.13	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13

2. Recharging refrigerant

(a) When the entire refrigerant pipe length is within 5 meters, charge the refrigerant in accordannce with the amount mentioned on the nameplate, and when the pipe length exceeds 5 meters, the charging amount is an addition of the amount stated on the nameplate and the additional charging amount.

1PN01324A-1

3. Pump Down Operation method

Take the following steps to perform the pump down operation.

● **Heat pump type**

	Procedure	Precautions
1	Start fan operation with the remote controller.	Confirm that stop valves both on the liquid and gas side are open.
2	Push the pumping down button on the PC board of the outdoor unit.	Compressor and outdoor fan will start operation automatically.
3	Continue operation for 1 minute until operation condition stabilizes.	———
4	Close the stop valve on the liquid side securely.	Insecure closing of this valve may result in burning of the compressor.
5	After about 1 minute passed, close the stop valve on the gas side.	After pushing the pumping down button, compressor and outdoor fan will stop 3 minutes later.

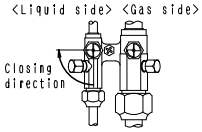
This is the end of pumping down operation.

After pumping down operation, the remote controller shows "U4" even when ON button on the remote controller is pressed, and it will not operate. Turn off the main power supply switch and turn it on again in need of operation.

● **Straight cooling type**

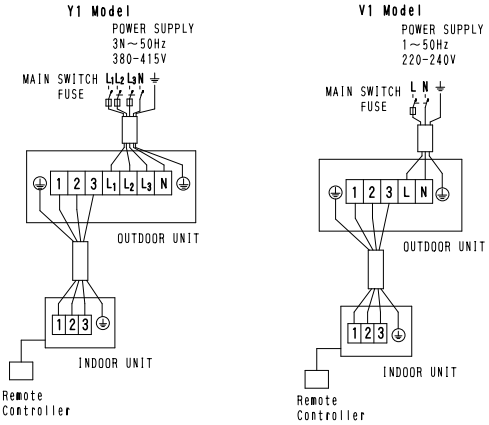
	Procedure	Precautions
1	Connect a pressure gauge to the service port of the stop valve.	Carry out an air purge of the charge hose.
2	Perform fan operation by the remote controller.	Make sure that the liquid-side and gas-side stop valves are fully open.
3	Perform cooling operation by the remote controller.	Check that the compressor and outdoor fan are operating.
4	Run the unit for one minute until the operation stabilizes.	———
5	Close the liquid-side stop valve fully.	If the valve is not fully closed it could cause burn-out of the compressor.
6	After the pressure gauge indication has dropped to 0 kgf/cm²G, close the gas stop valve fully and press the Stop button on the remote controller.	———

This is the end of pumping down operation.



<How to Connect the Power Supply and Wire between Units>

1. For details on the wiring of the indoor unit and wiring between units, refer to the Installation Manual of the indoor unit.



Specifications of standard wiring components

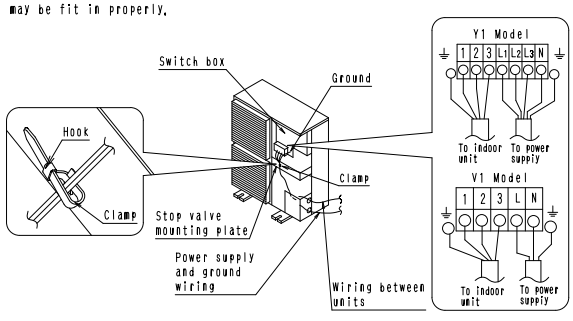
Model	Power supply			Wire type of wiring between the units.
	Field fuse	Wire type	Size	
RY71FUY1	15A	H05VV-U5G	Wiring size must comply with the applicable local and national code.	H05VV-U4G2.0
RY100FUY1	15A	H05VV-U5G		H05VV-U4G2.0
RY125FUY1	15A	H05VV-U5G		H05VV-U4G2.0
RY71FUV1	30A	H05VV-U3G		H05VV-U4G2.0
R71FUY1	15A	H05VV-U5G		H05VV-U4G2.0
R100FUY1	15A	H05VV-U5G		H05VV-U4G2.0
R125FUY1	15A	H05VV-U5G		H05VV-U4G2.0
R71FUV1	25A	H05VV-U3G		H05VV-U4G2.0
R100FVU1	35A	H05VV-U3G		H05VV-U4G2.0

・Instead of fuse, use circuit breaker.

6 ELECTRICAL WIRING

(For Y1 model)

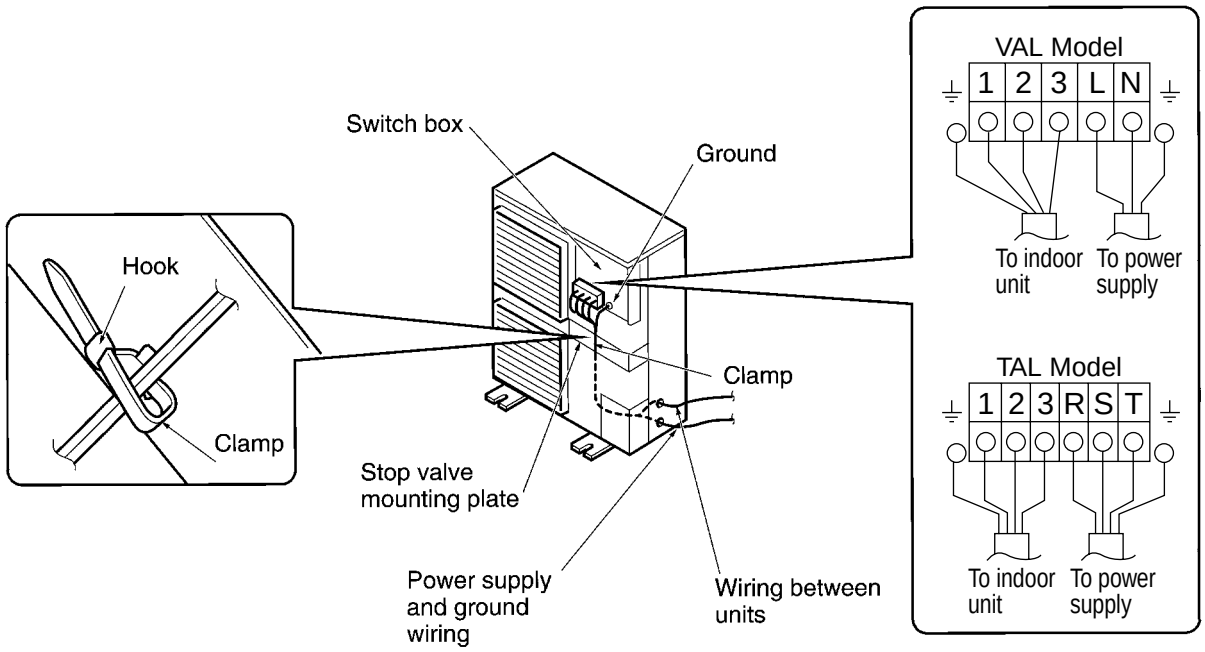
- Electrical wiring must be carried out by qualified personnel. ⚠WARNING
- Power supply must be cut off to everything that may come in touch with the terminals. ⚠WARNING
- Be sure to ground the air conditioner. ⚠CAUTION
- Do not connect the earth wire to a gas pipe, water pipe, lightning conductor or telephone earth wire. ⚠CAUTION
- Use only copper wires. ⚠CAUTION
- The wiring between the indoor unit and outdoor unit must be for 220V.
- Do not turn on the main switch until all the wiring is completed.
- The resistance of the grounding must not exceed 500 ohms.
- When performing electrical wiring, refer also to the wiring diagram affixed to the unit.
- Use the specified wires and fix them with clamps so that no external forces act on the terminals. For clamping, push the tail end of the clamp to loosen it, pass the wires through it, then fasten the clamp.
- Clamp the wiring as shown below, taking care that the wires do not touch the piping (especially high-pressure piping).
- Never connect the neutral wire to the "L1", "L2" or "L3" terminal. The neutral wire must be connected to the "N" terminal. (only Y1 models)
- Never squeeze extra wires into the unit.
- When leading out the wires to the front or side, you can use a wire conduit passing through the knock-out hole (ϕ34 mm).
- Form the wires and fix the cover firmly so that the cover may be fit in properly.



1PN01324A-2

(For VAL · TAL model)

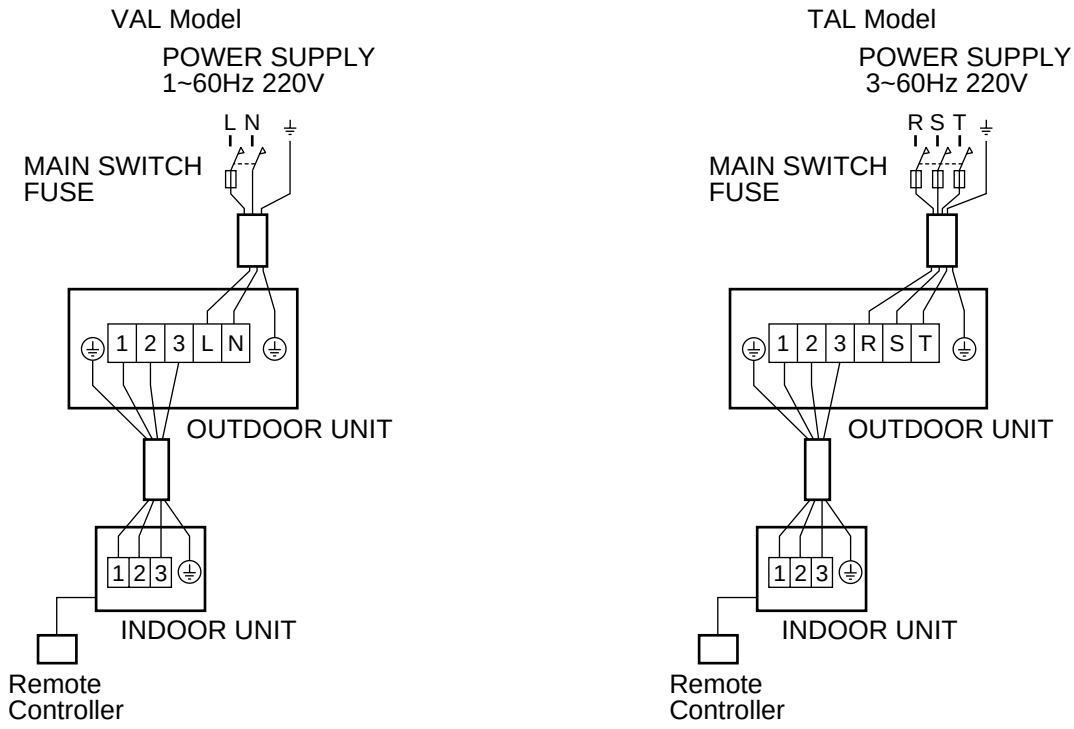
- Electrical wiring must be carried out by qualified personnel. ⚠WARNING
- Before obtaining access to terminal devices, all supply circuits must be interrupted. ⚠WARNING
- Be sure to ground the air conditioner. ⚠CAUTION
- Do not connect the earth wire to a gas pipe, water pipe, lightning conductor or telephone earth wire. ⚠ CAUTION
- Use only copper wires. ⚠CAUTION
- The wiring between the indoor unit and outdoor unit must be for 220V.
- Do not turn on the main switch until all the wiring is completed.
- The resistance of the grounding must not exceed 500Ω.
- When performing electrical wiring, refer also to the wiring diagram affixed to the unit.
- Use the specified wires and fix them with clamps so that no external forces act on the terminals. For clamping, push the hook in tail end of the clamp to loosen it, pass the wires through it, then fasten the clamp.
- Clamp the wiring as shown below, taking care that the wires do not touch the piping (especially high-pressure piping).
- Never squeeze extra wires into the unit.
- When leading out the wires to the front or side, you can use a wire conduit passing through the knock-out hole (ϕ 34mm).
- Form the wires and fix the cover firmly so that the cover may be fit in properly.



< How to Connect the Power Supply and Wire between Units >

1. For details on the wiring of the indoor unit and wiring between units, refer to the Installation Manual of the indoor unit.

3PN00281-7V-1



Specifications of standard wiring components

Model	Power supply			Wire type of wiring between the units.
	Field fuse	Wire type	Size	
R71FUVAL	30A	HO5VV-U3G	Wiring size must comply with the applicable local and national code.	HO5VV-U4G2.0
R100FUVAL	45A	HO5VV-U3G		HO5VV-U4G2.0
R125FUTAL	35A	HO5VV-U4G		HO5VV-U4G2.0
RY71FUVAL	35A	HO5VV-U3G		HO5VV-U4G2.0
RY100FUVAL	45A	HO5VV-U3G		HO5VV-U4G2.0
RY125FUTAL	35A	HO5VV-U4G		HO5VV-U4G2.0

• Instead of fuse, use circuit breaker.

7 TEST OPERATION

• Be sure to fully open the liquid-side and gas-side stop valves.
If the protective device of the compressor is triggered as a result of operation with the stop valves closed, it may take several hours before operation can be resumed. ⚠ **CAUTION**
• For details on test operation, refer to the Installation Manual of the indoor unit.

3PN00281-7V-2

13.2.5 RU06K

1 PRECAUTIONS ON INSTALLATION

- Check the strength and level of the installation ground so that the unit will not cause any operating vibration or noise after installed.
- In accordance with the foundation drawing in Fig. 3, fix the unit securely by means of the foundation bolts. (Prepare four sets of M12 foundation bolts, nuts and washers each which are available on the market.)
- It is best to screw in the foundation bolts until their length are 20 mm from the foundation surface.
- When installing the unit on the frame, fix water proof plate within 150 mm from the bottom of the unit to prevent water from entering.

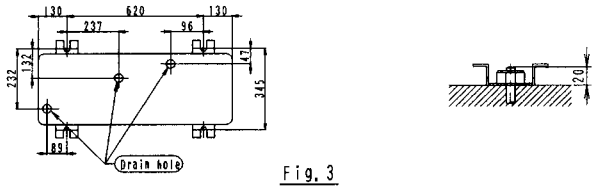


Fig. 3

≪Installation method of fitting for prevention of overturning≫

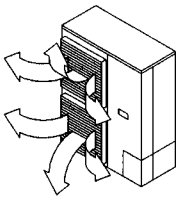
- If overturning prevention is required, use the optional overturning prevention kit.

≪Adjustment of air discharge with discharge grille≫

- By changing the direction of discharge grille installed at the front surface of the outdoor unit, the air discharge direction can be adjusted as shown in Fig. 4.
- Discharge grille can be detached by unscrewing 2 screws on its corners.
- In case of installation of multiple units, do not install discharge grille facing sidewards.

(Upward direction)
Factory set

(Leftward direction)
Turn the discharge grille counter clockwise for 90 degrees.



(Rightward direction)
Turn the discharge grille clockwise for 90 degrees.

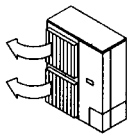
(Downward direction)
Turn the discharge grille 180 degrees

Fig. 4

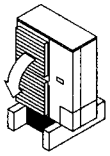
NOTE: When detaching the discharge grille, stop the operation and make sure that the fan is not moving.

(Installation example when adjusting air discharge)

- When avoiding direct air of the discharge grille from blowing toward people.



Be careful for short circuit.



To prevent short circuit from happening, block the lower part of the outdoor unit.

1P015254A

❷ REFRIGERANT PIPE SIZE AND ALLOWABLE PIPE LENGTH

① Refrigerant pipe size

Outdoor unit	Refrigerant pipe size	
	Gas pipe	Liquid pipe
RUO6KY1	φ19.1×t1.0	φ9.5×t0.8
RUO6KTAL		

(Note) • Use the material below for piping.
Wrought copper(having minimum copper content of 99.85%):ISO 1336

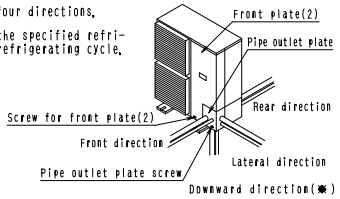
② Allowable pipe length

	Maximum allowable pipeing length	[Parenthesized figure represents equivalent length]	Maximum allowable height difference
Pair-type	50m		30m

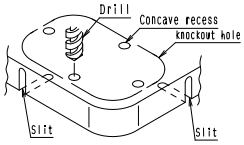
❸ PRECAUTIONS ON REFRIGERANT PIPING

Field pipes can be installed in four directions.

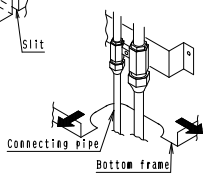
✱ Do not allow air other than the specified refrigerant to mix in during the refrigerating cycle.



✱ To install the connecting pipe to the unit in downward direction, make a knockout hole by penetrating the concave recesses(four locations)using a φ6mm drill.



✱ By cutting the slit(2 places), installation will be possible as shown in the figure on the right. (Please use a hacksaw when cutting the slit.)



