

SPECIFICATIONS



Model	OPA 970RLTB1FPQ-S2 Econex
Configuration	Horizontal Supply Air
Item No. (Standard / Opposite Hand)	866-097-701 / 866-097-710
Configuration	Downward Supply Air
Item No. (Standard / Opposite Hand)	866-097-723 / 866-097-732
Cooling capacity (net) ¹	88.9 kW
Cooling capacity range (gross)	15.4 ~ 99.2 kW
Heating capacity ¹	88.2 kW
Heating capacity range	14.3 ~ 96.1 kW
Electrical input - cooling	30.0 kW
Electrical input - heating	26.3 kW
EER / AEER (cooling) ¹	2.97 / 2.96
COP / ACOP (heating) ¹	3.35 / 3.34
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	10.5 kg/sys.
Minimum floor area (@2.4m below ceiling diffuser)	59 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)	19 A/ph.(x1) / 15.5 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	4 800 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. external static available@ 11 500 l/s	125 Pa
Control circuit breaker (internal)	2 A
Single phase socket circuit breaker	10 A
Running amps (total system) ¹	46 / 43 / 46 A
Max. running amps (total system)	64 / 63 / 64 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

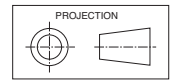
Refer to temperzone for other options.

¹ Tested in accordance with AS/NZS 3823

² Voltage range: 376-440V

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

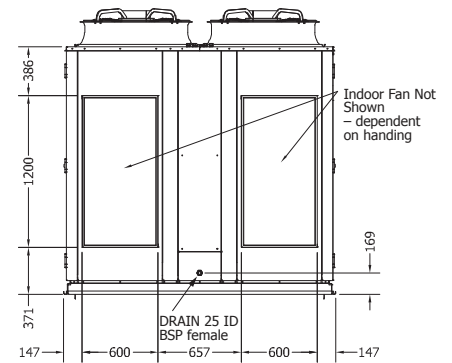
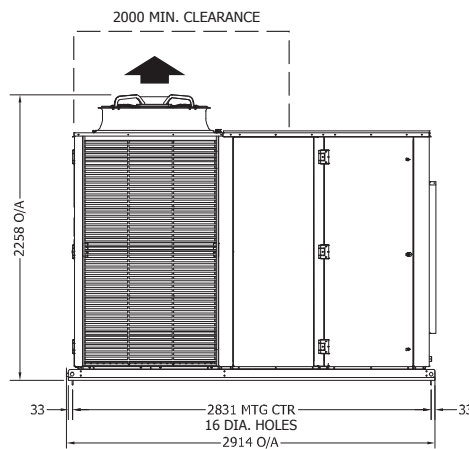
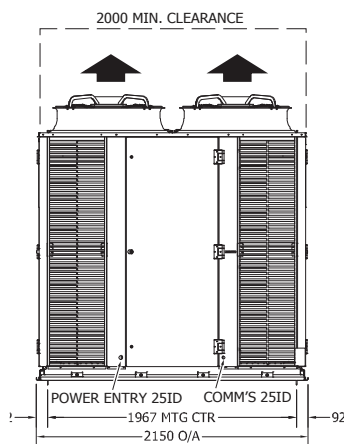
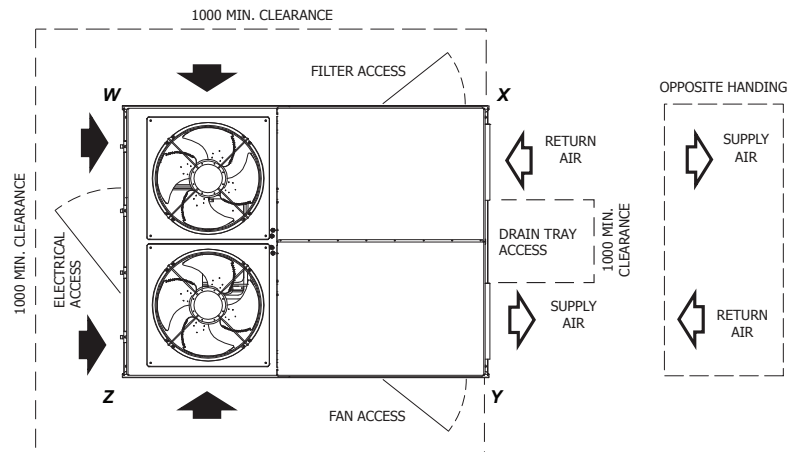
DIMENSIONS (mm)



