

**DAIKIN**

# INSTALLATION MANUAL



## Models

UAT180AMY1  
UAT240AMY1  
UAT280AMY1  
UAT320AMY1  
UAT450AMY1  
UAT560AMY1  
UAT700AMY1  
UAT850AMY1  
UATC10AMY1  
UATC12AMY1  
UATP180AMY1  
UATP240AMY1  
UATP280AMY1  
UATP320AMY1  
UATP450AMY1  
UATP560AMY1  
UATP700AMY1  
UATP850AMY1  
UATPC10AMY1  
UATPC12AMY1

UATY180AMY1  
UATY240AMY1  
UATY280AMY1  
UATY320AMY1  
UATY450AMY1  
UATY560AMY1  
UATY700AMY1  
UATY850AMY1  
UATYC10AMY1  
UATYC12AMY1  
UATYP180AMY1  
UATYP240AMY1  
UATYP280AMY1  
UATYP320AMY1  
UATYP450AMY1  
UATYP560AMY1  
UATYP700AMY1  
UATYP850AMY1  
UATYPC10AMY1  
UATYPC12AMY1

Installation Manual  
Rooftop Package Units

**English**

Installationshandbuch  
Kompaktanlage Für Dachmontage

**Deutsch**

Manuel D'installation  
Conditionneurs D'air En Toiture

**Français**

Installatiehandboek  
Compactsysteem Voor Dakmontage

**Nederlands**

Manual De Instalación  
Unidades Del Conjunto Del Tejado

**Español**

Manuale Di Installazione  
Unità A Pacchetto Per Installazione Sul Tetto

**Italiano**

Εγχειρίδιο Εγκατάστασης  
Μονάδες Συσκευασίας Της Κορυφής Της Οροφής

**Ελληνικά**

Manual De Instalação  
Unidades De Conjuntos De Telhado

**Portugues**

Руководство По Установке  
Компактные Установки Для Кондиционирования  
Воздуха, Монтируемые На Крыше Здания

**Русский**

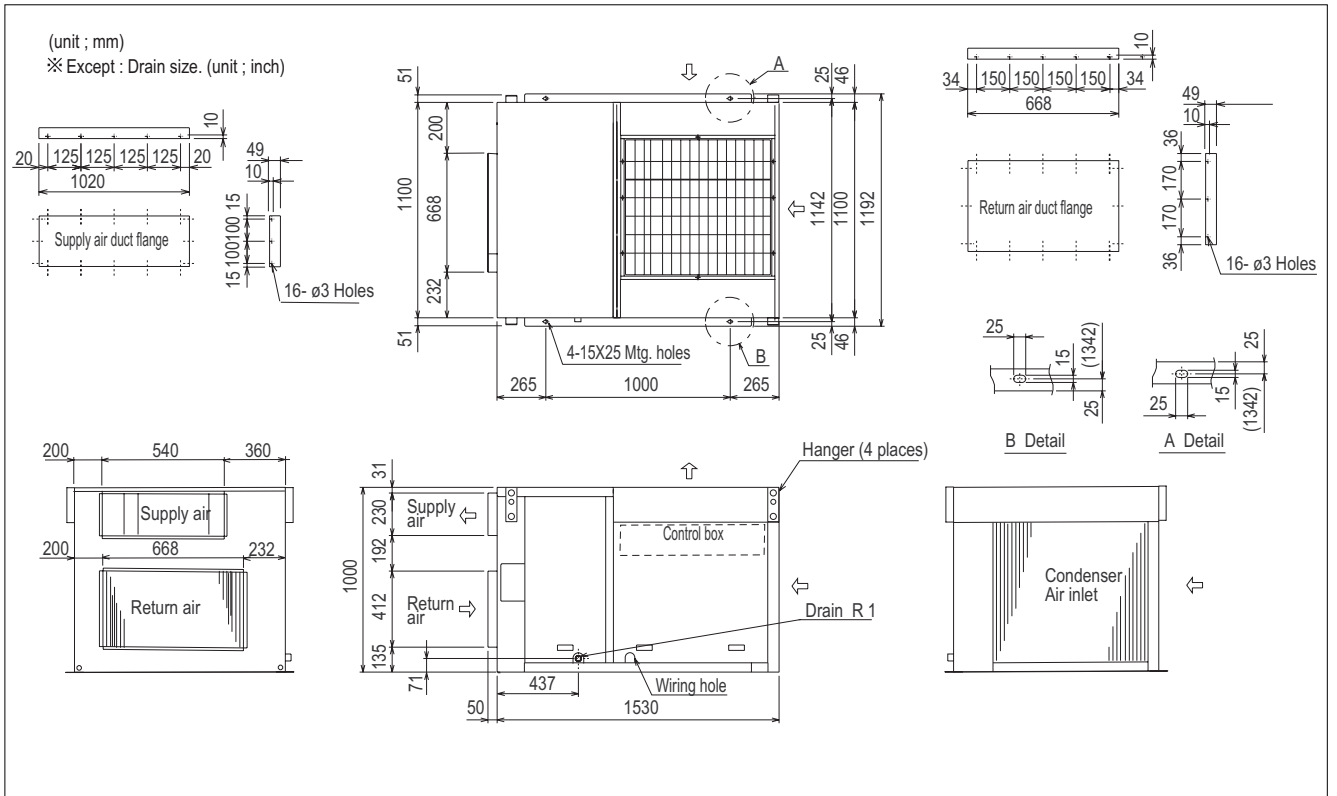
Kurulum kılavuzu  
Çatı Tipi Ambalaj Üniteleri

**Türkçe**

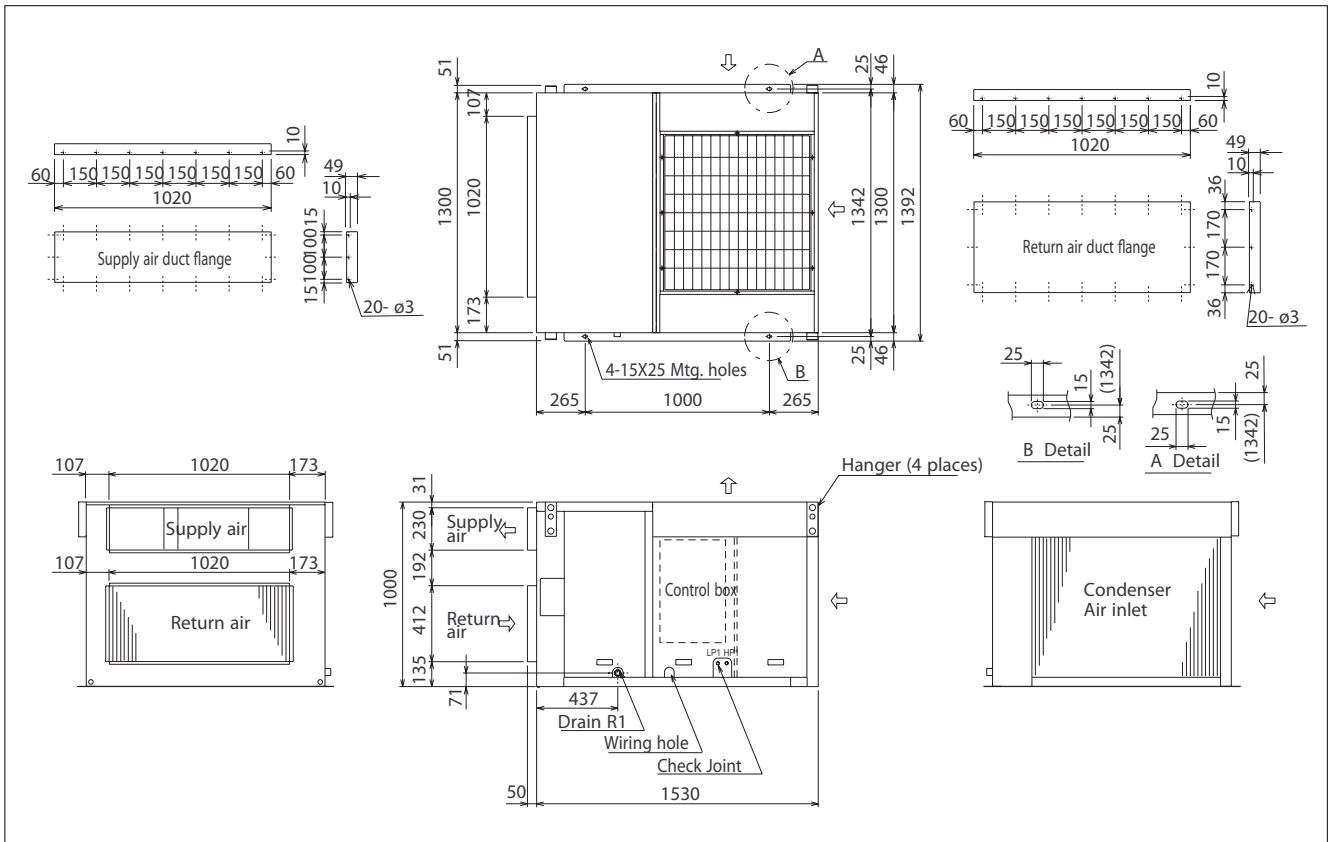


# OUTLINE AND DIMENSIONS

## UAT(Y)(P)180AMY1



## UAT(Y)(P)240,280,320AMY1 - Side flow

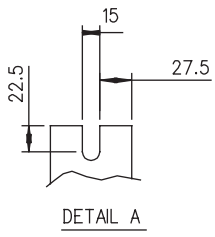
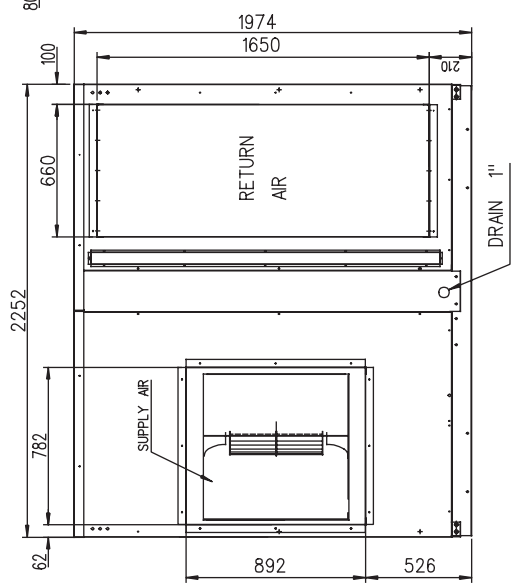
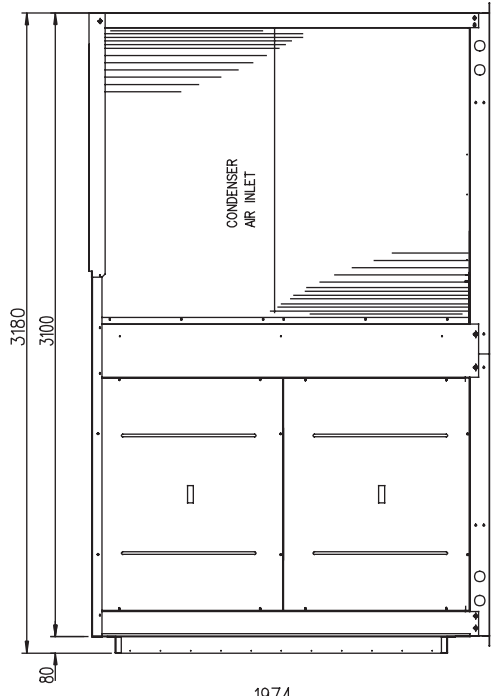
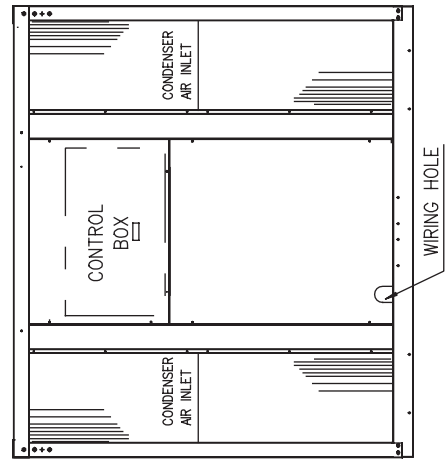
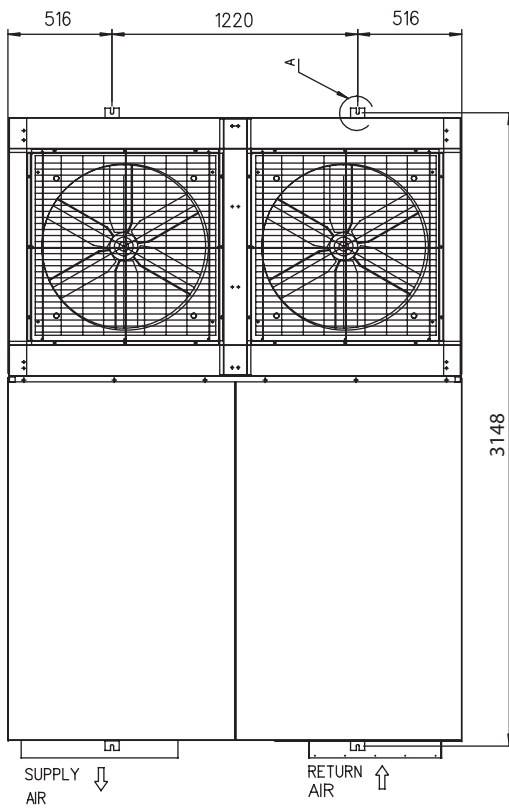






