

SPECIFICATIONS



Model	OPA 820RLTB1FPQ-Z Econex
Configuration	Horizontal Supply Air
Item No. (Standard / Opposite Hand)	867-082-701 / 867-082-710
Configuration	Downward Supply Air
Item No. (Standard / Opposite Hand)	867-082-723 / 867-082-732
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 (excl. cowl)	1294 kg
Shipping weight (excl. cowl)	1320 kg
Net Weight c/w Economiser	1346 kg

Accessories:

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

23020

² Voltage range: 380-440V

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

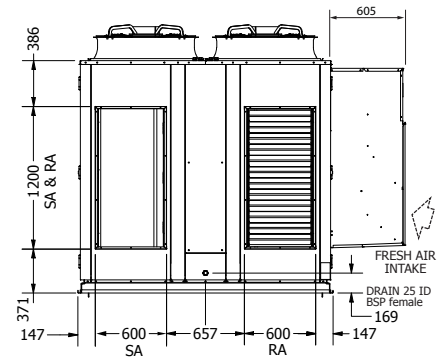
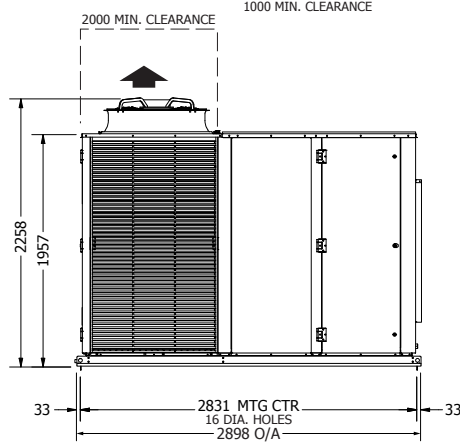
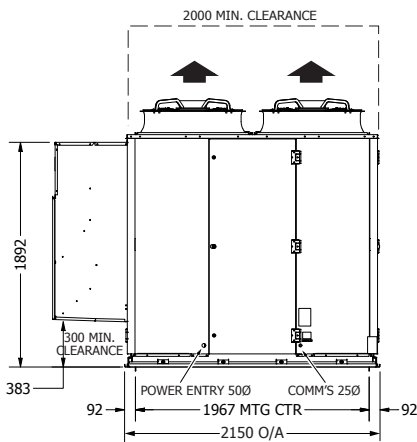
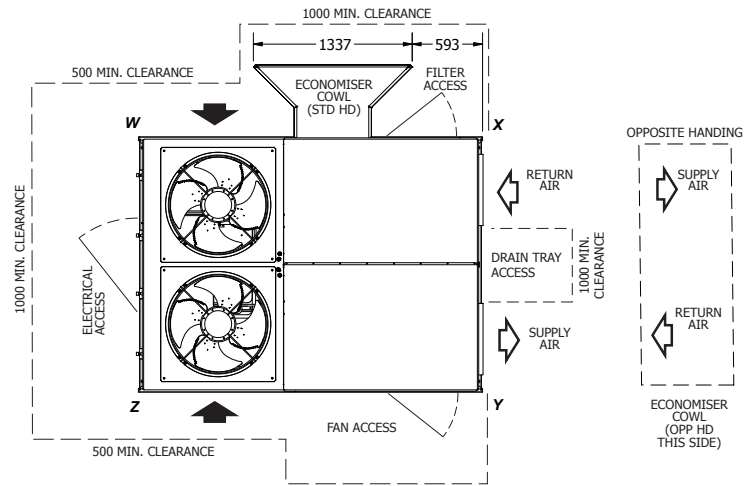
DIMENSIONS (mm)