OPA 970RLTBFPQ01-S2 Standard Hand, Horizontal Supply

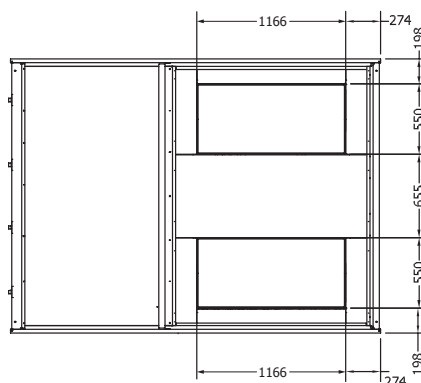
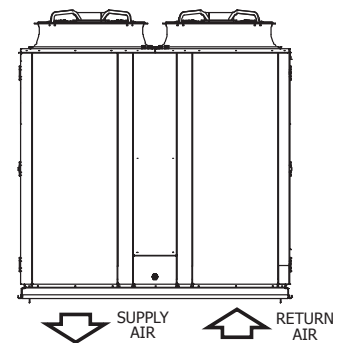
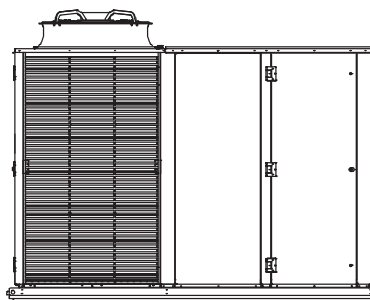
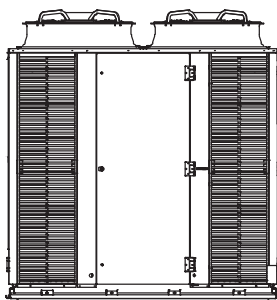
Not to Scale