# OUTLINE AND DIMENSIONS

UAT(Y)(P)C10,C12AMY1

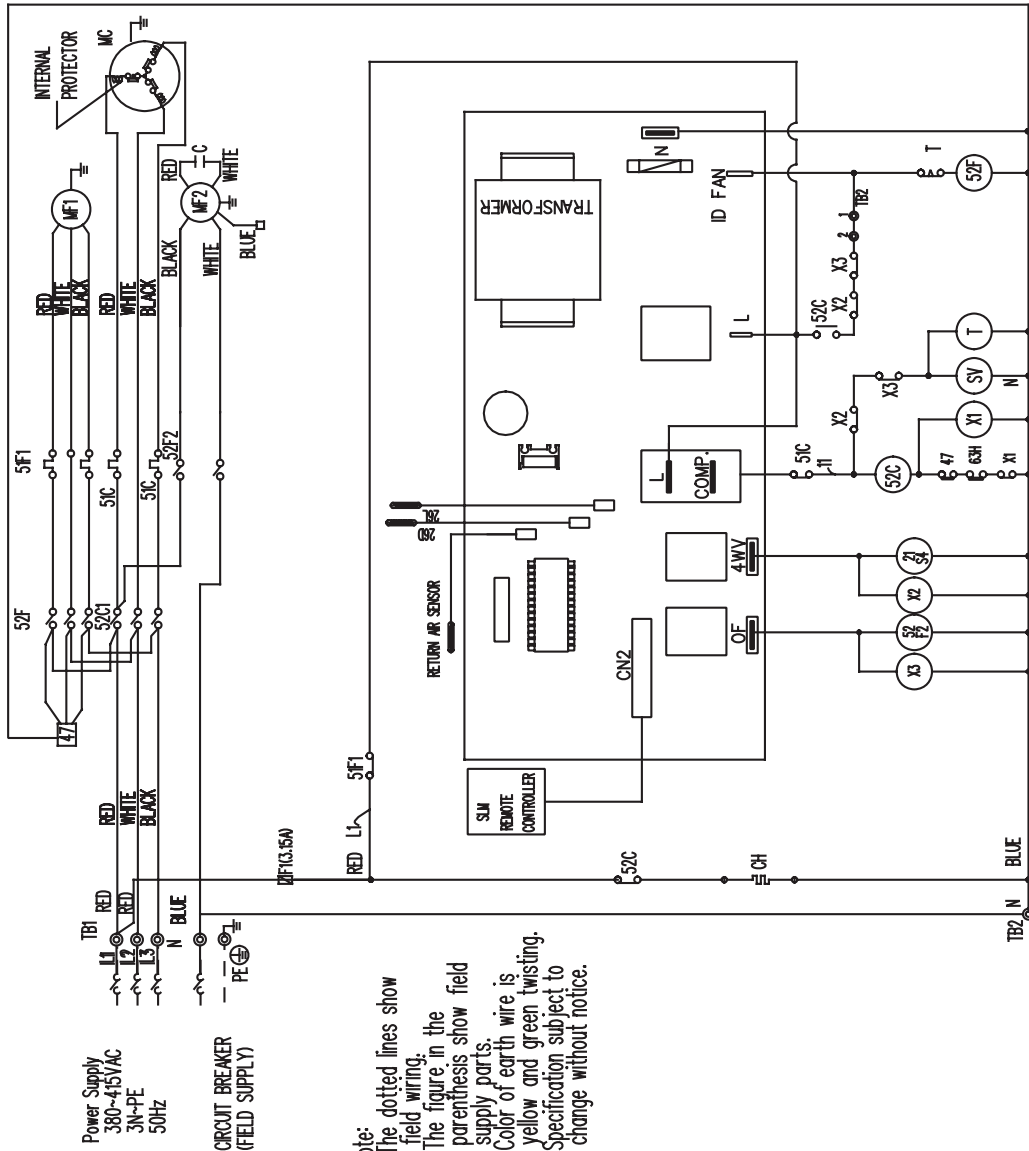




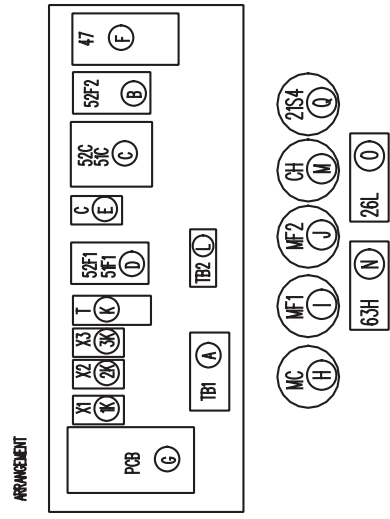
# ELECTRICAL WIRING DIAGRAM

MODEL:UATY(P)180AMY1

SYMBOL	NAME
MC	Compressor motor
MF1	Fan motor (indoor)
MF2	Fan motor (outdoor)
52C	Contact (compressor)
52F1	Contact (fan I/D)
52F2	Contact (fan O/D)
51C	Over current relay (comp)
TB1,2	Terminal block
5F1	Over current relay (fan I/D)
6.3H	High-pressure switch
CH	Crankcase heater
2IS4	4-Way valve
26I	Sensor (defrost)
26L	Sensor (freeze protection)
PCB	Printed circuit board
47	Phase protector/Discharge thermostat
X2, X3	Auxiliary Relay (Self hold)
T	Timer (Defrost)
SV	Solenoid Valve



- Note:
1. The dotted lines show field wiring.
  2. The figure in the parenthesis show field supply parts.
  3. Color of earth wire is yellow and green twisting.
  4. Specification subject to change without notice.

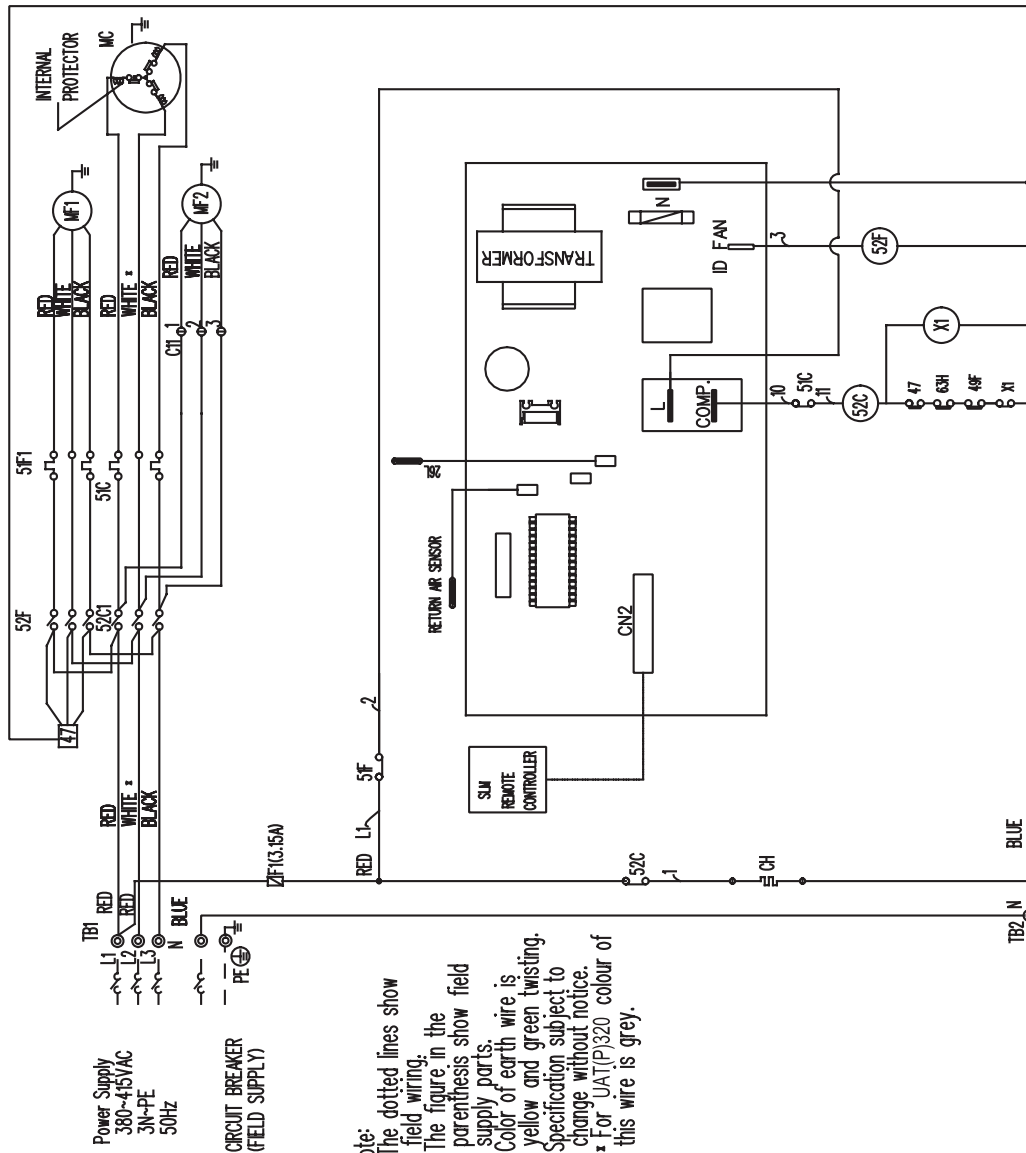


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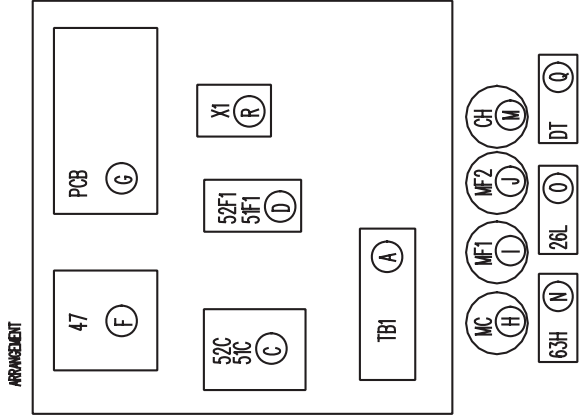
# ELECTRICAL WIRING DIAGRAM

MODEL:UAT(P)240,280,320AMY1



SYMBOL	NAME
MC	Compressor motor
MF1	Fan motor (indoor)
MF2	Fan motor (outdoor)
52C	Contact (compressor)
52F1	Contact (fan I/D)
52F	Over current relay (comp)
TB1	Terminal block
F1	Fuse (3.15A)
52F	Over current relay (fan I/D)
63H	High-pressure switch
CH	Crankcase heater
Z6L	Sensor (freeze protection)
PCB	Printed circuit board
47	Phase Protector / Discharge Thermostat
X1	Auxiliary Relay (Self hold)
49F	Internal Protector (OD Fan)

UAT(P)240,280 only



- Note:
1. The dotted lines show field wiring.
  2. The figure in the parenthesis show field supply parts.
  3. Color of earth wire is yellow and green twisting.
  4. Specification subject to change without notice.
  - 5.\* For UAT(P)320 colour of this wire is grey.

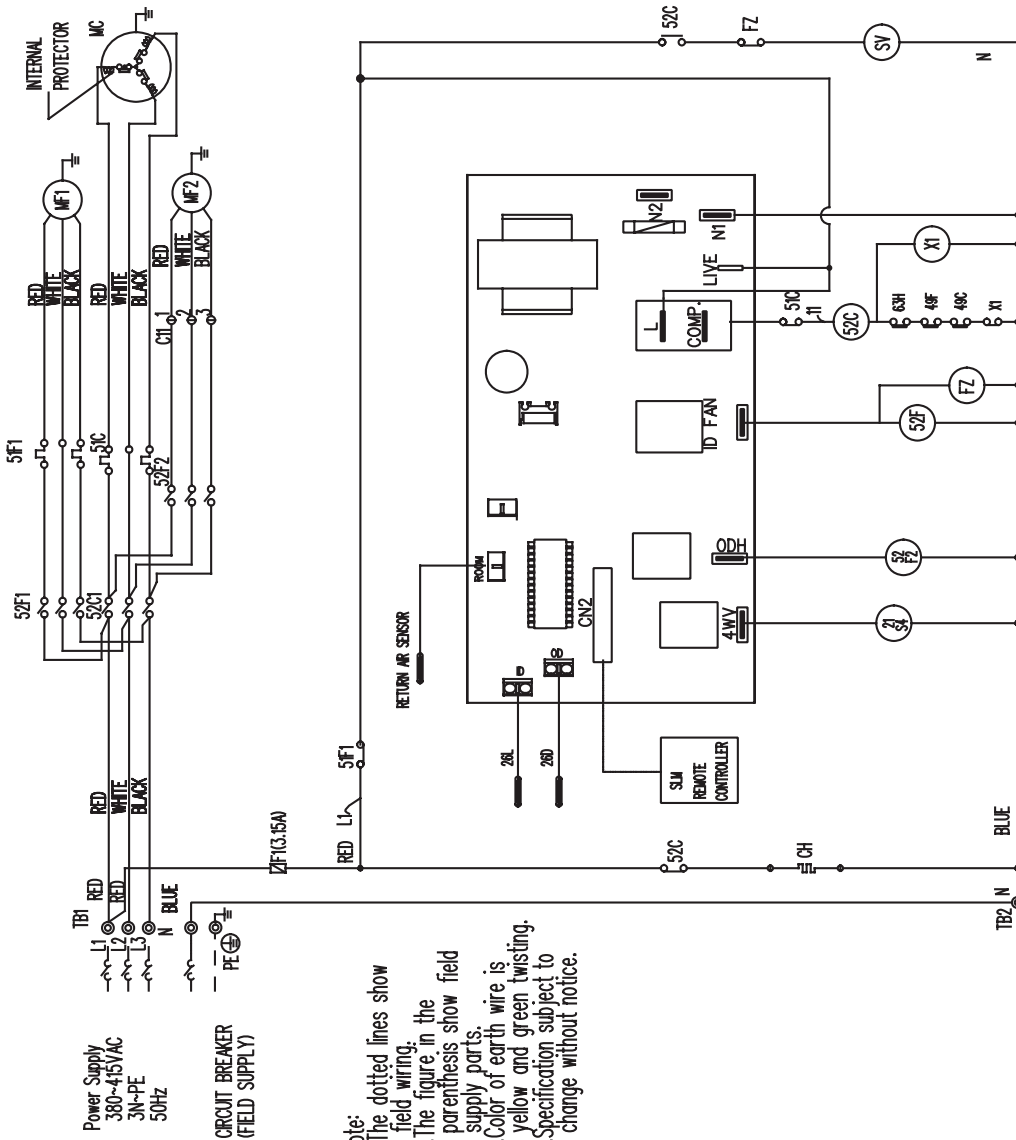
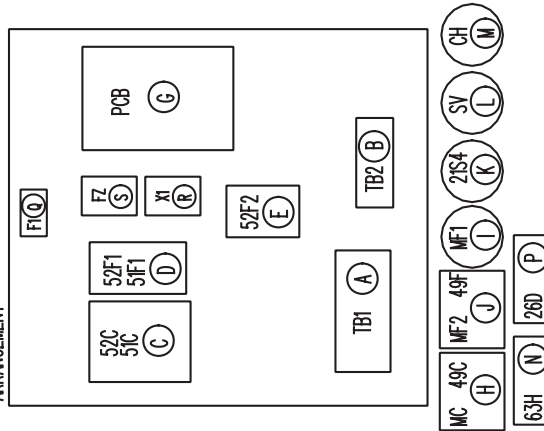
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# ELECTRICAL WIRING DIAGRAM

MODEL: UATY240,280AMY1

SYMBOL	NAME
MC	Compressor motor
MF1	Fan motor (indoor)
MF2	Fan motor (outdoor)
52C	Contactor (compressor)
52F1	Contactor (fan I/D)
52F2	Contactor (fan O/D)
51C	Over current relay (comp)
51F1	Over current relay (fan I/D)
F1	Fuse (3.15A)
TB1,2	Terminal block
63H	High-pressure switch
CH	Crankcase heater
21S4	4-Way valve
26D	Sensor (defrost)
26L	Sensor (freeze protection)
PCB	Printed circuit board
SV	Solenoid Valve
X1	Auxiliary Relay (Self hold)
FZ	Auxiliary Relay (defrost)
49F	Internal Protector (OD Fan)
49C	Internal Protector (Comp)

**ARRANGEMENT**



- Note:
1. The dotted lines show field wiring.
  2. The figure in the parenthesis show field supply parts.
  3. Color of earth wire is yellow and green twisting.
  4. Specification subject to change without notice.