OPA 820RLTB1FPQ01-Z Standard Hand, Horizontal Supply

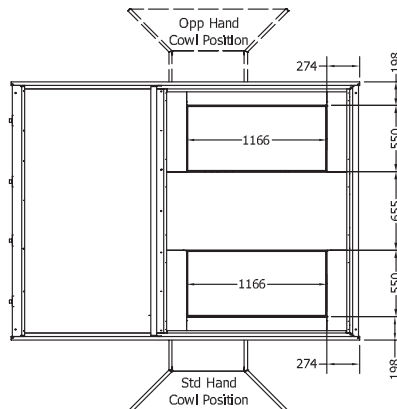
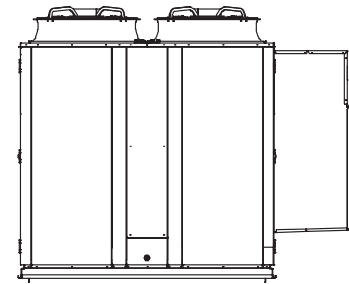
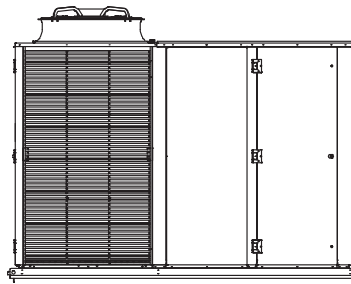
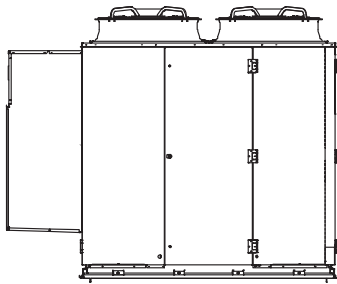
