

SPECIFICATIONS



Model	OPA 820RLTB1FPQ Econex
Configuration	Horizontal Supply Air
Item No. (Standard / Opposite Hand)	866-082-701 / 866-082-710
Configuration	Downward Supply Air
Item No. (Standard / Opposite Hand)	866-082-723 / 866-082-732
Cooling capacity (net) ¹	78.4 kW
Cooling capacity range (gross)	11.2 ~ 83.8 kW
Heating capacity ¹	79.0 kW
Heating capacity range	10.0 ~ 87.0 kW
Electrical input - cooling	24.6 kW
Electrical input - heating	23.8 kW
EER / AEER (cooling) ¹	3.18 / 3.17
COP / ACOP (heating) ¹	3.22 / 3.21
Operating Range (outdoor ambient) - cooling	-10°C ~ 50°C
Operating Range (outdoor ambient) - heating	-10°C ~ 25°C
Controller	UC8 (x2)
Refrigerant	R32
Refrigerant Charge	8.0 kg/sys.
Minimum floor area (@2.4m below ceiling diffuser)	34 m ²
Compressor oil type	POE-46 (NXG5020 or equivalent)
Compressor type	inverter + fixed scroll
Power supply ²	3 ph. 400 V ac 50 Hz + N + E
Compressor (3ph.) run amps at rating cond.(inv./fixed)	16 A/ph.(x1) / 16 A/ph.(x1)
Compressor + VSD circuit breaker	32 A (x2)
Indoor fan motor size	EC Plug 500 dia. 3.65kW (x2)
Nominal air flow at rating conditions	4 400 l/s
Indoor fan motor (3ph.) - full load	4.5 A/ph. (x2)
Outdoor fan motor (3ph.) - full load	5 A/ph. (x2)
Outdoor fan - max. external static available@ 11 600 l/s	125 Pa
Control circuit breaker (internal)	2 A
Single phase socket circuit breaker	10 A
Running amps (total system) ¹	38 / 36 / 39 A
Max. running amps (total system)	52 / 50 / 52 A
RCD type recommended	type B, 30mA, 3 pole
Net weight	1270 kg
Shipping weight	1296 kg

Accessories:

TZT-100 Room temperature controller	201-000-350
Filters - rated EU4/G4 disposable	019-400-004 500x500x50 (x9) ³
Filters - rated EU4/G4 washable (NZ Only)	019-000-033 500x500x50 (x9) ³
Drain tundish (2 per set; 2 sets required)	060-000-653

Refer to temperzone for other options.

¹ Tested in accordance with AS/NZS 3823

24004

² Voltage range: 380-440V

³ Filter sizes are nominal; refer to Temperzone for actual measurements.