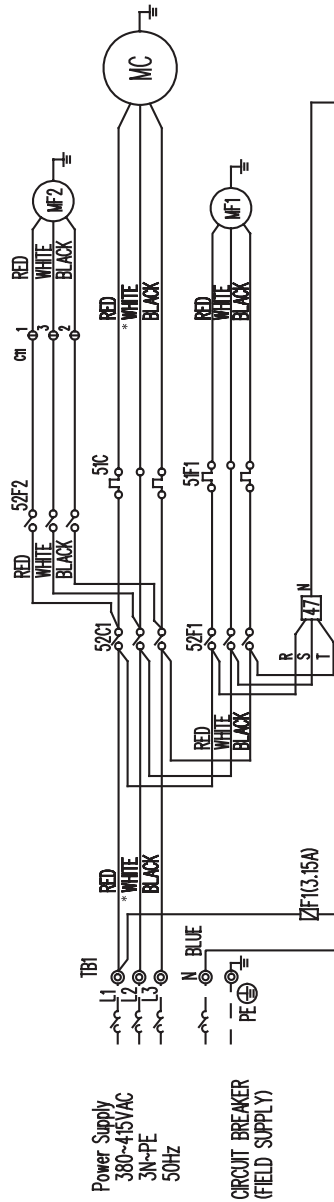
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# ELECTRICAL WIRING DIAGRAM

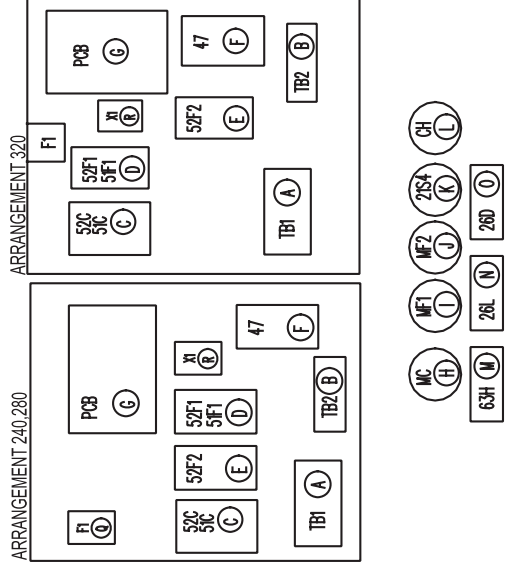
**MODEL: UATYP240,280AMY1,UATY(P)320AMY1**

SYMBOL	NAME
MC	Compressor motor
MF1	Fan motor (indoor)
MF2	Fan motor (outdoor)
52C	Contacto (compressor)
52F1	Contacto (fan I/D)
52F2	Contacto (fan O/D)
51C	Over current relay (comp)
TB1,2	Terminal block
F1	Fuse (3.15A)
51F1	Over current relay (fan I/D)
63H	High-pressure switch
CH	Crankcase heater
2IS4	4-Way valve
26D	Sensor (defrost)
26L	Sensor (freeze protection)
PCB	Printed circuit board
47	Phase protector/Discharge thermostat
X1	Auxiliary Relay (Self hold)
49F	Internal Protector (OD Fan)

\* X



- Note:**
- The dotted lines show field wiring.
  - The figure in the parenthesis show field supply parts.
  - Color of earth wire is yellow and green twisting.
  - Specification subject to change without notice.
- \* UATYP240AMY1 only  
 5. For UATY(P)320 colour of this wire is grey.

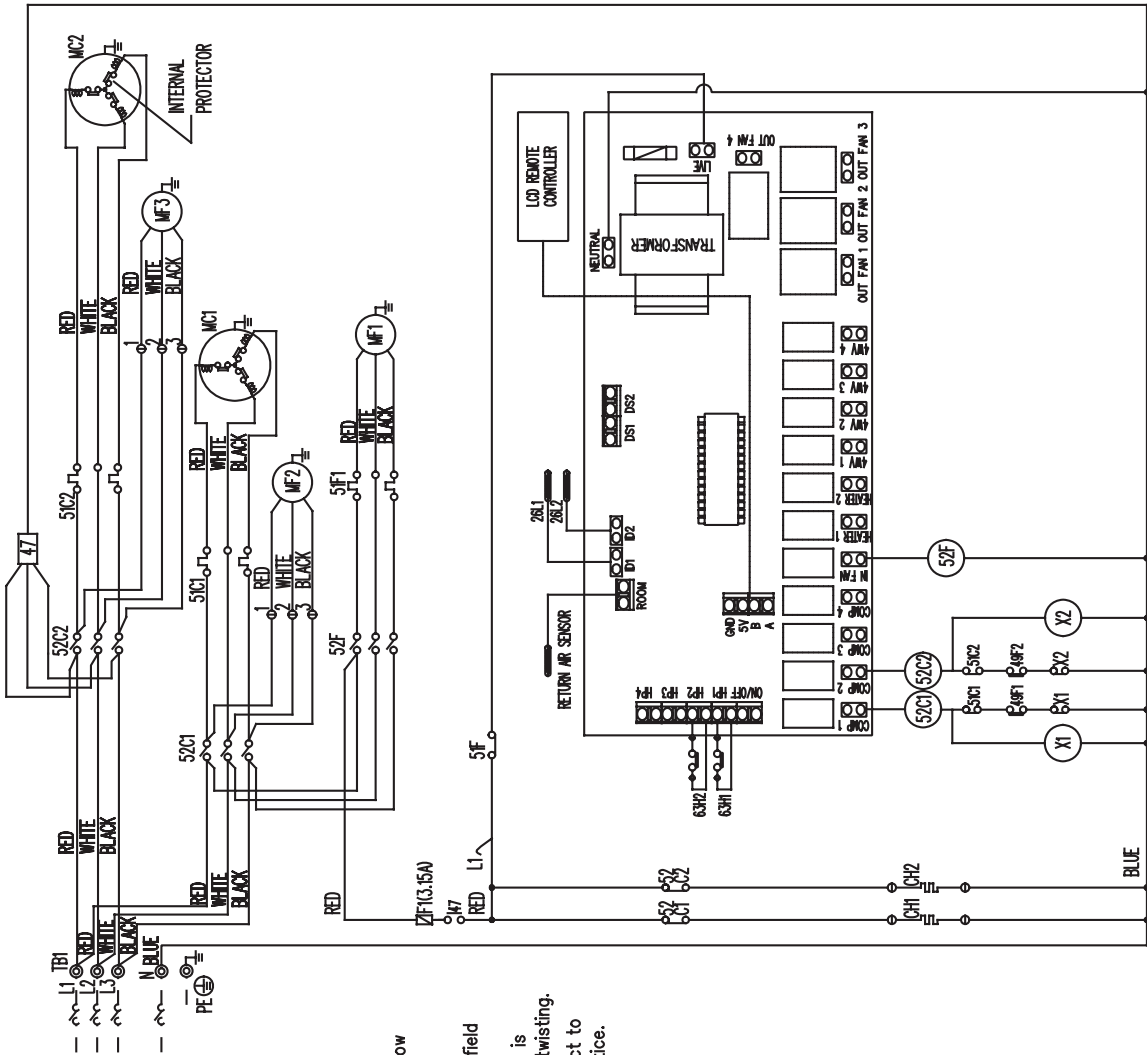


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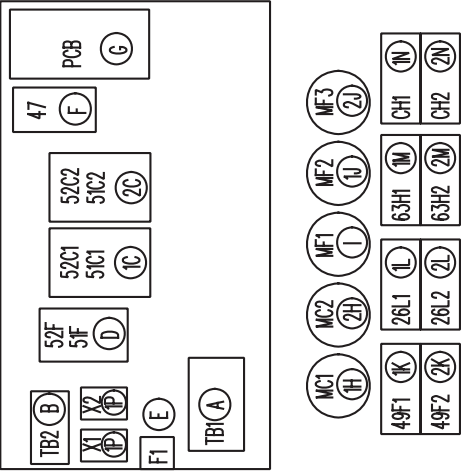
# ELECTRICAL WIRING DIAGRAM

**MODEL: UAT(P)450,560AMY1**

SYMBOL	NAME
MC1,2	Compressor motor
MF1	Fan motor (indoor)
MF2,3	Fan motor (outdoor)
52C1,2	Contact (compressor)
52F	Contact (fan I/D)
TB1,2	Terminal block
F1	Fuse (3.15A)
51C1, C2	Over current relay (COMP)
51F1	Over current relay (fan I/D)
CH1,2	Crankcase heater
26L1,2	Sensor (freeze protection)
PCB	Printed circuit board
47	Phase Protector
49F1, 2	Internal Protector (Od fan)
63H1,H2	High Pressure Switch
X1,2	Auxiliary Relay (Self Hold)



**ARRANGEMENT**



Power Supply  
380~415VAC  
3N+PE  
50Hz

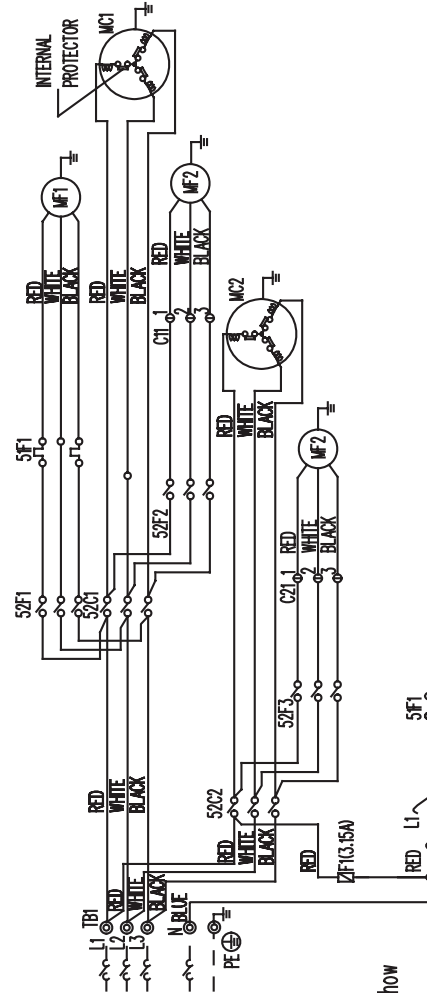
CIRCUIT BREAKER  
(FIELD SUPPLY)

- Note:
- The dotted lines show field wiring.
  - The figure in the parenthesis show field supply parts.
  - Color of earth wire is yellow and green twisting.
  - Specification subject to change without notice.

# ELECTRICAL WIRING DIAGRAM

**MODEL: UATY450,560AMY1**

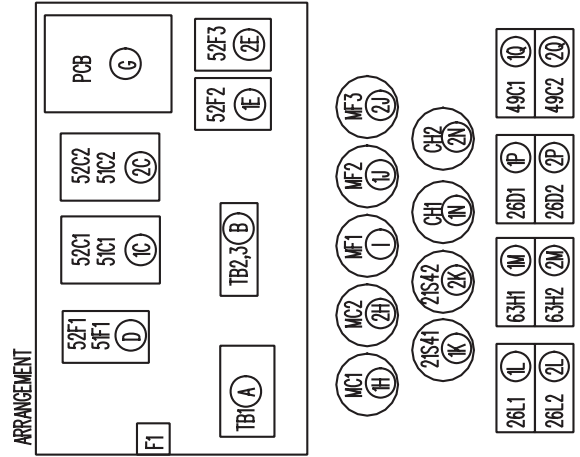
SYMBOL	NAME
MC1,2	Compressor motor
MF1	Fan motor (indoor)
MF2,3	Fan motor (outdoor)
52C1,2	Contactor (compressor)
52F1	Contactor (fan I/D)
52F2,3	Contactor (fan O/D)
TB1,2	Terminal block
F1	Fuse (3.15A)
51C1, C2	Over current relay (COMP)
51F1	Over current relay (fan)
6.3H1,2	High-pressure switch
CH1,2	Crankcase heater
21S41,2	4-Way valve
26D1,2	Sensor (defrost)
26L1,2	Sensor (freeze protection)
PCB	Printed Circuit Board
49F1, 2	Internal Protector (Od fan)
49C1, 2	Internal Protector (comp)



Power Supply  
380~415VAC  
3N~PE  
50Hz

CIRCUIT BREAKER  
(FIELD SUPPLY)

- Note:
1. The dotted lines show field wiring.
  2. The figure in the parenthesis show field supply parts.
  3. Color of earth wire is yellow and green twisting.
  4. Specification subject to change without notice.