<Precautions for handling pipe stop valves>

The names of the parts necessary for handling the pipe stop valves for the indoor and outdoor units are described in Fig. 5. The valves are closed before shipment.

● Tighten and loosen the flare nut by grasping the portions indicated by the black arrows in the figure with two spanners. Do not grasp the portions indicated by the white arrows with a two spanners.

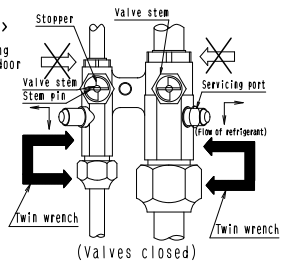


Fig. 5

Operating stop valve

To open:
1. Turn the valve stem 1/4 turn counterclockwise with a screwdriver.
2. Stop turning the stem at the point where the stem pin comes in contact with the stopper. Now the valve is opened. (Refer to Fig. 6)

To close:
1. Turn the valve stem 1/4 clockwise.
2. Stop turning the stem at the point where the stem pin comes in contact with the stopper. Now the valve is closed. (Refer to Fig. 5)

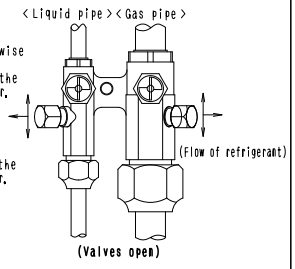
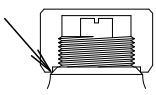


Fig. 6

<Precautions for handling valve cap>

1. A seal is attached to the point indicated by the arrow. Take care not to damage it.
2. Be sure to tighten the valve cap securely after operating the valves.
Tightening torque: 1960–2450 N·cm (200–250 kgf-cm)



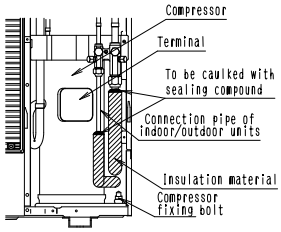
<Precautions for handling servicing port>

1. Use a push-rod-provided charging hose for operation.
2. Be sure to tighten the valve cap securely after operation.
Tightening torque: 980 – 1470 N·cm (100 – 150 kgf-cm)

<Precautions for connecting pipes>

Avoid the connection pipes of indoor and outdoor units from getting in contact with the terminal of the compressor. Adjust the height of the insulation material on liquid pipe when it has the possibility of getting in contact with the terminal. Also make sure that the connecting piping does not touch the mounting bolt of the compressor.

If the outdoor unit is installed higher than the indoor unit, the condensate from a stop valve may run down along the piping through the clearance between insulation and piping into the indoor unit. Under such conditions, an appropriate measure must be taken to prevent the condensate from running down into the indoor unit. for example, the clearance between the pipe and the insulation must be caulked with sealing compound.

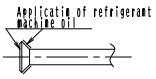


<Precautions for connecting pipes>

- Please refer to the Table 1 for the dimensions for processing flares.
- When connecting the flare unt, coat the flare both inside and outside with refrigerating machine oil and initially tighten by hand 3 or 4 turns before tightening firmly.
- Be sure to use both a spanner and torque wrench together when connecting or disconnecting pipes to/from the unit.
- Please refer to the Table 1 for the tightening torque. (Too much tightening will end up in splitting of the flare.)

Table 1

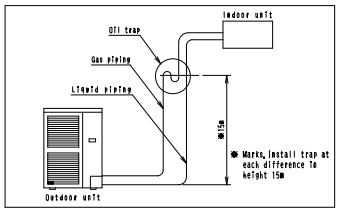
Piping size	Tightening torque	A dimensions for processing flares(mm)	Flare shape
φ 9.5	3270~3990N·cm (333 ~407 kgf·cm)	12.0~12.4	R0.4~0.8, 45°±2°, 90°±4°, A
φ19.1	9720~11860N·cm (990 ~1210 kgf·cm)	22.9~23.3	



●Necessity of a trap

Since there is fear of the oil held inside the riser piping flowing back into the compressor when stopped and causing liquid compression phenomenon, or cases of deterioration of oil return, it will be necessary to provide a trap at an appropriate place in the riser gas piping.

●Trap installation spacing



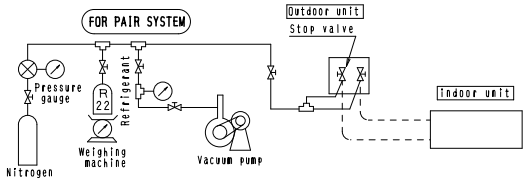
Note) A trap is not necessary when the outdoor unit is installed in a higher position than the indoor unit.

❹ EVACUATING

The units were checked for leaks by the manufacturer.
The refrigerant lines fitted in site are to be checked for leaks by the fitter.

Leak test

1. Evacuate the pipes and check vacuum. (No pressure increase for 1 minute.)
2. Charge Nitrogen gas.
3. Conduct leak test by applying soap water, etc. to the connecting part of the pipes.
4. Discharge Nitrogen.
5. Evacuate and check vacuum again.
6. Open the stop valve and inject the refrigerant into the refrigerant pipe and into the indoor unit.
7. Leak test must satisfy the standard pr. EN378-7.



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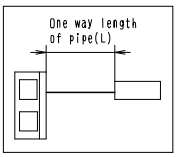
⑤ CHARGING REFRIGERANT

This unit requires additional charging of refrigerant according to the length of pipe connected at the site.
Take the following steps for proper charging.



① Additional charging of refrigerant

Select the appropriate refrigerant charging amout from Table 2, 3 and charge the refrigerant. Fill out the notice plate attached in the rear of the front plate(2) for future servicing.

Table 2 Additional charging refrigerant amount

$$\boxed{\text{Additional charging refrigerant amount}}\ \text{kg} = \left(\boxed{\text{Piping length(L)}}\ \text{m} - 5\text{m}\right) \times 0.025\text{kg/m}$$

< PRECAUTION >

- Contact your Daikin dealer when installing the unit using pipes of 3m or less.

② Complete charging of the refrigerant

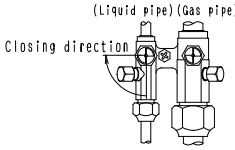
When the entire refrigerant pipe length is within 5 meters, charge the refrigerant in accordance with the amount mentioned in the nameplate, and when the pipe length exceeds 5meters, the charging amount mentioned in the nameplate and that required for additional charging are to be totaled as the net charging amount.

③ Precautions for pumping-down operation

The outdoor unit is equipped with a low-pressure switch to protect the compressor.
Take the following steps to perform the pumping-down operation.

Caution Never short-circuit the low-pressure switch in this operation.

Procedure	Precautions
1. Perform cooling operation by the remote controller.	Confirm that stop valves both on the liquid and gas side are open. Check that the compressor and outdoor fan are operating.
2. Continue operation for 1 min. until operation condition stabilizes.	———
3. Close the liquid-side stop valve fully.	Insecure closing of the valve may result in burning of the compressor.
4. When the low-pressure switch is activated, the unit stops working. At this time, close the stop valve on the gas side.	———
5. Turn off the remote controller.	———



⑥ ELECTRICAL WIRING WORK

- All wiring must be performed by an authorized electrician.
- All components procured on the site and all electric construction should comply with the applicable local and national codes.
- Use copper conductors only.
- Use a ground wire of 100Ω or less.
- Fix cables as shown in Fig. 7 so that cables do not make contact with the pipes (especially on high pressure side).
- **For Y1 models**
  Make sure to connect power supply cables in normal phase.
  If connected in reverse phase, the equipment cannot operate.
  Change any two of the three power supply cables(L1, L2, L3)to correct phase.
  [If the contact in the magnetic switch should be forcibly turned on while the equipment is inoperative, the compressor will be damaged by a fire. Never try to forcibly turn on the contact.]
- Never squeeze bundled cables into a unit.
- When cables are routed from the front, sides, or back of the unit, protection sleeves for the conduits(PG-insertions) can be inserted at the installation holes (ϕ34, ϕ27)(Refer to Fig. 8)
- Follow the electic wiring diagram on the nameplate for electrical wiring works.
- Never bundle and push excess wiring into the unit.
- Keep wires flat so that they do not push the cover open. Install the cover securely.
- Be sure to use a dedicated power supply.
- Do not share a common sourse with other equipment.

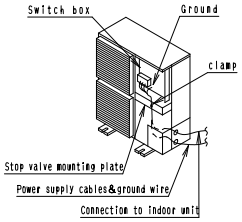


Fig. 7

<Wiring of power supply and the units>
Refer to the installation manual attached to the indoor unit for wiring of indoor units, etc.
Attach main switch and fuse to the power supply line.

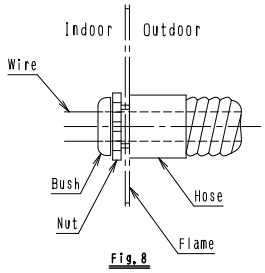
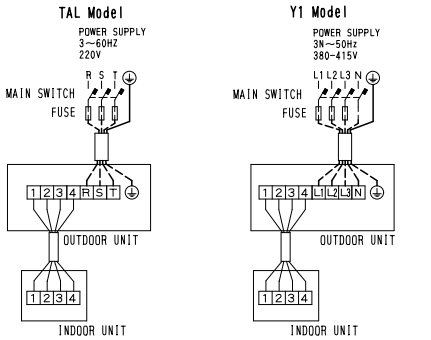


Fig. 8

<Wiring of power supply and the units>
Refer to the installation manual attached to the indoor unit for wiring of indoor units, etc.
Attach main switch and fuse to the power supply line.

PAIR SYSTEM

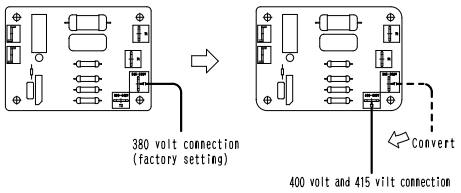


Model	Power supply			Wire type of wiring between the units. (※)
	Field fuse	Wire type (※)	size	
RU06KY1	25A	H05VV-U5G	Wiring size must comply with the applicable local and national code.	H05VV-U4G2.0
RU06KTAL	45A	H05VV-U4G		H05VV-U4G2.0

※ Only in protected pipes, use H07RN-F when protected pipes are not used.

CAUTION:(Y1 Models Only)

- Make sure that the phase reversal protector's terminal connection is converted when switching to a 400 volt or 415 volt connection.



- Failing to convert to the proper voltage will cause serious damage to the unit.

⑦ TEST OPERATION

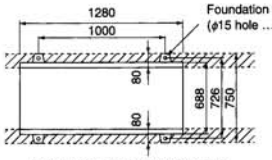
For the test run procedure, refer to the indoor unit installation manual.

1P015330A-2

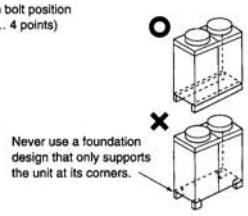
13.2.6 RU08 · 10K

1 INSTALLATION

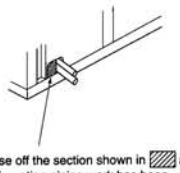
(1) • Before starting the installation, confirm that the foundation is strong enough to prevent the unit from making noise or vibration.
• Secure the unit to the foundation with foundation bolts
(Prepare 4 sets of M12 foundation bolts with the proper nuts and washers.)
• The foundation bolts should extend 20 mm from the surface of the base.
• The foundation must be capable of supporting the unit on the area shown in diagonal lines in Fig. 1.



Top-view diagram of foundation and foundation bolt locations.



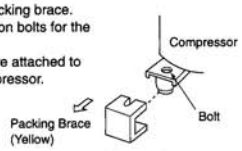
Never use a foundation design that only supports the unit at its corners.



Close off the section shown in ▨ after refrigeration piping work has been completed. This will prevent small birds or animals from entering the unit.

<Figure 1 - Top View of Foundation>

⚠ CAUTION:
(2) • Remove the yellow packing brace.
• Retighten the installation bolts for the compressor.
• Two packing braces are attached to the front of each compressor.



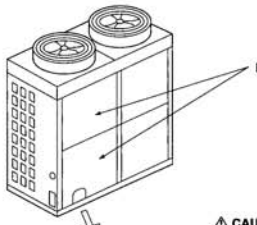
<Figure 2>

⚠ CAUTION:
• Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes. Improper installation work may result in the equipment falling and causing accidents.
• Make sure that the drainage of the unit will not cause inconvenience to the neighbors or harm the environment. Construct a drainage ditch if necessary.
• If the unit is to be installed on a rooftop, make certain that it will be capable of withstanding the weight of the unit and that measures have been taken to ensure watertightness.

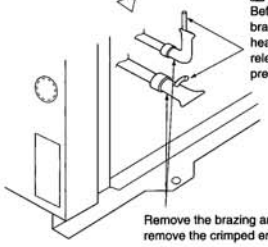
2 REFRIGERANT PIPING WORK

• The following are the material specifications for the piping.
Refrigerant piping: Seamless copper piping that has undergone phosphoric acid deoxidization.
Size: See figure below.

Model	Refrigerant Piping Size		Maximum Allowable Pipe Length	Figures in Parenthesis Represent Equivalent Length	Maximum Allowable Height Difference
	Gas Pipe OD × T (Min.)	Liquid Pipe OD × T (Min.)			
FD08K + RU08K	φ25.4 × 1.2 mm	φ12.7 × 0.9 mm	50 m	70 m	30 m
FD10K + RU10K	φ31.8 × 1.4 mm	φ15.9 × 1.0 mm			



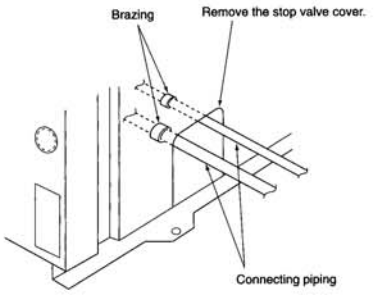
⚠ CAUTION:
Before removing the brazing (before applying heat), cut this pipe to release any remaining pressure.



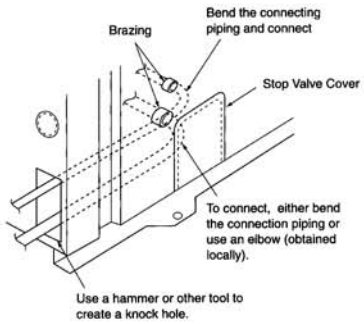
NOTE:
Adjust connecting piping on site.

• As shown in the figure below, the piping can be connected from either the front, side or bottom of the unit.

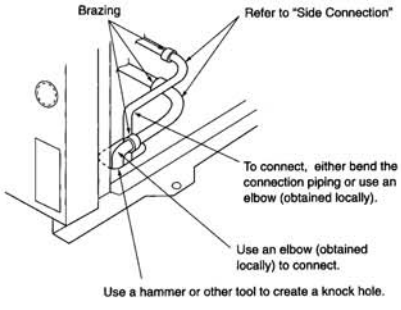
■ Front Connection



■ Side Connection



■ Bottom Connection



• Always completely heat insulate the gas and liquid piping.
• Use heat insulators capable of withstanding 80°C for both the gas and liquid side.

1PN01167B-1

3 AIR PURGE AND CHARGING WITH REFRIGERANT

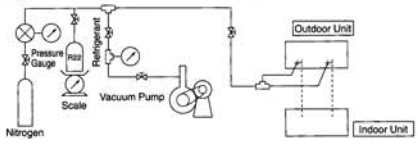
⚠ CAUTION:
This model is not charged with refrigerant at the factory.
To avoid compressor failure due to improper amount of refrigerant, do not charge the refrigerant by means of pressure and electric current.
Make sure to charge the refrigerant by measuring its weight in accordance with the method shown in this installation manual.

⚠ WARNING:
Always charge the unit with refrigerant. Failure to do so will cause damage to the compressor. Do not charge the compressor with refrigerant while it is operating.

- Perform an air purge of the system with a vacuum pump.
- The unit has been checked for leaks by the manufacturer.
- Refrigerant piping installed on site must be check for leaks by the installer.

■ Leak Test

1. Evacuate the piping and check the vacuum.
   (There should be no pressure increase for one minute.)
2. Charge the system with nitrogen gas.
3. Conduct a leak test by apply soapy water to the joints of the piping.
4. Discharge nitrogen.
5. Evacuate the piping and check the vacuum again.
6. Charge with refrigerant.



- Calculate the amount of refrigerant charge using the information provided below.
  (When piping is less than 5 meters in length.)

RU08K (Y1·TAL)	5.0 kg (Basic Charge)
RU10K (Y1·TAL)	6.1 kg (Basic Charge)

(When piping is more than 5 meters in length)

RU08K (Y1·TAL)

Total Refrigerant Amount (kg)	=	Basic Charge Amount (kg)	+	Additional Charge Amount (kg/m)	× (	Total Piping Length (m)	- 5 meters)
				0.05			

RU10K (Y1·TAL)

Total Refrigerant Amount (kg)	=	Basic Charge Amount (kg)	+	Additional Charge Amount (kg/m)	× (	Total Piping Length (m)	- 5 meters)
				0.06			

- Always charge with the amount of refrigerant calculated above.