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



OPA 970RLTBFPQ23-S2 Standard Hand, Downward Supply

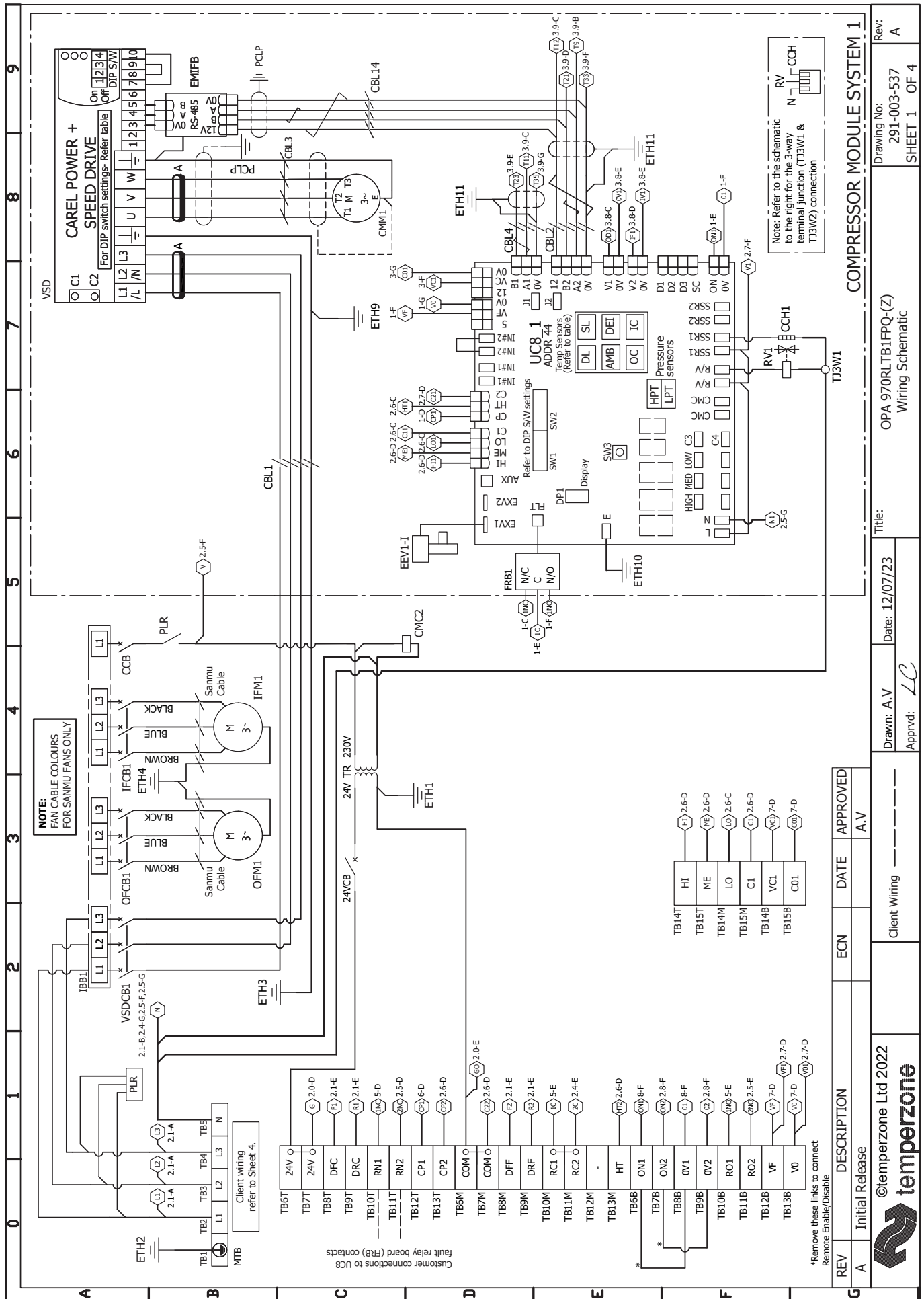
Clearances as above

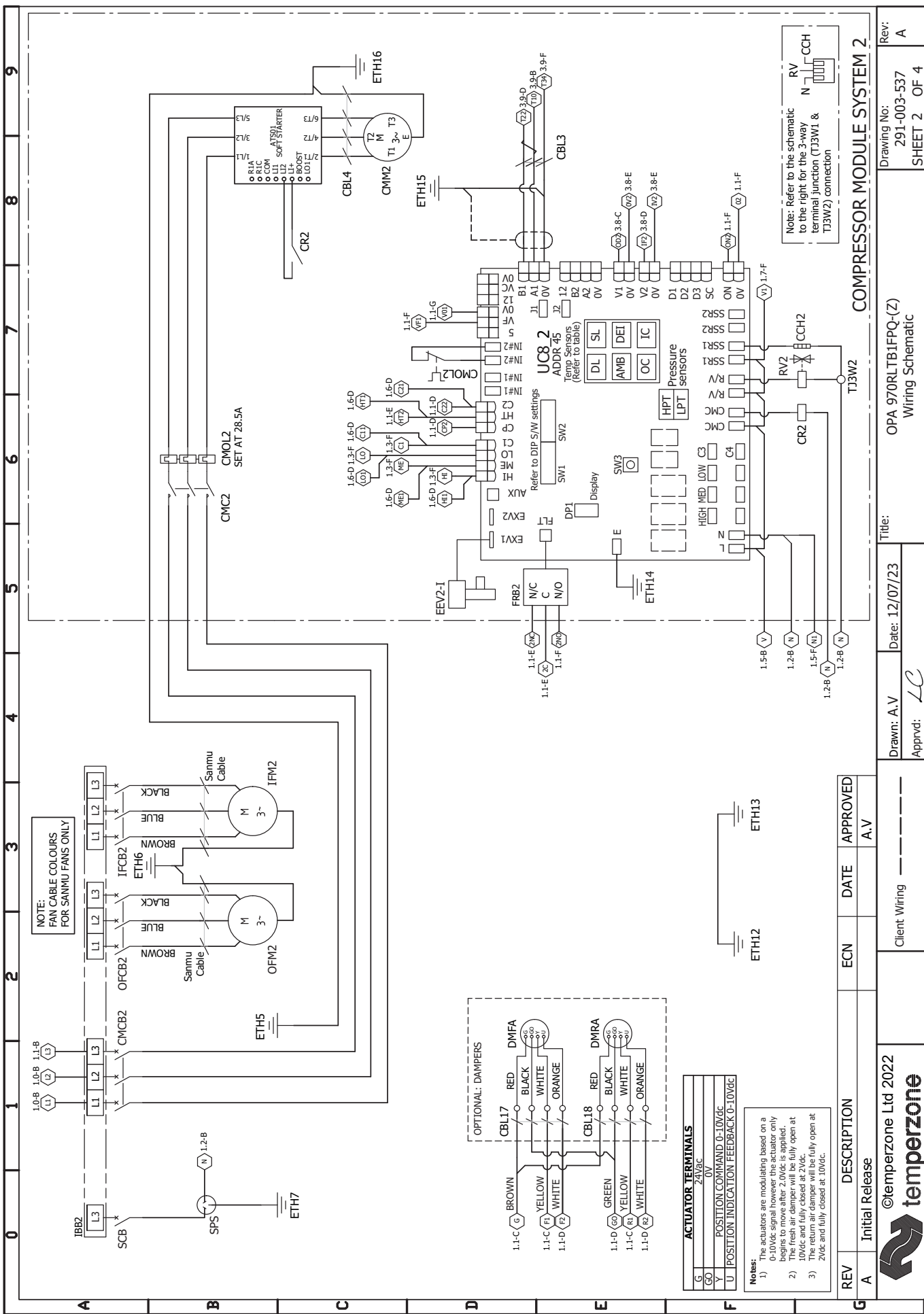


NOTE

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

BOTTOM VIEW





COMPRESSOR MODULE SYSTEM 2

REV	DESCRIPTION	ECN	DATE	APPROVED
A	Initial Release			A.V

©temperzone Ltd 2022		Client Wiring		Title: OPA 970RLTB1FPQ-(Z) Wiring Schematic	
temperzone		Drawn: A.V		Date: 12/07/23	
		Apprvd: LC		Rev: 291-003-537 SHEET 2 OF 4	
				A	

0 1 2 3 4 5 6 7 8 9

24VCB 24 Volt Circuit Breaker

CBL Cable Marker

CCB Control Circuit Breaker

CCH Crankcase Heater

CMC Compressor Motor Contactor

CMCB Compressor Motor Circuit Breaker

CMM Compressor Motor

CMOL Compressor Motor Overload

CR Control Relay

DMF Damper Motor Fresh Air

DMR Damper Motor Return Air

EEV Electronic Expansion Valve

EMIFB Electromagnetic Interference Filter Board

ETH Earth

FRB Fault Relay Board

IBB Insulated Bus Bar

IFCB Indoor Fan Circuit Breaker

IFM Indoor Fan Motor

MTB 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

TBXB Terminal Block (number) Bottom

TJ3W Terminal Junction 3 Way

TR Transformer

UC8 Unit Controller 8

VSD Variable Speed Drive

VSDCB Variable Speed Drive Circuit Breaker

0V 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

C01 Compressor Analogue Speed Control Common

C1 Indoor Fan Fixed Three speed Control Common

COM 24VAC internal Supply Common

CP Compressor ON / OFF Signal

DFC Damper Motor Fresh Air 0-10Vdc Command

DFE Damper Motor Fresh Air 0-10Vdc Feedback

DRC 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

24VAC Internal Supply

RS485 A (+) Communication Signal

RS485 B (-) Communication Signal

Compressor Analogue Speed Control Common

Indoor Fan Fixed Three speed Control Common

24VAC internal Supply Common

Compressor ON / OFF Signal

Damper Motor Fresh Air 0-10Vdc Command

Damper Motor Fresh Air 0-10Vdc Feedback

Damper Motor Return Air 0-10Vdc Command

