

HYDRO MAXX

Air Handler/ Heat Pump Gen 2

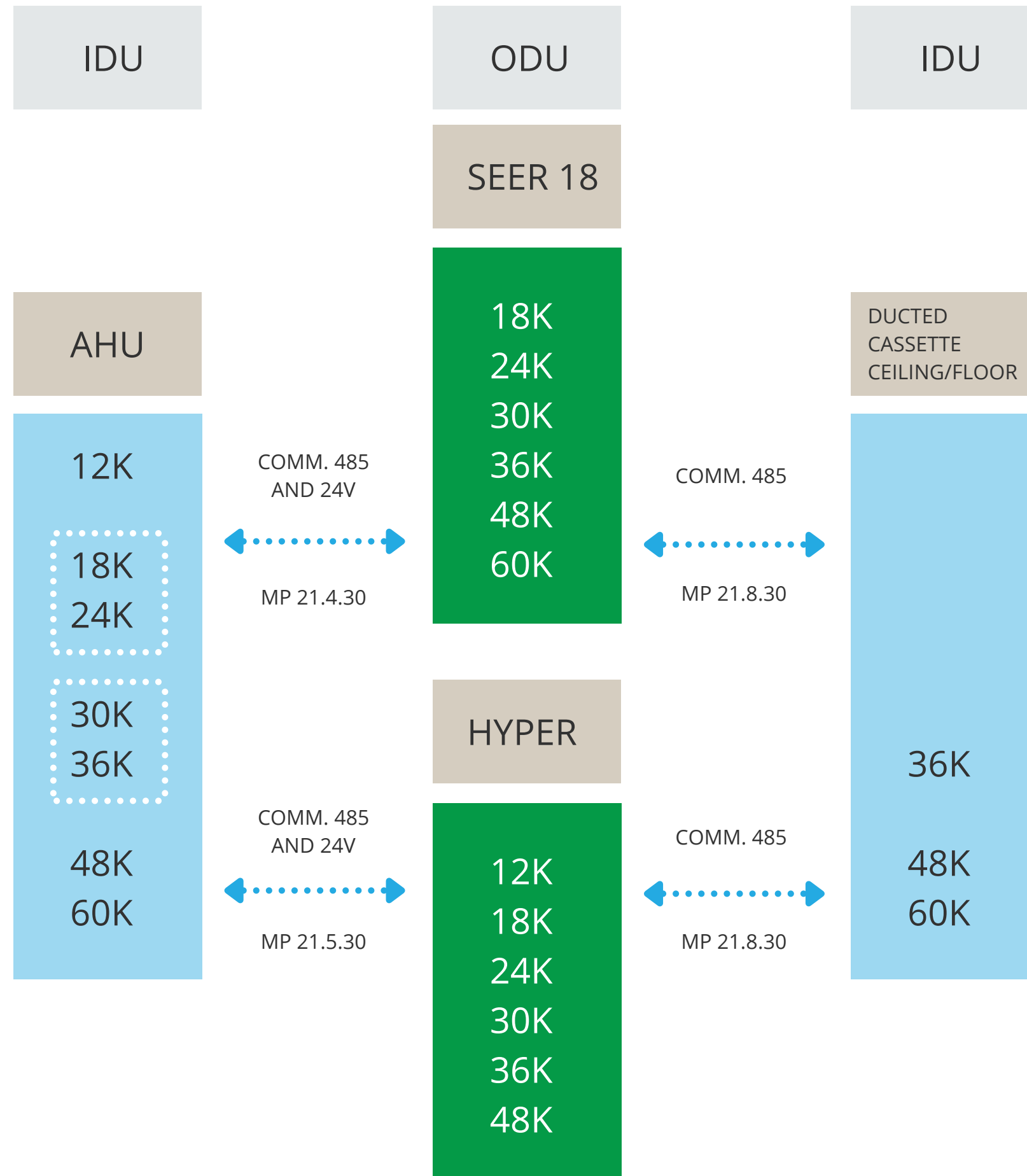
2021

24V TERMINAL AND FUNCTION

AHU	
R	24 V HOT
C	24 V COMM
G	FAN
B	CHANGEOVER VALVE ENERGIZED IN HEATING
Y1	HEAT / COOL STAGE 1
Y/Y2	HEAT / COOL STAGE 2
W	HEAT PUMP
W1	ELECTRIC HEATER STAGE 1
W2	ELECTRIC HEATER STAGE 2
E/AUX	EMERGENCY HEAT
DH/DS/BK	DEHUMIDIFY / HONEYWELL ZONE CONTROL
L	SYSTEM MALFUNCTION INDICATOR

ODU	
R	24 V HOT
C	24 V COMM
B	CHANGEOVER VALVE ENERGIZED IN HEATING
Y1	HEAT / COOL STAGE 1
Y/Y2	HEAT / COOL STAGE 2
W	HEAT PUMP
DEF	DEFROST (OUTPUT - BACK TO AHU/FURNACE)
L	SYSTEM MALFUNCTION INDICATOR

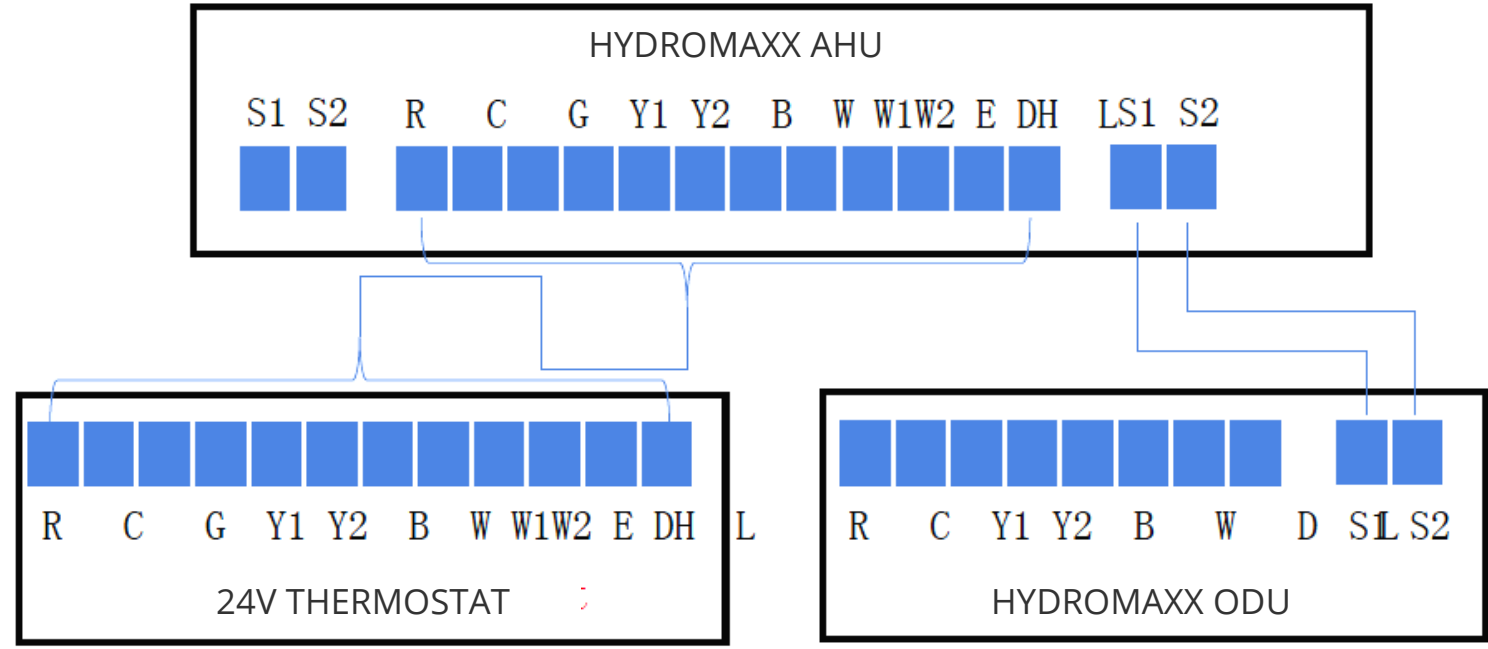
PRODUCT LINEUP - 485 + 24V LINE



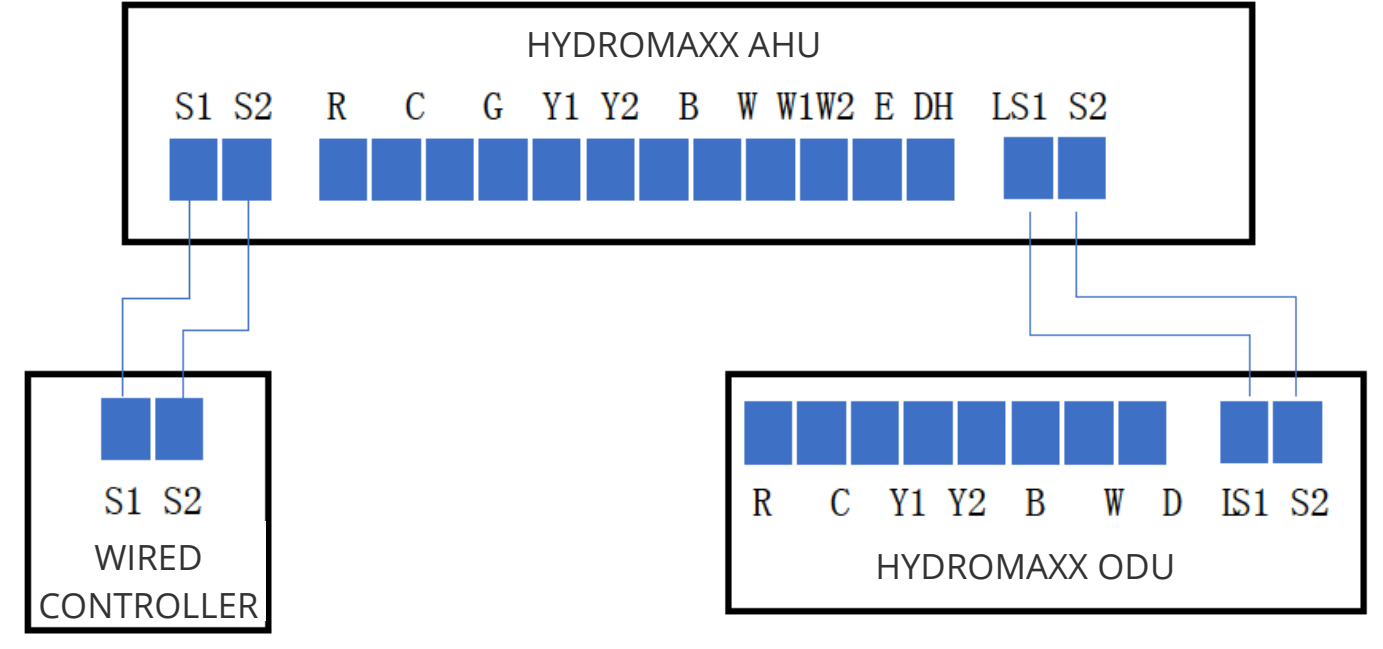
FEATURES:

- 1) MULTIPLE APPLICATIONS.
- 2) 485 AND 24V COMMUNICATION - NO NEED TO REPLACE WIRE AND LINESET FOR REPLACEMENT MARKET.

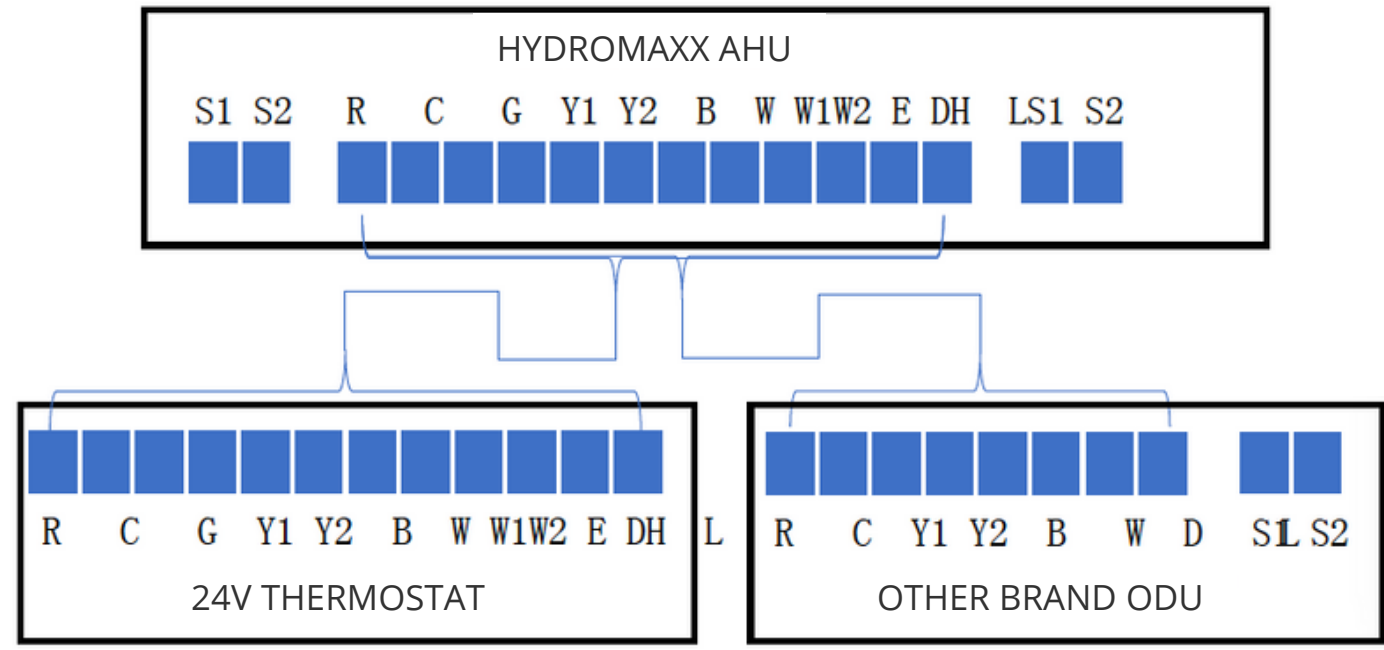
 = SAME SKU



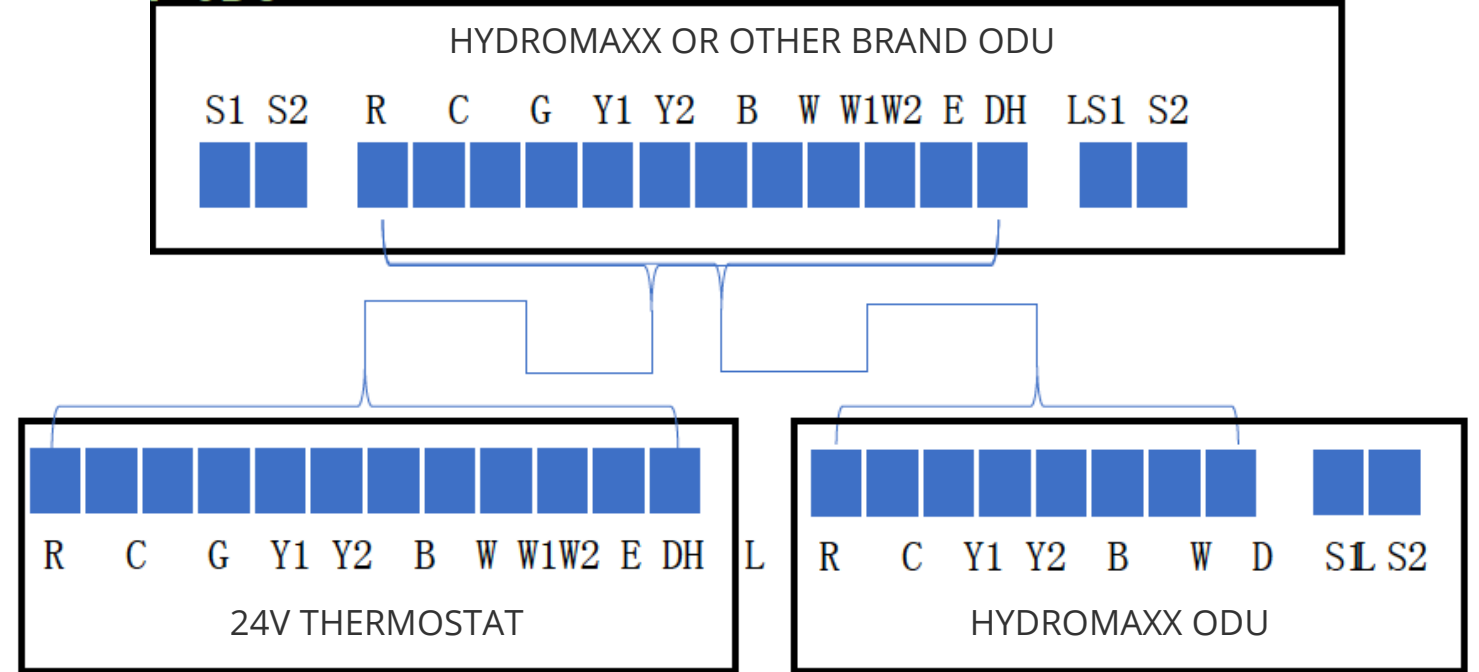
(1) HYDROMAXX WIRED CONTROLLER + HYDROMAXX AHU + HYDROMAXX ODU



(2) 24V THERMOSTAT + HYDROMAXX AHU + HYDROMAXX ODU



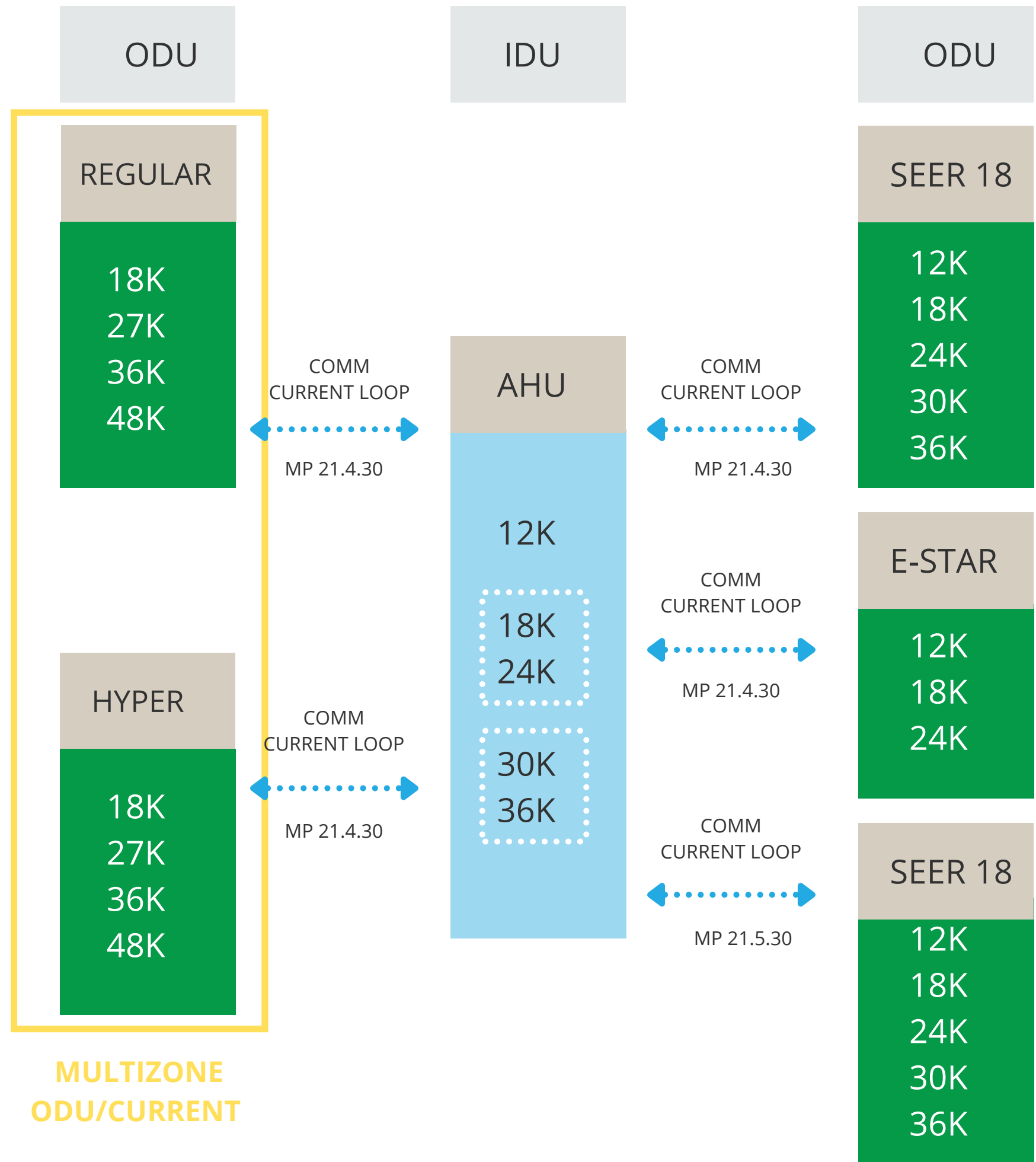
(3) 24V THERMOSTAT + OTHER BRAND AHU + HYDROMAXX ODU