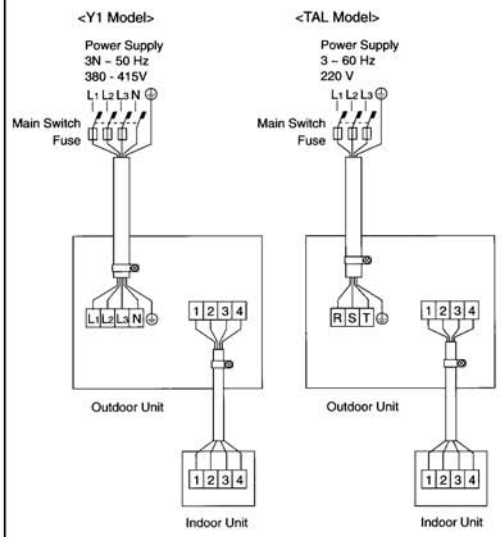
4 ELECTRIC WIRING WORK

- All electrical wiring components which are to be obtained locally must meet or exceed the applicable standards for the country or region in which the unit is being installed.
- Only use copper conductors.
- Refer to the "Wiring Diagram" on the unit when installing.
- All electrical work must be performed by appropriately certified electricians.
- The schematic diagram of the wiring provided here is only a guideline and does not provide the detailed information required for proper installation.
- The power line for the unit must have a switch with a fuse or breaker that meets applicable local standards.
- Wire connections must be tight, but not forced. Dress the wiring so that the covers and related parts will not come loose.
  Poorly connected and/or poorly routed wiring can cause overheating, electrical shock and/or fire.

■ Wiring of Power Supply for the Units

- Refer to the Installation Manual provided with indoor unit.

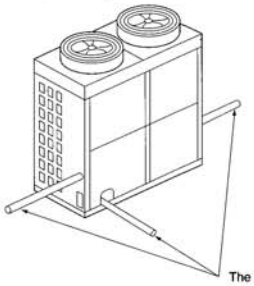
⚠ CAUTION:
The power line for the unit must have a switch with a fuse or breaker that meets applicable local standards.



⚠ CAUTION:
Clamp the power supply wiring as well as the wiring between the indoor and outdoor units with resin clamp material. (Be sure to clamp the ground wire.)

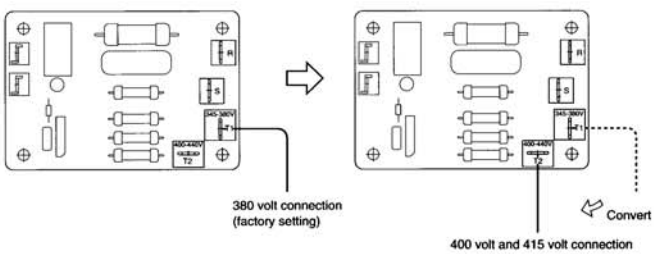
Model	Power Supply			Wiring Between Units	
	Field Fuse	Wire Type	Size	Wire Type	Size
RU08KY1	30 A	H05VV-U5G	All electrical wiring components which are to be obtained locally must meet or exceed the applicable standards for the country or region in which the unit is being installed.	UL1015 AWG18 or Equivalent	0.75 mm² each
RU10KY1	40 A				
RU08KTAL	50 A	H05VV-U4G			
RU10KTAL	60 A				

- As shown in the figure below, the wiring can be connected from the front, left or right side of the unit.



The power supply wiring and the wires between the indoor and outdoor units.

⚠ CAUTION: (Y1 Models Only)
Make sure that the phase reversal protector's terminal connection is converted when switching to a 400 volt or 415 volt connection.



- Failing to convert to the proper voltage will cause serious damage to the unit.

5 TEST OPERATION

- Only perform test operation after charging the unit with refrigerant. Failure to do so will cause damage to the compressor.

⚠ WARNING:
Details of the test operation are provided in the Installation Manual for the indoor unit.

1PN01167B-2

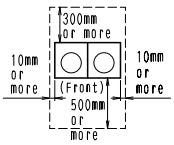
13.2.7 RU08 · 10KU

❶ SELECTION OF LOCATION

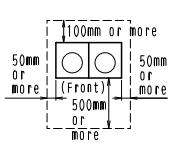
This unit should be installed in a location that meets the following requirements:
1. There is no danger of flammable gas leakage.
2. The foundation is safe and level. The foundation withstands the weight and the vibration of the unit.
3. Neither the air discharged nor the sound generated by the unit bother anyone.
4. The piping length between the outdoor unit and the indoor unit may not exceed the allowable piping length. (Refer to "SPECIFICATIONS OF REFRIGERANT PIPING".)
5. Ensure that water cannot cause any damage to the location in case it drips out the unit (e.g. in case of a blocked drain pipe).
6. Make sure that the air inlet and outlet of the unit are not positioned towards the main wind direction. Frontal wind disturb the operation of the unit.
   If necessary, use a windscreen to block the wind.
7. The space around the unit is adequate for servicing safly, connecting refrigerant piping and the access. The unit can take and discharge air enough. (Refer to the figure below for the space required.)

SINGLE INSTALLATION

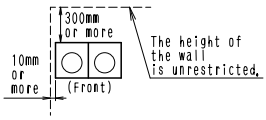
<Pattern 1>



<Pattern 2>

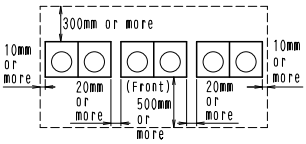


<Pattern 3>

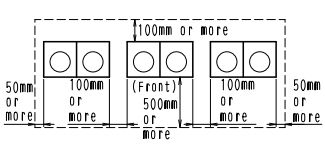


SERIAL INSTALLATION

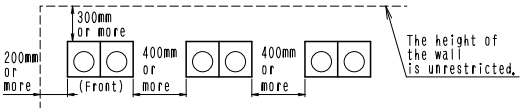
<Pattern 1>



<Pattern 2>

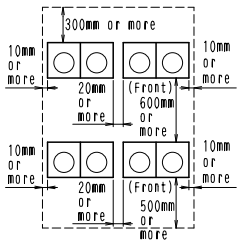


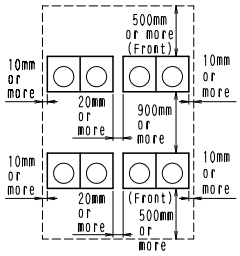
<Pattern 3>



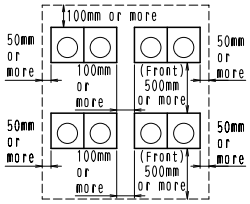
COLLECTIVE INSTALLATION

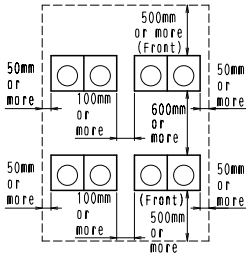
<Pattern 1>



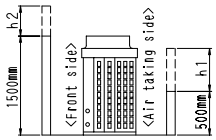


<Pattern 2>





- The height of the wall for <Pattern 1> and <Pattern 2> should be as follows:
  Front side ···1500mm or less
  Air taking side ··· 500mm or less
  Side ···Unrestricted
- If the wall exceed the allowable height mentioned above, add half of the exceeded dimension to the space shown above.
  (For air taking side, add h1/2. For front side, add h2/2.)



⚠ WARNING

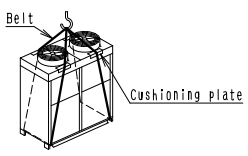
- The refrigerant R22 itself is nontoxic, nonflammable and safe.
  If the refrigerant should leak however, its concentration may exceed the allowable limit depending on room size. Due to this it could be necessary to take measures against refrigerant leak.

⚠ CAUTION

- Do not install in the following locations.
  - Locations where mineral oil may spray.
    Locations such as kitchens that contain a lot of steam in the atmosphere or where oil may splatter.
    Resin parts may deteriorate, causing the unit to fall or leakage.
  - Locations where sulfurous acids or other corrosive gases may be present in the atmosphere. Copper piping and brazed joints may corrode, causing refrigerant to leak.
  - Locations where equipment that produces electromagnetic waves is found. The electromagnetic waves may cause the control system to malfunction, preventing normal operation.
  - Locations where flammable gases may leak, where thinner, gasoline or other volatile substances are handled, or where carbon dust or other incendiary substances are found in the atmosphere.
    Leaked gas may accumulate around the unit, causing explosion or fire.
  - Locations which contain a lot of salinity in the atmosphere such as that near ocean.
  - Locations where supply voltage may fluctuate greatly.
- In heavy snowfall areas, select location where snow will not affect operation of the unit.

❷ INSPECTING AND HANDLING THE UNIT

At delivery, the package should be checked and any damage should be reported immediately to the carrier claims agent.
When handling the unit, take into account the following:
1. Fragile, handle the unit with care. Keep the unit upright in order to avoid compressor damage.
2. Choose the path along which the unit is to be brought in ahead of time.
3. When lifting the unit with a crane etc., always use 2 belts that are at least 8m long and pay attention to the position of the unit's center of gravity.
   To prevent the casing from being damaged, put the cushioning plates or rags where the belts contact the casing.
4. Bring the unit as close to its final installation position in its original package to prevent damage during transport.



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3 UNPACKING AND PLACING THE UNIT

1. Remove the crate from the unit.
2. Remove the four bolts fixing the unit to the pallet.
3. The foundation must support the unit in the range above the shaded portion in the right figure.
   Do not use the foundation that supports only the corners.
4. Install the unit on sufficiently a level and strong foundation to prevent vibration and noise.
5. Secure the unit to its foundation using foundation bolts.
   (Use four commercially available M12-type foundation bolts, nuts, and washers.)
6. The foundation bolts should project 20mm.

7. Remove the transporting fixtures (yellow) from the compressor and be sure to tighten the bolts firmly again afterward.

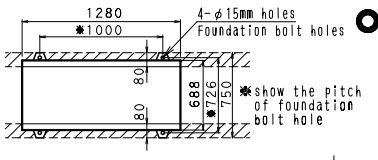
⚠ CAUTION

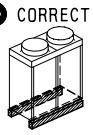
- Prepare the drainage ditch around the foundation to drain waste water from around the unit.
- When installing the unit on a roof, be sure to waterproof the floor and confirm the floor have enough strength.

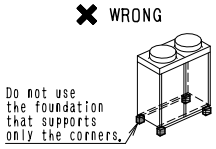
NOTE

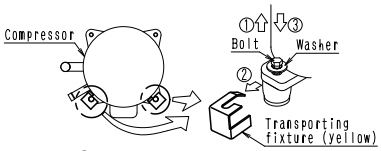
Block all gaps in the holes for passing out the piping and wiring by sealing material (field supplied), so that prevent small animals etc. from entering the unit.

OUTDOOR UNIT INSTALLATION LEG SHARP AND FOUNDATION DIAGRAM

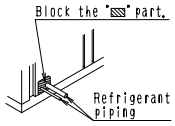








E. G. PASSING PIPING OUT THROUGH THE FRONT



4 REFRIGERANT PIPING

⚠ CAUTION

- Use R22 only when adding refrigerant.
- All field piping must be installed by qualified personnel and must comply with relevant local and national regulations.

<WHEN BRAZING REFRIGERANT PIPNG>

Do not use flux when brazing copper to copper refrigerant piping. Therefore, use the phosphor copper brazing filter metal (BCuP) which does not require flux.
(Flux has extremely harmful influence on refrigerant piping systems. For instance, if the chlorine based flux is used, it will cause pipe corrosion, or in particular, if the flux contains fluorine, it will damage the refrigerant oil.)

NOTE

- Installation tools:
  Make sure to use installation tools (gauge manifold charge hose, etc.) that are exclusively used for R22 installations to withstand the pressure and to prevent foreign materials from mixing into the system.
  <Vacuum pump (use a 2-stage vacuum pump with a non-return valve)>
  - Make sure the pump oil does not flow oppositely into the refrigerant piping system while the pump is not working.
  - Use a vacuum pump which can evacuate to −100.7kPa (5Torr, −755mmHg).
- Make sure to perform the piping installation within the maximum allowable pipe length, allowable difference in height as shown in the diagram below.

SPECIFICATIONS OF REFRIGERANT PIPING

Outdoor unit	Refrigerant piping size (outer diameter × minimum thickness)		Maximum allowable length (Between outdoor unit and indoor unit)		Maximum allowable difference in height (Between outdoor unit and indoor unit)
	Gas pipe (mm)	Liquid pipe (mm)	Actual pipe length	Equivalent length	
RU08KU	φ25.4×1.0	φ12.7×0.8	50 m	70 m	30 m
RU10KU	φ31.8×1.2	φ15.9×1.0			

SELECTION OF PIPING MATERIAL

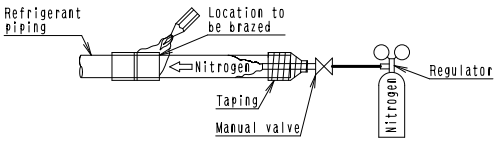
Use the following material specifications for refrigerant piping:
- Quality of material: Phosphoric acid deoxidized seamless copper for refrigerant.
- Size: Determine the proper size referring to the diagram above.
- The wall thickness of the refrigerant piping should comply with relevant local and national regulations.
  For R22 the design pressure is 2.9Mpa.

PIPE CONNECTION

- Do not use flux when brazing.
- Be sure to perform a nitrogen blow when brazing.
  (Brazing without performing nitrogen replacement or releasing nitrogen into the piping will create large quantities of oxidized film on the inside of the pipes, adversely affecting valves and compressors in the refrigerating system and preventing normal operation.)

NOTE

- The pressure of the nitrogen released when brazing should be 0.02MPa or less.



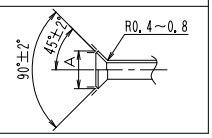
<PRECAUTION WHEN CONNECTING PIPING BY FLARE NUT>

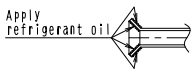
- Only use the flare nuts included with the unit.
  Using different flare nuts may cause the refrigerant to leak.
- Refer to the following diagram for flare dimensions.
- When connecting the flare nuts, apply refrigerant oil to the inside and outside of the flares and hand-tighten the nuts 3 to 4 turns as initial tightening.
- Refer to the following diagram for tightening torque.
  Tightening too much torque may cause the flares to crack.
- When loosening the flare nuts, always use two wrenches in combination.
  When tightening the flare nuts, always use a wrench and a torque wrench in combination.
- After connecting all piping, confirm there is no gas leak by using nitrogen.

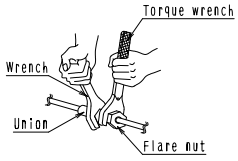
<NOT RECOMMENDABLE BUT IN CASE OF EMERGENCY>

You must use a torque wrench but if you are obliged to install the unit without a torque wrench, you may follow the installation method mentioned below.
When you keep on tightening the flare nut with a wrench, there is a point where the tightening torque suddenly increases. From that position, further tighten the flare nut the angle shown below.
After connecting all piping, confirm there is no gas leakage by using nitrogen.

Piping size	Further tightening angle	Recommended arm length of tool
φ12.7	30 to 60 degrees	Approx. 250 mm
φ15.9	30 to 60 degrees	Approx. 300 mm

Piping size	Tightening torque	Dimension of A for flare	Flare shape
φ12.7	49.5～60.3N・m	φ15.8～16.2mm	
φ15.9	61.8～75.4N・m	φ19.0～19.4mm	





Place	Installation period	Protection method
Outdoor	More than a month	Pinch the piping
	Less than a month	Pinch or tape the piping
Indoor	Regardless of the period	

PROTECTION AGAINST CONTAMINATION WHEN INSTALLING PIPING

- Take measures to prevent foreign materials such as moisture or contamination from mixing into the refrigerant piping.
- Great caution is needed when passing piping through walls or putting piping edge to outdoor.

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STOP VALVE OPERATION PROCEDURE

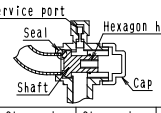
Confirm the sizes of the stop valves referring to the diagram right.

<OPENING STOP VALVE>
1. Remove the cap and turn the shaft counterclockwise with the hexagon wrench (JIS B4648).
2. Turn the shaft until the shaft stops. Do not apply excessive force to the shaft.
   Doing so may break the valve body, as the valve is not a backseat type.
   Always use the special tool.
3. Make sure to tighten the cap securely.

<CLOSING STOP VALVE>
1. Remove the cap and turn the shaft clockwise with the hexagon wrench (JIS B4648).
2. Securely tighten the shaft until the shaft contacts the seal.
3. Make sure to tighten the cap securely.

For the tightening torque, refer to the diagram right.

NOTE
- Always use the charge hose for service port connection.
- After tightening the cap, confirm that there is no refrigerant leakage.