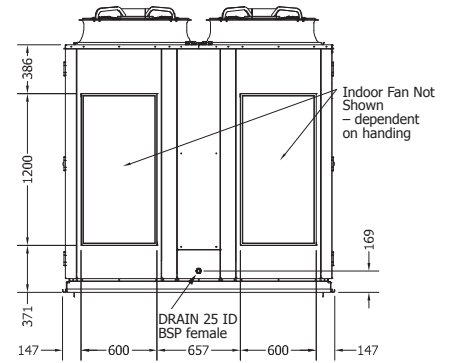
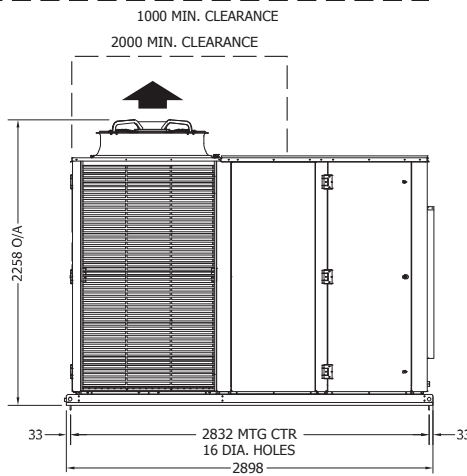
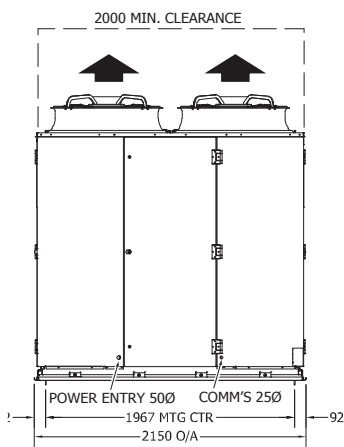
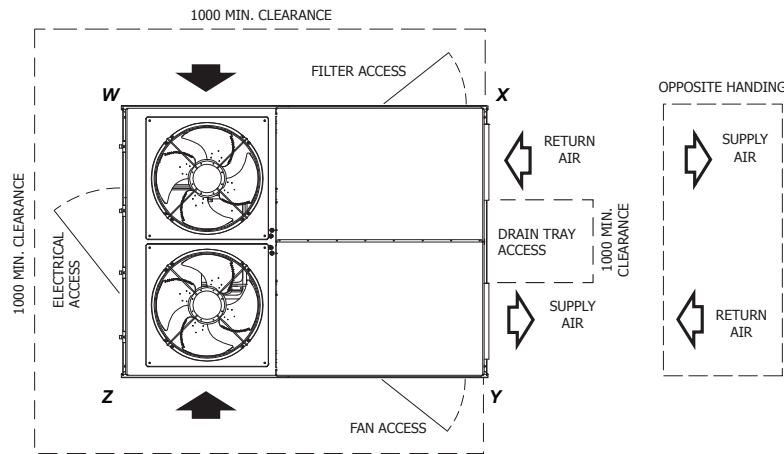
DIMENSIONS (mm)



OPA 820RLTBFPQ01 Standard Hand, Horizontal Supply

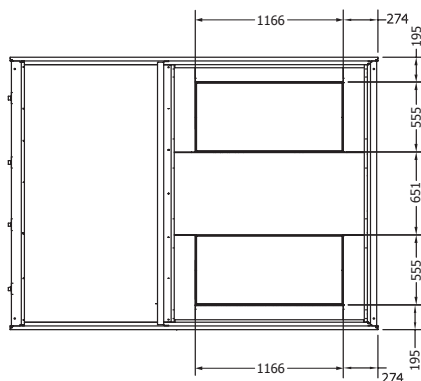
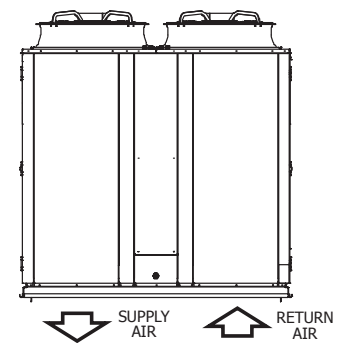
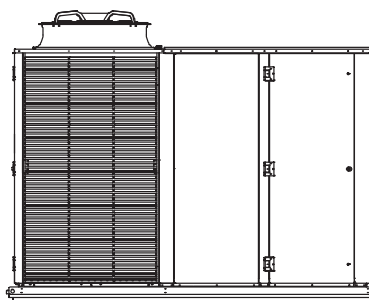
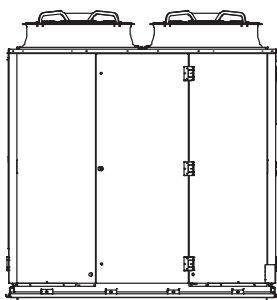
Not to Scale