(4) 24V THERMOSTAT + HYDROMAXX AHU + OTHER BRAND ODU

		12K	18K	24K	27K	30K	36K	48K	LAUNCH
	AHU	Y	Y	Y		Y	Y		
SINGLE ZONE ODU	SEER 18 ODU	Y	Y	Y		Y	Y		
	E-STAR	Y	Y	Y					
	HYPER HEAT	Y	Y	Y		Y	Y		
MULTI ZONE ODU	REGULAR		Y		Y		Y	Y	
	HYPER		Y		Y		Y	Y	

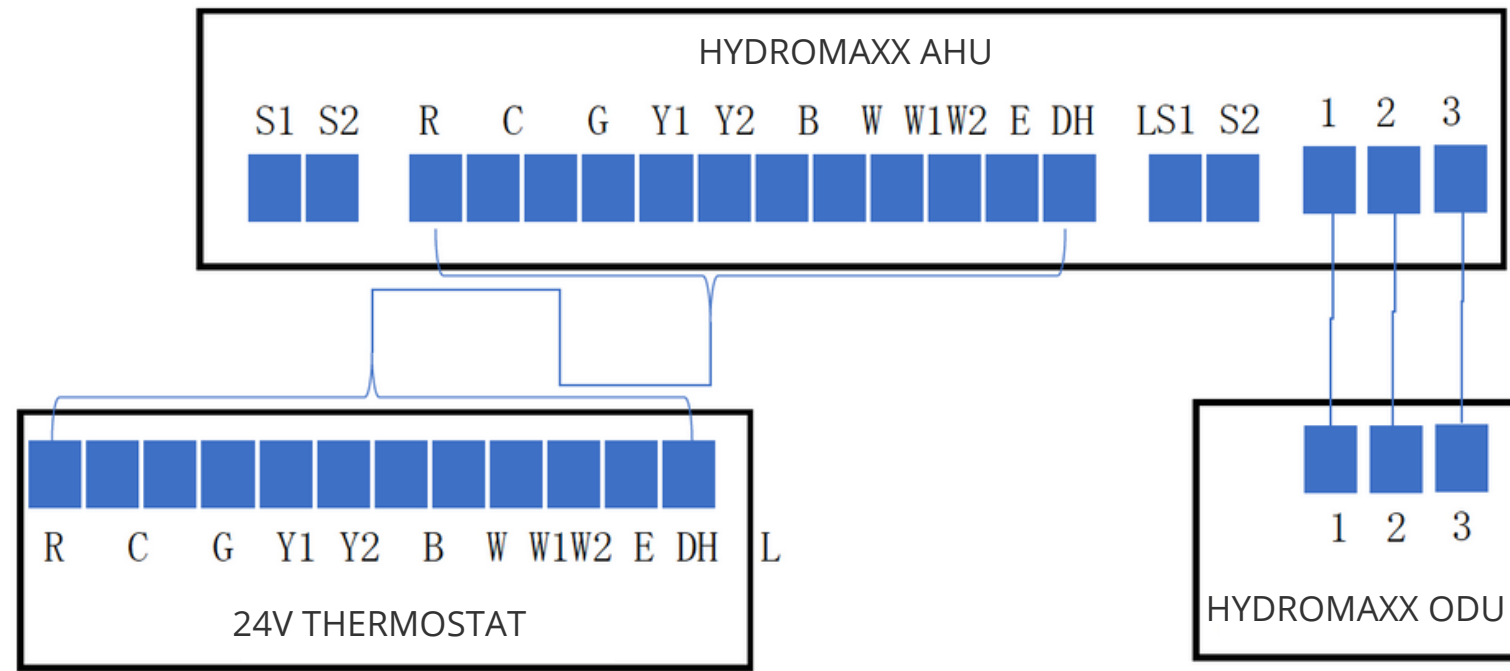
PRODUCT LINEUP - CURRENT LOOP LINE



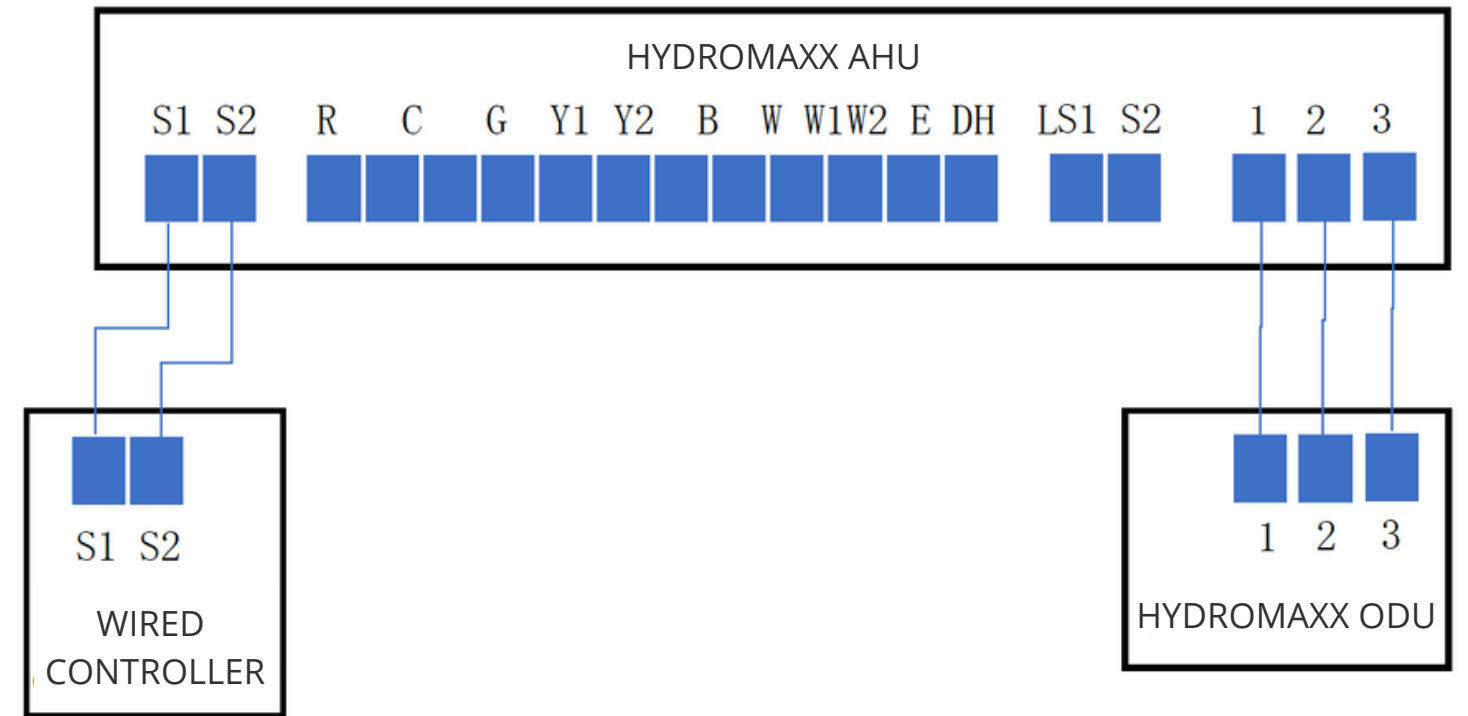
FEATURES:

1) SINGLE ZONE AND MULTI ZONE COMPATIBLE.

2) CURRENT LOOP AHU MATCH WITH CURRENT UNIVERSAL ODU'S.



