

<b>Model</b>	<b>OPA 970RLTB2FPQD-Z Econex Pro</b>
Configuration	Horizontal Supply Air
Item No. (Standard / Opposite Hand)	877-097-701 / 877-097-710
Configuration	Downward Supply Air
Item No. (Standard / Opposite Hand)	877-097-723 / 877-097-732
Cooling capacity (net) <sup>1</sup>	91 kW
Cooling capacity range (gross)	16 ~ 102 kW
Heating capacity <sup>1</sup>	95.8 kW
Heating capacity range	13 ~ 110 kW
Electrical input - cooling	29.9 kW
Electrical input - heating	28.7 kW
EER / AEER (cooling) <sup>1</sup>	3.04 / 3.03
COP / ACOP (heating) <sup>1</sup>	3.34 / 3.33
Operating Range (outdoor ambient) - cooling	-10°C ~ 50°C
Operating Range (outdoor ambient) - heating	-10°C ~ 25°C
Master Controller	<i>c.pCO</i>
Slave Controllers	UC8 (x2)
Refrigerant	R32
Refrigerant Charge	10 kg/sys.
Minimum floor area (@2.4m below ceiling diffuser)	53 m <sup>2</sup>
Compressor oil type	POE-46 (NXG5020 or equivalent)
Compressor type	inverter scroll (x2)
Power supply <sup>2</sup>	3 ph. 400 V ac 50 Hz + N + E
Compressor (3ph.) run amps at rating cond.	19 A/ph. (x2)
Compressor + VSD circuit breaker	40 A (x2)
Indoor fan motor size	EC Plug 500 dia. 3.65kW (x2)
Nominal air flow at rating conditions	4 700 l/s
Indoor fan motor (3ph.) - full load	4.5 A/ph. (x2)
Outdoor fan motor (3ph.) - full load	5.5 A/ph. (x2)
Outdoor fan max. static pressure@ 10 500 l/s	125 Pa
Control circuit breaker (internal)	2 A
Single phase socket circuit breaker	10 A
Running amps (total system) <sup>1</sup>	46 / 41 / 47 A.
Max. running amps (total system)	74 / 74 / 77 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:**

Remote wired Service Interface Device ( <i>pGD1</i> )	201-000-867
Filters - rated EU4/G4 disposable	019-400-004 500x500x50 (x9) <sup>3</sup>
Filters - rated EU4/G4 washable (NZ Only)	019-000-033 500x500x50 (x9) <sup>3</sup>
Drain tundish (2 per set; 2 sets required)	060-000-653

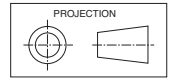
Refer to temperzone for other options.

<sup>1</sup> Tested in accordance with AS/NZS 3823

<sup>2</sup> Voltage range: 380-440V

<sup>3</sup> Filter sizes are nominal; refer to Temperzone for actual measurements.