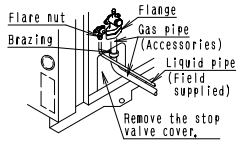
Outdoor unit		Stop valve size (mm)	Stop valve hexagon wrench size (mm)	Tightening torque (N・m)			
				Stop valve			Service port
				Shaft (Valve body)	Cap	Bolt (Flange)	Cap
Liquid side	RU08KU	φ12.7	4	8.1～9.9	18～22		11.5～13.9
	RU10KU	φ15.9	6	13.5～16.5	23～27		
Gas side	RU08KU	φ25.4	10	17.7～19.6	36～43	22～28	
	RU10KU	*φ25.4					

*Field piping size is φ31.8.

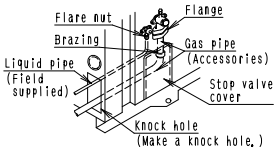
CONNECTING REFRIGERANT PIPING

Installation of refrigerant piping is possible as front, side or bottom connection as shown in the following figure.

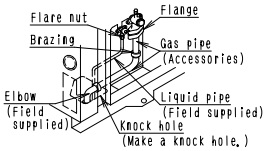
FRONT CONNECTION



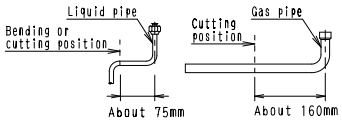
SIDE CONNECTION



BOTTOM CONNECTION

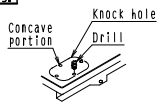


<DIMENSION OF PIPING FOR BOTTOM CONNECTION>
Liquid side···Bend the pipe or cut the pipe and make connection using an elbow as shown in the figure below.
Gas side ···Cut the accessory gas pipe and make connection using an elbow as shown in the figure below.



⚠ WARNING
- Be sure to use the accessory pipes when connecting the refrigerant piping.
- Be sure that the field piping does not contact other pipes, the bottom or side panel. Especially for the bottom or side connection, be sure to protect the field piping with the insulation, to prevent the field piping from contacting the casing.

<PRECAUTION WHEN MAKING KNOCK HOLE>
- Be sure to avoid damaging the casing.
- Pierce the knock hole with φ6mm-bit drill around the concave portions and make the knock hole.
- After making knock hole, we recommend to apply the repair paint to the edges and areas around the edges to prevent rusting.

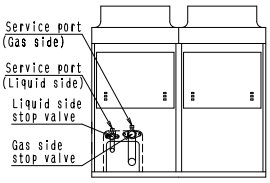


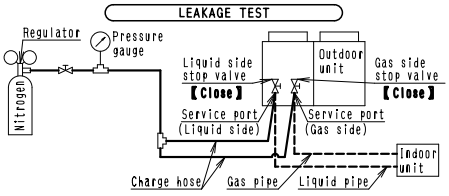
LEAKAGE TEST AND VACUUM DRYING

⚠ CAUTION
The units were checked for leakage by the manufacturer. Confirm that the liquid side and the gas side valves are firmly closed before leakage test and vacuum drying. Make sure to perform leakage test and vacuum drying by using the service ports of the liquid side stop valve and the gas side stop valve.

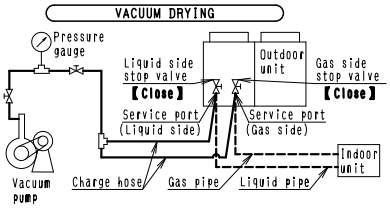
To prevent entry of any impurities and insure sufficient pressure resistance, always use the special tools dedicated for R22.

<LEAKAGE TEST>
Make sure to use nitrogen gas.
Pressurize the liquid and gas pipes to 2.9MPa (do not pressurize more than 2.9MPa).
If the pressure does not drop within 24 hours, the system passes the test. If the pressure drops, check where the nitrogen leaks from, and prevent leakage.



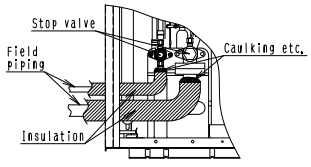


<VACUUM DRYING>
Use a vacuum pump which can evacuate to −100.7kPa(5Torr, −755mmHg) or less.
1. Evacuate the liquid pipe, the gas pipe and the indoor unit to −100.7kPa or less by using a vacuum pump for more than 2 hours.
   After stopping the vacuum pump, confirm that the pressure don't rise for more than 1 hour.
   If the pressure rises, the system may either contain moisture inside or have leakage.
2. Following should be executed if there is a possibility of moisture remaining inside the pipes. (if installation of refrigerant piping is carried out during the raining season or over a long period of time, or if rainwater may enter the pipe during installation, moisture may remain inside the pipes.)
   After evacuating the liquid pipe, the gas pipe and the indoor unit for more than 2 hours, pressurize the liquid pipe, the gas pipe and the indoor unit to 0.05MPa with nitrogen gas (vacuum break) and evacuate the liquid pipe, the gas pipe and the indoor unit to −100.7kPa or less for more than 1 hour by using the vacuum pump (vacuum drying) again.
   If the liquid pipe, the gas pipe and the indoor unit cannot be evacuated to −100.7kPa or less within 2 hours, repeat the operation of vacuum break and vacuum drying.
   Then confirm that the pressure don't rise for more than 1 hour after stopping the vacuum pump.



PIPE INSULATION

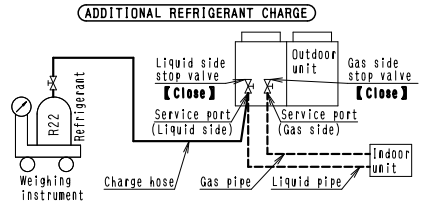
After finishing the leakage test and vacuum drying, insulate the field piping. Take into account the following points:
- Be sure to insulate the liquid pipe and the gas pipe. Not insulating them may cause water leakage.
- Be sure the insulation used can withstand 80℃.
- If there is a possibility that condensation on the stop valves might drip down into the indoor unit through gaps in the insulation and the pipe because the outdoor unit is located higher than the indoor unit, etc., prevent water leakage by caulking the connections, etc., as shown in the figure right.



ADDITIONAL REFRIGERANT CHARGE

⚠ CAUTION
- Refrigerant may only be added after finishing the leak test and the vacuum drying (refer to above).
- Do not add the refrigerant judged by the pressure or the current.
  Do not add the refrigerant more than the specified amount. Otherwise, the compressor may break down.
- Adding an unsuitable substance may cause explosions or accidents, so always ensure that the appropriate refrigerant (R22) is added.
- Refrigerant containers shall be opened slowly.
- Always use protective gloves and protect your eyes when adding the refrigerant.

- This outdoor unit is charged with the refrigerant at the factory, and depending on the pipe size and the pipe lengths, some systems require additional refrigerant charge.
- Make sure to use exclusive installation tools for R22 to withstand the pressure and to prevent foreign materials from mixing into the system.
- Determine the amount of refrigerant to be added in accordance with the right diagram, and write it down on the label attached on the surface of the control box cover. If the calculated amount is less than zero kg, the additional refrigerant charge is no need.
- After finishing the vacuum drying, add the refrigerant.
  Take the following instructions into account:
  1. Confirm that the gas side and liquid side stop valves are closed.
  2. Stop the compressor and add the specified amount of refrigerant.
  3. Add the refrigerant in its liquid state through the service port of the liquid side stop valve.



<OUTDOOR UNIT> RU08KU～

ADDITIONAL REFRIGERANT CHARGING AMOUNT (kg) = (TOTAL LENGTH OF LIQUID PIPE (m) − 5(m)) × ADDITIONAL REFRIGERANT CHARGING AMOUNT PER 1m (0.05 (kg/m))

<OUTDOOR UNIT> RU10KU～

ADDITIONAL REFRIGERANT CHARGING AMOUNT (kg) = (TOTAL LENGTH OF LIQUID PIPE (m) − 5(m)) × ADDITIONAL REFRIGERANT CHARGING AMOUNT PER 1m (0.06 (kg/m))

⚠ CAUTION
- After finishing additional refrigerant charge, open the liquid side stop valve and the gas side stop valve. (If the additional refrigerant charge is no need, open the liquid side stop valve and the gas side stop valve after finishing the vacuum drying.)

1PN05843-1

5 FIELD WIRING

⚠ WARNING

All field wiring and components must be installed only by qualified personnel and must comply with relevant local and national regulations.
The field wiring must be carried out in accordance with the wiring diagrams and the instructions given below.
Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance.

GENERAL

- Make sure to connect the power supply wiring to the terminal block for power supply and to fix the power supply wiring as shown in the figure below.
- Follow the "electrical wiring diagram" when carrying out any wiring.
- Only proceed with wiring work after blocking off all power.
- Always earth wires. (In accordance with national regulations of the pertinent country.)
- Do not connect the earth wire to gas pipes, sewage pipes, lightning rods, or telephone earth wires.
- Gas pipes: There is danger of explosion and catching fire when the gas leaks.
- Sewage pipes: Earthing have no effect if hard plastic piping is used.
- Telephone earth wires and lightning rods: When struck by lightning, there is danger of abnormal rise in electrical potential in the earthing.
- Be sure to install an earth leakage circuit breaker.
- Earth leakage circuit breaker which are especially for protecting groundfaults should be used in conjunction with main switch concluded fuse or circuit breaker.

POWER CIRCUIT AND CABLE REQUIREMENTS

⚠ CAUTION

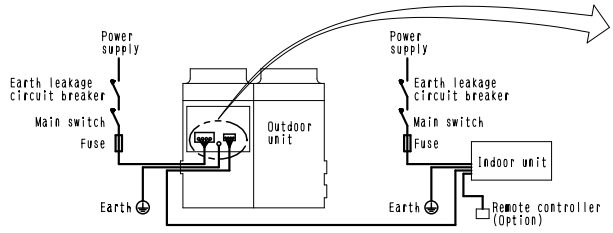
- Select the power supply cable in accordance with relevant local and national regulations.
- Wire size must comply with the applicable local and national code.
- Specifications for the field wiring must be in compliance with IEC60245.
- WIRE TYPE: H05VV(✱)
  ✱Only in protected pipes, use H07RN-F when protected pipes are not used.

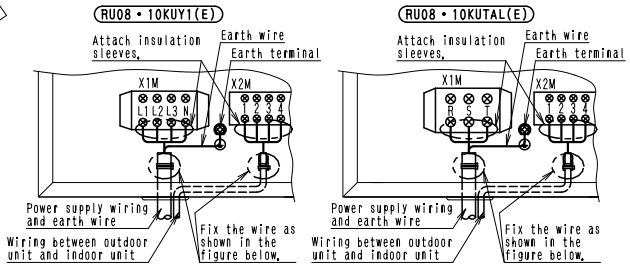
A power circuit (refer to the diagram right) must be provided for the unit. This circuit must be protected with required safety devices, i. e. a main switch, a slow blow fuse on each phase and an earth leakage circuit breaker.

Outdoor unit	Power supply			Wiring between outdoor unit and indoor unit
	Voltage	Phase and frequency	Recommended fuses	Wire size
RU08KUY1(E)	380/400-415V	3N~ 50Hz	30 A	2.5 mm²
RU10KUY1(E)			40 A	
RU08KUTAL(E)	220V	3~ 60Hz	50 A	
RU10KUTAL(E)			60 A	

SYSTEM EXAMPLES

- The schematic diagram of the wiring provided here is only a guideline and does not provide the detailed information required for proper installation.



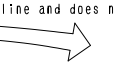


- L1, L2, L3, N-phase of the power supply wiring should be fixed to the unit using the accessory clamp material.
  The green and yellow striped wrapped wires should be used for earthing.

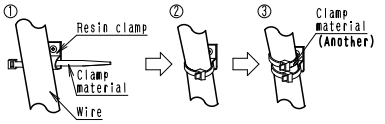
⚠ CAUTION

- Only use copper conductors.
- Use round pressure terminals for connections to the terminal block.
- For wiring, use the designated wire and connect firmly, then secure to prevent outside pressure being exerted on the terminal block.
- Use an appropriate screwdriver for tightening the terminal screw. A screwdriver with a small head will strip the head and make proper tightening impossible.
- Over-tightening the terminal screw may break them.

<When connecting the earth>
When pulling the earth wire out, wire it so that it comes through the notch of the cup washer.
(Improper earth connection may prevent good earth from being achieved.)

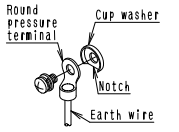


<FIXING WIRE>



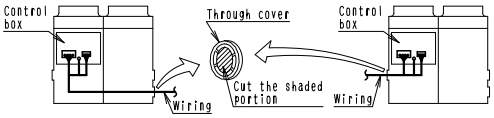
① Pass the wire through the resin clamp.
② Fix the wire to the resin clamp by the clamp material.
③ Set another clamp material to prevent the wire from coming out.

<CONNECTING THE EARTH>



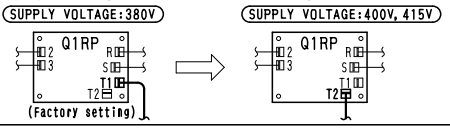
<TAKING WIRING>

- Be sure to let the wiring pass through a conduit hole.
- Take the wiring from the conduit hole on the left side plate or the lower conduit hole on the right side plate.



⚠ CAUTION

<ONLY FOR RU08・10KUY1(E)>
When the supply voltage is 400V or 415V, change wiring of Q1RP (Reverse phase protector) in accordance with the figure below and the wiring diagram.
Improper wiring could cause serious damage to the unit.



6 BEFORE OPERATION

⚠ WARNING

- Make sure that the main switch on the power supply panel of the installation is switched off.
- Attach the power supply wiring securely.
- Introducing power supply with a missing N-phase or with a mistaken N-phase will break the equipment.

After the installation, check the following before switching on the main switch:

1. <Wiring>
   Use a designated wiring and make sure that it has been carried out according to the instructions described in this manual, according to the wiring diagram and according to local and national regulations.
2. <Pipe size and pipe insulation>
   Make sure that correct pipe sizes are installed and that the insulation work is properly executed.
3. <Additional refrigerant charge>
   The amount of refrigerant to be added to the unit should be written on the label attached on the surface of the control box cover.
4. <Stop valve>
   Confirm that the liquid side and gas side stop valves are open.
5. <Insulation test of the main power circuit>
   Using a megatester for 500V, confirm that insulation resistance of 2MΩ or more is attained by applying a voltage of 500V DC between power terminals and earth.

7 TEST RUN

⚠ CAUTION

- Confirm that the liquid side and gas side stop valves are open.
- After finishing the test run, when handing the unit over to the customer, make sure the control box cover and the casing are all fixed to the unit.

For the test run procedure, refer to the indoor unit installation manual.

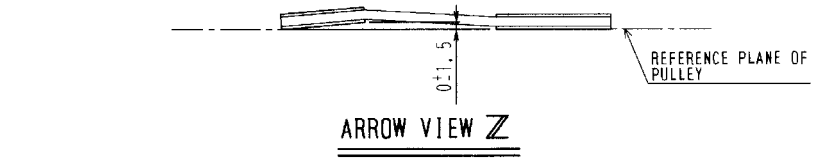
1PN05843-2

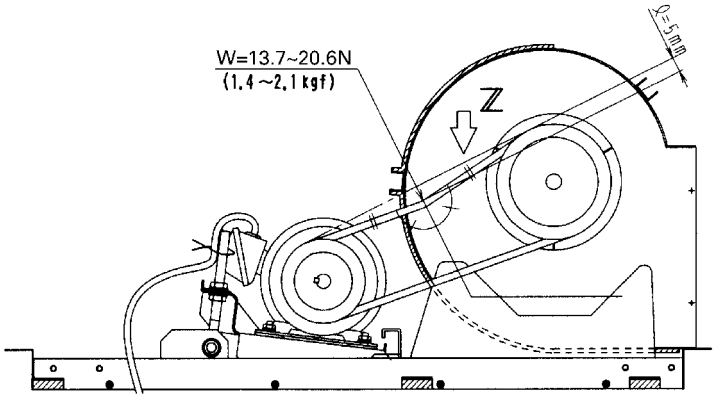
14. Pulley Change and Selection

Keep the following when changing the pulley, etc.

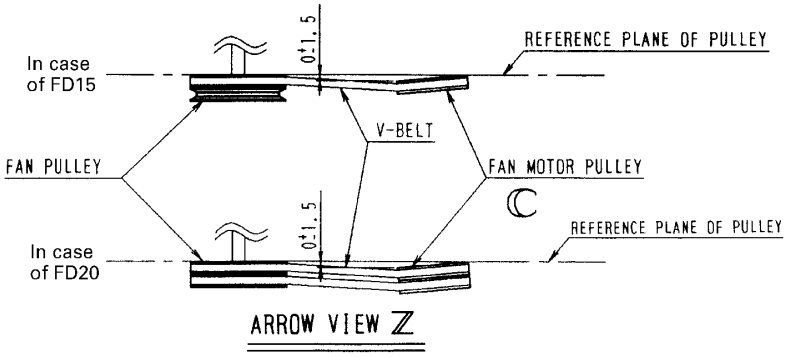
· Tension per one V-belt should keep W when depth of the belt reaches L as shown in this DWG.
· Fan pulley and fan motor pulley should be on the same level, and keep the tolerance of ± 1.5mm as shown.