(1) HYDROMAXX WIRED CONTROLLER + HYDROMAXX AHU + HYDROMAXX ODU



(2) 24V THERMOSTAT + HYDROMAXX AHU + HYDROMAXX ODU

UNIT DIMENSION

DIMENSION HxWxD (inch)	1ton/12K	1.5ton/18K	2ton/24K	2.5ton/30K	3ton/36K	4ton/48K	5ton/60K
45x17-1/2x21	Y	Y	Y				
49x21x21				Y	Y	Y	
58x24-1/2x21							Y

ELECTRIC HEATER

Power of Electric Heater	1ton/12K	1.5ton/18K	2ton/24K	2.5ton/30K	3ton/36K	4ton/48K	5ton/60K
3KW	Y						
5KW	Y	Y	Y	Y	Y		
10KW		Y	Y	Y	Y	Y	
15KW					Y	Y	Y
20KW						Y	Y
25KW							Y

KEY COMPONENTS INFORMATION

	1ST GENERATION	2ND GENERATION	ADVANTAGE OF 2ND GENERATION
MOTOR	DC inverter	ECM motor (built-in) Constant CFM	<ul style="list-style-type: none"> - Air flow compensation at different static pressures, reduce air attenuation. - Easy for after service.
EVAPORATOR	Copper pipe + Al fin	Full aluminum	<ul style="list-style-type: none"> - Full aluminum evaporator can improve corrosion resistance.
INSULATION COTTON	Fire proofing foam	Glass wool	<ul style="list-style-type: none"> - Glass wool do not have water absorption, will not produce mold.
WATER PAN	Metal	Plastic	<ul style="list-style-type: none"> - Reliable drainage. - Easy for installation for multi install position.

ECM MOTOR

POWER

208~230V

MOTOR TYPE

PW ECM, CONSTANT CFM MOTOR

SETTING FAN SPEED

HIGH / MID / LOW

SPEED ADJUSTMENT

24V

VOLTAGE

STATIC PRESSURE RANGE

0-1 IN. WG.



STRUCTURAL DESIGN - EASY MAINTENANCE OF FAN AND MOTOR

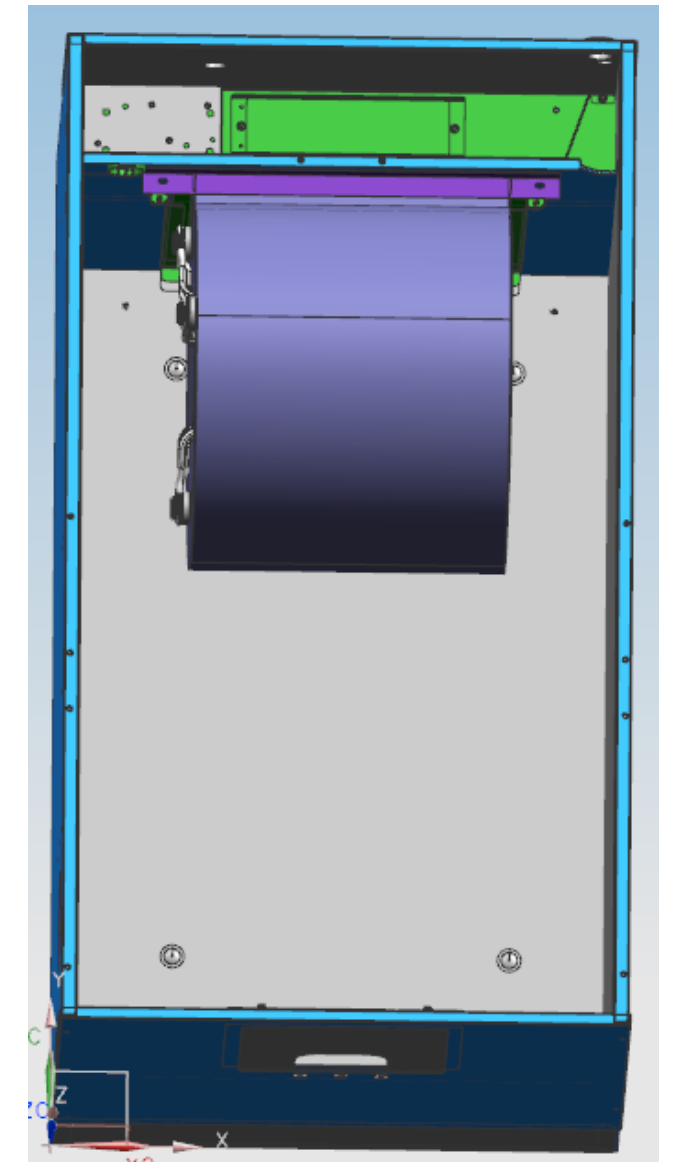
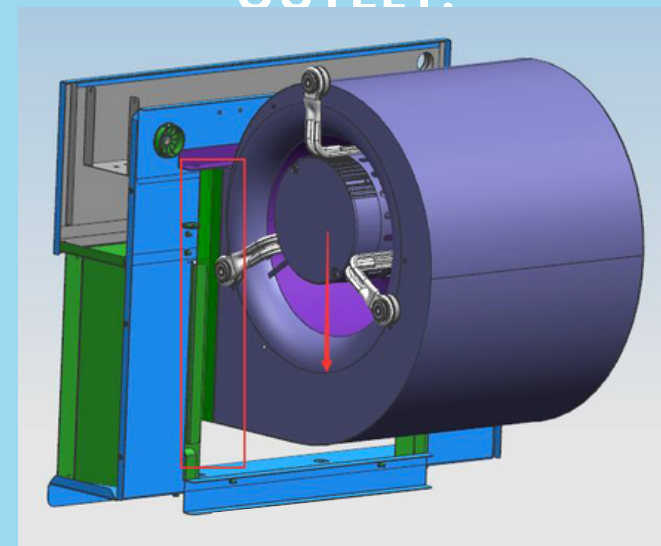
1ST GENERATION

NOT EASY TO DISASSEMBLE THE FAN AND MOTOR ASSY. BEFORE DISASSEMBLING THE ASSY., NEED TO TAKE OUT THE EVAPORATOR, THE TOP COVER, AND THE ELECTRIC BOX.



2ND GENERATION

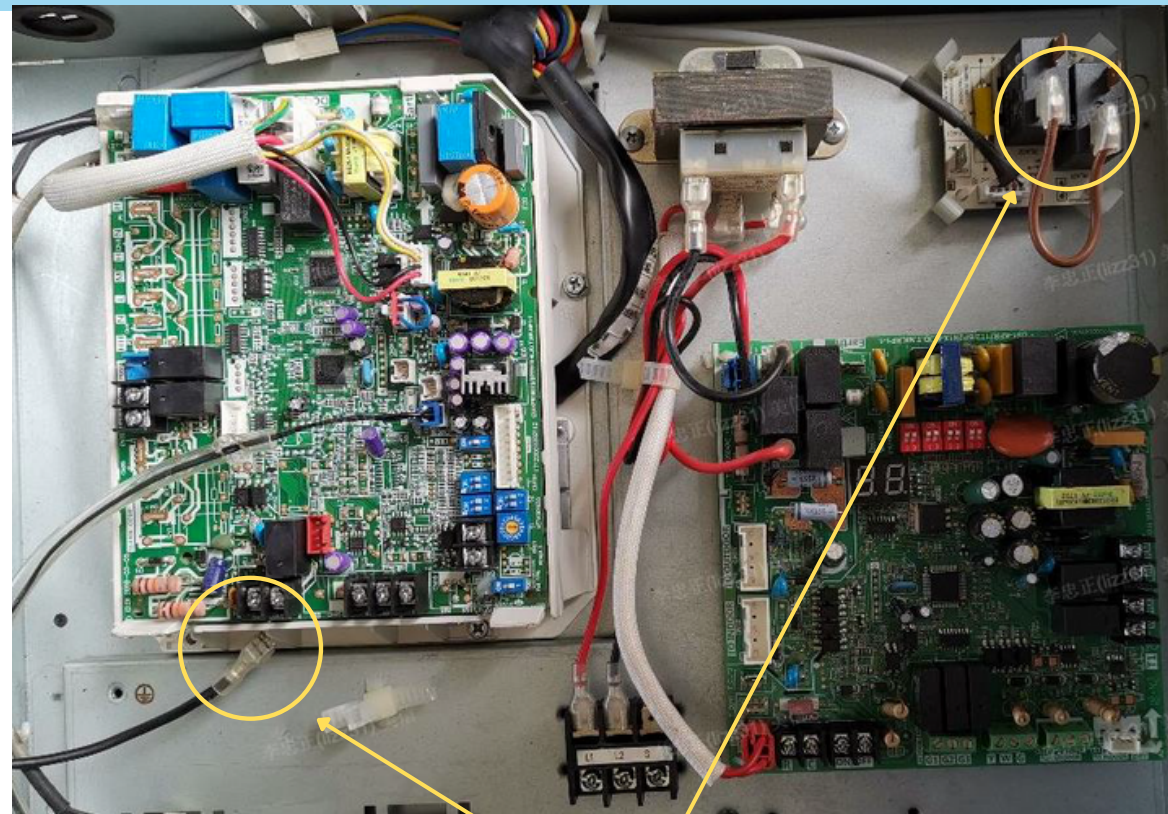
DISASSEMBLE THE TOP COVER, THEN CAN DISASSEMBLE THE FAN AND MOTOR ASSY. THE FAN IS CONNECTED BY SLIDE RAIL WITH THE UNIT. ASSEMBLE VIA THE FAN FLANGE AND FAN FIXED BOARD ASSY SLIDE RAIL. USE THE SCREW OF FAN FLANGE TOP TO FIX THE FAN, WHEN DISASSEMBLING, NO NEED TO DISASSEMBLE THE AIR OUTLET.



	1ST GENERATION	2ND GENERATION
ANIT-VIRUS LIGHT	<ul style="list-style-type: none"> - No reserved anti virus light connection, the anti virus light needs to be installed outside of the ducts. - Independent control of the anti virus, not convenient. 	<ul style="list-style-type: none"> - Reserve the installation space. - Reserve the installation controller connection, and could be controlled with the unit together.
HUMIDIFIER	<ul style="list-style-type: none"> - The humidifier is independent, needs additional controller, not convenient. - No connection for the controller, the humidifier could not be controlled by the unit. <p>No control logic, not easy to achieve the smart control.</p>	<ul style="list-style-type: none"> - Reserve the connection of humidifier controller. - Reserve the controller logic, in order to be controlled by the unit.