POINT LOADS (kg)			
W	X	Y	Z
341	266	280	383



OPA 820RLTBFPQ23 Standard Hand, Downward Supply

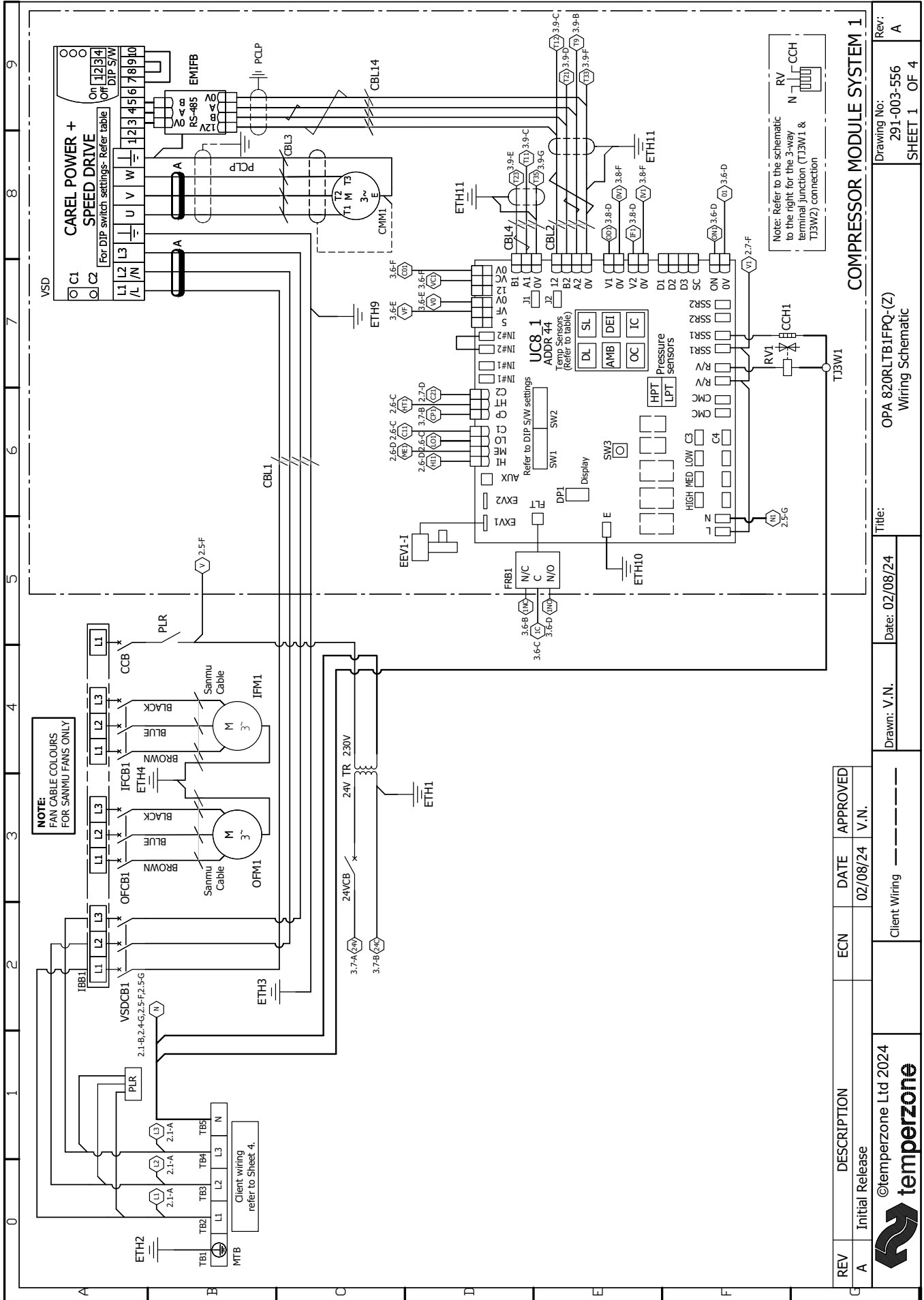
Clearances as above



NOTE

Specifications are subject to change without notice due to the manufacturer's ongoing research and development programme.