Not to Scale

	POINT LOADS (kg)			
	W	X	Y	Z
Eco Std	356	304	295	391
Eco Opp	349	281	319	398



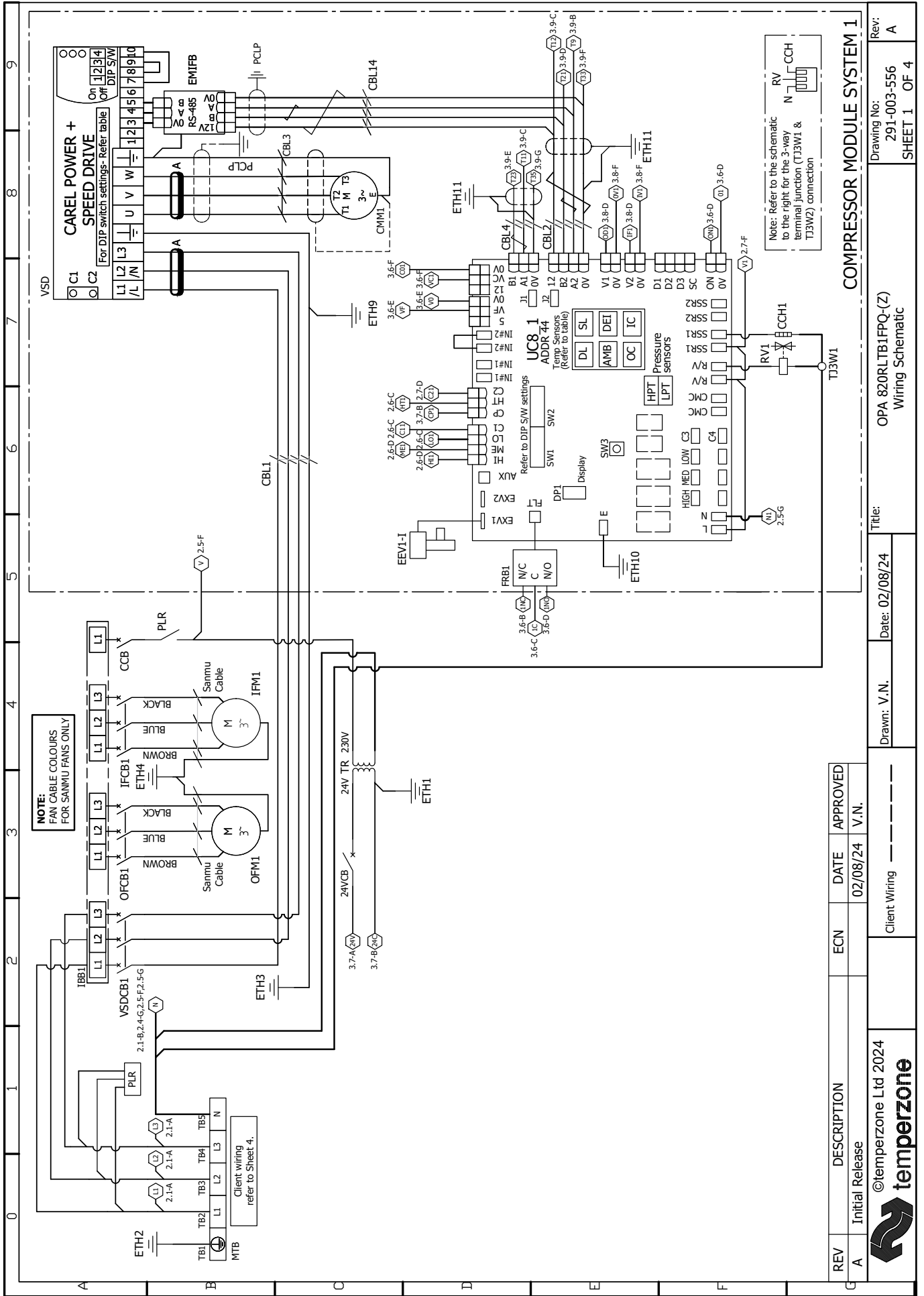
OPA 820RLTB1FPQ23-Z Standard Hand, Downward Supply