1ST GENERATION

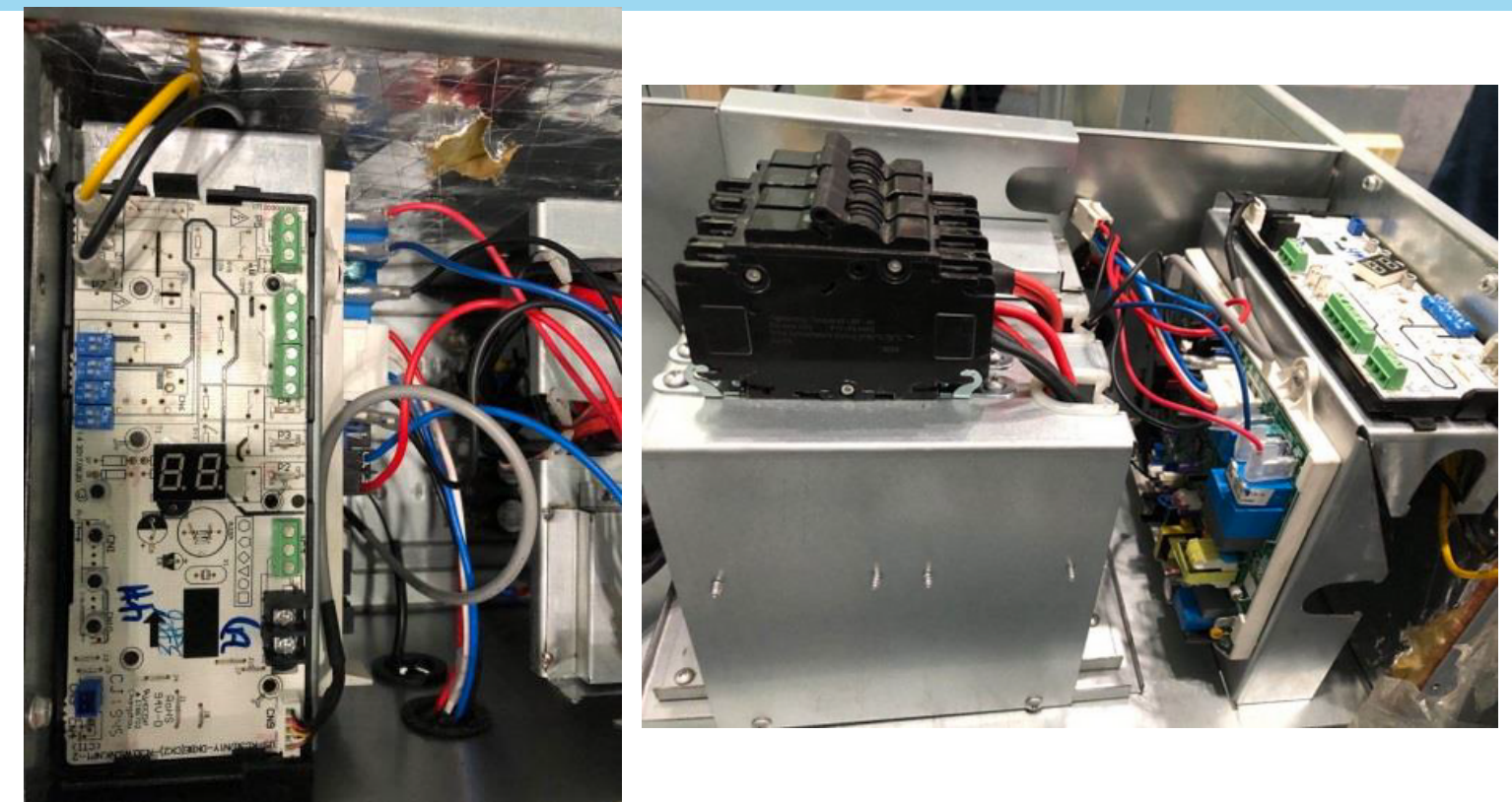
Main control board + 24V board + drive board + transformer + heater board + wires assy + display box assy + terminal



- 1) Boards quantity is big.
- 2) Low efficiency of manufacturing, most of the wires are insert wire.

2ND GENERATION

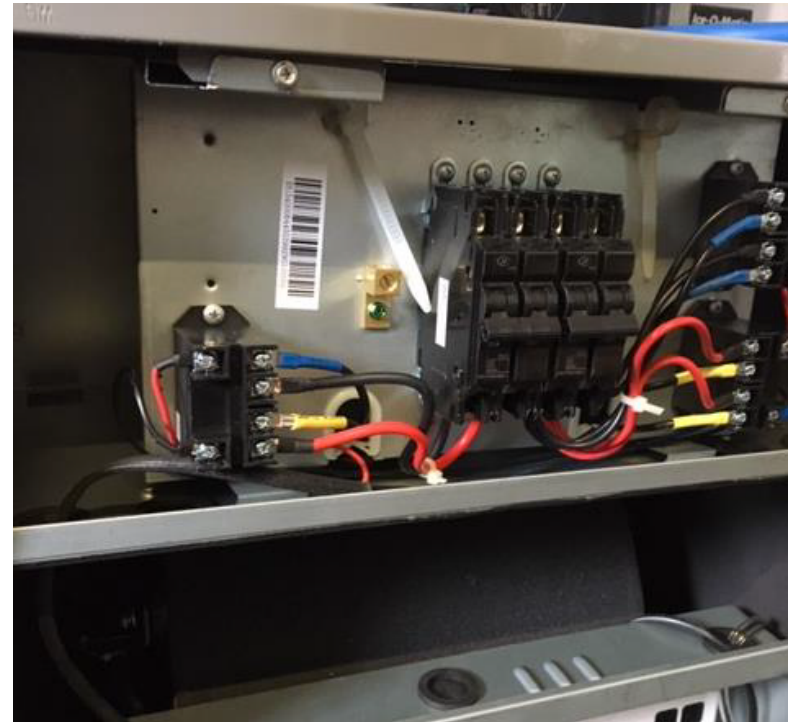
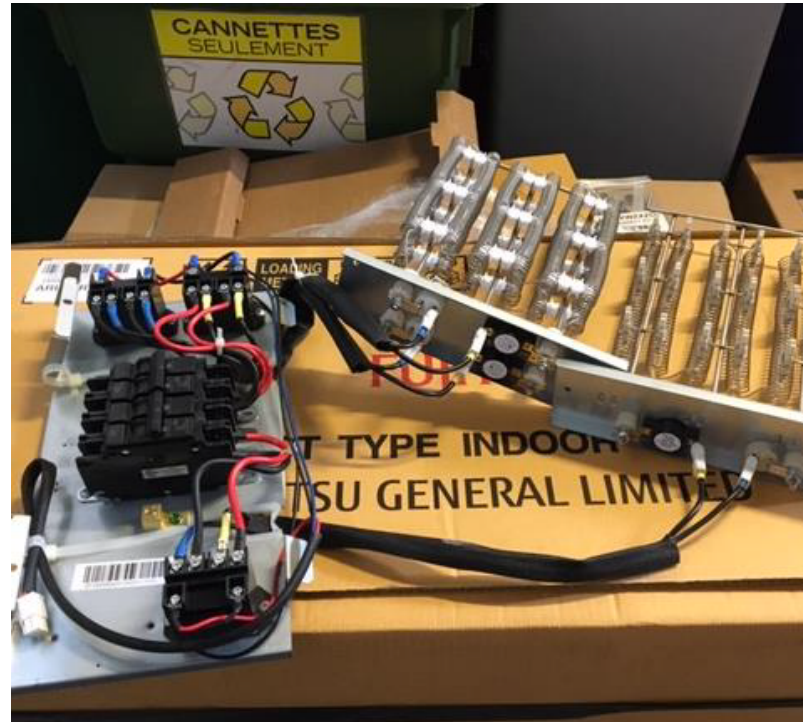
2 boards + 2 pcs of transformers + wires assy



- 1) Only 2 integrated PCB - main control board, and the other is function board for 24V thermostat, dip switch, wired controller and 88 display.
- 2) High efficiency of manufacturing, easy for maintenance, the wires are connected by connector.

1ST GENERATION

Three pieces combine to one heater.



1) Not easy installation.

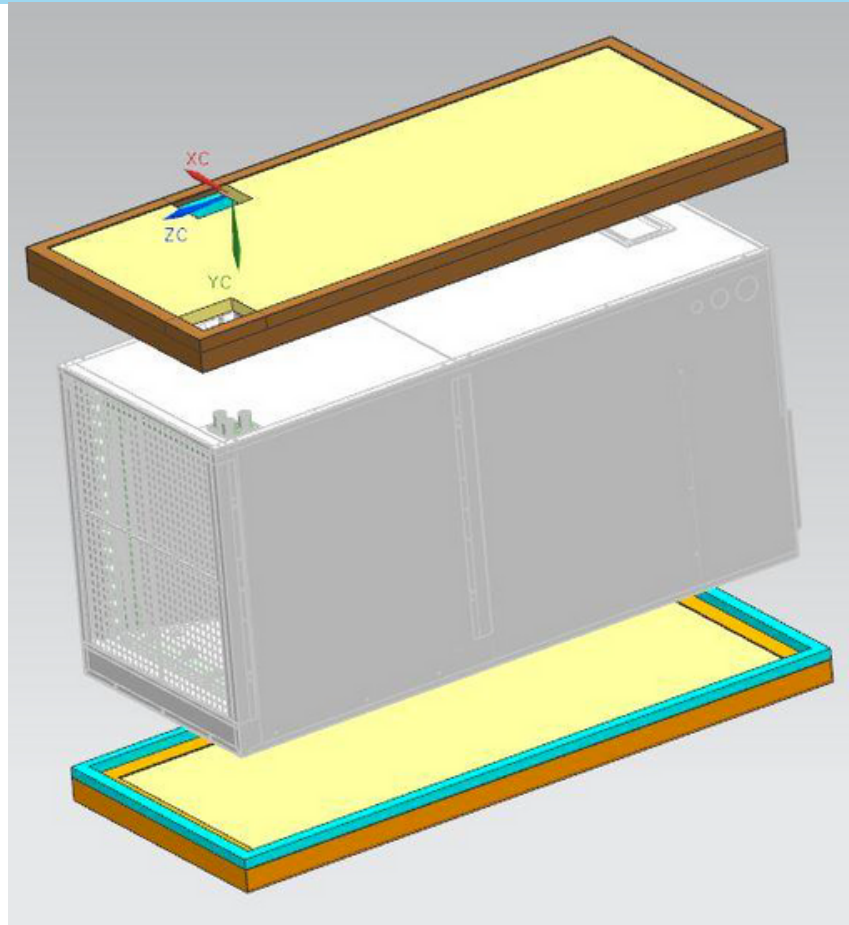
2ND GENERATION

One piece.