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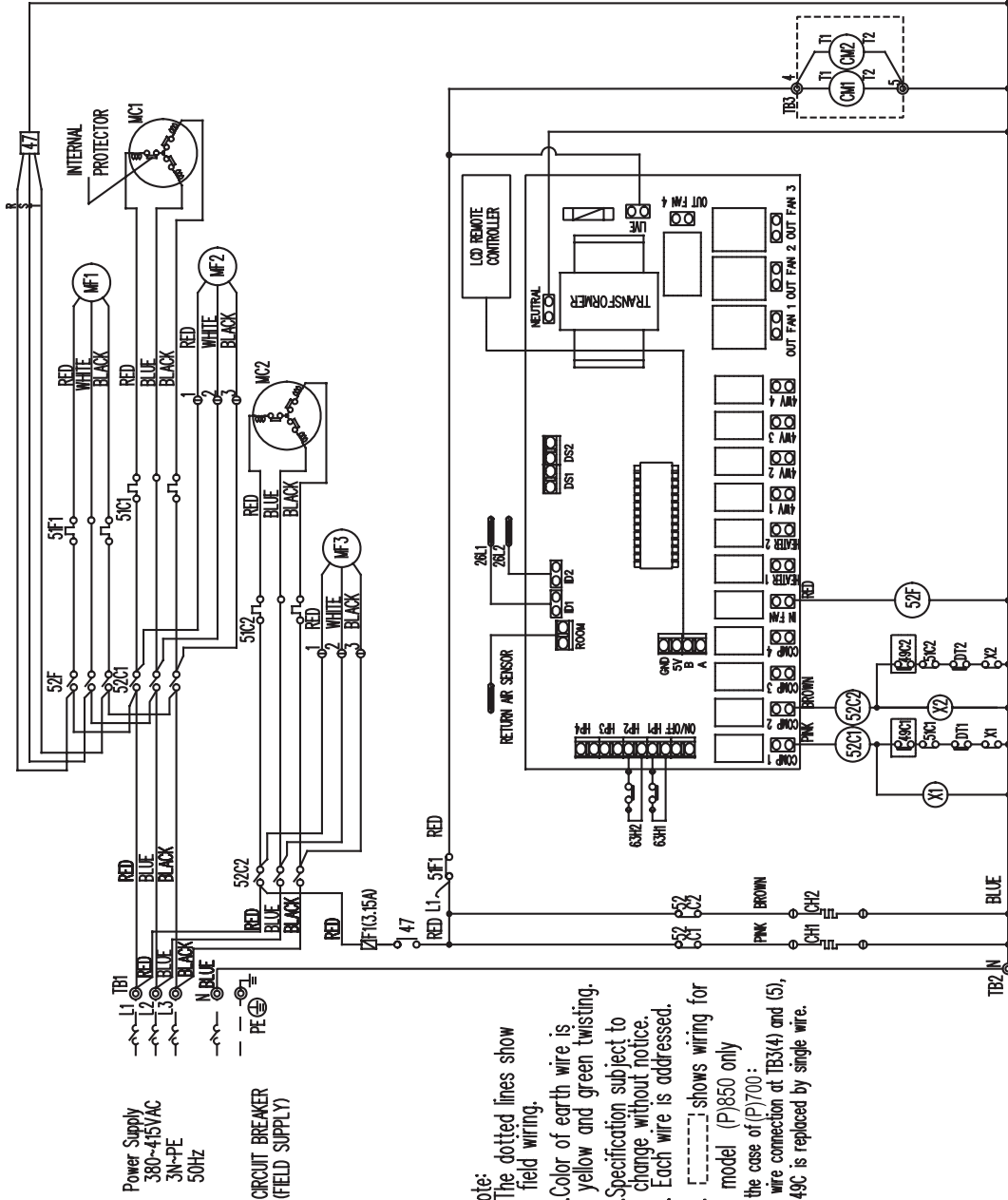


# ELECTRICAL WIRING DIAGRAM

**MODEL: UAT(P)700,850AMY1**

SYMBOL	NAME
MC1,2	Compressor motor
MF1	Fan motor (indoor)
MF2,3	Fan motor (outdoor)
52C1,2	Contact (compressor)
52F1	Contact (fan I/D)
51C1,C2	Overload Protector (compressor)
TB1,2,3	Terminal block
F1	Fuse (3.15A)
51F	Overload Protector (fan I/D)
63H1,2	High-pressure switch
CHI,2	Crankcase heater
26.1,2	Sensor (freeze protection)
PCB	Printed Circuit Board
47	Phase Protector
DT1,2	Discharge Thermostat
X1,2	Auxiliary Relay (Self Hold)
49C1,C2	Compressor internal Overload
CMT,2	Compressor Control Module

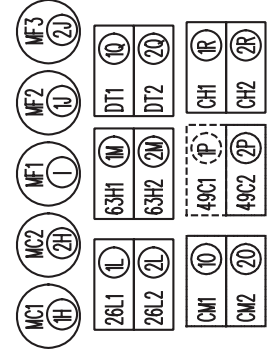
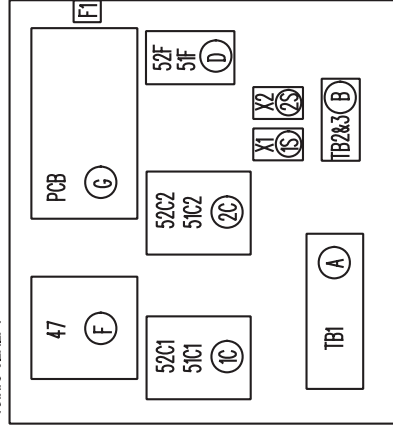
\* (P)850 only  
 \* (P)850 only



Note:

- The dotted lines show field wiring.
- Color of earth wire is yellow and green twisting.
- Specification subject to change without notice.
- Each wire is addressed.
- [---] shows wiring for model (P)850 only  
 In the case of (P)700:  
 no wire connection at TB3(4) and (5),  
 & 49C is replaced by single wire.

ARRANGEMENT



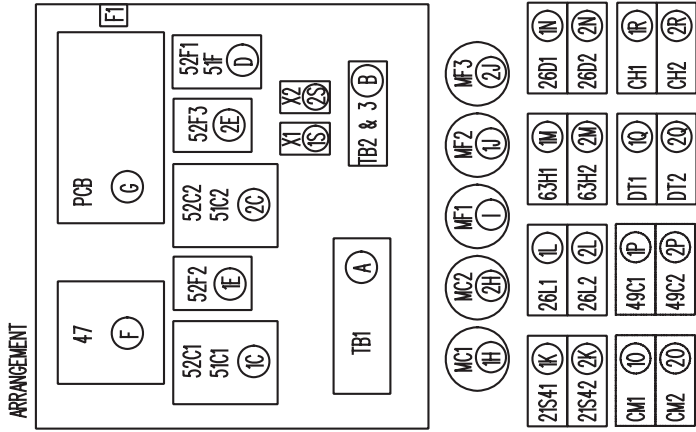
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# ELECTRICAL WIRING DIAGRAM

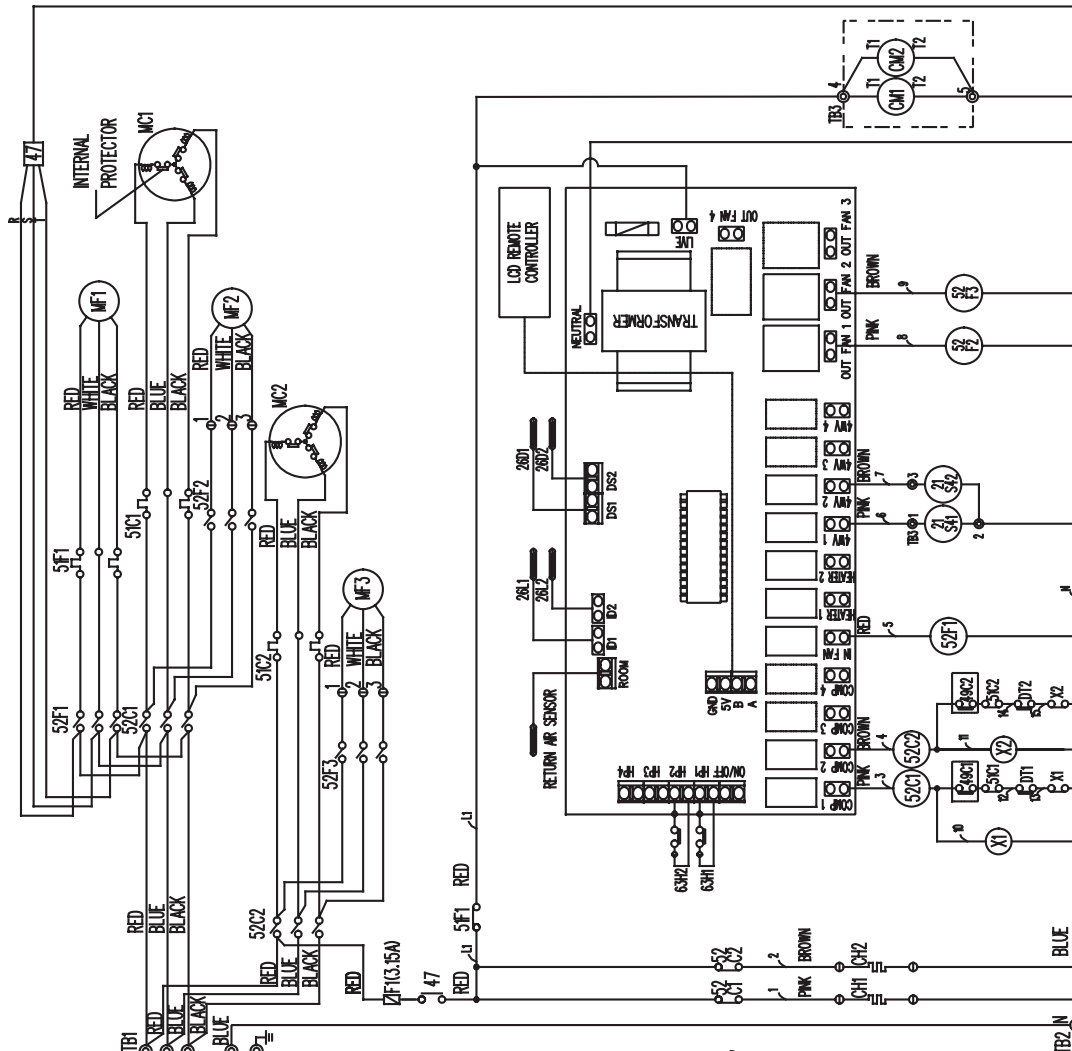
**MODEL: UATY(P)700,850AMY1**

SYMBOL	NAME
MC1,2	Compressor motor
MF1	Fan motor (indoor)
MF2,3	Fan motor (outdoor)
52C1,2	Contact (compressor)
52F1	Contact (fan 1/D)
52F2,3	Contact (fan 0/D)
51C1,C2	Overload Protector (compressor)
TB1,2,3	Terminal block
F1	Fuse (3.15A)
51F	Overload Protector (fan 1/D)
63H1,2	High-pressure switch
CH1,2	Crankcase heater
21S41,2	Sensor (defrost)
26D1,2	Sensor (freeze-protection)
26L1,2	Printed Circuit Board
47	Phase Protector
DT1,2	Discharge Thermostat
X1,2	Auxiliary Relay (Self Hold)
49C1,C2	Compressor Internal Overload
CM1,2	Compressor Control Module

\* (P)850 only  
 \* (P)850 only



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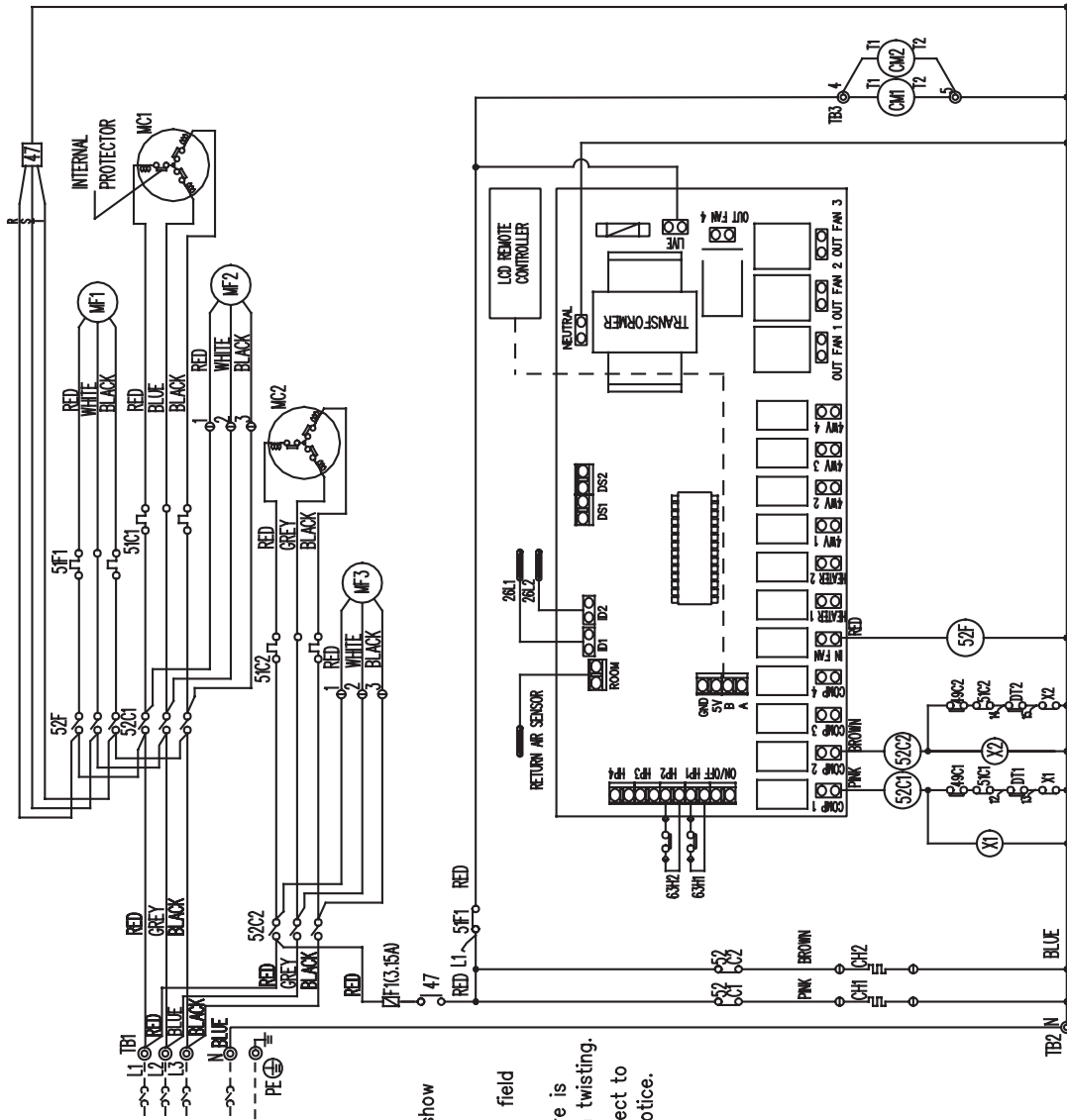
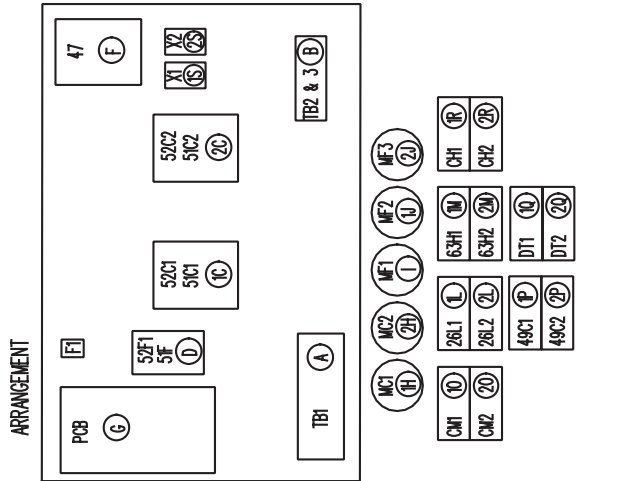
- Note:**
- The dotted lines show field wiring.
  - Color of earth wire is yellow and green twisting.
  - Specification subject to change without notice.
  - Each wire is addressed.
  - shows wiring for model (P)850 only  
 In the case of (P)700 :  
 no wire connection at TB3(4) and (5), & 49C is replaced by single wire.