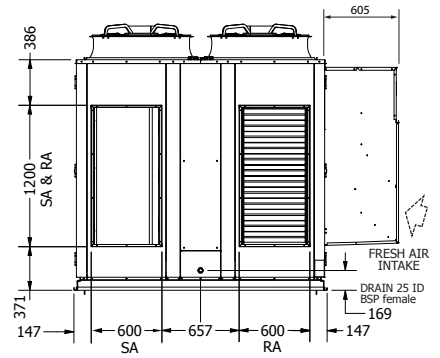
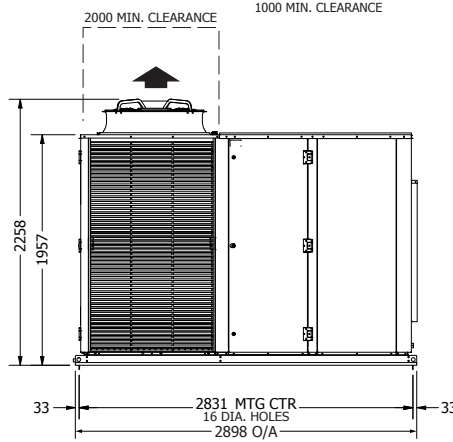
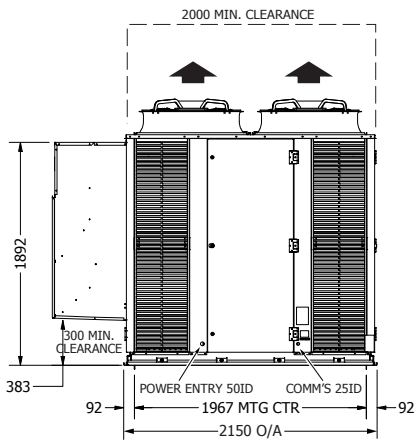
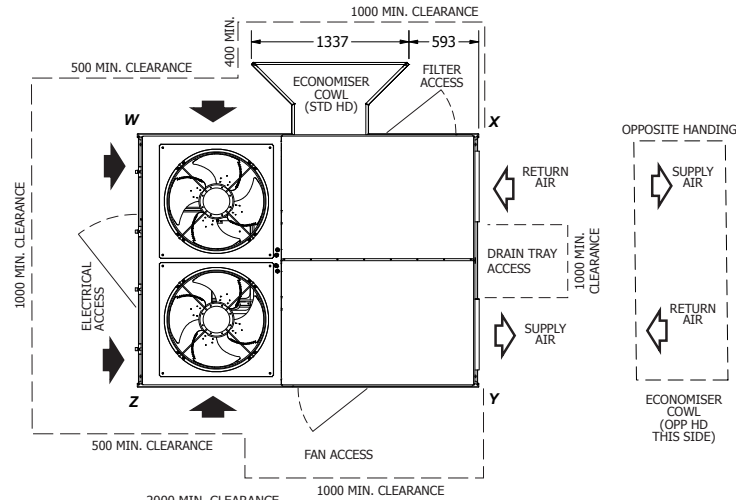
# DIMENSIONS (mm)



## OPA 970RLTBFPQD01-Z Standard Hand, Horizontal Supply

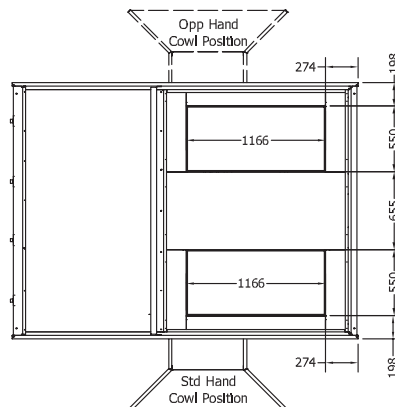
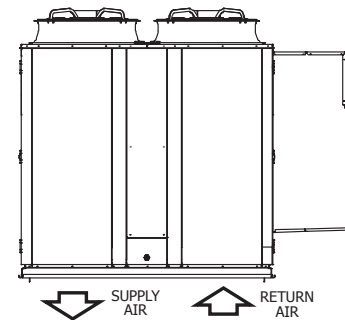
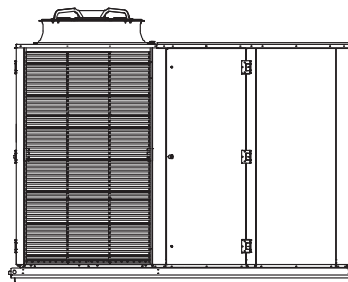
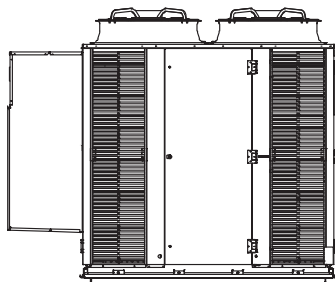
Not to Scale