BOTTOM VIEW



REV	DESCRIPTION	ECN	DATE	APPROVED
A	Initial Release		02/08/24	V.N.

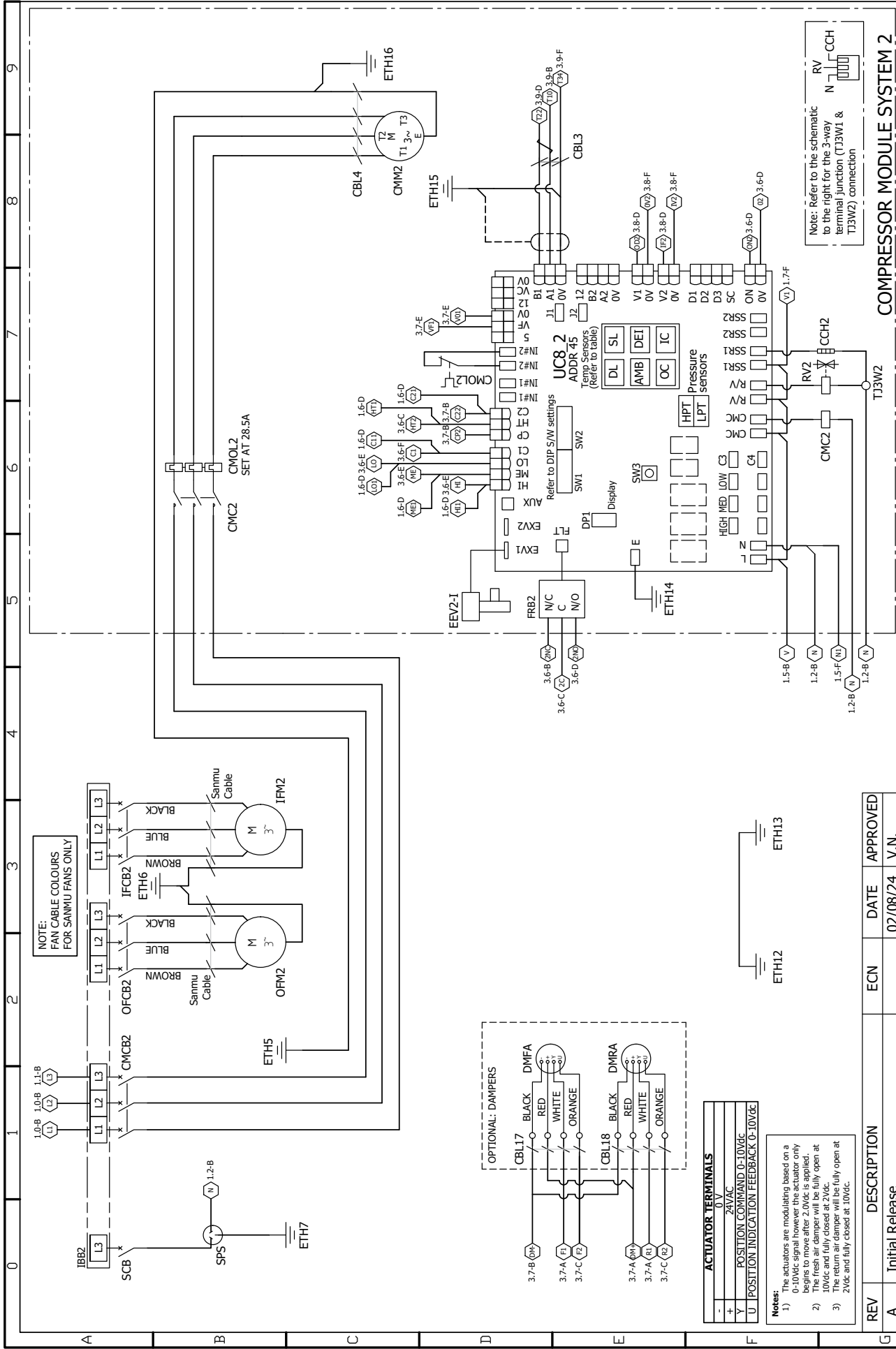
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Client Wiring