# ELECTRICAL WIRING DIAGRAM

**MODEL: UAT(P)C10,12AMY1**

SYMBOL	NAME
MC1,2	Compressor motor
MF1	Fan motor (indoor)
MF2,3	Fan motor (outdoor)
52C1,2	Contact (compressor)
52F1	Contact (fan I/D)
52C1,C2	Overload Protector (compressor)
TB1,2,3	Terminal block
F1	Fuse (3,15A)
5F	Overload Protector (fan I/D)
63H1,2	High-pressure switch
CH1,2	Crankcase heater
26L1,2	Sensor (freeze protection)
PCB	Printed Circuit Board
47	Phase Protector
DT1,2	Discharge Thermostat
X1,2	Auxiliary Relay (Self Hold)
49C1,C2	Compressor internal Overload
CM1,2	Compressor Control Module



Power Supply  
380~415VAC  
3N~PE  
50Hz

CIRCUIT BREAKER  
(FIELD SUPPLY)

- Note:
- 1.The dotted lines show field wiring.
  - 2.The figure in the parenthesis show field supply parts.
  - 3.Color of earth wire is yellow and green twisting.
  - 4.Specification subject to change without notice.

08.02.4.08A032



## INDEX

1. Outline And Dimensions	page i-iv	6. Wire connection	page 7~9
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5. Electrical Data	page 6	10. Trouble Shooting	page 12

## SAFETY PRECAUTIONS

Before installing the air conditioner unit, please read the following safety precautions carefully.

### **Caution**

**Please take note on the following important points when installing.**

- **Do not install the unit where leakage of flammable gas may occur.**



If gas leaks and accumulates around the unit, it may cause fire ignition.

- **Ensure that the drainage piping is connected properly.**

- **Do not overcharge the unit.**



This unit is factory pre-charged. Overcharge will cause over-current or damage to the compressor.

- **Ensure that the unit service panel is closed after service or installation.**



Unsecured panel will cause unit to operate noisily.

## INSTALLATION OF THE UNIT

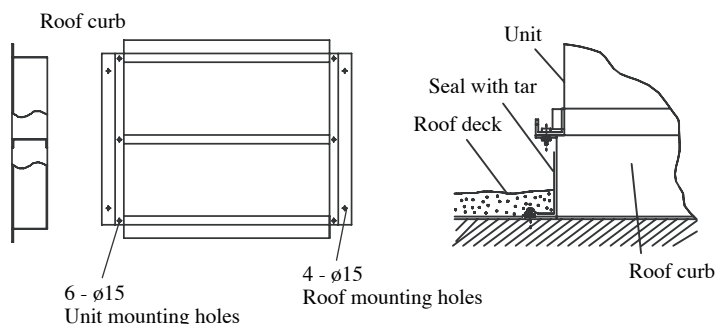
### 1.1 Location For Installation

- Install the unit in such way that air distributed by the unit cannot be drawn in again (as in the case of short circuit of discharge air). Allow sufficient space for maintenance around the unit.
- When two or more units are installed in a location, they must be positioned such that one unit will not be taking the discharge air from another unit.
- Ensure that there is no obstruction of air flow into or out of the unit. Remove obstacles which block air intake or air discharge.
- The location must be well ventilated, so that the unit can draw and distribute plenty of air
- A place capable of bearing the weight of the outdoor unit and isolating noise and vibration.
- A place protected from direct sunlight. Otherwise use an awning for protection, if necessary.
- A place where smooth drainage of rain water and water formed by defrosting is acceptable.
- A place where the unit will not be buried in snow.
- A place where air outlet port is not exposed to strong wind.
- A place where the air discharge and operating sound level will not annoy the neighbours.
- The location must not be susceptible to dust or oil mist.
- The location where it is not accessible by general public.
- Keep the unit, power cable and transmission wiring, at least 1 m away from TVs and radios, to prevent distorted pictures and static. (Depending on the type and the source of the electrical waves, static may be heard even when more than 1 m away)

## INSTALLATION OF THE UNIT

### 1.2 Unit Support

1. The figure shows the use of the roof curb for mounting these units.
2. The curb should be sealed and fixed to the roof by weather stripping. A suggested means of sealing the unit and roof curb as shown in the left.



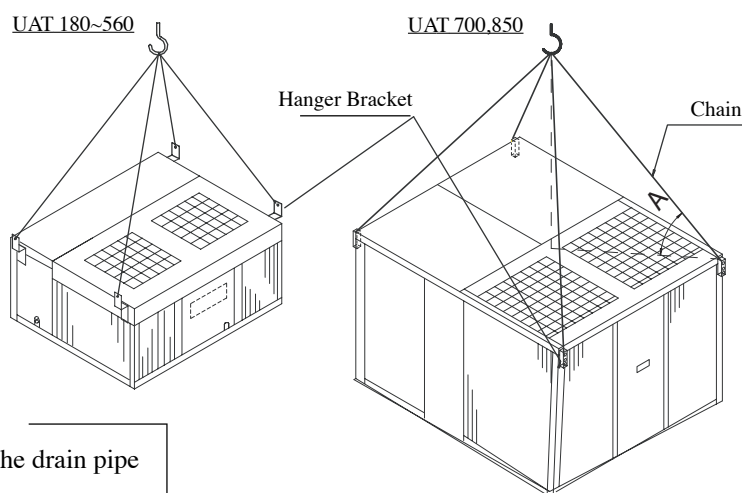
### 1.3 Duct Construction

- These unit are equipped with supply and return air openings. Duct connection to the unit should be made with duct flanges and secured directly to the air openings with flexible duct connectors to avoid normal noise transmission.
- To prevent air leakage, all duct seams should be sealed.
- Ducts in the spaces that not air-conditioned, must be insulated.
- Ducts exposed to the outside must be weather proofed.
- Ducts that entering building through the roof, the entering should be sealed with weather stripping to prevent the rain, sand, dust etc. from entering the bulding.
- Correct size of filter must be install at the return air duct.

### 1.4 Unit Lifting

Hanger brackets at 4 corner of the unit are used for unit lifting purpose.

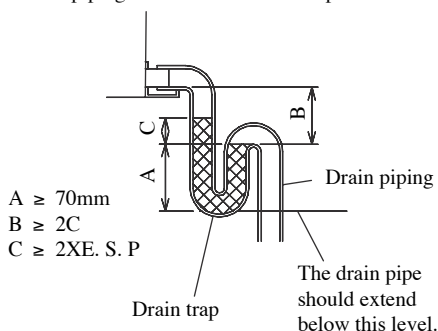
The angle A of the chain should be at least 45°, and insulation should be added at 4 corner of the chain to prevent the damage of the panel when lifting.



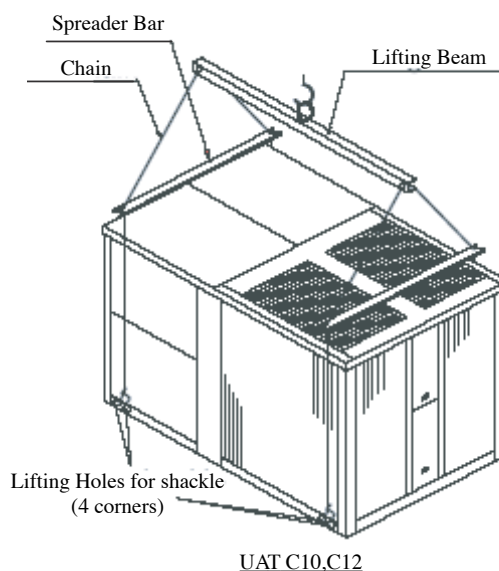
### 1.5 Drain piping

- A 1 FPT condensate drain fitting is provided. The drain pipe can be led out at the front side.
- The drain pipe must be provided with a trap on the outside of the unit and also installed at an incline for proper drainage, as shown in the right.
- To prevent condensate formation and leakage, provide the drain pipe with insulation to safeguard against sweating.
- Upon completion of the piping work, check that there is no leakage and that the water drains off properly.

The drain piping should have a drain trap.



Note: ESP = External Static Pressure  
 Drain trap for condensate



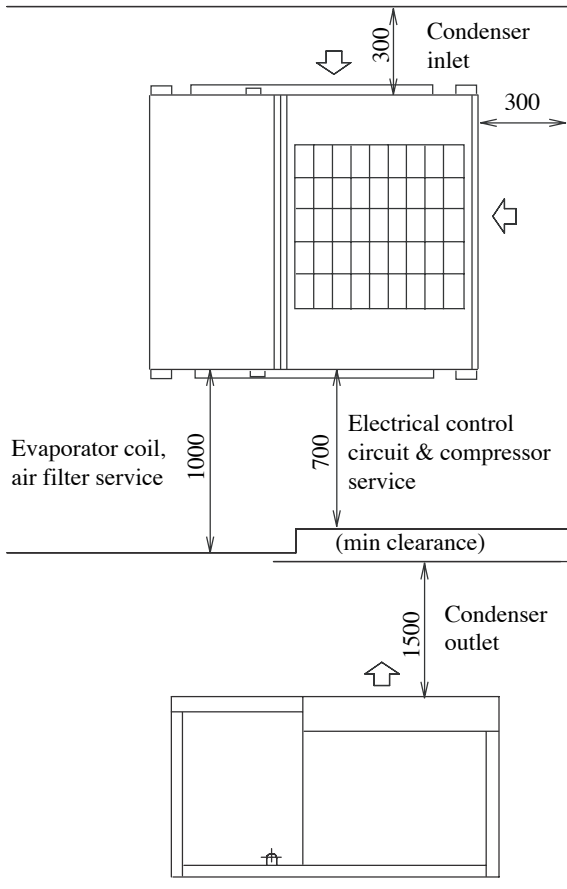
# INSTALLATION OF THE UNIT

## 1.6 Space required around units

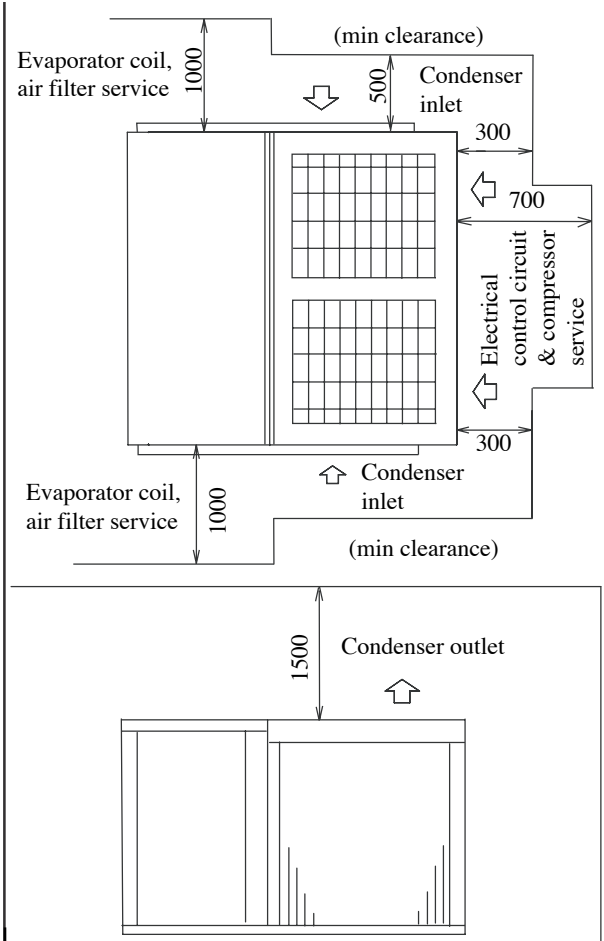
(unit ; mm)