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



## OPA 970RLTBFPQD23-Z Standard Hand, Downward Supply

Clearances as above

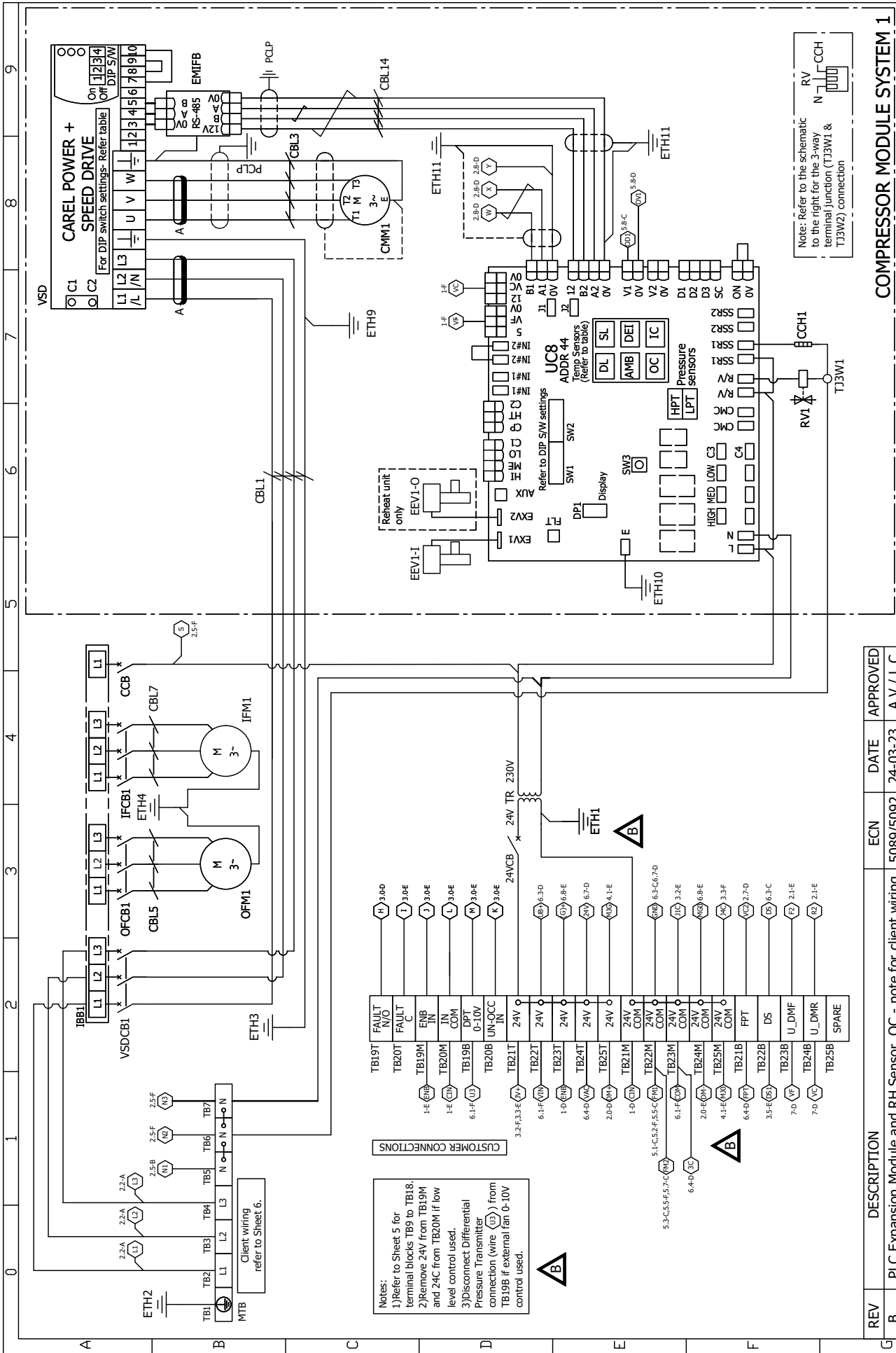


### NOTE

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

# WIRING (1)

Refer Sheet 5 for client wiring & descriptors



**COMPRESSOR MODULE SYSTEM 1**

Rev: B  
Drawing No: 291-003-492  
SHEET 1 OF 6

Title: OPA 970RLTB2FPQD-(Z) UC8 c/w CAREL c.pCO  
Wiring Schematic

Date: 16/12/22  
Drawn: A.V

Client Wiring

ECN 5089/5092  
DATE 24-03-23  
APPROVED A.V / L.C

DESCRIPTION  
PLC Expansion Module and RH Sensor. QC - note for client wiring.