Drawn: V.N. Date: 02/08/24

Title: OPA 820RLTB1FPQ-(Z) Wiring Schematic

Rev: A
 Drawing No: 291-003-556
 SHEET 1 OF 4



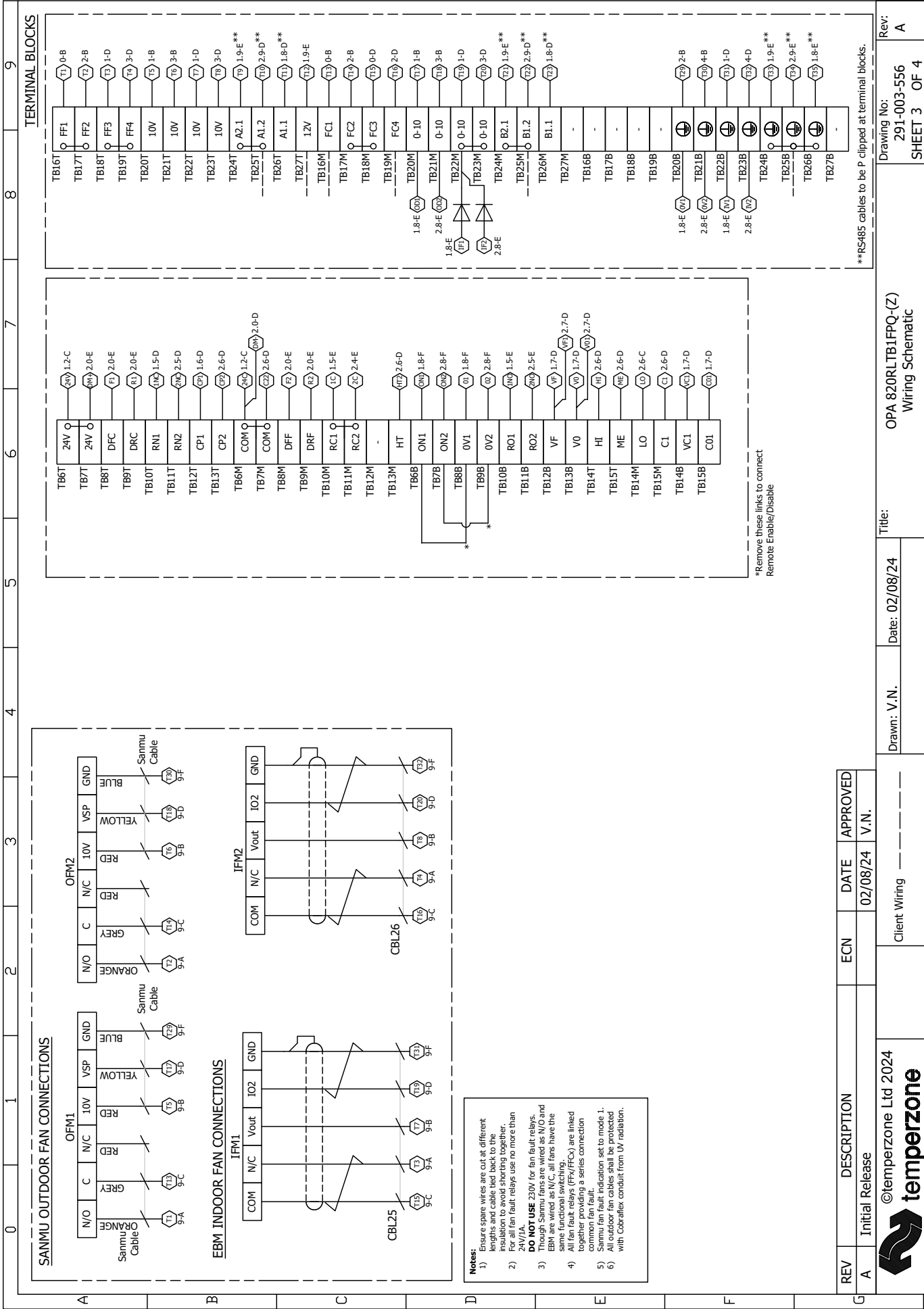
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Drawing No: 291-003-556	Rev: A
SHEET 2	OF 4