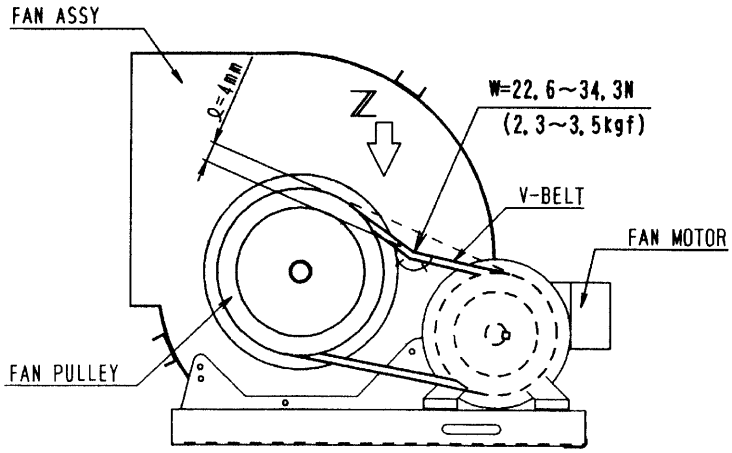
■ **For FD03~10 type**





■ **For FD15 · 20 type**





15. Optional Accessories

15.1 Option List

FD-K

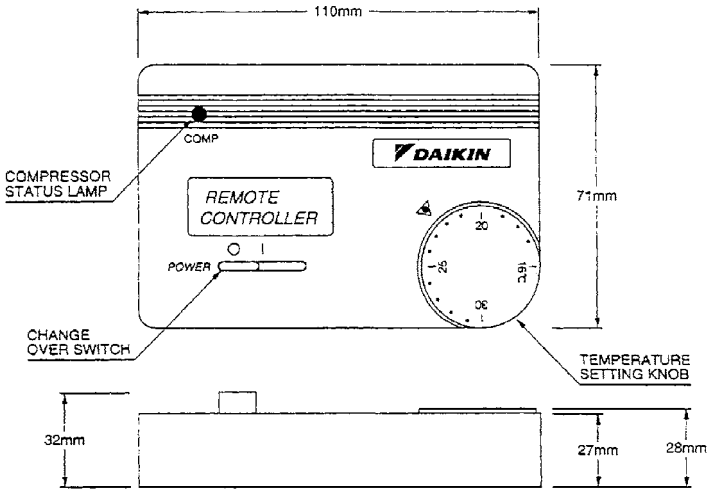
Name of Option		Remark	Kit Name	
			FD03~10K	FD15·20K
Remote Controller	Mechanical Type	With 3 Minutes Timer Wired Type	KRC47-3	KRC47-3 (Note 1)
		–	–	KRC17-2B (Note 2, 3)
	Digital type	With 3 Minutes Timer	KRC47-5	
3 Minutes Timer			KTA19A1	
Central Remote Controller			DCS302C61	
Unified ON/OFF Controller			DCS301B61	
Schedule Timer			DST301B61	
Remote Sensor			KRCS01-1	
Central Control Adaptor Kit		Refer to Page 90, 91.	DTA107A55	

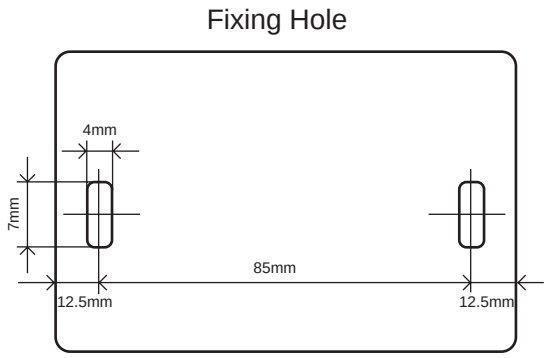
C : 3D008263A

Note:
1. In case of 100-0% operation.
2. In case of 100-50-0% operation.
3. In case of using KRC17-2B or field supplied remote controller, 3 Minutes Timer (KTA19A1 or field supplied) is required.

15.2 Remote Controller (KRC47-3)

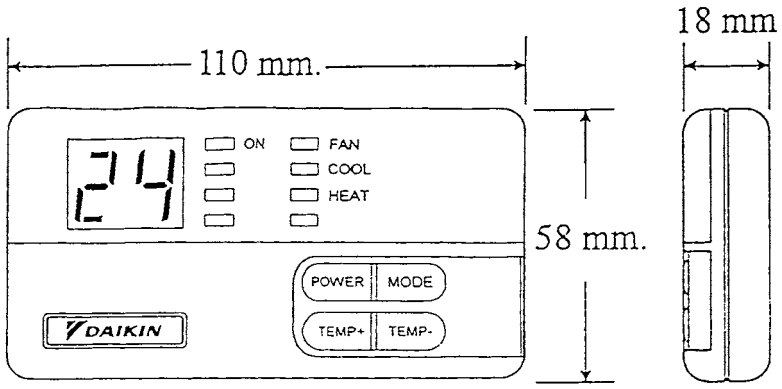
KRC47-3 contens the following parts, and they are packed in one carton.



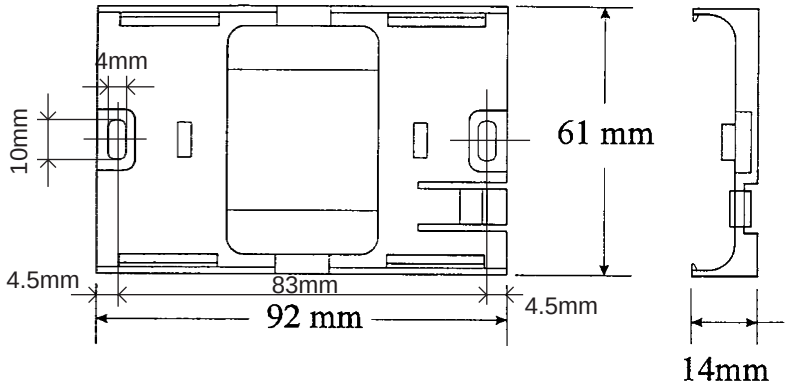


15.3 Digital Remote Controller (KRC47-5)

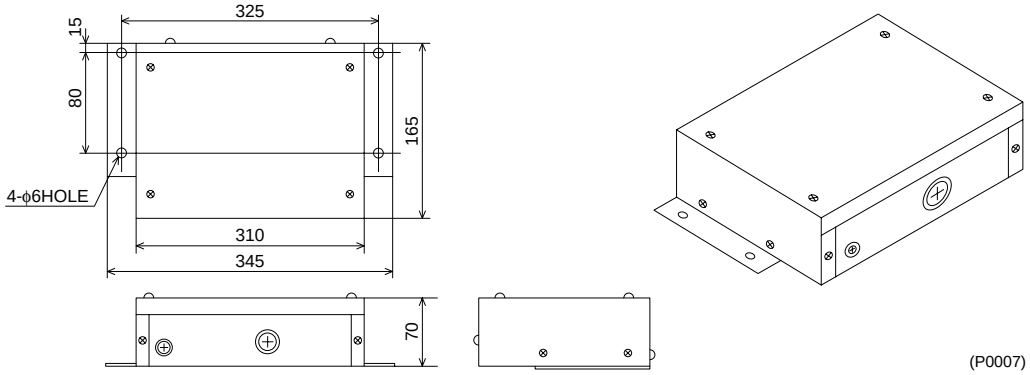
1. Digital Remote Controller



2. Holder



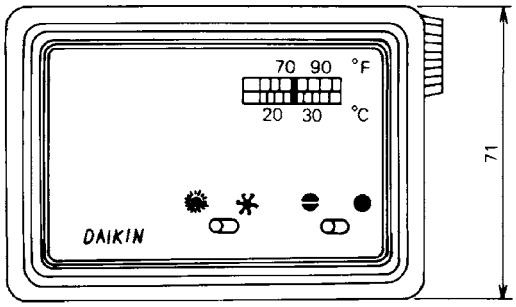
3. Control Board (Box)

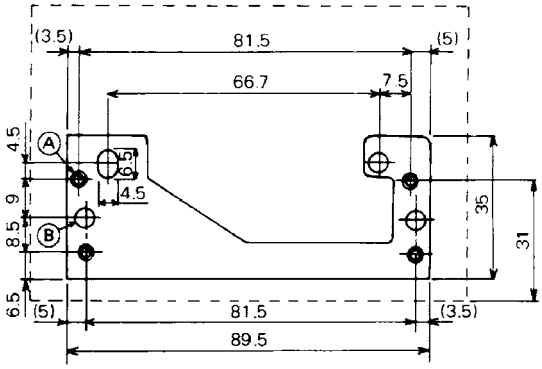


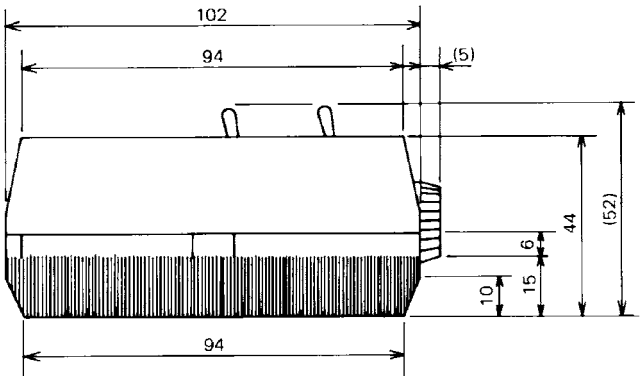
4. Wire Cable

Cable length : 4m (8m or 15m will be available on request.)
Connecting cable between **1. Digital Remote Controller** and **3. Control Board (Box)**.

15.4 Remote Controller (KRC17-2B)





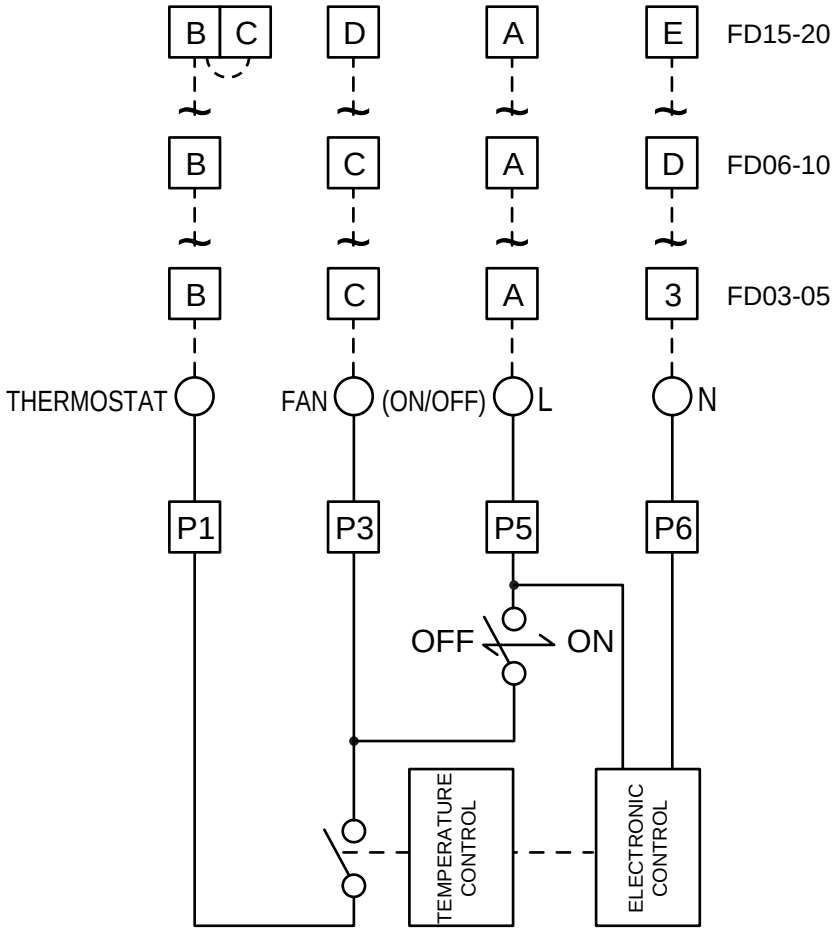


Ⓐ Screw hole for remote controller (2-M4)
Ⓑ Screw hole for wall mounting (ϕ4.4)

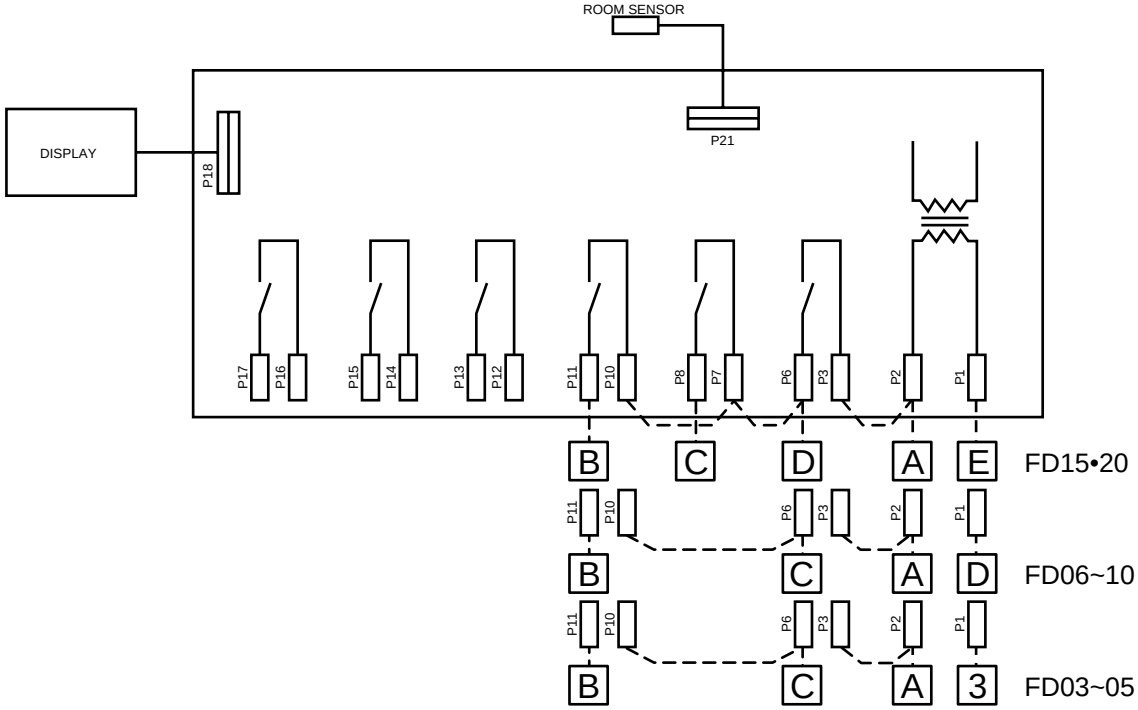
Note: The screws for remote controller and terminal for connecting wires (11 pcs) are attached.