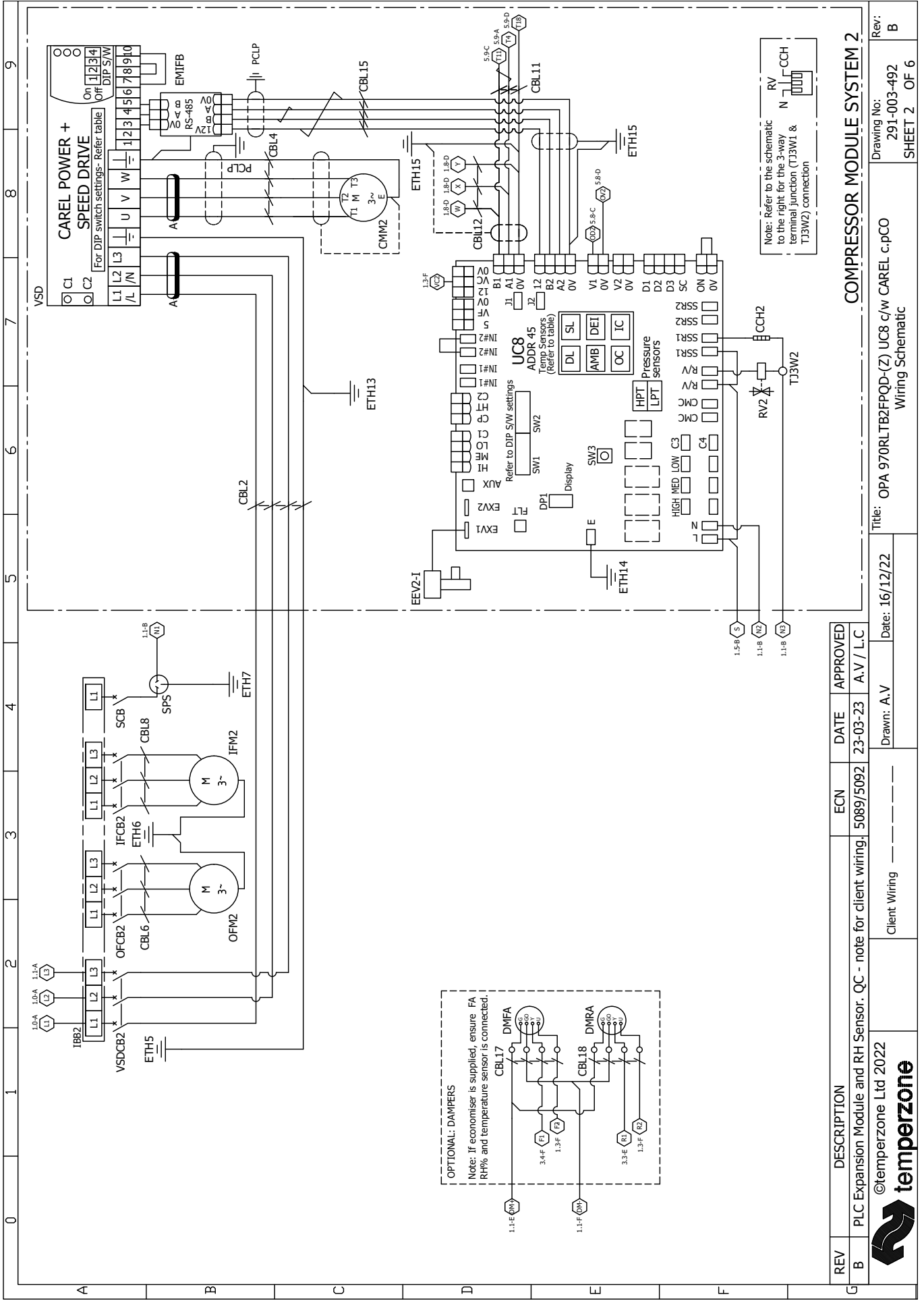


- Notes:**
- 1) Refer to Sheet 5 for terminal blocks TB9 to TB18, and 24C from TB20M if low level control used.
  - 2) Remove 24V from TB19M and 24C from TB20M if low level control used.
  - 3) Disconnect Differential Pressure Transmitter connection (Wire (L2) from TB19B if external fan 0-10V control used.