Clearances as above



NOTE

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



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

Client Wiring

Drawn: V.N.

Date: 02/08/24

Title: OPA 820RLTB1FQ-(Z) Wiring Schematic

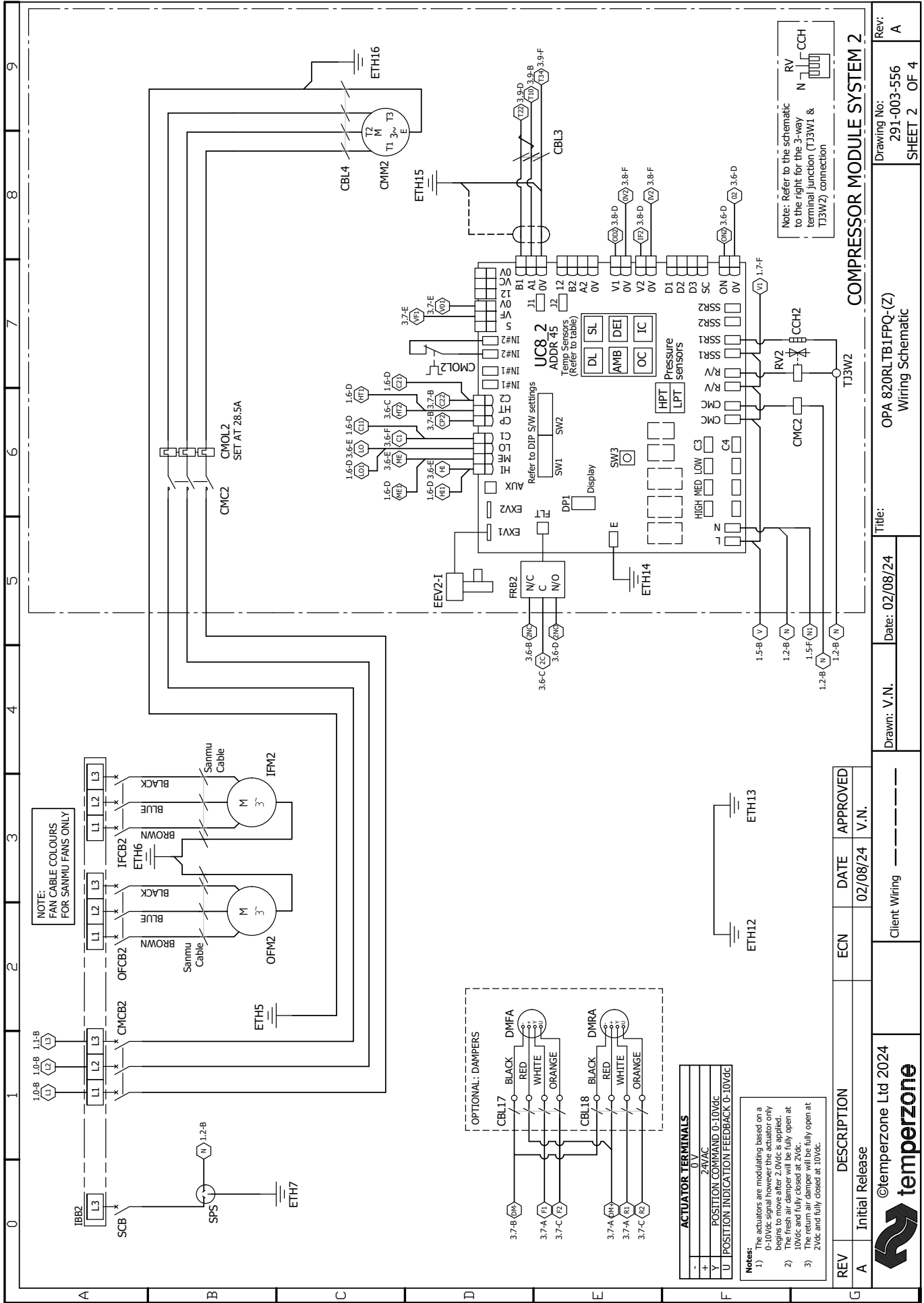
Drawing No: 291-003-556
SHEET 1 OF 4

COMPRESSOR MODULE SYSTEM 1



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Rev: A



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

Title: OPA 820RLTBFPO-(Z)
 Wiring Schematic

Date: 02/08/24

Drawn: V.N.