All space value ; minimum clearance

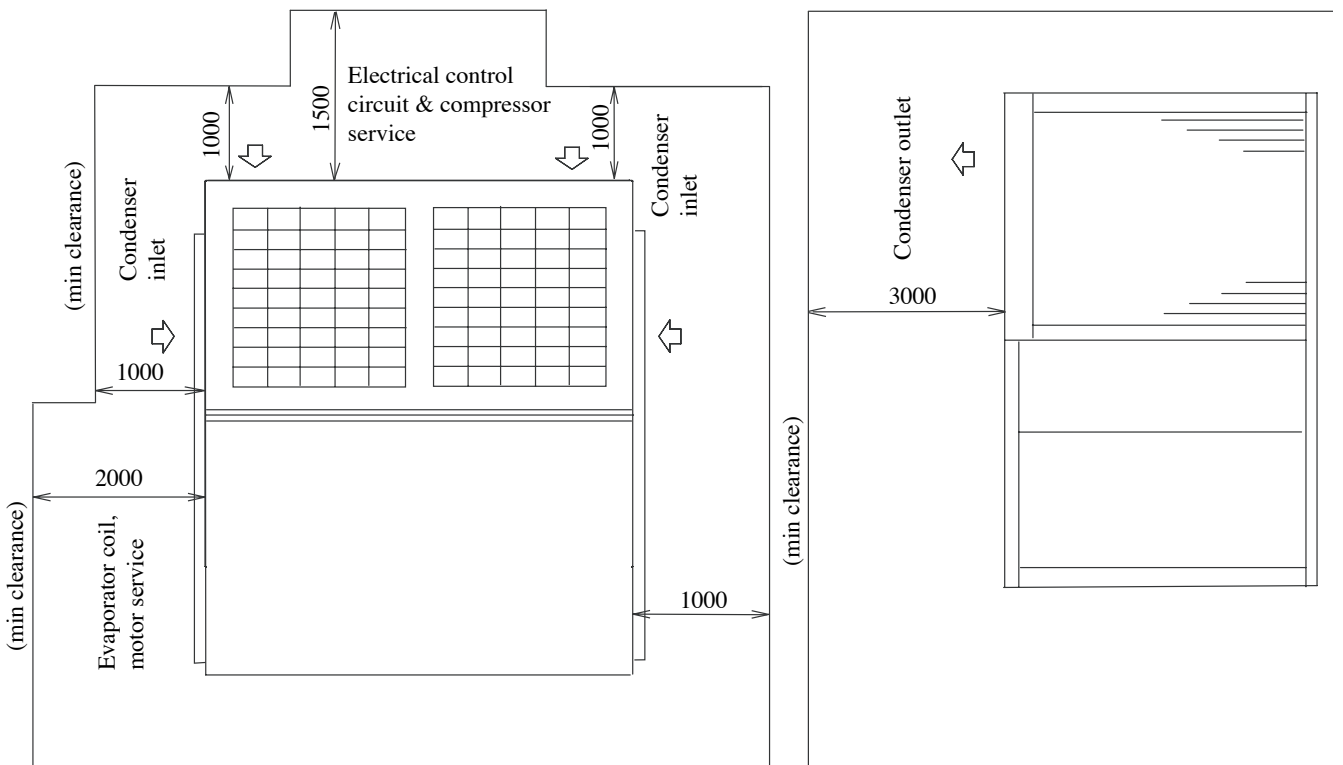
UAT 180~320



UAT 450, 560



UAT 700~C12



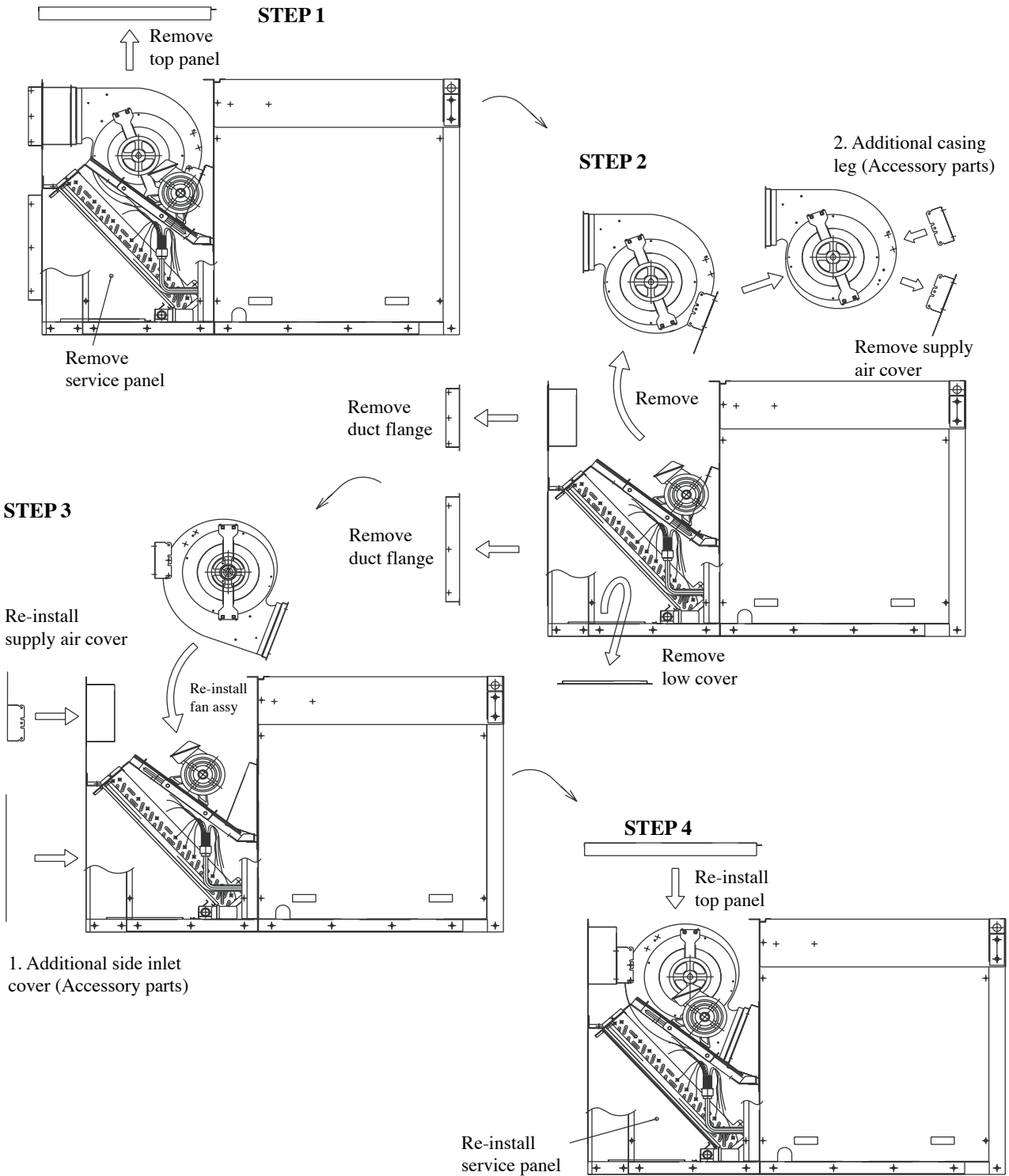
# INSTALLATION OF THE UNIT

## 1.7 Unit conversion

Please check for accessory parts as below. (Packed in the unit, and available for convertible unit only)

1. Side inlet cover	1 piece
2. Casing leg	2 pieces UAT(Y)(P)240, 280, 320AMY1 4 pieces UAT (Y)(P)450, 560AMY1

In the case of converting to down flow unit, change according to the following steps.



## PHYSICAL DATA

### COOLING ONLY (R22)

MODEL		UAT180AMY1	UAT240AMY1	UAT280AMY1	UAT320AMY1	UAT480AMY1
REFRIGERANT		R22				
REFRIGERANT CHARGE	kg	5.2	4.0	5.9	6.2	4.5 x 2
EVAPORATOR AIR FLOW	CFM	1800	2826	3532	3600	5651
	L/S	850	1334	1667	1699	2667
EXTERNAL STATIC PRESSURE	mmAq	10				
CONDENSER AIR FLOW	CFM	4500	5650		8000	11300
	L/S	2124	2667		3776	5333
CONTROL		SLM CONTROLLER				SEQUENTIAL CONTROLLER
CONTROL WIRE LENGTH (STANDARD / MAX) : SIZE	m : mm <sup>2</sup>	7 / 15 : 0.14				- / 100 : 0.14
COMPRESSOR (TYPE / QUANTITY)		SCROLL / 1				SCROLL / 2
AIR FILTER (TYPE / QUANTITY)		WASHABLE SARANET / 1				WASHABLE SARANET / 2
AIR FILTER DIMENSION (LENGTH x WIDTH x THICKNESS)	mm	820 x 615 x 1		1020 x 615 x 1		840 x 667 x 1

MODEL		UAT560AMY1	UAT700AMY1	UAT850AMY1	UATC10AMY1	UATC12AMY1
REFRIGERANT		R22				
REFRIGERANT CHARGE	kg	5.9 x 2	10.5 x 2	10.4 x 2	16.5 / 19.5	19.5 x 2
EVAPORATOR AIR FLOW	CFM	6710	8000	9600	11000	12500
	L/S	3167	3776	4531	5191	5899
EXTERNAL STATIC PRESSURE	mmAq	20				
CONDENSER AIR FLOW	CFM	11300			20000	9439
	L/S	5333			9439	
CONTROL		SEQUENTIAL CONTROLLER				
CONTROL WIRE LENGTH (STANDARD / MAX) : SIZE	m : mm <sup>2</sup>	- / 100 : 0.14				
COMPRESSOR (TYPE / QUANTITY)		SCROLL / 2				
AIR FILTER (TYPE / QUANTITY)		WASHABLE SARANET / 2				
AIR FILTER DIMENSION (LENGTH x WIDTH x THICKNESS)	mm	840 x 667 x 1	1370 x 735 x 1		860 x 505 & 600 x 4	

### HEAT PUMP (R22)

MODEL		UATY180AMY1	UATY240AMY1	UATY280AMY1	UATY320AMY1	UATY480AMY1
REFRIGERANT		R22				
REFRIGERANT CHARGE	kg	4.5	4.7	5.6	6.0	4.7 x 2
EVAPORATOR AIR FLOW	CFM	1800	2826	3532	3600	5651
	L/S	850	1334	1667	1699	2667
EXTERNAL STATIC PRESSURE	mmAq	10				
CONDENSER AIR FLOW	CFM	4500	5650		10000	11300
	L/S	2124	2667		4719	5333
CONTROL		SLM CONTROLLER				SEQUENTIAL CONTROLLER
CONTROL WIRE LENGTH (STANDARD / MAX) : SIZE	m : mm <sup>2</sup>	7 / 15 : 0.14				- / 100 : 0.14
COMPRESSOR (TYPE / QUANTITY)		SCROLL / 1				SCROLL / 2
AIR FILTER (TYPE / QUANTITY)		WASHABLE SARANET / 1				WASHABLE SARANET / 2
AIR FILTER DIMENSION (LENGTH x WIDTH x THICKNESS)	mm	820 x 615 x 1		1020 x 615 x 1		840 x 667 x 1

MODEL		UATY560AMY1	UATY700AMY1	UATY850AMY1	UATYC10AMY1	UATYC12AMY1
REFRIGERANT		R22				
REFRIGERANT CHARGE	kg	5.6 x 2	10.5 x 2	9.4 x 2	16.0 / 20.5	20.5 x 2
EVAPORATOR AIR FLOW	CFM	6710	8000	9600	11000	12500
	L/S	3167	3776	4531	5191	5899
EXTERNAL STATIC PRESSURE	mmAq	20				
CONDENSER AIR FLOW	CFM	11300			20000	9439
	L/S	5333			9439	
CONTROL		SEQUENTIAL CONTROLLER				
CONTROL WIRE LENGTH (STANDARD / MAX) : SIZE	m : mm <sup>2</sup>	- / 100 : 0.14				
COMPRESSOR (TYPE / QUANTITY)		SCROLL / 2				
AIR FILTER (TYPE / QUANTITY)		WASHABLE SARANET / 2				
AIR FILTER DIMENSION (LENGTH x WIDTH x THICKNESS)	mm	840 x 667 x 1	1370 x 735 x 1		860 x 505 & 600 x 4	

### COOLING ONLY (R407C)

MODEL		UATP180AMY1	UATP240AMY1	UATP280AMY1	UATP320AMY1	UATP480AMY1
REFRIGERANT		R407C				
REFRIGERANT CHARGE	kg	4.6	4.0	5.9	6.2	4.5 x 2
EVAPORATOR AIR FLOW	CFM	1800	2826	3532	3600	5651
	L/S	850	1334	1667	1699	2667
EXTERNAL STATIC PRESSURE	mmAq	10				
CONDENSER AIR FLOW	CFM	4500	5650		8000	11300
	L/S	2124	2667		3776	5333
CONTROL		SLM CONTROLLER				SEQUENTIAL CONTROLLER
CONTROL WIRE LENGTH (STANDARD / MAX) : SIZE	m : mm <sup>2</sup>	7 / 15 : 0.14				- / 100 : 0.14
COMPRESSOR (TYPE / QUANTITY)		SCROLL / 1				SCROLL / 2
AIR FILTER (TYPE / QUANTITY)		WASHABLE SARANET / 1				WASHABLE SARANET / 2
AIR FILTER DIMENSION (LENGTH x WIDTH x THICKNESS)	mm	820 x 615 x 1		1020 x 615 x 1		840 x 667 x 1

MODEL		UATP560AMY1	UATP700AMY1	UATP850AMY1	UATPC10AMY1	UATPC12AMY1
REFRIGERANT		R407C				
REFRIGERANT CHARGE	kg	4.2 x 2	9.6 x 2	10.4 x 2	14.5 / 18.0	18.0 x 2
EVAPORATOR AIR FLOW	CFM	6710	8000	9300	11000	12500
	L/S	3167	3776	4389	5191	5899
EXTERNAL STATIC PRESSURE	mmAq	20				
CONDENSER AIR FLOW	CFM	11300			20000	9439
	L/S	5333			9439	
CONTROL		SEQUENTIAL CONTROLLER				
CONTROL WIRE LENGTH (STANDARD / MAX) : SIZE	m : mm <sup>2</sup>	- / 100 : 0.14				
COMPRESSOR (TYPE / QUANTITY)		SCROLL / 2				
AIR FILTER (TYPE / QUANTITY)		WASHABLE SARANET / 2				
AIR FILTER DIMENSION (LENGTH x WIDTH x THICKNESS)	mm	840 x 667 x 1	1370 x 735 x 1		860 x 505 & 600 x 4	

### HEAT PUMP (R407C)

MODEL		UATYP180AMY1	UATYP240AMY1	UATYP280AMY1	UATYP320AMY1	UATYP480AMY1
REFRIGERANT		R407C				
REFRIGERANT CHARGE	kg	4.3	4.7	5.6	6.0	5.0 x 2
EVAPORATOR AIR FLOW	CFM	1800	2826	3532	3600	5651
	L/S	850	1334	1667	1699	2667
EXTERNAL STATIC PRESSURE	mmAq	10				
CONDENSER AIR FLOW	CFM	4500	5650		10000	11300
	L/S	2124	2667		4719	5333
CONTROL		SLM CONTROLLER				SEQUENTIAL CONTROLLER
CONTROL WIRE LENGTH (STANDARD / MAX) : SIZE	m : mm <sup>2</sup>	7 / 15 : 0.14				- / 100 : 0.14
COMPRESSOR (TYPE / QUANTITY)		SCROLL / 1				SCROLL / 2
AIR FILTER (TYPE / QUANTITY)		WASHABLE SARANET / 1				WASHABLE SARANET / 2
AIR FILTER DIMENSION (LENGTH x WIDTH x THICKNESS)	mm	820 x 615 x 1		1020 x 615 x 1		840 x 667 x 1