15.5 Internal Wiring Diagram

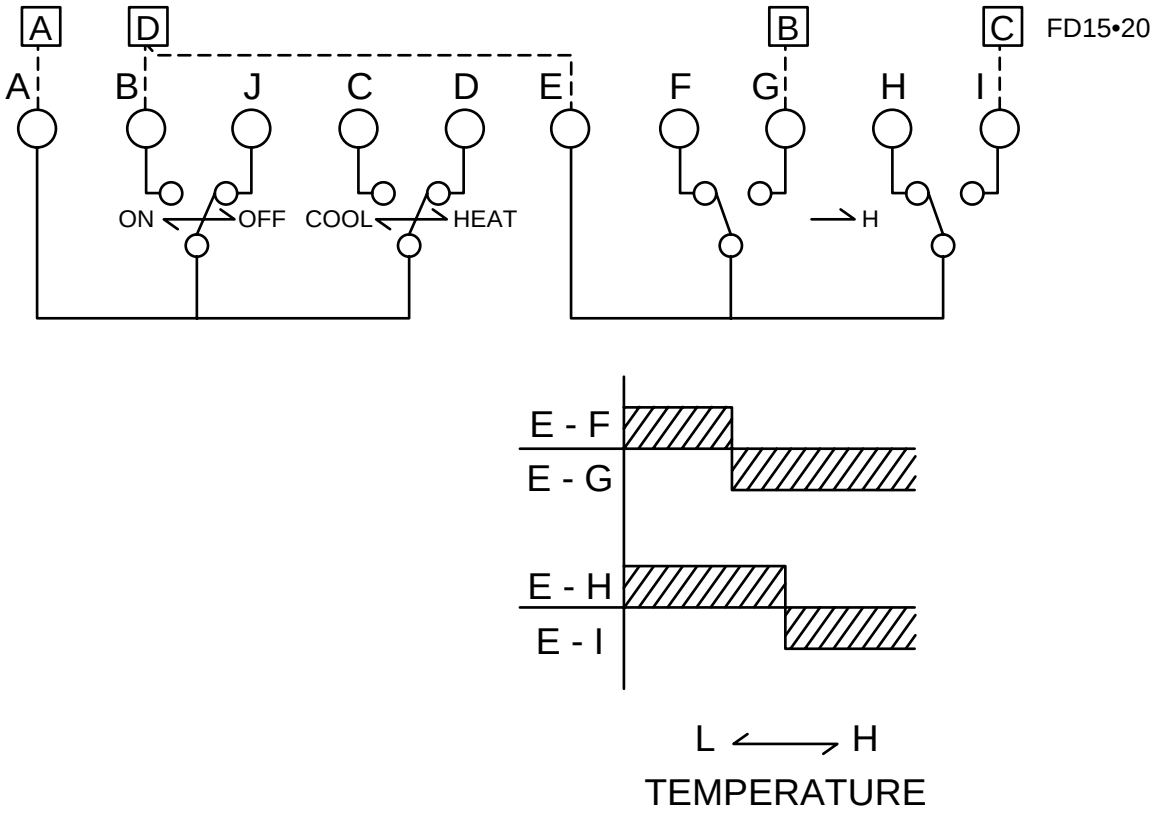
■ **KRC47-3**



■ **KRC47-5**



■ **KRC17-2B**

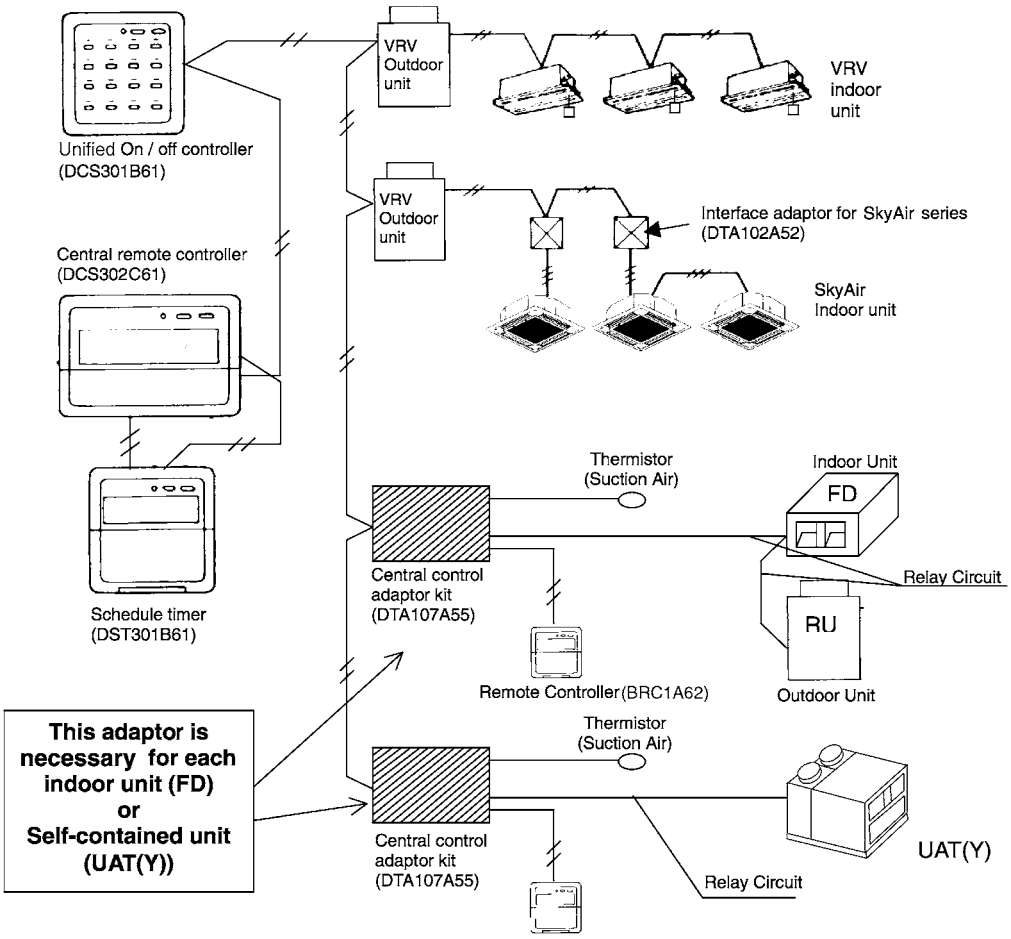


16. Details of DTA107A55 (Central Control Adaptor Kit)

16.1 Features

By adopting this optional kit, you can control FD and UAT(Y) by VRV controller.

[Example of Combination A] Refer to **16.2** and **16.3**.



Applicable model : FD03~20K

16.2 Combination of Remote Controllers with DTA107A55

The following 7 combinations can be selectable.

Model	Name	A	B	C	D	E	F	G
DTA107A55	Central Control Adaptor Kit	○	○	○	○	○	○	○
BRC1A62	Remote Controller	○	▲	▲	○	○	▲	○
DCS302C61	Central Remote Controller	○	○	○	—	—	○	—
DST301B61	Schedule Timer	○	○	—	○	—	—	—
DCS301B61	Unified On/Off Controller	○	—	○	—	○	—	—

○ : Required

▲ : Required only for address setting of the unit

(P0020)

16.3 Functions Available by Each Combination

Functions	A	B	C	D	E	F	G
1.Operation and Monitoring ON/OFF	○	○	○	○	○	○	○
2.Setting and monitoring of Operation mode	○	○	○	○	○	○	○
3. Temperature setting	○	○	○	○	○	○	○
4. Forced shut down	○	○	○	—	○	○	○
5. Group control (*1)	○	○	○	○	○	○	○
6. Indication of alarm (*4)	○	○	○	○	○	○	○
7. Setting of Timer	○	○	○	○	○	○	○
8. Setting and cleaning sign of Air filter	○	○	○	○	○	○	○
9.ON/OFF group control (*2)	○	—	○	—	○	—	—
10. Scheduled timer	○*5	○*5	—	○*3	—	—	—

*1 : It can control up to 128 units.

*2 : It can control up to 16 groups. (Max.128 units)

Combination of controllers (Using number and Max. groups)

Model	Name	Using number	Max. groups to be controlled
DCS302C61	Central Remote Controller	1 2	64 128
DST301B61	Schedule Timer	1	128
DCS301B61	Unified On/Off Controller	1 8	16 128

*3 : 2 Setting of ON/OFF per day is available by the Schedule Timer.
(It can set 2 × 7 = 14 times per week.)

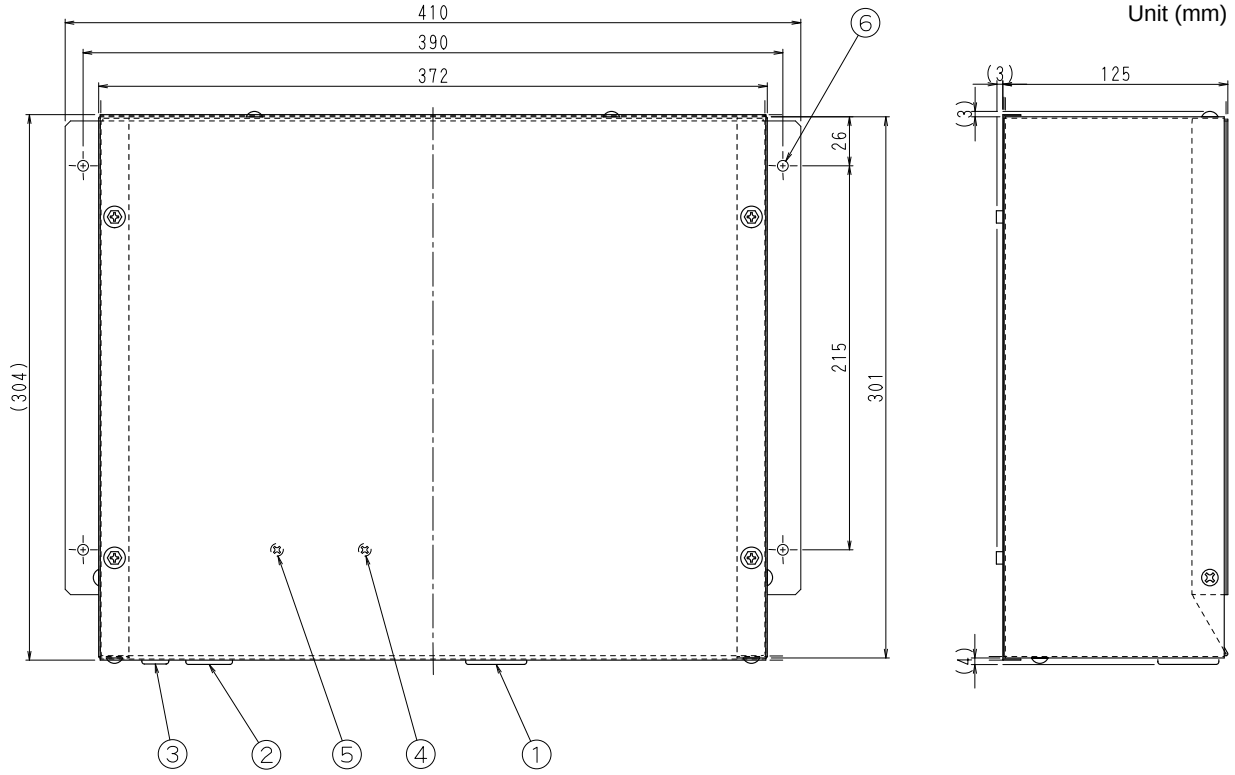
*4 : Error code:"A0" only (Unified display of indoor unit malfunction)

*5 : Using the Schedule Timer with the Central Remote Controller makes it possible to set ON/OFF time four times a day.
(Four times of ON/OFF time can be set up per day, because two settings of ON/OFF time are possible to one Schedule Timer, and two Schedule Timers can be registered into a Central Remote Controller.)

(P0021)

16.4 Dimension

Unit (mm)

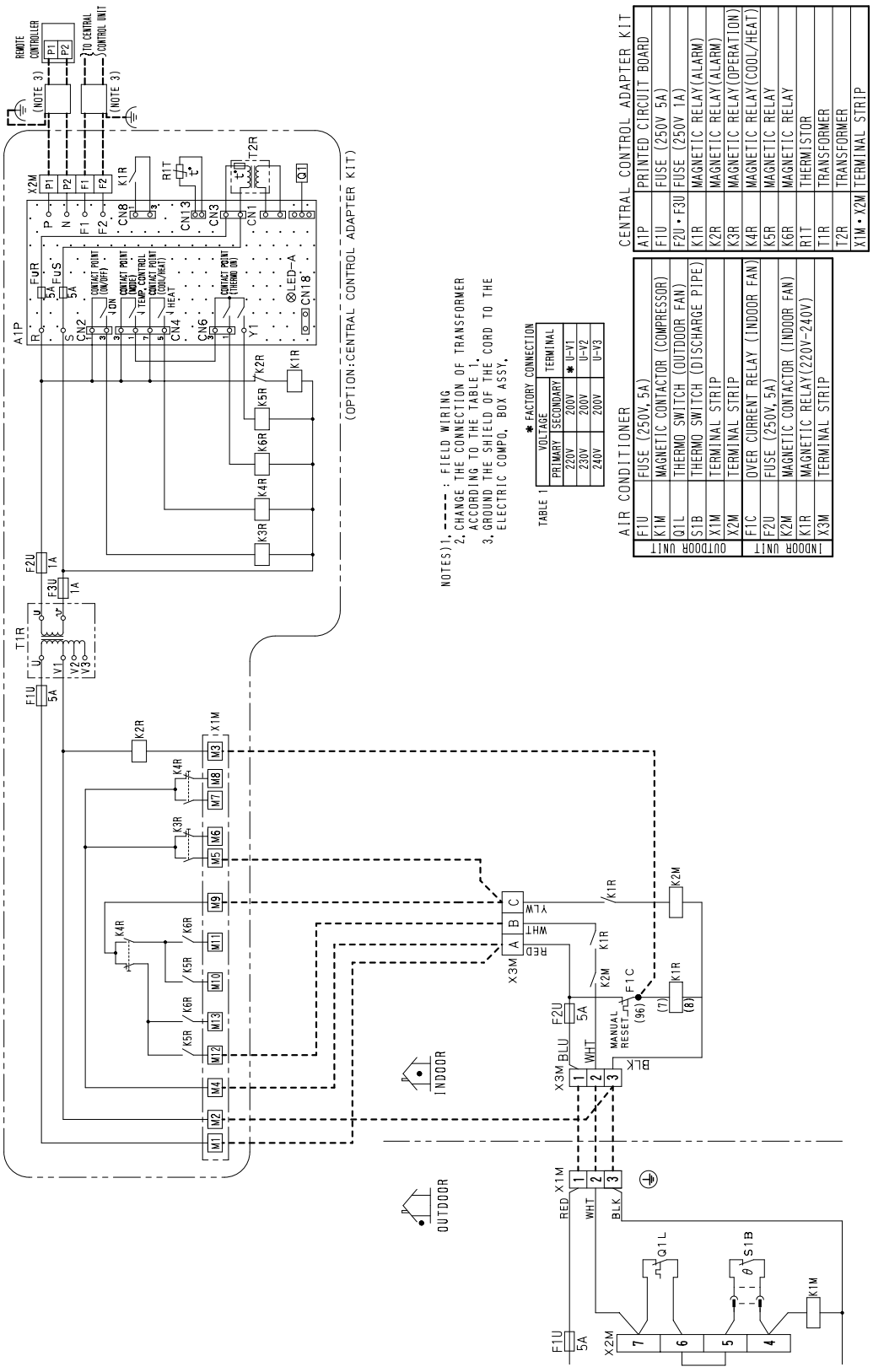


ITEM	PARTS NAME	REMARK
6	FIXING HOLE	4-ø7 (USING M5 BOLTS)
5	EARTH TERMINAL (FOR SHIELD CODE)	M4 (IN THE EL,COMPO,BOX ASSY)
4	EARTH TERMINAL (FOR EL,COMPO,BOX ASSY)	M4 (IN THE EL,COMPO,BOX ASSY)
3	WIRING INTAKE (FOR THERMISTOR)	(ø8)
2	WIRING INTAKE (FOR CONTROLLER)	(ø15)
1	WIRING INTAKE (FOR AIR CONDITIONER)	(ø20)

3D019850

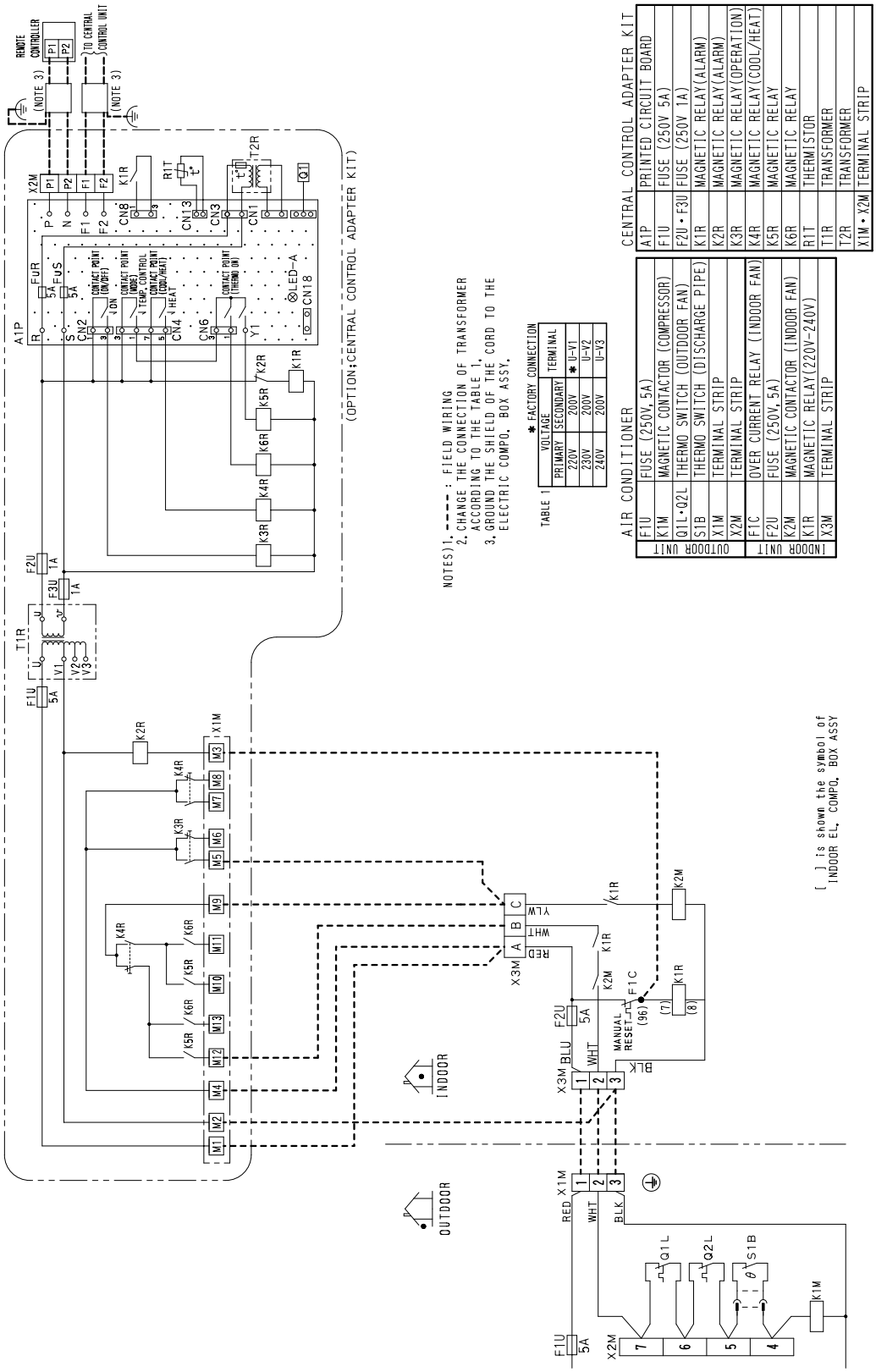
16.5 Wiring Diagram with Optional Central Control Adaptor