**CUSTOMER CONNECTIONS**

TB19T	FAULT N/O	(H) 3.0D
TB20T	FAULT C	(I) 3.0E
TB19M	ENB IN	(J) 3.0E
TB20M	IN COM	(L) 3.0E
TB19B	DPT 0-10V	(M) 3.0E
TB20B	UNV OCC IN	(K) 3.0E
TB21T	24V	(3.2,F,3.3-E) (V)
TB22T	24V	(B) 3.0D
TB23T	24V	(G) 6.8E
TB24T	24V	(W) 6.7D
TB25T	24V	(R) 4.1E
TB21M	24V COM	(U) 6.3,C,6.7D
TB22M	24V COM	(V) 3.2E
TB23M	24V COM	(W) 6.8E
TB24M	24V COM	(W) 3.3F
TB25M	24V COM	(W) 2.7D
TB21B	FPT	(S) 6.3C
TB22B	DS	(P) 2.1E
TB23B	U_DMFM	(R) 2.1E
TB24B	U_DMIR	(R) 2.1E
TB25B	SPARE	

Note: Refer to the schematic to the right for the 3-way terminal junction (TJ3W1 & TJ3W2) connection



REV	DESCRIPTION	ECN	DATE	APPROVED
B	PLC Expansion Module and RH Sensor. QC - note for client wiring.	5089/5092	23-03-23	A.V / L.C