MODEL		UATYP560AMY1	UATYP700AMY1	UATYP850AMY1	UATYPC10AMY1	UATYPC12AMY1
REFRIGERANT		R407C				
REFRIGERANT CHARGE	kg	5.8 x 2	9.6 x 2	9.6 x 2	13.5 / 20.5	20.0 x 2
EVAPORATOR AIR FLOW	CFM	6710	8000	9600	11000	12500
	L/S	3167	3776	4531	5191	5899
EXTERNAL STATIC PRESSURE	mmAq	20				
CONDENSER AIR FLOW	CFM	11300			20000	9439
	L/S	5333			9439	
CONTROL		SEQUENTIAL CONTROLLER				
CONTROL WIRE LENGTH (STANDARD / MAX) : SIZE	m : mm <sup>2</sup>	- / 100 : 0.14				
COMPRESSOR (TYPE / QUANTITY)		SCROLL / 2				
AIR FILTER (TYPE / QUANTITY)		WASHABLE SARANET / 2				
AIR FILTER DIMENSION (LENGTH x WIDTH x THICKNESS)	mm	840 x 667 x 1	1370 x 735 x 1		860 x 505 & 600 x 4	

## ELECTRICAL DATA

### COOLING ONLY (R22)

MODEL		UAT180AMY1	UAT240AMY1	UAT280AMY1	UAT320AMY1	UAT450AMY1
POWER SUPPLY	V/ph/Hz	400 / 3 / 50				
VOLTAGE RANGE	V	380 ~ 415				
MAX CONTINUOUS CURRENT (COMP)	A	14.0	23.0	26.9	27.5	23.0 x 2
FULL LOAD CURRENT (FLA, COMP)	A	12.1	15.6	16.9	22.3	15.6 x 2
LOCKED ROTOR CURRENT (LRA, COMP)	A	74	95	118	118	95 x 2

MODEL		UAT560AMY1	UAT700AMY1	UAT850AMY1	UATC10AMY1	UATC12AMY1
POWER SUPPLY	V/ph/Hz	400 / 3 / 50				
VOLTAGE RANGE	V	380 ~ 415				
MAX CONTINUOUS CURRENT (COMP)	A	26.9 x 2	27.5 x 2	37.0 x 2	35.0, 50.0	50.0 x 2
FULL LOAD CURRENT (FLA, COMP)	A	16.9 x 2	22.3 x 2	30.0 x 2	24.0, 30.0	30.0 x 2
LOCKED ROTOR CURRENT (LRA, COMP)	A	118 x 2	118 x 2	198 x 2	175, 215	215 x 2

### HEAT PUMP (R22)

MODEL		UATY180AMY1	UATY240AMY1	UATY280AMY1	UATY320AMY1	UATY450AMY1
POWER SUPPLY	V/ph/Hz	400 / 3 / 50				
VOLTAGE RANGE	V	380 ~ 415				
MAX CONTINUOUS CURRENT (COMP)	A	17.0	22.0	31.0	27.5	22.0 x 2
FULL LOAD CURRENT (FLA, COMP)	A	15.0	19.5	23.0	22.3	19.5 x 2
LOCKED ROTOR CURRENT (LRA, COMP)	A	101	84	81	118	84 x 2

MODEL		UATY560AMY1	UATY700AMY1	UATY850AMY1	UATYC10AMY1	UATYC12AMY1
POWER SUPPLY	V/ph/Hz	400 / 3 / 50				
VOLTAGE RANGE	V	380 ~ 415				
MAX CONTINUOUS CURRENT (COMP)	A	31.0 x 2	27.5 x 2	37.0 x 2	35.0, 50.0	50.0 x 2
FULL LOAD CURRENT (FLA, COMP)	A	23.0 x 2	22.3 x 2	30.0 x 2	24.0, 30.0	30.0 x 2
LOCKED ROTOR CURRENT (LRA, COMP)	A	81 x 2	118 x 2	198 x 2	175, 215	215 x 2

### COOLING ONLY (R407C)

MODEL		UATP180AMY1	UATP240AMY1	UATP280AMY1	UATP320AMY1	UATP450AMY1
POWER SUPPLY	V/ph/Hz	400 / 3 / 50				
VOLTAGE RANGE	V	380 ~ 415				
MAX CONTINUOUS CURRENT (COMP)	A	14.0	23.0	26.9	31.0	23.0 x 2
FULL LOAD CURRENT (FLA, COMP)	A	13.0	15.9	16.9	22.3	15.6 x 2
LOCKED ROTOR CURRENT (LRA, COMP)	A	74	95	118	118	95 x 2

MODEL		UATP560AMY1	UATP700AMY1	UATP850AMY1	UATPC10AMY1	UATPC12AMY1
POWER SUPPLY	V/ph/Hz	400 / 3 / 50				
VOLTAGE RANGE	V	380 ~ 415				
MAX CONTINUOUS CURRENT (COMP)	A	26.9 x 2	31.0 x 2	45.0 x 2	35.0, 50.0	50.0 x 2
FULL LOAD CURRENT (FLA, COMP)	A	16.9 x 2	22.3 x 2	30.0 x 2	24, 30	30.0 x 2
LOCKED ROTOR CURRENT (LRA, COMP)	A	118 x 2	118 x 2	198 x 2	175, 215	215 x 2

### HEAT PUMP (R22)

MODEL		UATYP180AMY1	UATYP240AMY1	UATYP280AMY1	UATYP320AMY1	UATYP450AMY1
POWER SUPPLY	V/ph/Hz	400 / 3 / 50				
VOLTAGE RANGE	V	380 ~ 415				
MAX CONTINUOUS CURRENT (COMP)	A	17.0	23.0	26.9	31.0	23.0 x 2
FULL LOAD CURRENT (FLA, COMP)	A	15.0	15.9	16.9	22.3	15.9 x 2
LOCKED ROTOR CURRENT (LRA, COMP)	A	101	95	118	118	95 x 2

MODEL		UATYP560AMY1	UATYP700AMY1	UATYP850AMY1	UATYPC10AMY1	UATYPC12AMY1
POWER SUPPLY	V/ph/Hz	400 / 3 / 50				
VOLTAGE RANGE	V	380 ~ 415				
MAX CONTINUOUS CURRENT (COMP)	A	26.9 x 2	31.0 x 2	45.0 x 2	35.0, 50.0	50.0 x 2
FULL LOAD CURRENT (FLA, COMP)	A	16.9 x 2	22.3 x 2	32.0 x 2	24, 30	30.0 x 2
LOCKED ROTOR CURRENT (LRA, COMP)	A	118 x 2	118 x 2	198 x 2	175, 215	215 x 2



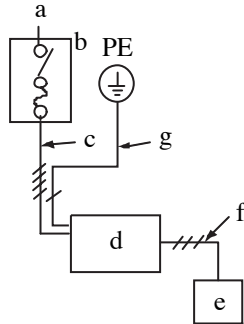
## WIRE CONNECTION

- All electrical work must be carried out by qualified electrician and accordance with local supply requirement and associated regulation.

### Method for connecting electric wire

Before connecting the wire, consult the electric power company of jurisdiction.

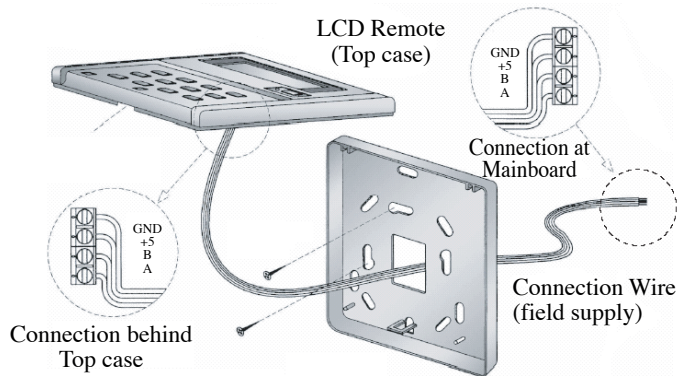
1. The entire wiring diagram of unit.



a.	Power supply	d.	Unit
b.	Main switch/fuse (field supply)	e.	Remote control
c.	Power supply wiring for unit	f.	Connection wiring for unit & remote controller
		g.	Earth

2. Remote control wire connection.

UAT(Y)(P)450, 560, 700, 850, C10, C12AMY1

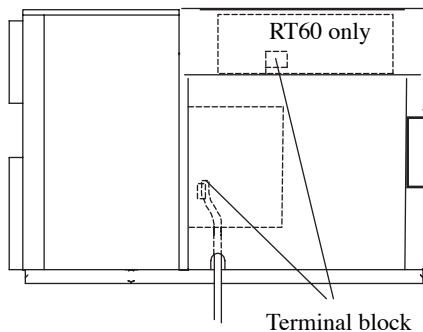


Note: For UAT(Y)(P)180, 240, 280, 320AMY1, wire is attached the remote control. Connect directly to connector 'CN2' on mainboard.

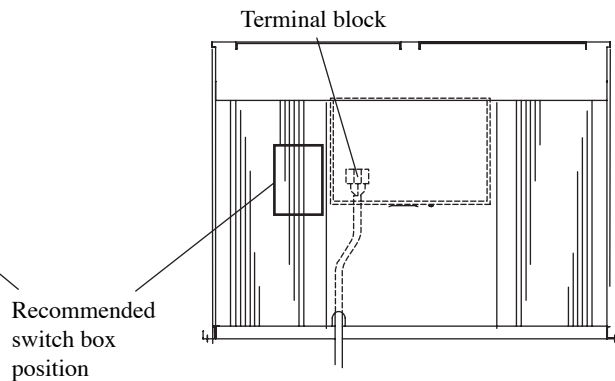
3. Wiring connection to unit

Remove the panel and connect the units power supply wires to terminal block, as shown below.

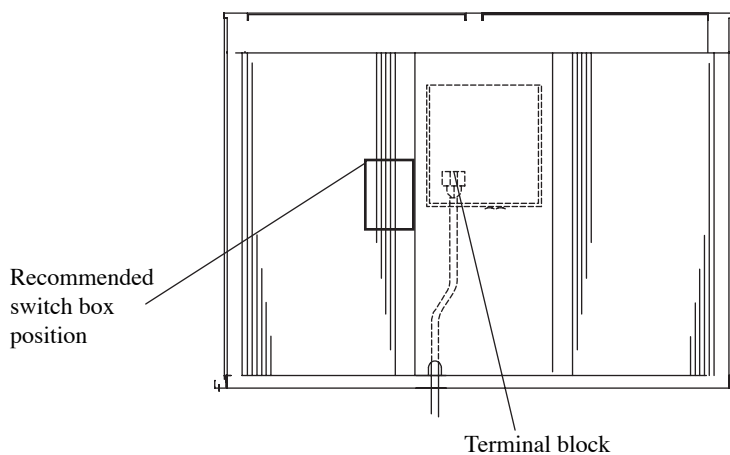
UAT(Y)(P)180, 240, 280, 320AMY1



UAT(Y)(P)450, 560AMY1



UAT(Y)(P)700, 850, C10, C12AMY1

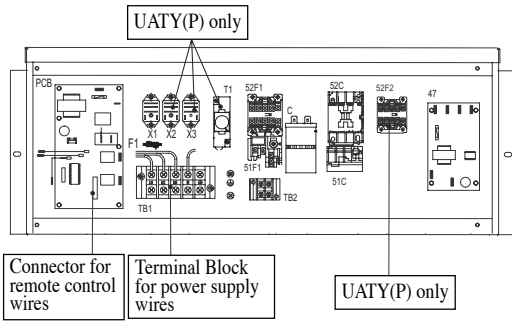


**NOTE:** While installing the circuit breaker onto the unit, make sure that the screws do not damage the components (e.g. coil) inside of the unit.  
The circuit breaker also can be installed without attaching to the unit.

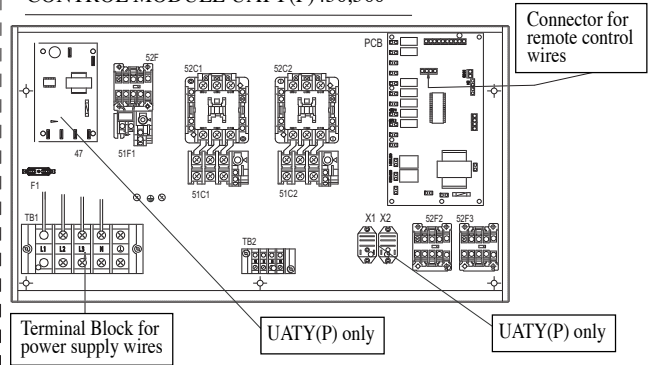
## WIRE CONNECTION

Arrangement of terminal block for controller are shown below.