Client Wiring

Initial Release



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

A	0	1	2	3	4	5	6	7	8	9																																		
<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"> <p>Customer Connection (Refer UC8 Manual for details)</p> </div> <div style="width: 25%;"> <p>Customer scope Incoming Power Connection</p> </div> <div style="width: 25%;"> <p>UC8 Configuration</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Compressor</th> <th>UC8 DIP SWITCHES</th> </tr> </thead> <tbody> <tr> <td></td> <td>ON</td> </tr> <tr> <td>SYSTEM 1</td> <td>INVERTER 1, 4, 6, 7, 10, 14</td> </tr> <tr> <td>SYSTEM 2</td> <td>FIXED SPEED 1, 4, 6, 7, 10, 11, 14</td> </tr> </tbody> </table> </div> <div style="width: 25%;"> <p>Ferrites</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Part Number</th> <th>Frequency Type</th> <th>Number of Turns</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>012-001-074</td> <td>High</td> </tr> <tr> <td></td> <td></td> <td>1</td> </tr> </tbody> </table> </div> </div>											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	Part Number	Frequency Type	Number of Turns	A	012-001-074	High			1																	
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<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. 																																												
<p>24VDCB 24 Volt Circuit Breaker</p> <p>CB1 Cable Marker</p> <p>CCB Control Circuit Breaker</p> <p>CCH Crankcase Heater</p> <p>CMC Compressor Motor Contactor</p> <p>CMCB Compressor Motor Circuit Breaker</p> <p>CMM Compressor Motor</p> <p>CMOL Compressor Motor Overload</p> <p>DMF Damper Motor Fresh Air</p> <p>DMR Damper Motor Return Air</p> <p>EEV Electronic Expansion Valve</p> <p>EMIFB Electromagnetic Interference Filter Board</p> <p>ETH Earth</p> <p>FRB Fault Relay Board</p> <p>IBB Insulated Bus Bar</p> <p>IFCB Indoor Fan Circuit Breaker</p> <p>IFM Indoor Fan Motor</p> <p>MTB Main Terminal Block</p> <p>OFGB Outdoor Fan Circuit Breaker</p> <p>OFM Outdoor Fan Motor</p> <p>PCLP P CLIP</p> <p>PLR Phase Loss Relay</p> <p>RV Reversing Valve</p> <p>SCB Socket Circuit Breaker</p> <p>SPS Single Phase Socket</p> <p>TBXT Terminal Block (number) Top</p> <p>TBXM Terminal Block (number) Middle</p> <p>TBXM Terminal Block (number) Bottom</p> <p>TJ3W Terminal Junction 3 Way</p> <p>TR Transformer</p> <p>UC8 Unit Controller 8</p> <p>VSD Variable Speed Drive</p> <p>VSDCB Variable Speed Drive Circuit Breaker</p> <p>0V UC8 Enable link Common</p> <p>0s-10 Indoor / Outdoor Fan 0-10VDC analogue speed control</p> <p>10V Indoor / Outdoor Fan 0-10VDC Supply Output</p> <p>12V RS-485 12V Supply Output</p> <p>24V 24VAC Internal Supply</p> <p>As.x RS-485 A (+) Communication Signal</p> <p>Bs.x RS-485 B (-) Communication Signal</p> <p>C01 Compressor Analogue Speed Control Common</p> <p>C1 Indoor Fan Fixed Three speed Control Common</p> <p>COM 24VAC Internal Supply Common</p> <p>CP Compressor ON / OFF Signal</p> <p>DFC Damper Motor Fresh Air 0-10Vdc Command</p> <p>DFR Damper Motor Return Air 0-10Vdc Feedback</p> <p>DRF Damper Motor Return Air 0-10Vdc Command</p> <p>FC Fan Fault Relay Output Common</p> <p>FE Fan Fault Relay Output Contact Signal</p> <p>FI Indoor Fan Fixed High speed Control Signal</p> <p>HT Cooling / Heating Mode Selection Signal</p> <p>LO Indoor Fan Fixed Low speed Control Signal</p> <p>ME Indoor Fan Fixed Medium speed Control Signal</p> <p>ON UC8 Enable Link Contact</p> <p>RC UC8 Fault Relay Output Common Contact</p> <p>RN UC8 Fault Relay Output Normally Closed Contact</p> <p>RO UC8 Fault Relay Output Normally Open Contact</p> <p>VC Compressor 0-10VDC Analogue Speed Control Signal</p> <p>VF Indoor Fan 0-10Vdc Analogue Speed Control Signal</p> <p>V0 Indoor Fan Analogue Speed Control Common</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 LI) 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</td> </tr> <tr> <td>SL</td> <td>Suction</td> <td>S</td> </tr> <tr> <td>AMB</td> <td>Ambient</td> <td>S</td> </tr> <tr> <td>DEI</td> <td>Deice</td> <td>S</td> </tr> <tr> <td>LPT</td> <td>Suction Pressure</td> <td>T</td> </tr> <tr> <td>HPT</td> <td>High Pressure</td> <td>T</td> </tr> <tr> <td></td> <td></td> <td>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	SL	Suction	S	AMB	Ambient	S	DEI	Deice	S	LPT	Suction Pressure	T	HPT	High Pressure	T			Grey
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<p>Drawing No: OPA 820RLTB1FPQ-(Z)</p> <p>Wiring Schematic</p> <p>Rev: A</p> <p>Sheet: SHEET 4 OF 4</p>																																												



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A	Initial Release		02/08/24	V.N.

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