Damper Motor Return Air 0-10Vdc Feedback

Fan Fault Relay Output Common

Fan Fault Relay Output Contact Signal

Indoor Fan Fixed High speed Control Signal

Cooling / Heating Mode Selection Signal

Indoor Fan Fixed Low speed Control Signal

Indoor Fan Fixed Medium speed Control Signal

UC8 Enable link Contact

UC8 Fault Relay Output Common Contact

UC8 Fault Relay Output Normally Closed Contact

UC8 Fault Relay Output Normally Open Contact

Compressor 0-10VDC Analogue Speed Control Signal

Indoor Fan 0-10Vdc Analogue Speed Control Signal

Indoor Fan Analogue Speed Control Common

Indoor Coil Layout

Overall System Layout

Temperzone Soft Starter Default Settings

UC8 Configuration

Client Wiring

Client Wiring

Client Wiring

Phase Loss Relay

Important Notes:

Modbus Devices Address

VSD DIP switch settings

Sensor(S) / Transducers (T) to UC8

UC8 Configuration

Ferrites

Instructions To Convert To Master-Master Control

24 Hour power required (on L1) for control circuit and crankcase heaters

Portable Residual Current Device (PRCD) shall be used with single phase socket.

UC8 44, 45

VSD 10

DIP switch 1,4 On

2,3 Off

DL Discharge S Grey

SL Suction S White

AMB Ambient S Black

DEI Deice S Blue

LPT Suction Pressure T Grey

HPT High Pressure T Grey

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

1) Turn off power to entire system.

2) Turn off dip switch 11 for system 2 fixed speed UC8 control.

3) Move the jumper between terminal blocks TB24T and TB25T to between TB25T and TB26T (refer to sheet 3).

4) Move the jumper between terminal blocks TB24M and TB25M to between TB25M and TB26M (refer to sheet 3).

5) Turn power back on.

6) Check UC8_2 (SYSTEM 2) address is set as 45. If its address is 44, it needs to be changed to 45 using the pushbutton.

REV A

DESCRIPTION

ECN

DATE

APPROVED

Initial Release

Client Wiring

Client Wiring

Client Wiring

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Drawing No: 291-003-537

SHEET 4 OF 4

Rev: A