

Model	OPA 970RLTB2FPQD-Z-S2 Econex Pro
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) ¹	91 kW
Cooling capacity range (gross)	16 ~ 102 kW
Heating capacity ¹	95.8 kW
Heating capacity range	13 ~ 110 kW
Electrical input - cooling	29.9 kW
Electrical input - heating	28.7 kW
EER / AEER (cooling) ¹	3.04 / 3.03
COP / ACOP (heating) ¹	3.34 / 3.33
Operating Range (outdoor ambient) - cooling	-10°C ~ 50°C
Operating Range (outdoor ambient) - heating	-10°C ~ 25°C
Master Controller	c.pCO
Slave Controllers	UC8 (x2)
Refrigerant	R32
Refrigerant Charge	10 kg/sys.
Minimum floor area (@2.4m below ceiling diffuser)	53 m ²
Compressor oil type	POE-46 (NXG5020 or equivalent)
Compressor type	inverter scroll (x2)
Power supply ²	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) ¹	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

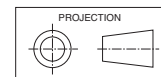
Accessories:

Remote wired Service Interface Device (pGD1)	201-000-867
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 3823² Voltage range: 376-440V³ Filter sizes are nominal; refer to Temperzone for actual measurements.

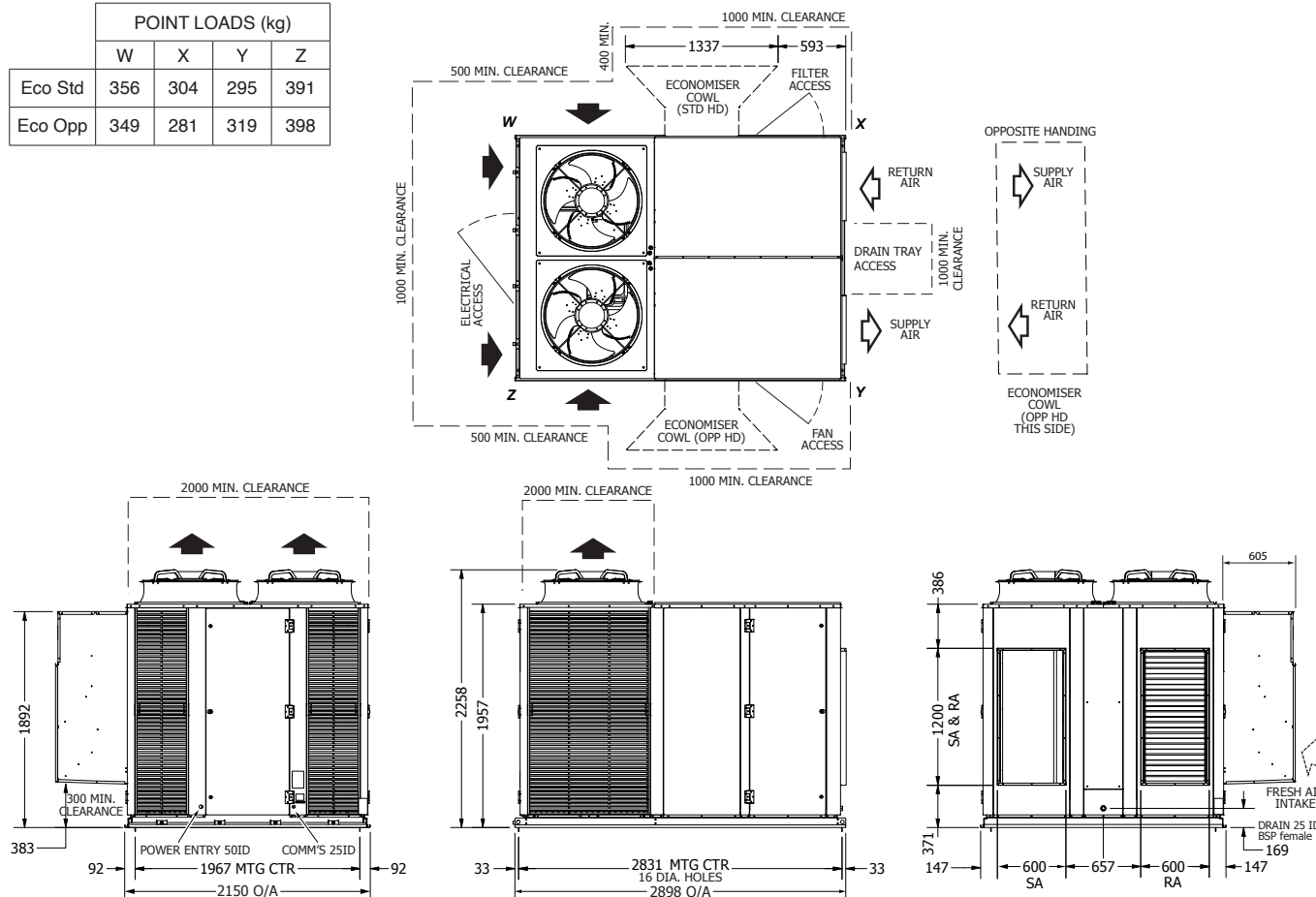
DIMENSIONS (mm)