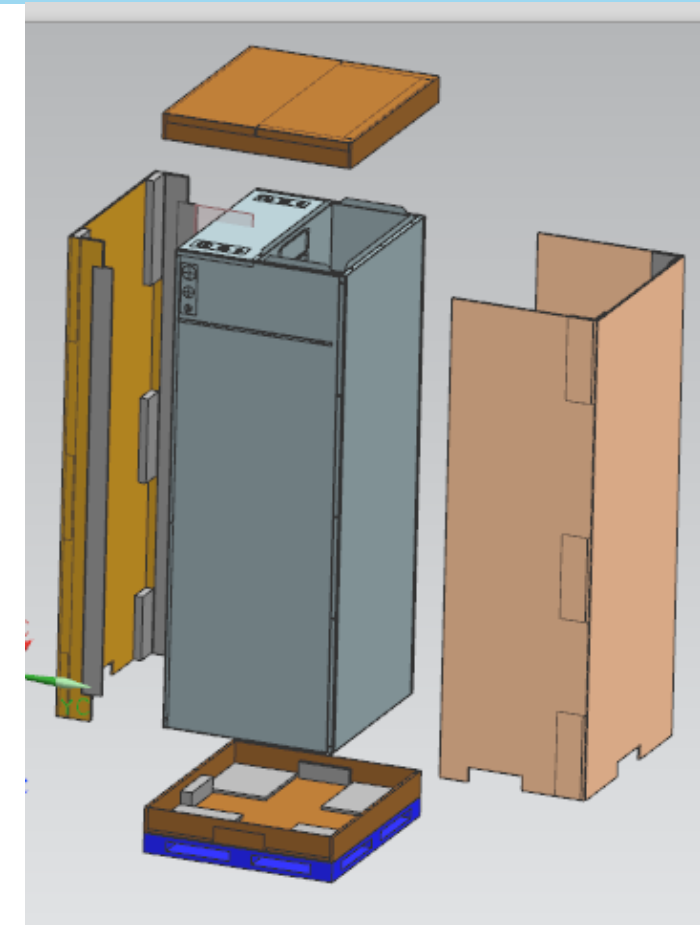
1) Only 1 piece.
2) High efficiency of manufacturing, easy for installation, easy for maintenance.

1ST GENERATION



- 1) Horizontal package, no pallet.
- 2) Top foam + bottom foam + package belt + package film + carton box.

2ND GENERATION



- 1) Vertical package, with pallet.
- 2) Pallet + bottom carton board + 2 pcs of carton sleeves + top cover.

24V THERMOSTAT CONTROL

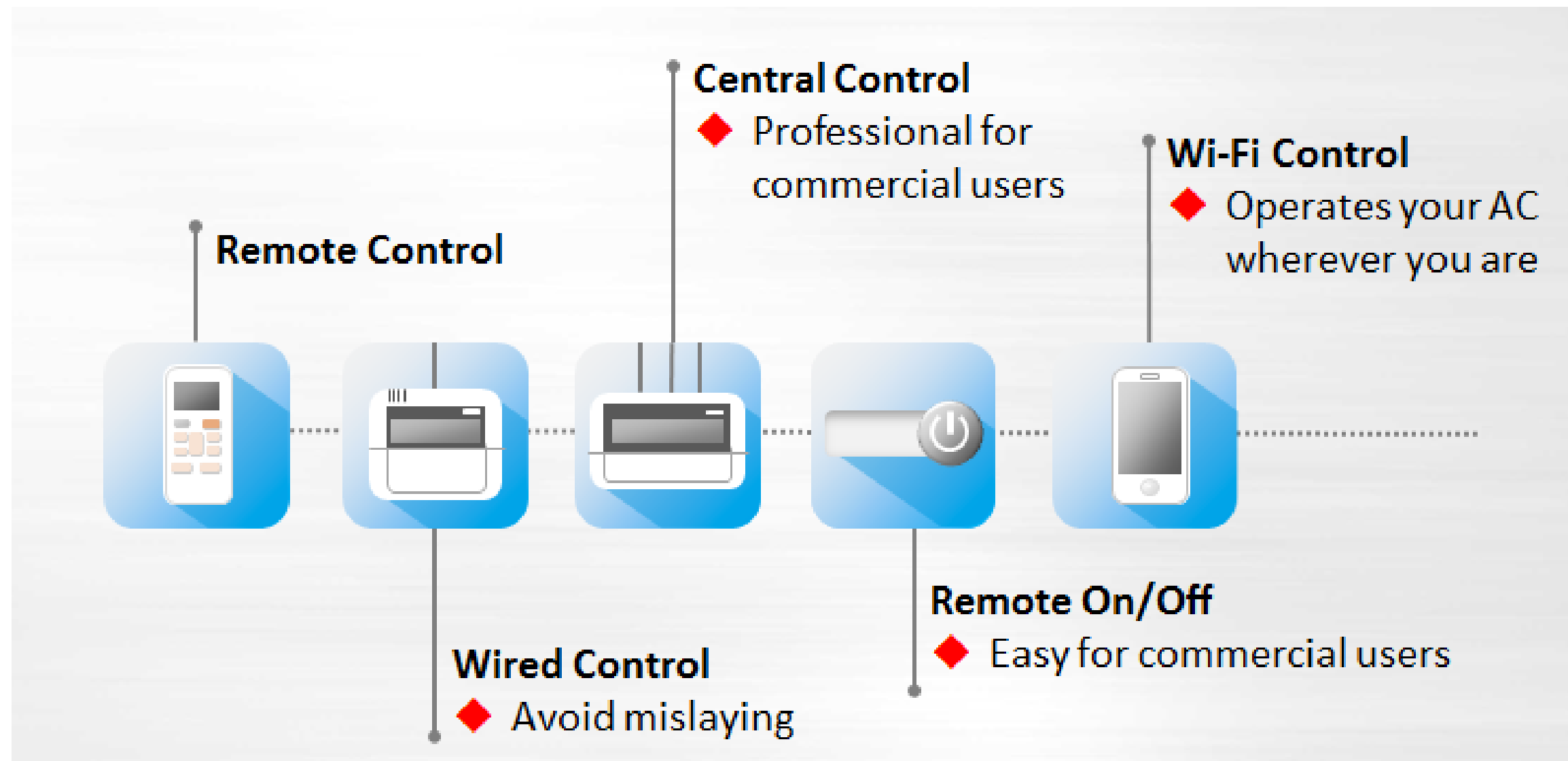
24V THERMOSTAT OUTPUT SIGNAL TO AHU TERMINAL												
MODE	PRIORITY	G	Y1	Y2	B/O	W	W1	W2	E/AUX	DHM	DS/BK	Mode display on 88 LED
		Fan	Stage 1 Cooling, Compressor	Stage 2 Cooling	Stage 1 Heat pump, Reverse valve		Stage 1 Electric heater 1	Stage2 Heat pump and Electric heater 2	Electric heater only	Dehumidify	Honeywell Zone control	
OFF	/	0	0	0	0		0	0	0	0	0	00
FAN	12	1	0	0	0		0	0	0	0	0	01
FAN SPEED FOR ZONE	11	1	*	*	*		*	*	*	*	1	/
COOLING	10	*	1	0	0		0	0	0	0	*	02
TURBO COOLING	9	*	1	1	0		0	0	0	0	*	03
HEAT PUMP	7	*	*	*	1		0	0	0	0	*	04
TURBO HEAT PUMP	6	*	*	*	1		0	1	0	0	*	05
HEAT PUMP + ELECTRIC HEATER group 1	5	*	*	*	1		1	0	0	0	*	06
TURBO HEAT PUMP + ELECTRIC HEATER group 1 + 2	4	*	*	*	1		1	1	0	0	*	07
ELECTRIC HEATER group 1	3	*	*	*	0		1	0	0	0	*	08
ELECTRIC HEATER group 1 + 2	2	*	*	*	0		1	1	0	0	*	09

24V THERMOSTAT OUTPUT 1: 24V 0: 0V *: 0V OR 24V

COMPATIBLE WITH ALL THE 24V THERMOSTATS

COMPATIBLE WITH HYDROMAXX WIRELESS REMOTE
CONTROLLER, PROGRAMMABLE WIRED CONTROLLER,
CENTRAL CONTROLLER, WI-FI CONTROLLER, REMOTE ON/OFF.