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Client Wiring

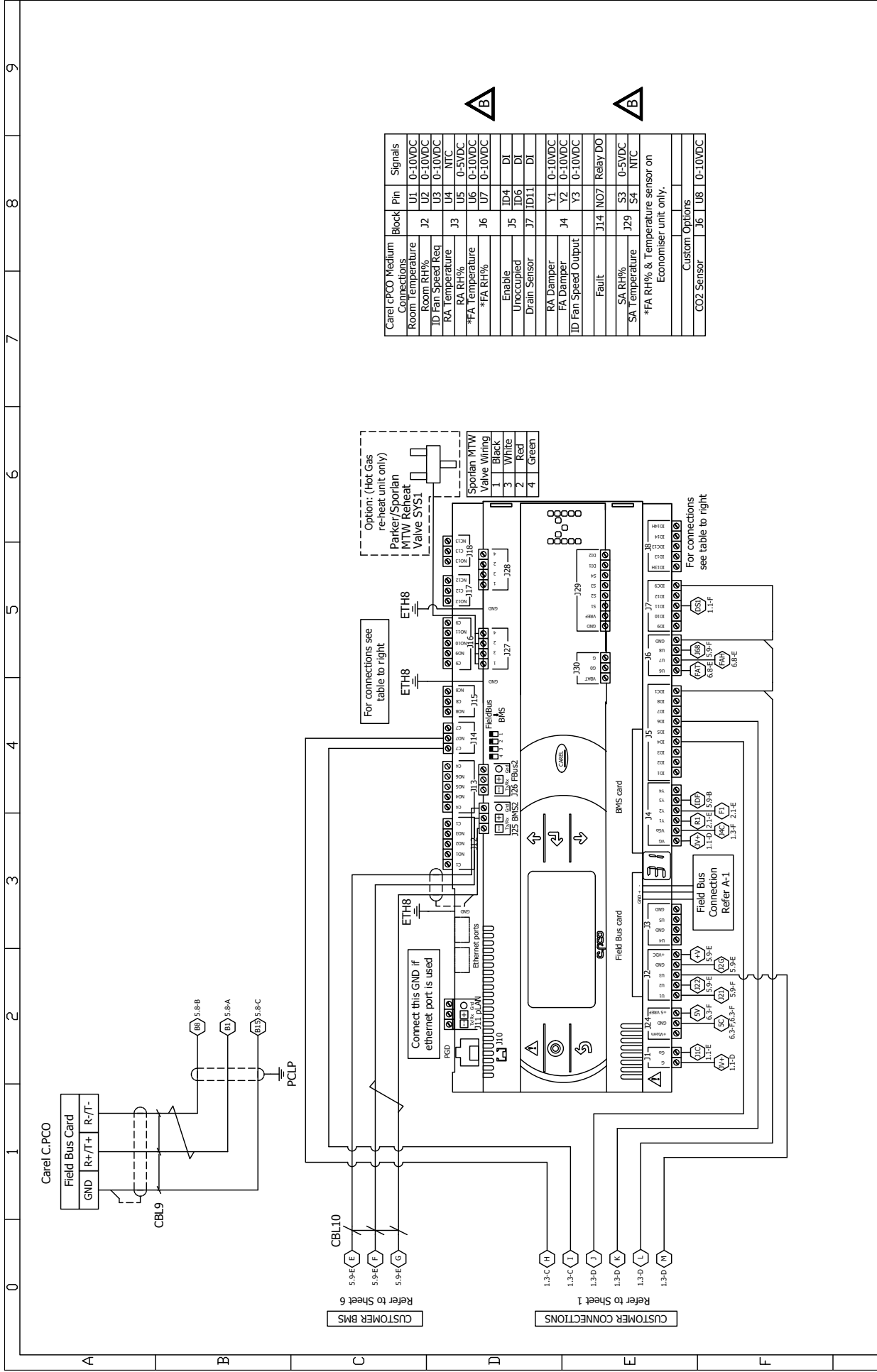
Drawn: A.V

Date: 16/12/22

Title: OPA 970RLTB2FPQD-(Z) UC8 c/w CAREL c.pCO  
 Wiring Schematic

Drawing No: 291-003-492  
 SHEET 2 OF 6

Rev: B



Carel c.p.CO Connections	Medium	Block	Pin	Signals
Room Temperature		J2	U1	0-10VDC
Room RH%			U2	0-10VDC
ID Fan Speed Req			U3	0-10VDC
RA Temperature		J3	U4	NTC
RA RH%			U5	0-5VDC
*FA Temperature		J6	U6	0-10VDC
*FA RH%			U7	0-10VDC
Enable		J5	ID4	DI
Unoccupied			ID6	DI
Drain Sensor		J7	ID11	DI
RA Damper			Y1	0-10VDC
FA Damper		J4	Y2	0-10VDC
ID Fan Speed Output			Y3	0-10VDC
Fault		J14	NO7	Relay DO
SA RH%			S3	0-5VDC
SA Temperature		J29	S4	NTC
*FA RH% & Temperature sensor on Economiser unit only.				
Custom Options				
CO2 Sensor		J6	U8	0-10VDC

REV	DESCRIPTION	ECN	DATE	APPROVED
B	PLC Expansion Module and RH Sensor. QC - note for client wiring.	5089/5092	23-03-23	A.V / L.C