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Client Wiring

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Date: 02/08/24

Title: OPA 820RL TB1FPQ-(Z)
Wiring Schematic

Drawing No: 291-003-556
SHEET 3 OF 4

Rev: A

**RS485 cables to be P clipped at terminal blocks.

*Remove these links to connect Remote Enable/Disable

- Notes:**
- 1) Ensure spare wires are out at different lengths and cable tied back to the insulation to avoid shorting together.
 - 2) For all fan fault relays use no more than 24V/1A.
 - 3) **DO NOT USE** 230V for fan fault relays. Though Sanmu fans are wired as N/O and EBRs are wired as N/C, all fans have the same functional switch (FF/FC) and are linked together providing a series connection common fan fault.
 - 4) All outdoor fan cables shall be protected with Cobralflex conduit from UV radiation.

0	1	2	3	4	5	6	7	8	9																																																				
<p>Customer Connection (Refer UC8 Manual for details)</p>	<p>Customer scope Incoming Power Connection</p>			<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>UC8 Configuration</th> <th>Compressor</th> <th>UC8 DIP SWITCHES</th> </tr> </thead> <tbody> <tr> <td></td> <td>ON</td> <td></td> </tr> <tr> <td>SYSTEM 1</td> <td>INVERTER</td> <td>1, 4, 6, 7, 10, 14</td> </tr> <tr> <td>SYSTEM 2</td> <td>FIXED SPEED</td> <td>1, 4, 6, 7, 10, 11, 14</td> </tr> </tbody> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Ferrites</th> </tr> <tr> <th>Part Number</th> <th>Frequency Type</th> <th>Number of Turns</th> </tr> </thead> <tbody> <tr> <td>A 012-001-074</td> <td>High</td> <td>1</td> </tr> </tbody> </table> <p>Instructions To Convert To Master-Master Control</p> <ol style="list-style-type: none"> Turn off power to entire system. Turn off dip switch 11 for system 2 fixed speed UC8 control. Move the jumper between terminal blocks TB24T and TB25T to between TB25T and TB26T (refer to sheet 3). Move the jumper between terminal blocks TB24M and TB25M to between TB25M and TB26M (refer to sheet 3). Turn power back on. Check UC8.2 (SYSTEM 2) address is set as 45. If it's address is 44, it needs to be changed to 45 using the pushbutton. 			UC8 Configuration	Compressor	UC8 DIP SWITCHES		ON		SYSTEM 1	INVERTER	1, 4, 6, 7, 10, 14	SYSTEM 2	FIXED SPEED	1, 4, 6, 7, 10, 11, 14	Ferrites			Part Number	Frequency Type	Number of Turns	A 012-001-074	High	1	<p>24VCB 24 Volt Circuit Breaker CBL Cable Marker CCB Control Circuit Breaker CCH Crankcase Heater CNC Compressor Motor Contactor CMCB Compressor Motor Circuit Breaker CMH Compressor Motor CMOL Compressor Motor Overload DMF Damper Motor Fresh Air DNR Damper Motor Return Air EEV Electronic Expansion Valve EMIFB Electromagnetic Interference Filter Board ETH Earth FRB Fault Relay Board IRB Insulated Bus Bar IFCB Indoor Fan Circuit Breaker IFM Indoor Fan Motor ITB Main Terminal Block OFCB Outdoor Fan Circuit Breaker OFM Outdoor Fan Motor PCLP P-Clip PLR Phase Loss Relay RV Reversing Valve