MULTI CONTROLLERS



HYDROMAXX WIRED CONTROLLER

485 CONTROL

2-WIRED NON-POLARITY

WEEKLY TIMER	YES	YES
FOLLOW-ME	YES	YES
REMOTE CONTROL COMPATIBLE	NO	YES
DUAL CONTROL	NO	YES
GROUP CONTROL	NO	YES
ROTATION & BACK-UP	NO	YES
DUCTED/ CASSETTE/ CEILING FLOOR COMPATIBLE	YES	NO

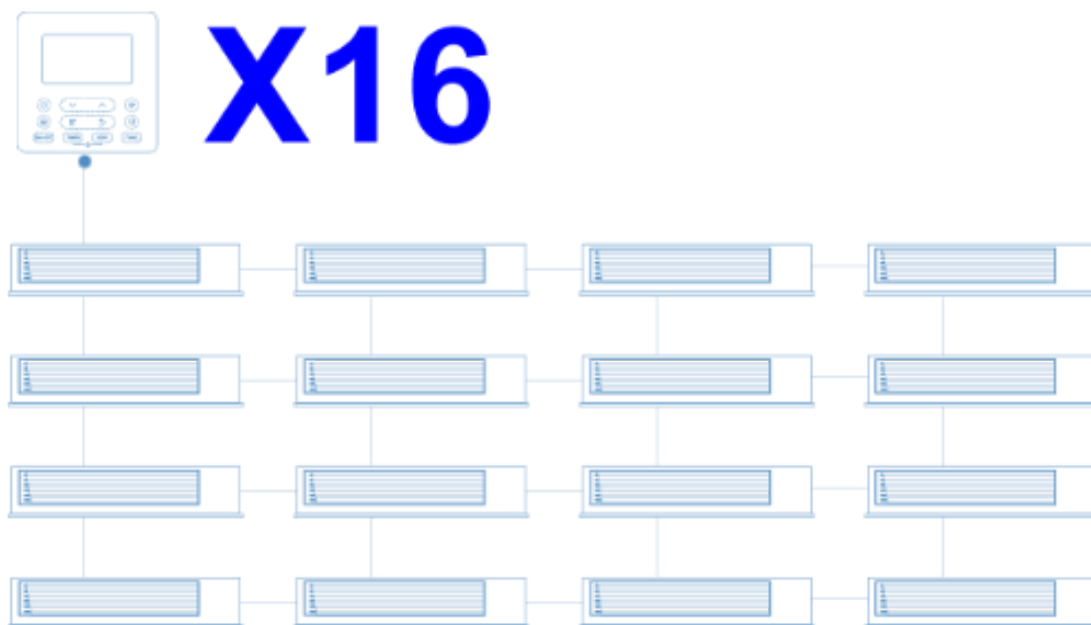


TWO OPTIONS:

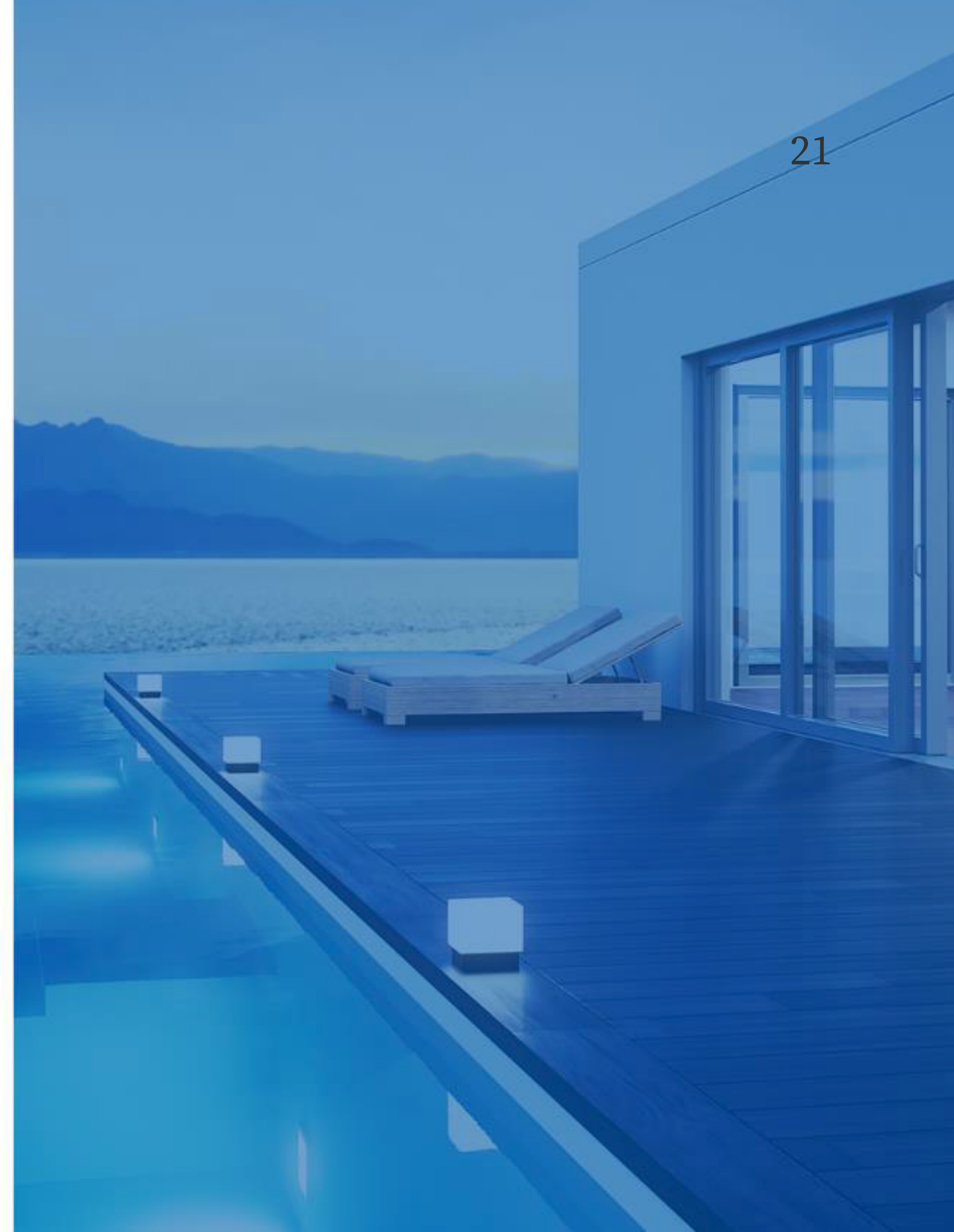
- CURRENT 120G 485 CONTROL WIRED CONTROLLER
- NEW 2-WIRED NON-POLARITY CONTROL 120X2 WIRED CONTROLLER

ONE 120X WIRED CONTROLLER CAN ADJUST THE OPERATION MODE, TEMPERATURE AND FAN SPEED OF UP TO 16 INDOOR UNITS TOGETHER. IT SAVES ON COSTS AND SIMPLIFIES THE CONTROL OF MULTIPLE IDU'S IN LARGE SPACES WHERE EVEN TEMPERATURES ARE REQUIRED. ONE CONTROLS ALL OF THE MACHINES IN ORDER TO KEEP THEM PROPERLY ALIGNED.

INDOOR UNITS MUST BE THE SAME CATEGORY.



ONLY FOR 2-WIRED NON-POLARITY CONTROLLER.



DEMANDING SCENARIOS, SUCH AS SERVER ROOMS, REQUIRE CONSISTENT COOLING / HEATING TO MAINTAIN PRESCRIPTIVE TEMPERATURES IN THE ROOM. THE ROTATION & BACK-UP FUNCTION OF 120X WIRED CONTROLLER ENSURES THE BEST WORKING TIME ARRANGEMENT OF ALL AIR CONDITIONERS.

ONLY FOR 2-WIRED NON-POLARITY CONTROLLER.

DUAL CONTROL



TWO 120X WIRED CONTROL CAN MATCH TWO PANELS TO ONE AIR CONDITIONER. THIS FEATURE ALLOWS FOR MAXIMUM FLEXIBILITY AND COMFORT - YOU CAN SET THE CONTROLS IN THE LIVING ROOM AND LATER ADJUST FROM THE COMFORT OF YOUR BEDROOM, PROVIDING ACCESS TO THE FURTHEST REACHES OF YOUR HOME.

ONLY FOR 2-WIRED NON-POLARITY CONTROLLER.

DUAL CONTROL



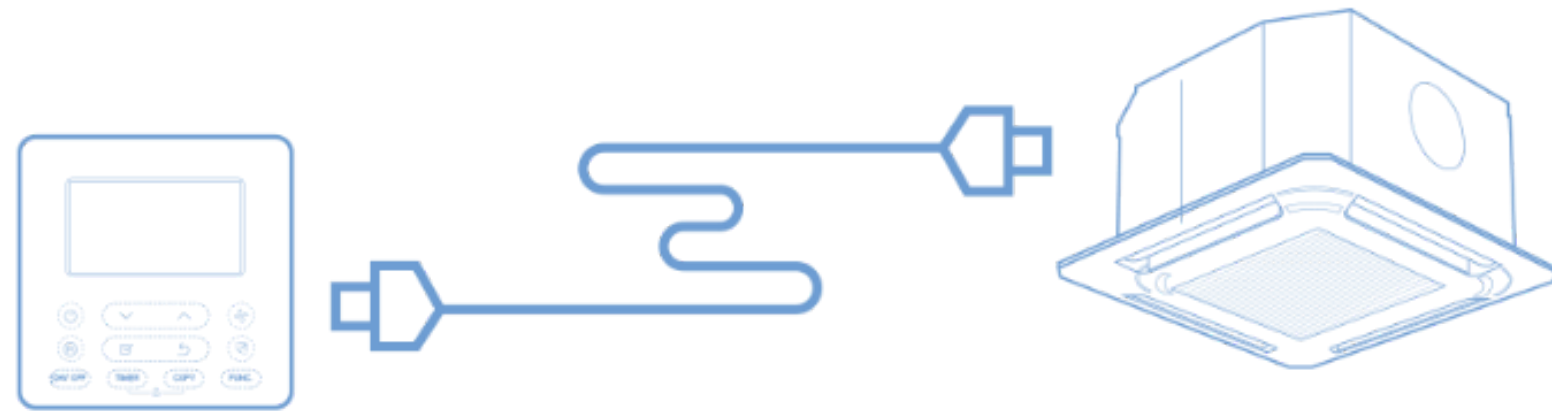
24

TWO 120X WIRED CONTROL CAN MATCH TWO PANELS TO ONE AIR CONDITIONER. THIS FEATURE ALLOWS FOR MAXIMUM FLEXIBILITY AND COMFORT - YOU CAN SET THE CONTROLS IN THE LIVING ROOM AND LATER ADJUST FROM THE COMFORT OF YOUR BEDROOM, PROVIDING ACCESS TO THE FURTHEST REACHES OF YOUR HOME.