(FD03KY1, VAL + R71FUY1, VAL) + DTA107A55



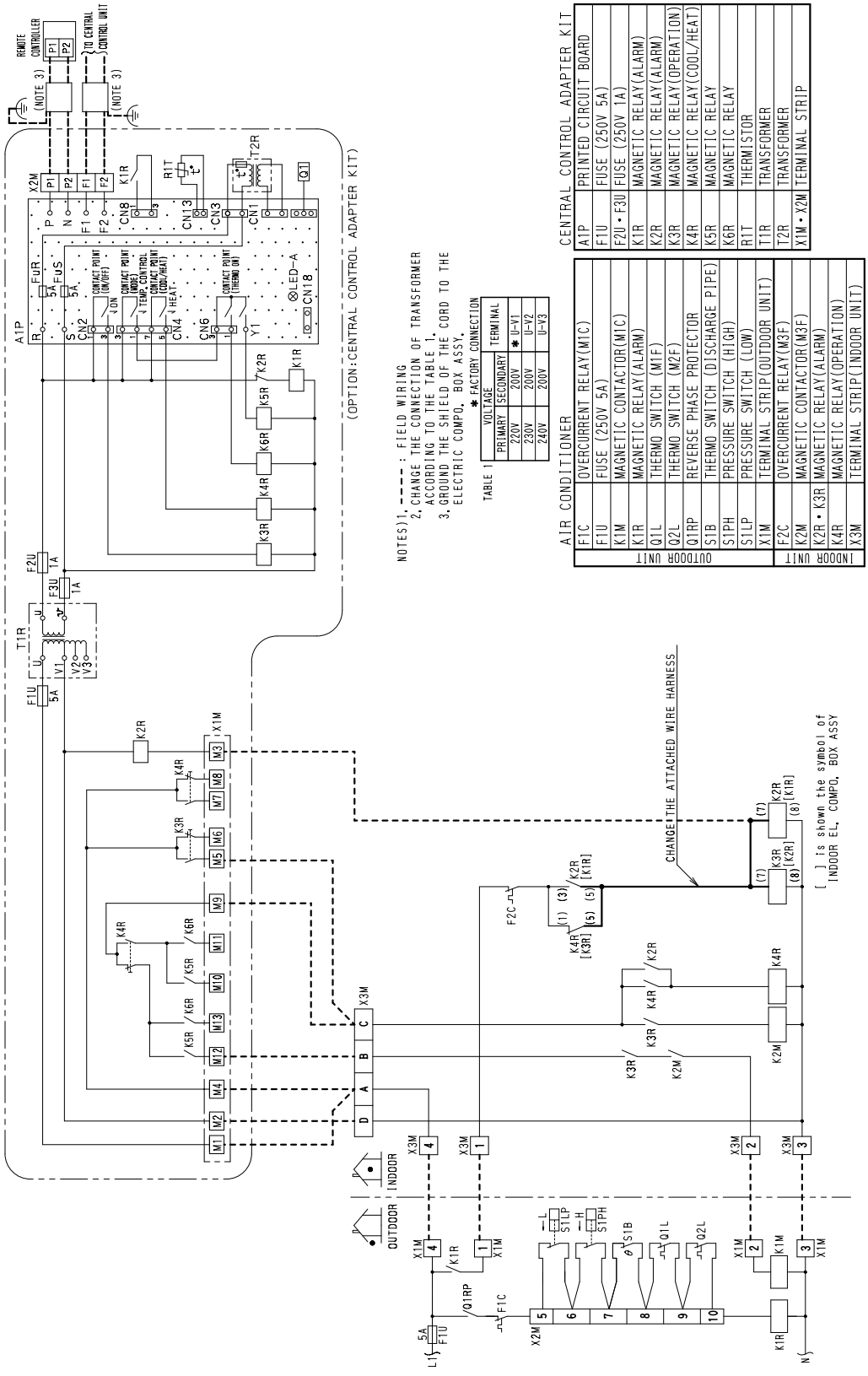
3D019851

(FD04KY1, VAL + R100FUY1, VAL) + DTA107A55
(FD05KY1, VAL + R125FUY1, TAL) + DTA107A55

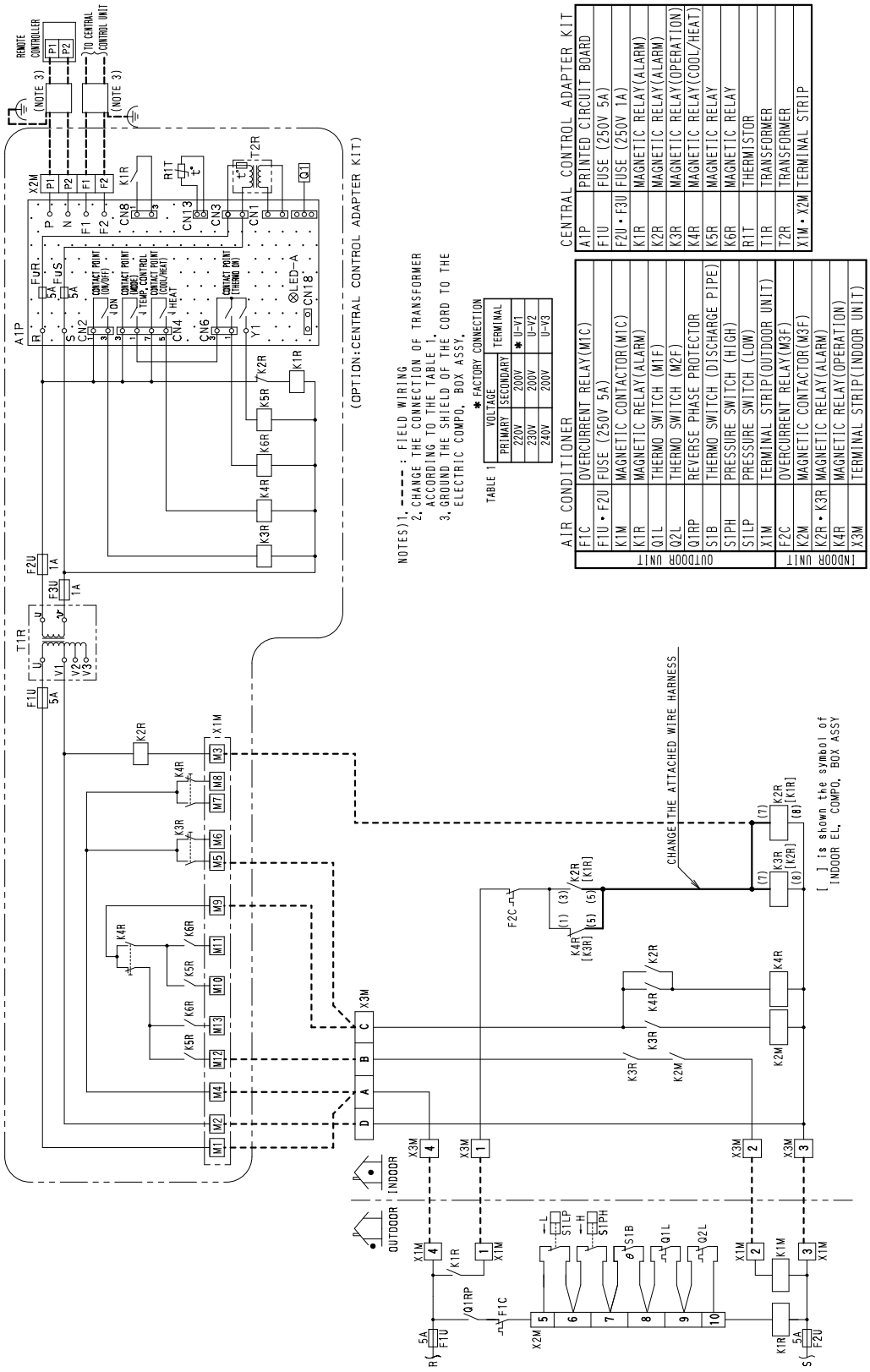


3D019853

(FD06KY1 + RU06KY1) + DTA107A55



(FD06KTAL + RU06KTAL) + DTA107A55



CENTRAL CONTROL ADAPTER KIT

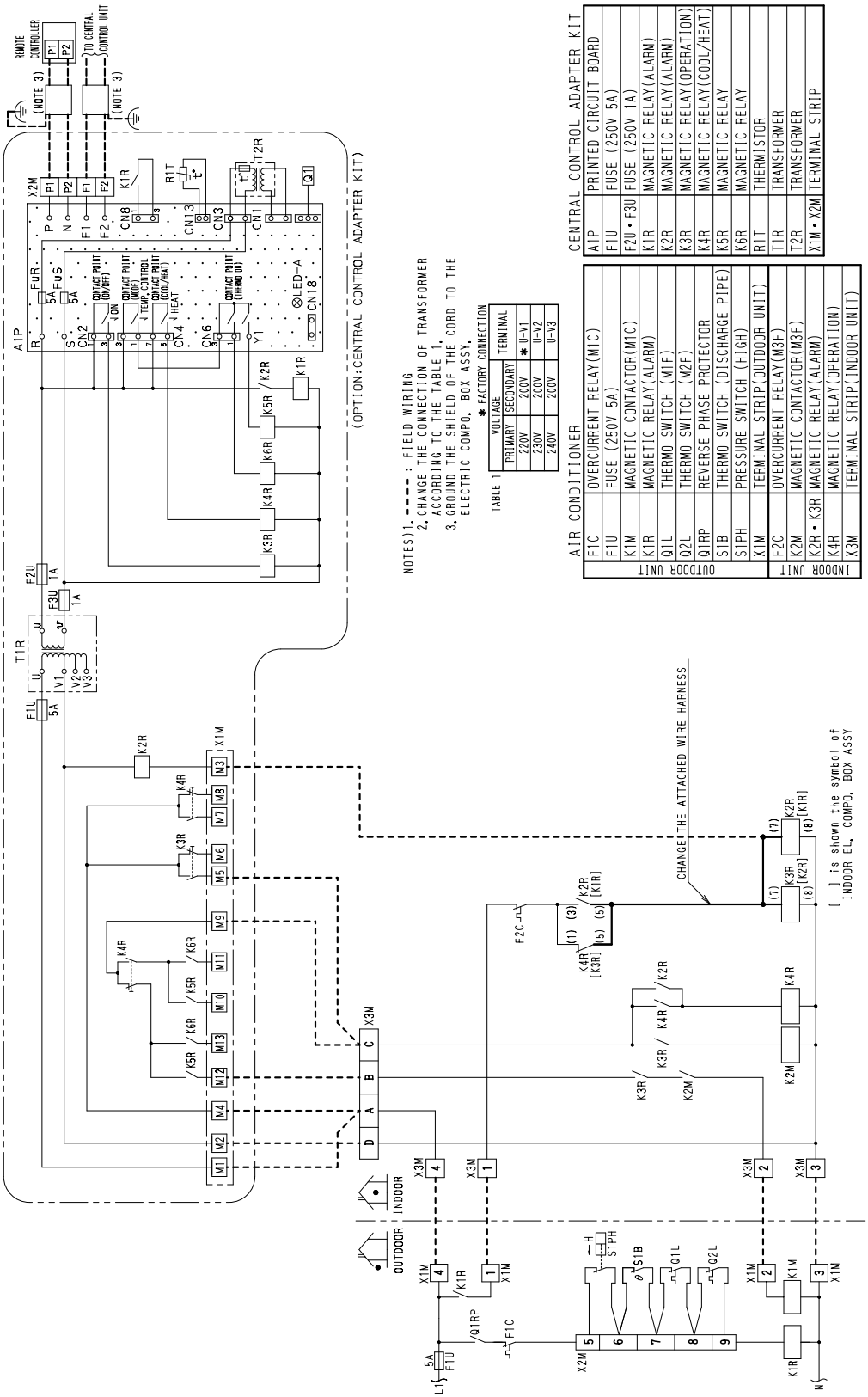
A1P	PRINTED CIRCUIT BOARD
F1U	FUSE (250V 5A)
F2U • F3U	FUSE (250V 1A)
K1R	MAGNETIC RELAY(ALARM)
K2R	MAGNETIC RELAY(ALARM)
K3R	MAGNETIC RELAY(OPERATION)
K4R	MAGNETIC RELAY(COOL/HEAT)
K5R	MAGNETIC RELAY
K6R	MAGNETIC RELAY
R1T	THERMISTOR
T1R	TRANSFORMER
T2R	TRANSFORMER
X1M • X2M	TERMINAL STRIP

AIR CONDITIONER

OUTDOOR UNIT	F1C	OVERCURRENT RELAY(M1C)
	F1U • F2U	FUSE (250V 5A)
	K1M	MAGNETIC CONTACTOR(M1C)
	K1R	MAGNETIC RELAY(ALARM)
	Q1L	THERMO SWITCH (M1F)
	Q2L	THERMO SWITCH (M2F)
	Q1RP	REVERSE PHASE PROTECTOR
	S1B	THERMO SWITCH (DISCHARGE PIPE)
	S1PH	PRESSURE SWITCH (HIGH)
	S1LP	PRESSURE SWITCH (LOW)
	X1M	TERMINAL STRIP(OUTDOOR UNIT)
INDOOR UNIT	F2C	OVERCURRENT RELAY(M3F)
	K2M	MAGNETIC CONTACTOR(M3F)
	K2R • K3R	MAGNETIC RELAY(ALARM)
	K4R	MAGNETIC RELAY(OPERATION)
	X3M	TERMINAL STRIP(INDOOR UNIT)

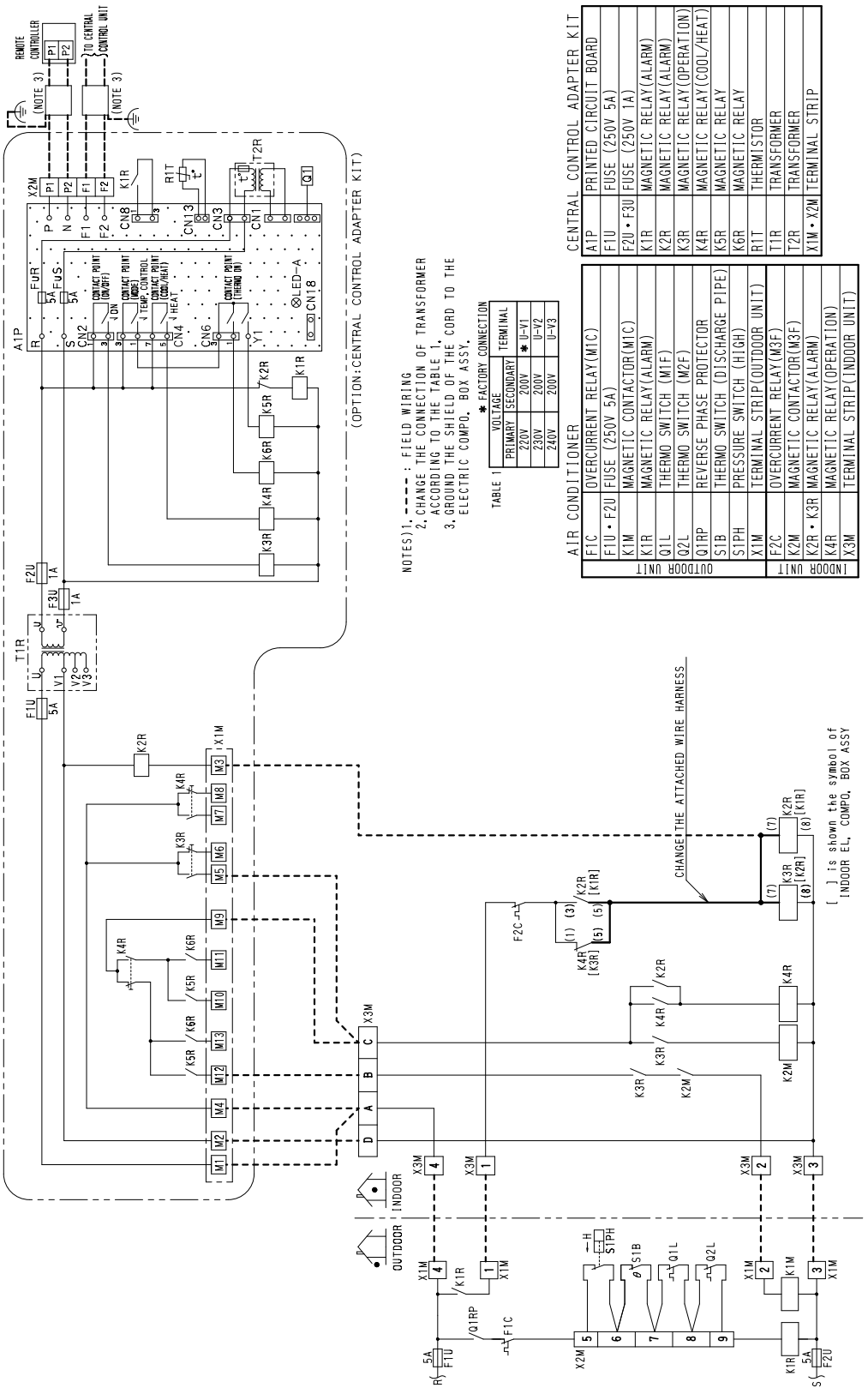
3D019855

(FD08 · 10KY1 + RU08 · 10KY1) + DTA107A55
(FD08 · 10KY1 + RU08 · 10KUY1) + DTA107A55



3D019856

(FD08 · 10KTAL + RU08 · 10KTAL) + DTA107A55
(FD08 · 10KTAL + RU08 · 10KUTAL) + DTA107A55



NOTES) 1. ---- : FIELD WIRING
2. CHANGE THE CONNECTION OF TRANSFORMER ACCORDING TO THE TABLE 1.
3. GROUND THE SHIELD OF THE CORD TO THE ELECTRIC COMPO. BOX ASSY.