OPA 970RLTBFPQD01-Z-S2 Standard Hand, Horizontal Supply

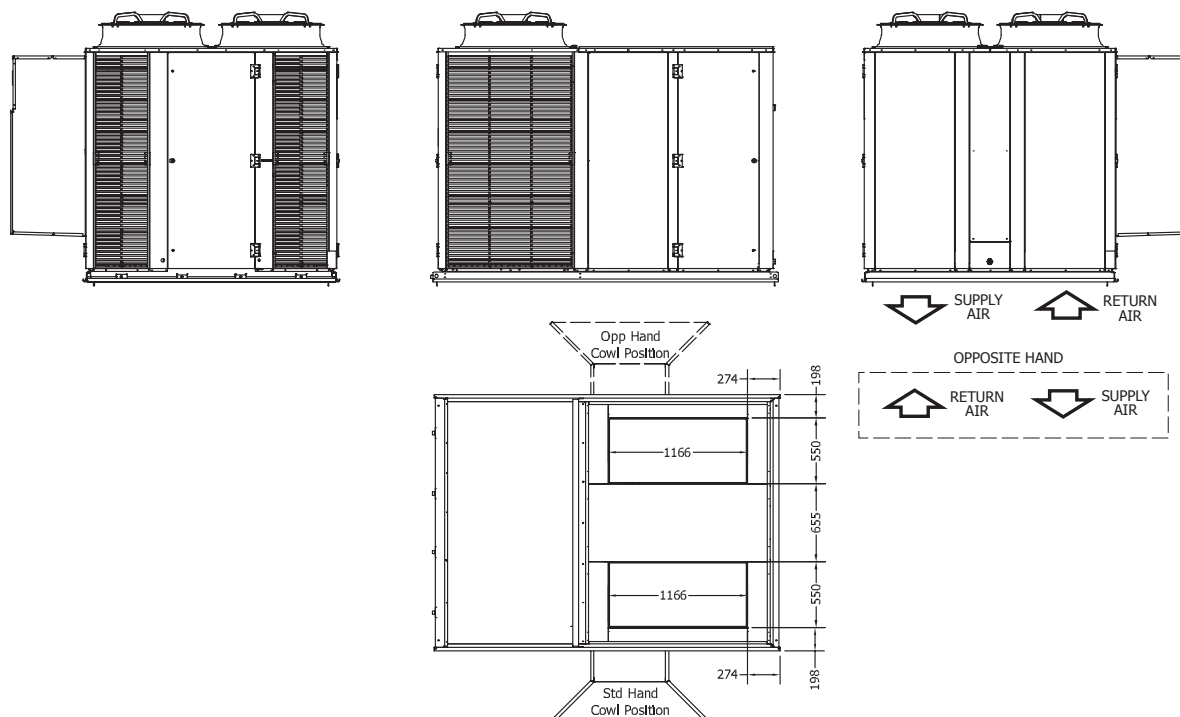
Not to Scale

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



OPA 970RLTBFPQD23-Z-S2 Standard Hand, Downward Supply

Clearances as above

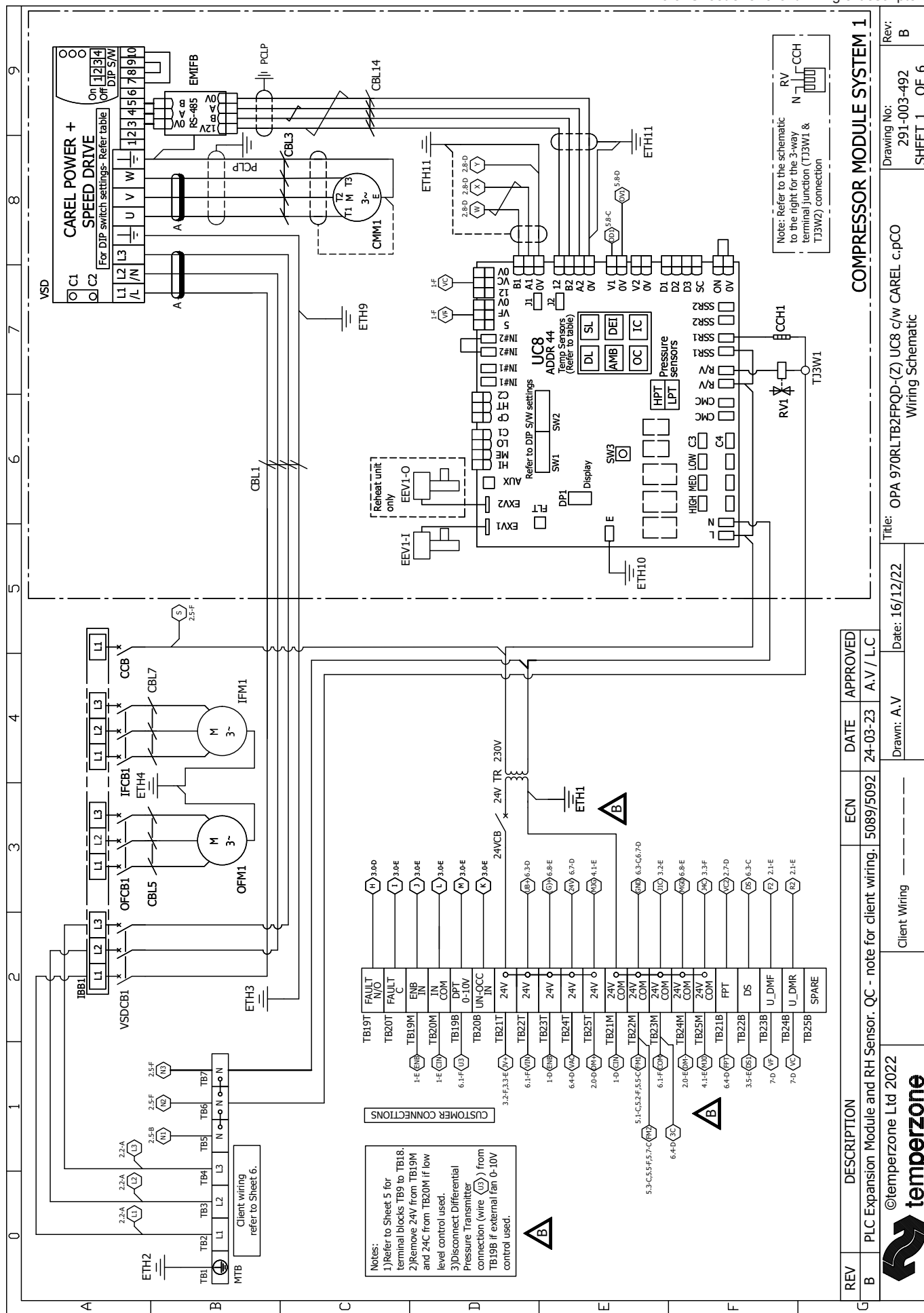


NOTE

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



DESCRIPTION

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

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ECN

5089/5092

Client Wiring

DATE

24-03-23

Approved

APPROVED

A.V / L.C

Drawn: A.V

Date:

16/12/22

Rev:

291-003-492

Rev: B

COMPRESSOR MODULE SYSTEM 1

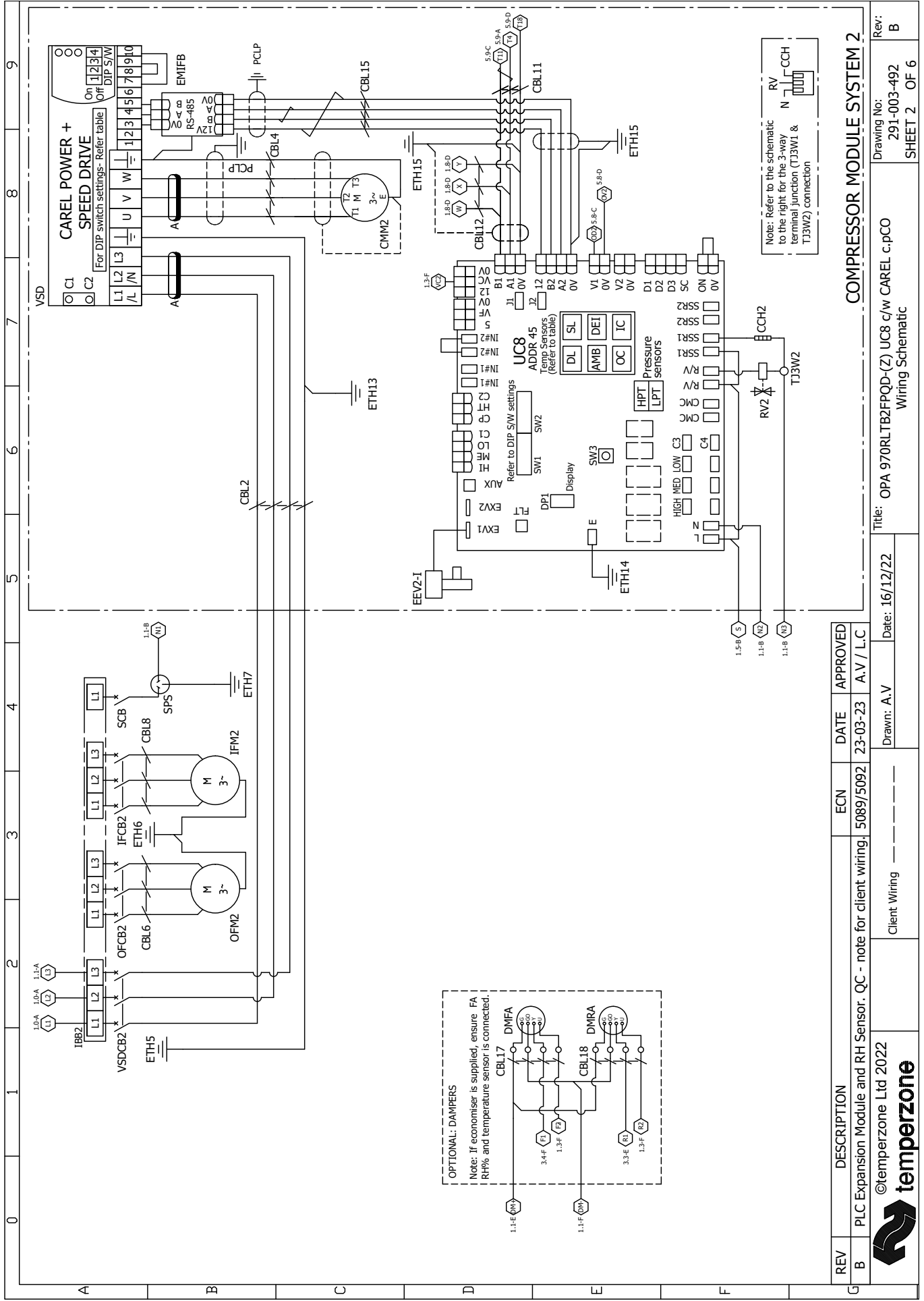
Wiring Schematic

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

SHEET 1

OF 6

Rev: B



G	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
<div>  <div> ©temperzone Ltd 2022 temperzone </div> </div>					
<div> <div>Client Wiring</div> <div> <div>Drawn: A.V</div> <div>Date: 16/12/22</div> </div> </div>			Title: OPA 970RLTB2FPQD-(Z) UC8 c/w CAREL c.pCO Wiring Schematic		
			Drawing No: 291-003-492 SHEET 3 OF 6		
			Rev: B		

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

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

24VCB 24 Volt Circuit Breaker

CBL Cable Marker

CCB Control Circuit Breaker

CCH Crankcase Heater

CMM Compressor Motor

DMF Damper Motor Fresh Air

DNR Damper Motor Return Air

EEDV Electronic Expansion Valve

EEIFB Electromagnetic Interference Filter Board

ETH Earth

IBB Insulated Bus Bar

IFCB Indoor Fan Circuit Breaker

IFM Indoor Fan Motor

MTB Main Terminal Block

OFCB Outdoor Fan Circuit Breaker

OFLM Outdoor Fan Motor

PCLP P Clip

RV Reversing Valve

SCB Socket Circuit Breaker

SFS Single Phase Socket

TB Terminal Block

TJ3W Terminal Junction 3 Way

TR Transformer

UC8 Unit Controller 8

VSD Variable Speed Drive

VSDCB Variable Speed Drive Circuit Breaker

Sensor(S) / Transducers (T) to UC8

Name	Type	Colour
DL Discharge	S	Grey
SL Suction	S	White
AMB Ambient	S	Black
DEL Deice	S	Blue
LPT Suction Pressure	T	Grey