Client Wiring

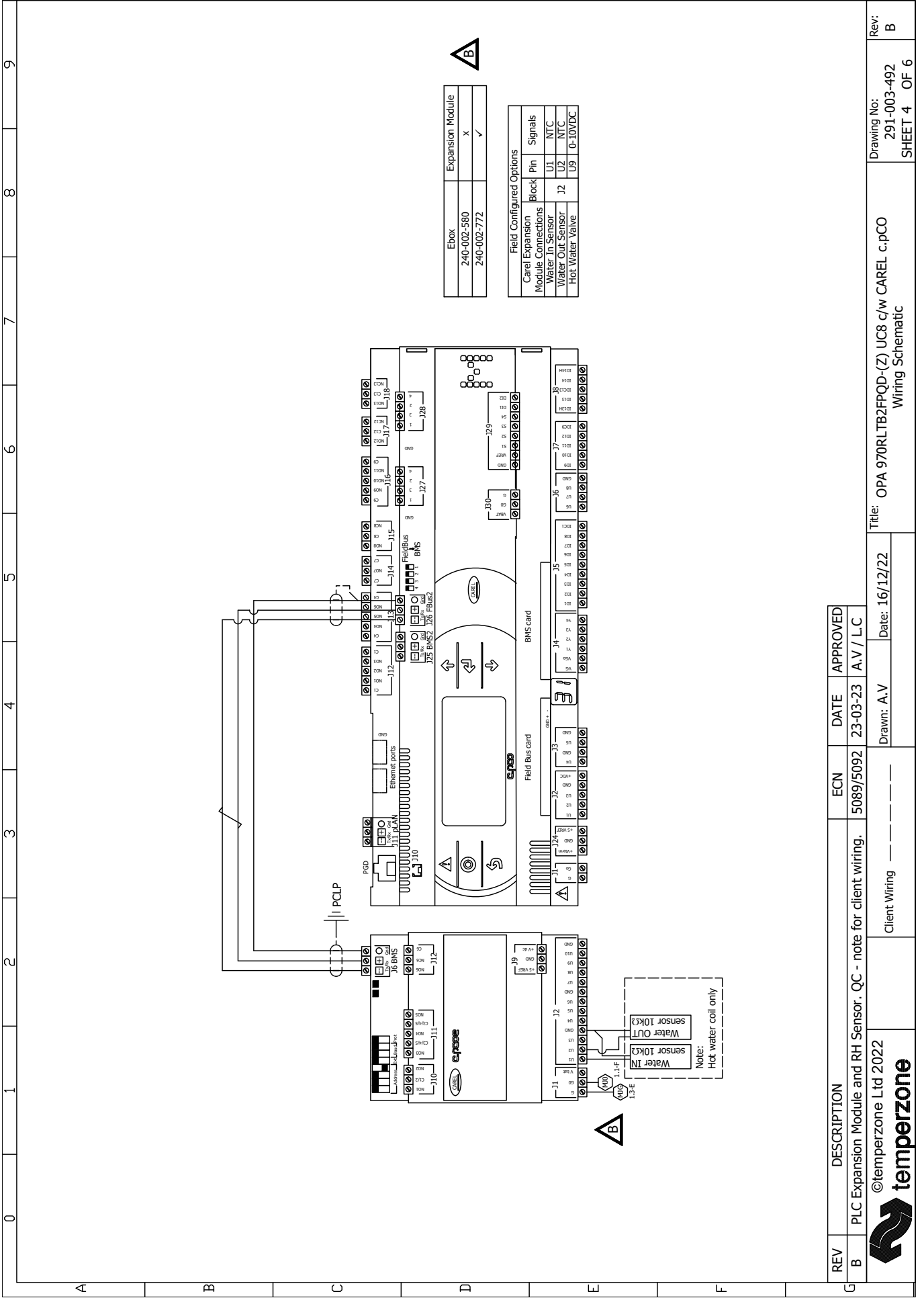
Drawn: A.V Date: 16/12/22

Title: OPA 970RLTB2FPQD-(Z) UC8 c/w CAREL c.p.CO Wiring Schematic

Drawing No: 291-003-492  
SHEET 3 OF 6

Rev: B





Expansion Module	Expansion Module
240-002-580	x
240-002-772	✓

Field Configured Options	
Carel Expansion Module Connections	Block Pin Signals
Water In Sensor	U1 U2 NTC
Water Out Sensor	J2 U9 0-10VDC
Hot Water Valve	

REV	DESCRIPTION	ECN	DATE	APPROVED
B	PLC Expansion Module and RH Sensor . QC - note for client wiring.	5089/5092	23-03-23	A.V / L.C