TABLE 1 * FACTORY CONNECTION

VOLTAGE		TERMINAL
PRIMARY	SECONDARY	* U-V1
220V	200V	U-V2
230V	200V	U-V3
240V	200V	

AIR CONDITIONER

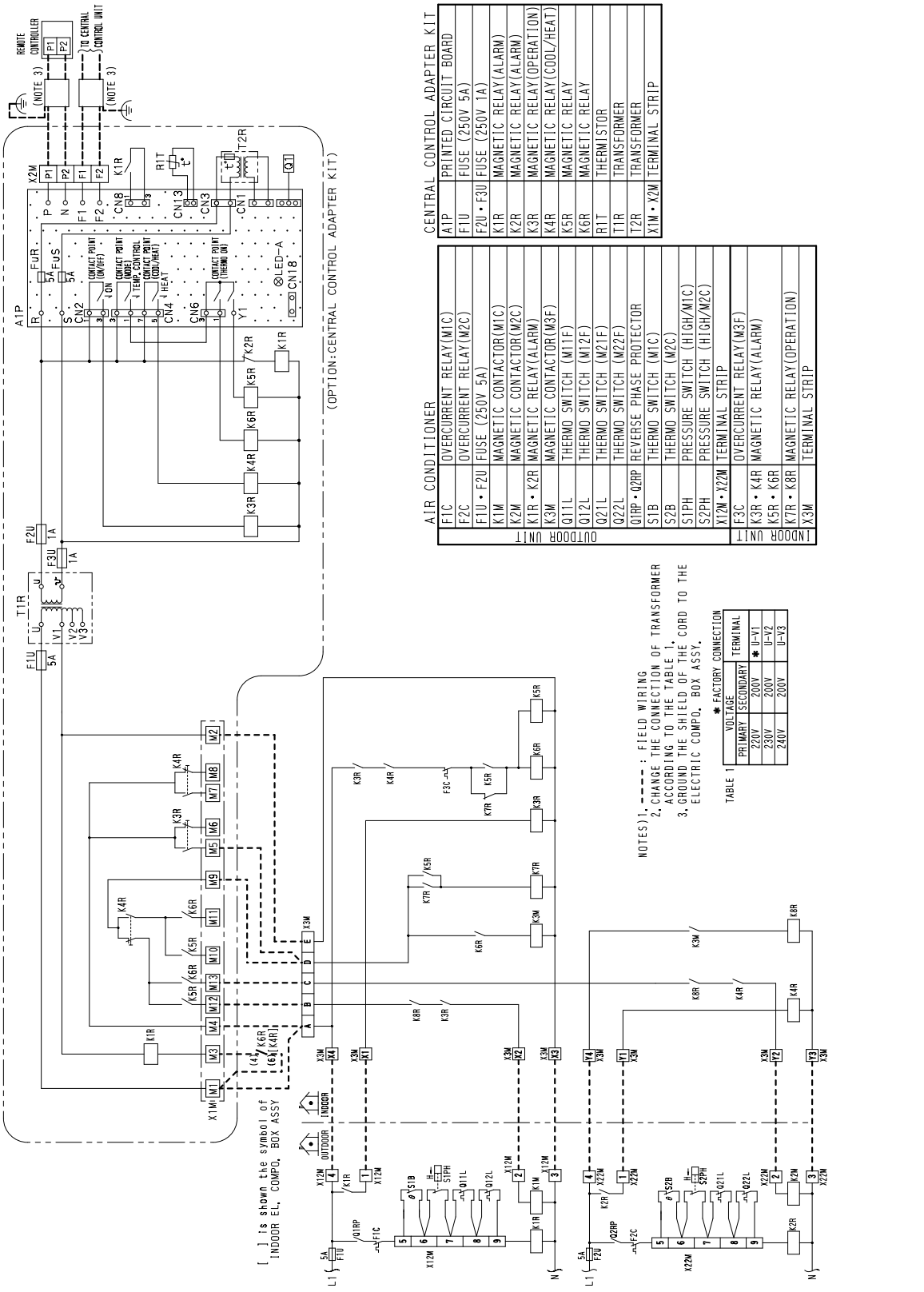
OUTDOOR UNIT	F1C	OVERCURRENT RELAY(M1C)	
	F1U • F2U	FUSE (250V 5A)	
	K1M	MAGNETIC CONTACTOR(M1C)	
	K1R	MAGNETIC RELAY(ALARM)	
	Q1L	THERMO SWITCH (M1F)	
	Q2L	THERMO SWITCH (M2F)	
	Q1RP	REVERSE PHASE PROTECTOR	
	S1B	THERMO SWITCH (DISCHARGE PIPE)	
	S1PH	PRESSURE SWITCH (HIGH)	
	X1M	TERMINAL STRIP(OUTDOOR UNIT)	
INDOOR UNIT	F2C	OVERCURRENT RELAY(M3F)	
	K2M	MAGNETIC CONTACTOR(M3F)	
	K2R • K3R	MAGNETIC RELAY(ALARM)	
	K4R	MAGNETIC RELAY(OPERATION)	
	X3M	TERMINAL STRIP(INDOOR UNIT)	

CENTRAL CONTROL ADAPTER KIT

A1P	PRINTED CIRCUIT BOARD
F1U	FUSE (250V 5A)
F2U • F3U	FUSE (250V 1A)
K1R	MAGNETIC RELAY(ALARM)
K2R	MAGNETIC RELAY(ALARM)
K3R	MAGNETIC RELAY(OPERATION)
K4R	MAGNETIC RELAY(COOL/HEAT)
K5R	MAGNETIC RELAY
K6R	MAGNETIC RELAY
R1T	THERMISTOR
T1R	TRANSFORMER
T2R	TRANSFORMER
X1M • X2M	TERMINAL STRIP

3D019857

(FD15 · 20KY1 + RU08 · 10KY1×2) + DTA107A55
(FD15 · 20KY1 + RU08 · 10KUY1×2) + DTA107A55

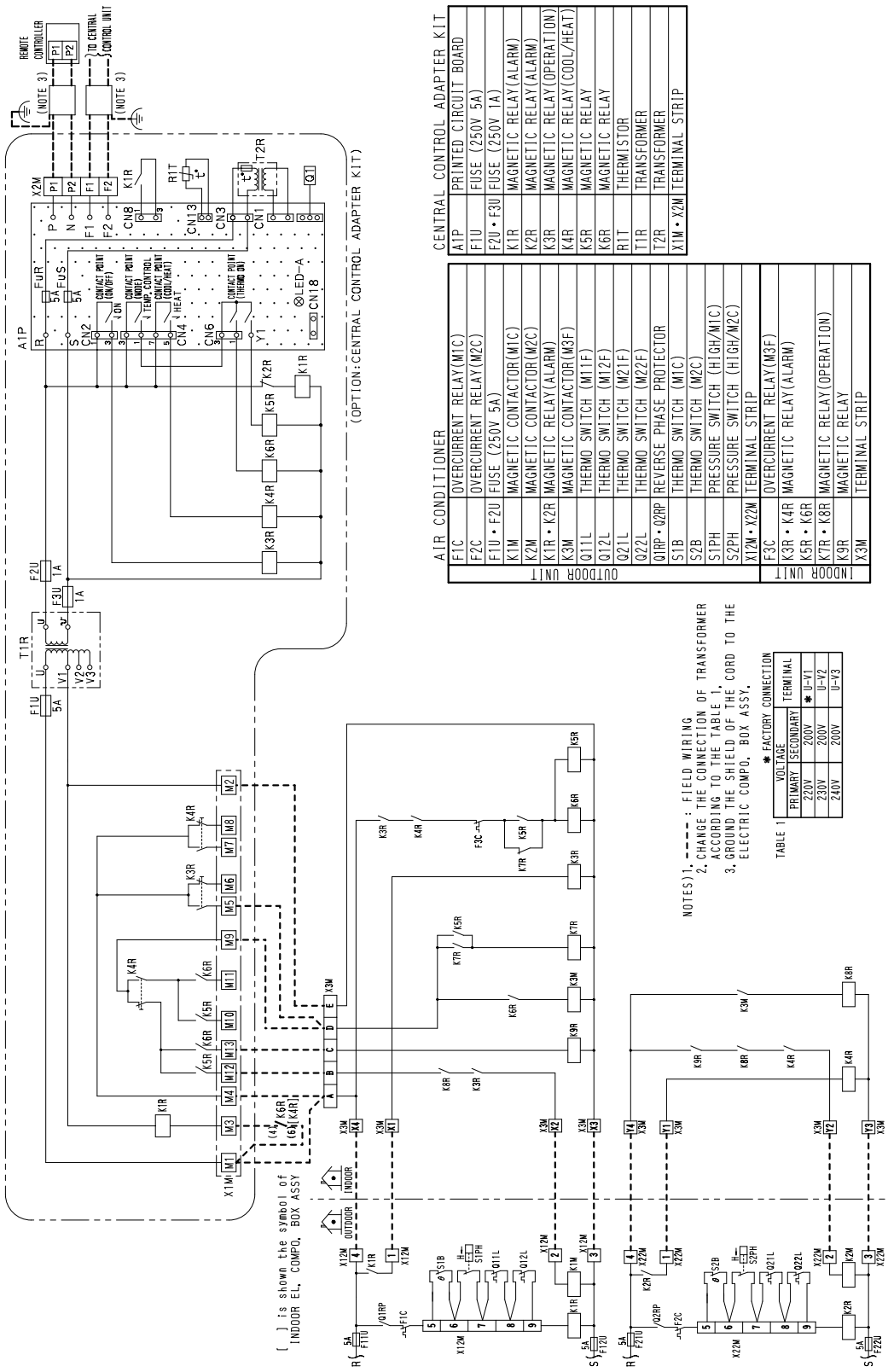


CENTRAL CONTROL ADAPTER KIT		
	A1P	PRINTED CIRCUIT BOARD
	F1U	FUSE (250V 5A)
	F2U・F3U	FUSE (250V 1A)
	K1R	MAGNETIC RELAY(ALARM)
	K2R	MAGNETIC RELAY(ALARM)
	K3R	MAGNETIC RELAY(OPERATION)
	K4R	MAGNETIC RELAY(COOL/HEAT)
	K5R	MAGNETIC RELAY
	K6R	MAGNETIC RELAY
	R1T	THERMISTOR
	T1R	TRANSFORMER
	T2R	TRANSFORMER
	X1M・X2M	TERMINAL STRIP

AIR CONDITIONER		
OUTDOOR UNIT	F1C	OVERCURRENT RELAY(M1C)
	F2C	OVERCURRENT RELAY(M2C)
	F1U・F2U	FUSE (250V 5A)
	K1M	MAGNETIC CONTACTOR(M1C)
	K2M	MAGNETIC CONTACTOR(M2C)
	K1R・K2R	MAGNETIC RELAY(ALARM)
	K3M	MAGNETIC CONTACTOR(M3F)
	Q11L	THERMO SWITCH (M11F)
	Q12L	THERMO SWITCH (M12F)
	Q21L	THERMO SWITCH (M21F)
	Q22L	THERMO SWITCH (M22F)
	Q1RP・Q2RP	REVERSE PHASE PROTECTOR
	S1B	THERMO SWITCH (M1C)
	S2B	THERMO SWITCH (M2C)
	S1PH	PRESSURE SWITCH (HIGH/M1C)
	S2PH	PRESSURE SWITCH (HIGH/M2C)
	X12M・X22M	TERMINAL STRIP
INDOOR UNIT	F3C	OVERCURRENT RELAY(M3F)
	K3R・K4R	MAGNETIC RELAY(ALARM)
	K5R・K6R	
	K7R・K8R	MAGNETIC RELAY(OPERATION)
	X3M	TERMINAL STRIP

3D019858

(FD15 · 20KTAL + RU08 · 10KTAL×2) + DTA107A55
(FD15 · 20KTAL + RU08 · 10KUTAL×2) + DTA107A55



CENTRAL CONTROL ADAPTER KIT

A1P	PRINTED CIRCUIT BOARD
F1U	FUSE (250V 5A)
F2U • F3U	FUSE (250V 1A)
K1R	MAGNETIC RELAY(ALARM)
K2R	MAGNETIC RELAY(ALARM)
K3R	MAGNETIC RELAY(OPERATION)
K4R	MAGNETIC RELAY(COOL/HEAT)
K5R	MAGNETIC RELAY
K6R	MAGNETIC RELAY
R1T	THERMISTOR
T1R	TRANSFORMER
T2R	TRANSFORMER
X1M • X2M	TERMINAL STRIP

AIR CONDITIONER

OUTDOOR UNIT	F1C	OVERCURRENT RELAY(M1C)
	F2C	OVERCURRENT RELAY(M2C)
	F1U • F2U	FUSE (250V 5A)
	K1M	MAGNETIC CONTACTOR(M1C)
	K2M	MAGNETIC CONTACTOR(M2C)
	K1R • K2R	MAGNETIC RELAY(ALARM)
	K3M	MAGNETIC CONTACTOR(M3F)
	Q11L	THERMO SWITCH (M11F)
	Q12L	THERMO SWITCH (M12F)
	Q21L	THERMO SWITCH (M21F)
	Q22L	THERMO SWITCH (M22F)
	Q1RP • Q2RP	REVERSE PHASE PROTECTOR
	S1B	THERMO SWITCH (M1C)
	S2B	THERMO SWITCH (M2C)
	S1PH	PRESSURE SWITCH (HIGH/M1C)
	S2PH	PRESSURE SWITCH (HIGH/M2C)
	X12M • X22M	TERMINAL STRIP
INDOOR UNIT	F3C	OVERCURRENT RELAY(M3F)
	K3R • K4R	MAGNETIC RELAY(ALARM)
	K5R • K6R	
	K7R • K8R	MAGNETIC RELAY(OPERATION)
	K9R	MAGNETIC RELAY
	X3M	TERMINAL STRIP

3D019859

The air conditioners manufactured by Daikin Industries have received **ISO 9000 series** certification for quality assurance.

Certificate Number.
(ISO9001) **JMI-0107** (ISO9002) **JQA-1452**
JQA-0495

All Daikin Industries locations and subsidiaries in Japan have received environmental management system standard **ISO 14001** certification.

Daikin Industries, Ltd.
Domestic Group
Certificate Number. EC99J2044

About ISO 14001

ISO 14001 is the standard defined by the International Organization for Standardization (ISO) relating to environmental management systems. Our group has been acknowledged by an internationally accredited compliance organisation as having an appropriate programme of environmental protection procedures and activities to meet the requirements of ISO 14001.

Dealer

DAIKIN INDUSTRIES, LTD.
Head Office:
Umeda Center Bldg., 4-12, Nakazaki-Nishi
2-chome, Kita-ku, Osaka, 530-8323 Japan

Tokyo Office:
JR Shinagawa East Bldg., 18-1, Konan
2-chome, Minato-ku, Tokyo, 108-0075 Japan

http://www.daikin.com/global/

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