HPT High Pressure	T	Grey

Sensor to Carel c.pCO

Name	Type
*Room Room Air	RH% & Temp
RA Return Air	RH% & Temp
SA Supply Air	RH% & Temp
**FA Fresh Air	RH% & Temp

*Room sensor supplied loose.
**FA sensor on Economiser unit only.

Belimo Drain Sensor EXT-TN-1071375
Wiring NO output

CBL36

Ferrites

Part Number	Frequency Type	Number of Turns
A 012-001-074	High	1

Room Sensor - Carel RH/Temp Sensor
DPPCL12000 (Supplied Loose)
Refer to Sheet 4 for connections.

DIP switches setting - Factory Default

5.8-E	ON
5.8-F	OFF
5.8-G	OFF
5.8-H	OFF

Dwyer Differential Pressure
Transmitter 616KD-13-V-C Wiring
and Tubes
Connections (0-10VDC output)

Inlet ring pressure tap location:
*EBM fan - RHS of fan as shown in
diagram on the right
*Kosenberg fan - Bottom of fan
*Samru fan - LHS of fan

Tubes Connections:
Connect static pressure tap to "A".
Connect inlet ring nipple to "n".

Client Wiring

Notes:

1)Remove 24V from TB19M
and 24C from TB20M if low
level control used.
2)Disconnect Differential
Pressure Transmitter
connection (wire (iii)) from
TB19B if external fan 0-10V
control used.

RA & SA Sensors - Carel RH/Temp Sensor
DPPCL3A000 Wiring (0-5VDC & NTC output)
Refer to Sheet 3 for connections to Carel controller.

Client Wiring

Client External Protection and Isolator Switch

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

Date: 16/12/22

Drawn: A.V

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

Wiring Schematic

Drawing No: 291-003-492

SHEET 6 OF 6

Rev: B