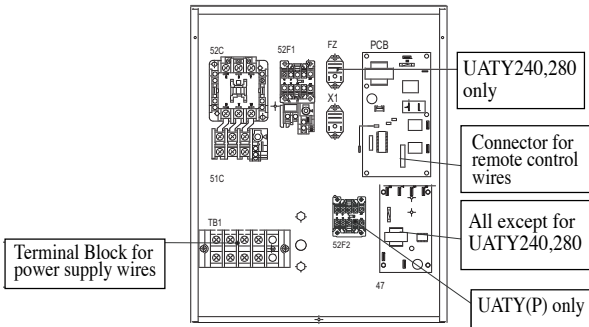
**CONTROL MODULE UAT(Y)(P)180**



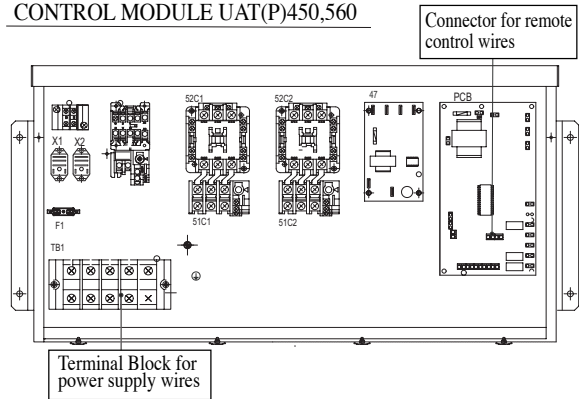
**CONTROL MODULE UATY(P)450,560**



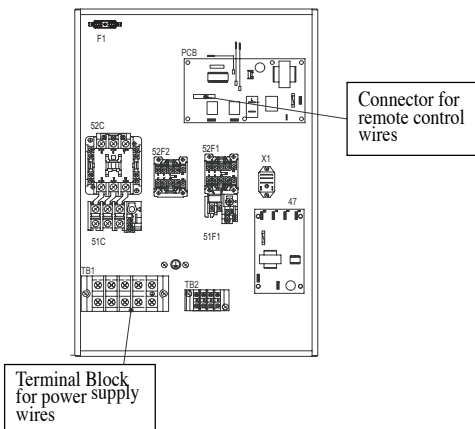
**CONTROL MODULE UAT(Y)240,280, UAT(Y)(P)320**



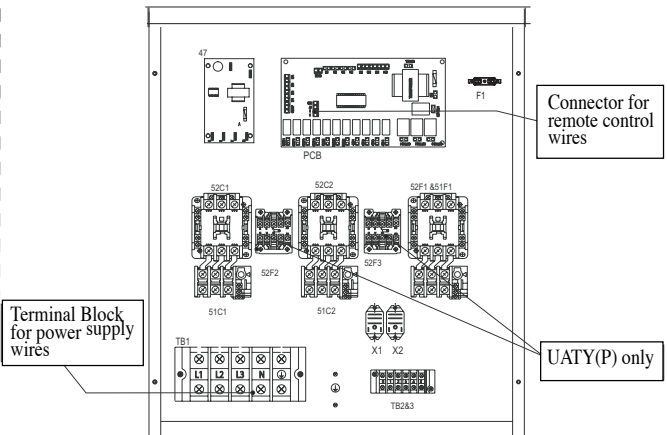
**CONTROL MODULE UAT(P)450,560**



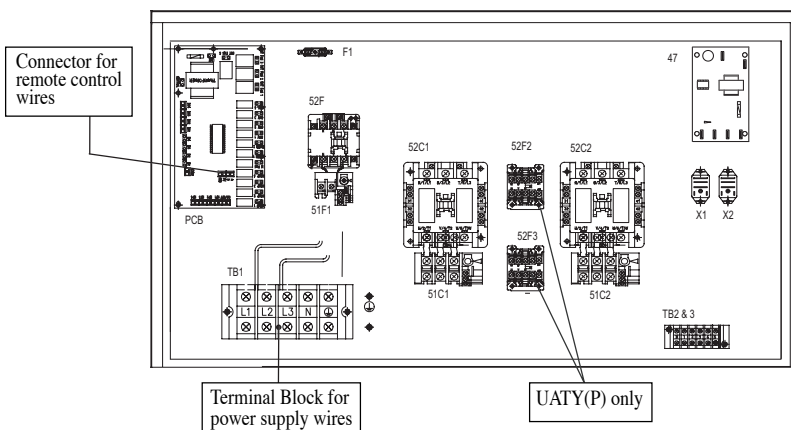
**CONTROL MODULE UATYP240,280**



**CONTROL MODULE UAT(Y)(P)700,850**



**CONTROL MODULE UAT(Y)(P)C10,C12**



## WIRE CONNECTION

### Wiring Example and Selection of Circuit Breaker

Values of breaker and wire size are recommended as in table below.

380~415V, 50Hz, 3 $\phi$

MODEL	POWER CABLE (mm <sup>2</sup> )	BREAKER CAPACITY (A)	OVER CURRENT PROTECTION SWITCH (A)	EARTH CABLE (mm <sup>2</sup> over)
UAT(Y)(P)180AMY1	8.4	32	32	8.4
UAT(Y)(P)240AMY1	8.4	32	32	8.4
UAT(Y)(P)280AMY1	13.3	50	50	13.3
UAT(Y)(P)320AMY1	13.3	50	50	13.3
UAT(Y)(P)450AMY1	13.3	50	50	13.3
UAT(Y)(P)560AMY1	21.2	63	63	21.2
UAT(Y)(P)700AMY1	33.6	80	80	33.6
UAT(Y)(P)850AMY1	42.4	100	100	42.4
UAT(Y)(P)C10AMY1	60.0	125	125	60.0
UAT(Y)(P)C12AMY1	60.0	125	125	60.0

**Note:** A main switch or other means for disconnection, having a contact separation in all poles, must be incorporated in fixed wiring in accordance with local and national legislation.

- The unit is to be wired directly from an electrical distribution board either by a circuit breaker (preferred) or HRC fuse.
- Fix the power supply wiring to control module. Connect control wiring to control terminal block through the control box's hole.

**Note:** Earth wiring must be connected.

The power supply cord must be equivalent to H05VV-F (60227 IEC 52 or 60227 IEC 53) which is the minimum requirement, and to be used in protective tube.

**Warning:**

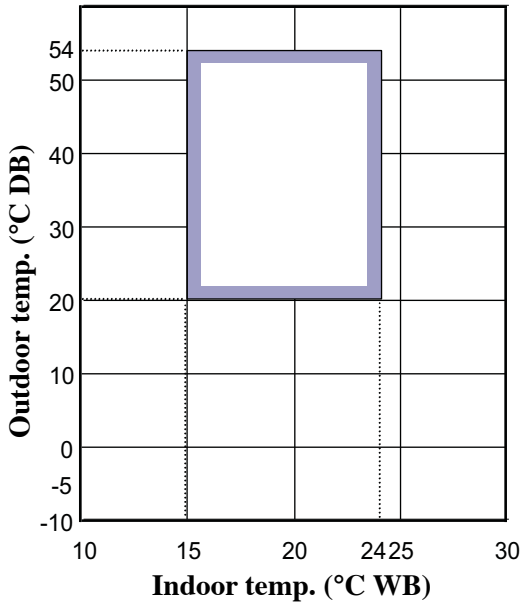
- Before working on this unit, isolate from the power supply.
- Electrical wiring to this unit and the remote controller shall be installed in accordance with the appropriate requirements of the local wiring code. e.g. AS3000

## OPERATING RANGE

Ensure the operating temperature is in allowable range.

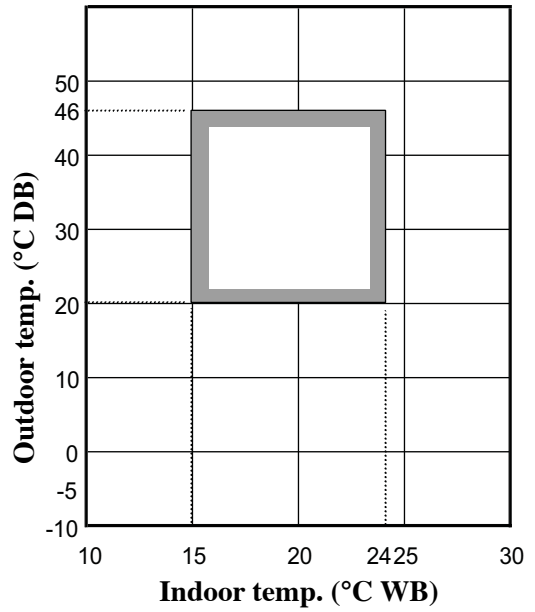
### Cooling (R22)

Cooling Only Unit & Cooling Mode For Heat Pump Unit



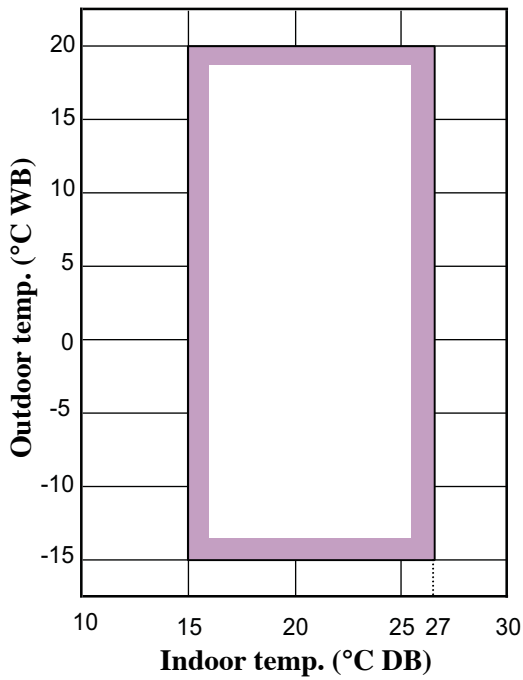
### Cooling (R407C)

Cooling Only Unit & Cooling Mode For Heat Pump Unit



### Heating (R22 & R407C)

Heat Pump Unit Only



#### ⚠ Caution :

The use of your air conditioner outside the range of working temperature and humidity can result in serious failure.

## REFRIGERANT & SPECIAL PRECAUTIONS WHEN DEALING WITH R407C UNIT

- All units are pre-charged with R407C refrigerant.
- R407C is a zeotropic refrigerant mixture which has zero ozone depletion potential and thus conformed to Montreal Protocol regulation. It requires Polyester oil (POE) oil for its compressor lubricant. Its refrigerant capacity and performance are about the same as the refrigerant R22.
- POE oil is used as lubricant for R407C compressor, which is different from the mineral oil used for R22 compressor. During installation or servicing, extra precaution must be taken not to expose the R407C system too long to moist air. Residual POE oil in the piping and components can absorb moisture from the air.
- Refrigerant R407C is more easily affected by dust or moisture compared with R22, make sure to temporarily cover the ends of the tubing prior to installation.
- No additional charge of compressor oil is permitted.
- No other refrigerant other than R407C.
- Tools specifically for R407C only (must not be used for R22 or other refrigerant)
 

i) Manifold gauge and charging hose	iv) Vacuum pump c/w adaptor
ii) Gas leak detector	v) Flare tools
iii) Refrigerant cylinder / charging cylinder	vi) Refrigerant recovery machine

## SERVICE AND MAINTENANCE

### Warning

- Disconnect from the main power supply before servicing the air conditioner unit.
- DO NOT pull out the power cord when the power is ON. This may cause serious electrical shocks which may result in the hazards.

### Caution

- Before turning off the power supply, set the remote controller's ON/OFF switch to the "OFF" position to prevent the nuisance tripping of the unit.
- If this is not done, the unit's fans will start turning automatically when power resumes, posing a hazard to service personnel or the user.

## SERVICE OF THE FILTER

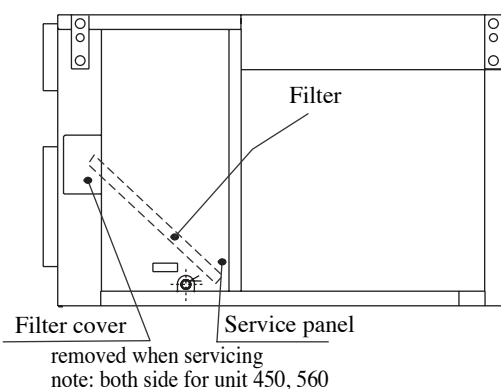
- Remove any dust adhering to the filter by using a vacuum cleaner or wash in lukewarm water (below 40°C) with a neutral cleaning detergent.
- Rinse the filter well and dry before placing it back onto the unit.
- Do not use gasoline, volatile substances or chemicals to clean the filter.
- Clean the filter at least once every 2 weeks. Or more frequently if necessary.

### Filter Position

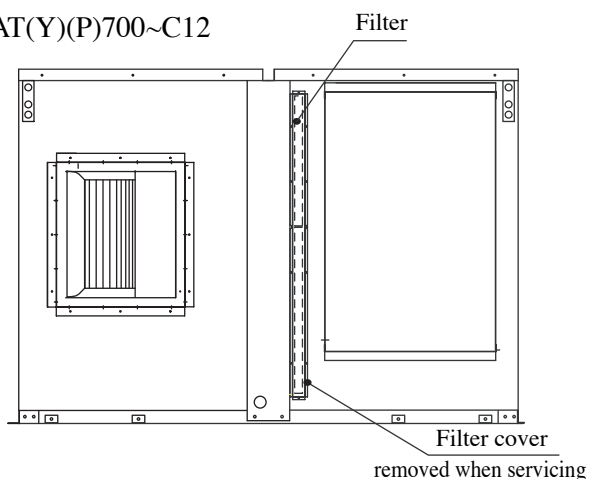
The filters are mounted in front of the indoor heat exchanger.

\* (Air filter : special order or field supply)

UAT(Y)(P)180~560



UAT(Y)(P)700~C12



## MAINTENANCE

Service Parts	Maintenance Procedures
<b>Panels</b>	<ol style="list-style-type: none"> <li>1. Clean any dirt or dust on the grille or panel by wiping it with a soft cloth soaked in lukewarm water (below 40°C) and a neutral detergent solution.</li> <li>2. Do not use gasoline, volatile substances or chemicals to clean the indoor unit.</li> </ol>
<b>Outdoor Heat Exchanger</b>	<ol style="list-style-type: none"> <li>1. If the unit is used for prolonged period, the outdoor heat exchanger will become dirty, and reducing the air conditioner performance. Consult your local dealer or air conditioning contractor on cleaning of the heat exchanger.</li> </ol>

## TROUBLESHOOTING

**If any malfunction of the air conditioner unit is noted for some simple trouble-shooting tips.**

**Check the following fault conditions and causes for some simple trouble-shooting tips.**

Problem	Causes	Action
Unit does not run	Power failure.	Press the [ON/OFF] after power restore.
	Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker.
	Power supply wiring phase incorrect.	Modify the wiring phase.
Compressor does not operate in 3 min after unit is started.	Protection against frequent starting.	Wait for 3 minutes for the compressor to start.
Air flow is low.	Filter is filled with dust and dirt.	Clean the filter
	There are some obstacles at the air inlet or outlet of the units	Remove obstacles.
Compressor operate continuously.	Dirty air filter.	Clean the air filter.
	Temperature setting too low (for cooling). Temperature setting too high (for heating).	Reset the temperature.
No cool air delivered during cooling cycle, or no hot air delivered during heating cycle.	Temperature setting too high (for cooling). Temperature setting too low (for heating).	Set the temperature lower. Set the temperature higher.
On heating cycle, indoor fan stop suddenly. [UAT(Y)(P)180~320A] On heating cycle, delivered air does not warm enough suddenly. [UAT(Y)(P)700~C12A]	Unit is in defrosting cycle.	Wait for a while. (It will be resumed after defrosting.)

**If the fault persists, please call your authorized local dealer / serviceman.**