SCB Socket Circuit Breaker SPS Single Phase Socket TBXT Terminal Block (number) Top TBXM Terminal Block (number) Middle TBXL Terminal Block (number) Bottom TI3W Terminal Junction 3 Way TR Transformer UC8 Unit Controller 8 VSD Variable Speed Drive VSDCB Variable Speed Drive Circuit Breaker OV UC8 Enable Link Common 0-10 Indoor / Outdoor Fan 0-10VDC analogue speed control 10V Indoor / Outdoor Fan 10VDC Supply Output 12V RS485 12V Supply Output 24V 24VAC Internal Supply Ax.x RS485 A (+) Communication Signal Bx.x RS485 B (-) Communication Signal CO1 Compressor Analogue Speed Control Common CI Indoor Fan Fixed Three speed Control Common COM 24VAC Internal Supply Common GP Compressor ON / OFF Signal DFC Damper Motor Fresh Air 0-10Vdc Command DFR Damper Motor Return Air 0-10Vdc Command DRF Damper Motor Return Air 0-10Vdc Feedback FC Fan Fault Relay Output Common FF Fan Fault Relay Output Contact Signal HI Indoor Fan Fixed High speed Control Signal HT Cooling / Heating Mode Selection Signal LO Indoor Fan Fixed Low speed Control Signal ME Indoor Fan Fixed Medium speed Control Signal ON UC8 Enable Link Contact RC UC8 Fault Relay Output Common Contact RN UC8 Fault Relay Output Normally Closed Contact RO UC8 Fault Relay Output Normally Open Contact VC Compressor 0-10VDC Analogue Speed Control Signal VF Indoor Fan 0-10Vdc Analogue Speed Control Signal V0 Indoor Fan Analogue Speed Control Common</p>	<p>Indoor Coil Layout</p> <p>Overall System Layout</p>	<p>Phase Loss Relay</p> <ul style="list-style-type: none"> PWR (Green) Indicator lit when power is being supplied. RY (Yellow) Indicator lit when relay is operating. <p>Important Notes:</p> <ul style="list-style-type: none"> 24 Hour power required (on L1) for control circuit and crankcase heaters Portable Residual Current Device (PRCD) shall be used with single phase socket. <p>Modbus Devices Address</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>UC8</td> <td>44, 45</td> </tr> <tr> <td>VSD</td> <td>10</td> </tr> </table> <p>VSD DIP switch settings</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>DIP switch</td> <td>On/Off</td> </tr> <tr> <td>1,4</td> <td>On</td> </tr> <tr> <td>2,3</td> <td>Off</td> </tr> </table> <p>Sensor(S) / Transducers (T) to UC8</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Name</th> <th>Type</th> <th>Colour</th> </tr> <tr> <td>DL</td> <td>Discharge</td> <td>S Grey</td> </tr> <tr> <td>SI</td> <td>Suction</td> <td>S White</td> </tr> <tr> <td>AMB</td> <td>Ambient</td> <td>S Black</td> </tr> <tr> <td>DEI</td> <td>Deice</td> <td>S Blue</td> </tr> <tr> <td>LPT</td> <td>Suction Pressure</td> <td>T Grey</td> </tr> <tr> <td>HPT</td> <td>High Pressure</td> <td>T Grey</td> </tr> </table>	UC8	44, 45	VSD	10	DIP switch	On/Off	1,4	On	2,3	Off	Name	Type	Colour	DL	Discharge	S Grey	SI	Suction	S White	AMB	Ambient	S Black	DEI	Deice	S Blue	LPT	Suction Pressure	T Grey	HPT	High Pressure	T Grey
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