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Client Wiring

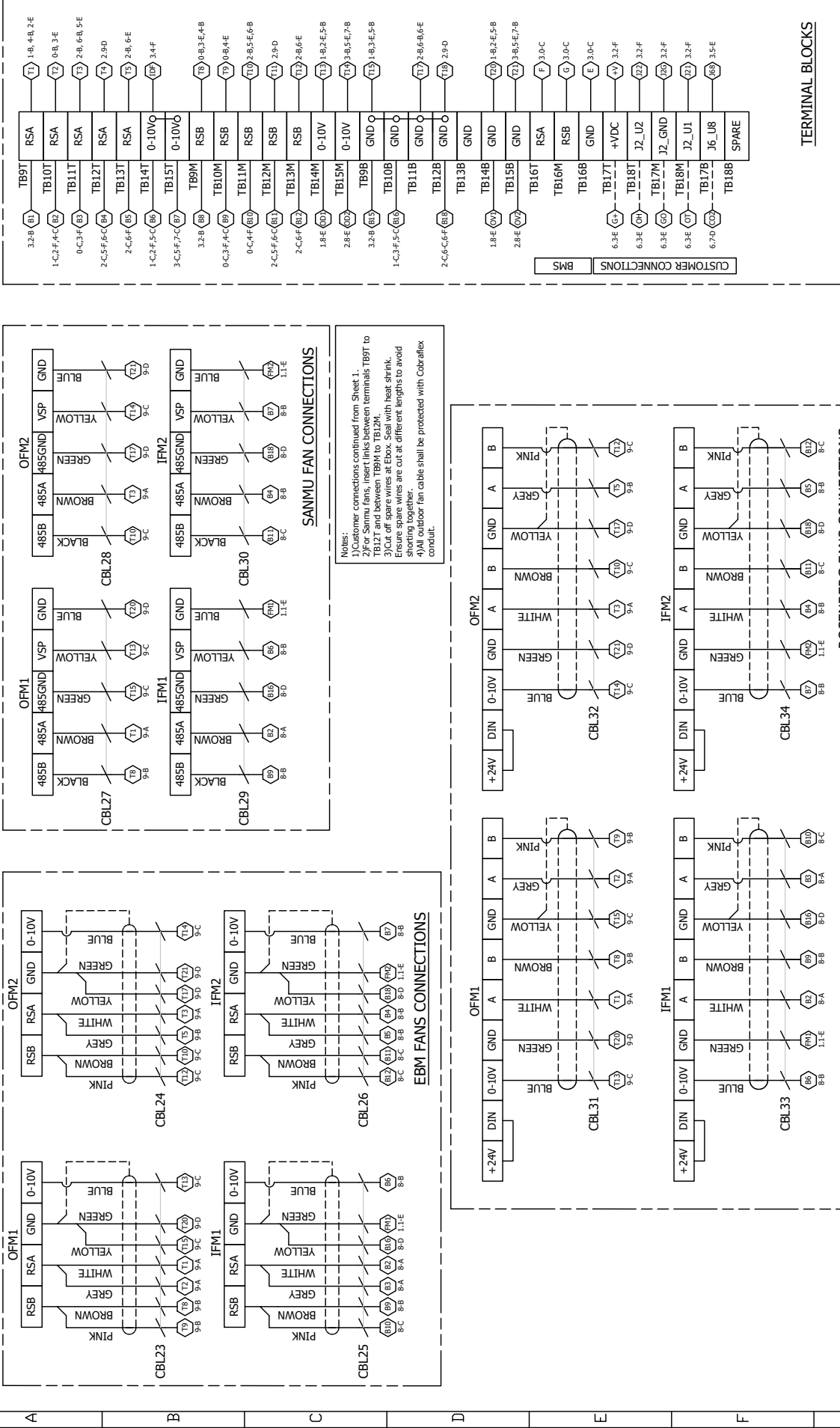
Title: OPA 970RLTB2FPQD-(Z) UC8 c/w CAREL c.pCO  
Wiring Schematic

Drawing No: 291-003-492  
SHEET 4 OF 6

Rev: B

0 1 2 3 4 5 6 7 8 9

NOTE: THE FOLLOWING FANS CONNECTIONS APPLY, DEPENDING ON THE MAKE OF FANS INSTALLED IN THE UNIT.



REV	DESCRIPTION	ECN	DATE	APPROVED
B	PLC Expansion Module and RH Sensor. QC - note for client wiring.	5089/5092	23-03-23	A.V / L.C

Drawn: A.V	Date: 16/12/22	Title: OPA 970RLTB2FPQD-(Z) UC8 c/w CAREL c.pCO
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Client Wiring	Wiring Schematic
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Drawing No: 291-003-492	Rev: B
SHEET 5	OF 6