ONLY FOR 2-WIRED NON-POLARITY CONTROLLER.

EASY INSTALLATION

120X WIRED CONTROLLER IS CONNENCTED TO INDOOR UNITS VIA TWO WIRES WITHOUT POLARITY. THIS SIMPLIFIES THE APPLICATION AND INSTALLATION PROCESS.



4 CONNECTION HOLES ON BACK

4

4 CONNECTION 25M MAX. WIRING LENGTH

25m



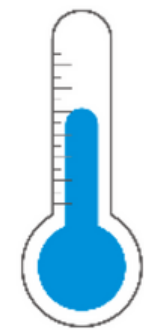
TWO WEEKLY TIMERS ARE AVAILABLE, WT1 AND WT2. WT2 HAS MORE OPTIONS FOR SETTINGS, AND MANAGES THE AIR CONDITIONER SPECIFICALLY, THEY CAN NOT BE SET THE SAME, OR WITH CONVENTIONAL TIMING FUNCTIONS.

	Sun				Mon	...	Fri	Sat			
Session	1	2	3	4	.....			1	2	3	4
Setting	4 different session for 1 day Only switch on/off Setting				.....			.....

	Sun								Mon	...	Fri	Sat							
Session	1	2	3	4	5	6	7	8	.....			1	2	3	4	5	6	7	8
Setting	8 different session for 1 day Every session can have different setting mode, temperature, fan speed, switch on/off								.....			.....			

FOLLOW-ME

THE 120X HAS A TEMPERATURE SENSOR BUILT-IN TO SENSE IT'S SURROUNDING TEMPERATURE. THE UNIT CAN ACCURATELY ADJUST THE ROOM TEMPERATURE, ACCORDING TO FEEDBACK FROM THE 120X. TO ENSURE THE HIGHEST LEVELS OF COMFORT.



Sensed Temp 26°C Actual Temp 26°C

With Follow-me



Sensed Temp 26°C Actual Temp 29°C

Without Follow-me

SETTING DEFAULT IS TO SWITCH THE 'FOLLOW-ME' ON



REMOTE CONTROL COMPATIBLE

CHILD LOCK

FOLLOW-ME



WITH INFARED RECEIVER BUILT-IN, 120X WIRED CONTROL CAN RECEIVE THESE SIGNALS FROM REMOTE CONTROLLER AND REALIZE CONVENTIONAL FUNCTIONS.
COMPATIBLE & CONVENIENT.



THIS FUNCTION CAN LOCK THE 120X WIRED CONTROLLER AND PREVENT ACCIDENTAL SETTINGS CHANGES. THIS SAVES ON ENERGY CONSUMPTION, ESPECIALLY IN COMMERCIAL SETTINGS, SUCH AS SHOPS / RESTAURANTS / OFFICES.



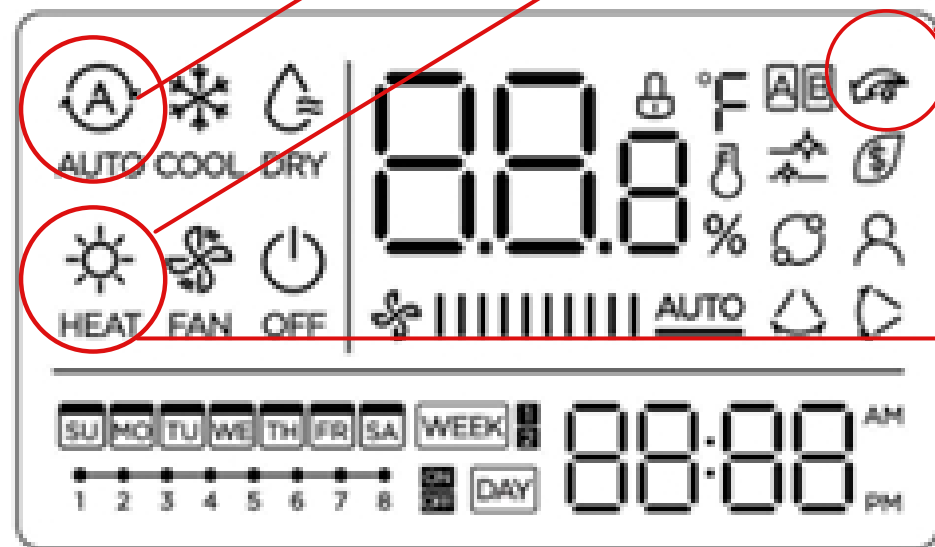
MODE:

AUTO --> COOL --> DRY --> HEAT --> FAN --> EMERGENCY HEAT --> AUTO

AUTO: COOL --> FAN --> HEAT

HEAT: HEAT PUMP + ELECTRIC HEATER

HEAT PUMP IS THE FIRST STAGE, ELECTRIC HEAT IS THE SECOND STAGE, OPERATION DEPENDS ON SETTING TEMPERATURE AND ROOM TEMPERATURE



EMERGENCY HEAT: ELECTRIC HEATER ONLY

HEAT PUMP ONLY MODE:

STEP 1 - PRESS THE 'MODE' BUTTON TO SELECT 'HEAT MODE'.

STEP 2 - PRESS THE 'FUNC' BUTTON UNTIL THE ELECTRIC HEATER ICON FLASHES, THEN PRESS THE 'CONFIRM' BUTTON TO DEACTIVATE THE ELECTRIC HEATER FUNCTION. THEN THE AHU WILL JUST WORK AT HEAT PUMP MODE.

***NOTE - THE 'HEAT PUMP ONLY' MODE CANNOT BE ON AUTO MODE.



DIP SWITCH

DIP SWITCH FOR FIELD SETTING					
DIP SWITCH	SWITCH NUMBER	SETTING		24V THERMOSTAT	HYDROMAXX WIRED CONTROLLER
		ON	OFF		
Network address setting switch for central controller	S1 S2-1 S2-2	Factory setting	Factory setting	n/a	n/a
24V Thermostat and HYDROMAXX wired controller select switch	SW1	HYDROMAXX	24V Thermostat	Yes	Yes
Cooling only and heat pump	SW2	Cooling only	Heat pump	n/a	Yes
ECO-AIR AHU only or HYDROMAXX AHU and ODU match	SW3	HYDROMAXX AHU only	HYDROMAXX AHU and ODU match	Yes	n/a
Time for increasing 1C/2F setting temperature to increasing the compressor speed	SW4	30 minutes	1.5 hours	Yes	n/a
When the room temperature below the Setpoint (2F/4F is configurable), the auxiliary heat contact will close (enable)	SW5	1C/2F	2C/4F	Yes	Yes
Upon a change in set point of greater than (3F/5F selectable) for (15/30 minutes selectable), the auxiliary heat will close(enable)	SW6	1.5C/3F	2.5C/5F	Yes	Yes
	SW7	30 minutes	50 minutes	Yes	Yes

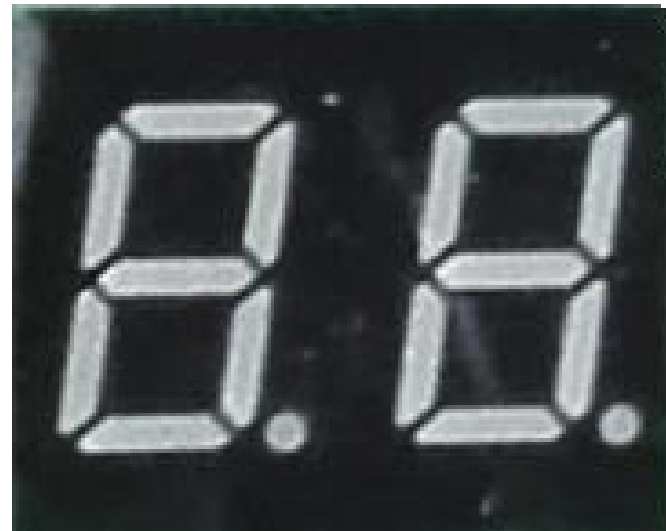
Displaying code	Meaning
T1	Room temperature
T2	Indoor coil temperature
T3	Outdoor coil temperature
T4	Ambient temperature
Tb	Outlet temperature of indoor coil
TP	Discharge temperature
TH	Suction temperature
FT	Targeted Frequency
Fr	Actual Frequency
IF	Indoor fan speed
OF	Outdoor fan speed
LA	EXV opening steps
CT	Compressor continuous running time
ST	Causes of compressor stop.
A0, A1, 0, 1, 2, 3, 4, 5, 6, LA, UT	Reserved

WITH 88 LED ON THE PCB, THE REMOTE CONTROL ALLOWS YOU TO CHECK THE CURRENT UNIT SPECIFICATIONS IN REAL TIME.



RUNNING PARAMETER MODIFY FUNCTION

USE THE ENGINEER FUNCTION OF THE REMOTE CONTROL TO MODIFY THE PRE-SET PARAMETERS FOR IN FIELD ADJUSTMENTS



HEATING TEMPERATURE COMPENSATION

AUTO-RESTART

LOWEST SETTING TEMPERATURE IN COOLING

COOLING TEMPERATURE COMPENSATION

AUTO-RESTART

ANTI-COLD AIR

SPEED CONTROL AFTER T'S REACHED

TEMPERATURE COMPENSATION