

SPECIFICATIONS



Indoor Unit	Horizontal discharge version (525-661-223)	ISD 840KBXH-P
	Vertical discharge version (525-671-201)	ISD 840KBXV-P
Outdoor Unit	(526-731-223)	OSA 840RKTBGV (digital)
Cooling capacity (net) ¹		81.3 kW
Nominal Cooling Capacity range		16.9 – 84.6 kW
Heating capacity ¹		78.4 kW
Electrical input - cooling		25.4 kW
Electrical input - heating		21.3 kW
EER / AEER (cooling) ¹		3.20 / 3.19
COP / ACOP (heating) ¹		3.68 / 3.66
Unit Controllers		UC8 (x2) / IUC
Refrigerant		R410A
Refrigerant precharge for 10 m		12.3 kg/sys.
Additional charge req'd for over 10 m		170 g/m/sys.
Base refrigerant charge OSA		10.6 kg/sys.
Maximum/extended line length ²		60 / 90 m
Separation limit: OSA above ISD		20 m
Separation limit: OSA below ISD		20 m
Suction line		35 mm OD (x2)
Liquid line		16 mm OD (x2)
Compressor oil type		POE 32-3MAF (or equivalent)
Additional oil charge over 40m line length		30 ml/m
Compressor type		digital + fixed scroll
Power supply via OSA ³		3 ph. 400V ac 50Hz + N + E
Compressor (3ph.) run amps at rating cond.		20 A/ph.
Compressor overload setting (digital/fixed)		25/30 A
Indoor fan motor size		EC Plug 500 dia. 2.8 kW (x2)
Rated indoor fan speed		4500 l/s
Indoor fan motor (3ph.) - full load		4.6 A/ph. (x2)
Outdoor fan motor (1ph.) - full load		2.7 A (x4)
Outdoor fan capacitor size		12 µfd (x4)
Control circuit breaker (internal)		2 A
Aux. power outlet (1ph.) overload setting		10 A
Running amps (total system) ¹		55 / 46 / 46 A
Max. running amps (total system)		74 / 64 / 64 A
RCD type recommended		type A, 30mA, 3 pole
Net weight ISD		351 kg
Net weight OSA		575 kg

Accessories:

ISD Filters – EU4/G4 rated, disposable	019-400-004 500x500x50 (x4) ⁴ 019-400-008 450x500x50 (x4)
ISD Filters – EU4/G4 rated, washable ^(NZ only)	019-400-034 500x500x50 (x4) ⁴ 019-400-038 450x500x50 (x4)

Optional Controls:

TZT-100 Room temperature controller	201-000-350
-------------------------------------	-------------

Refer to temperzone for other options, eg remote sensors, connection wires.

¹ Tested in accordance with AS/NZS 3823

² Refer to Temperzone for extended line length requirements

³ Voltage range: 380–440V.

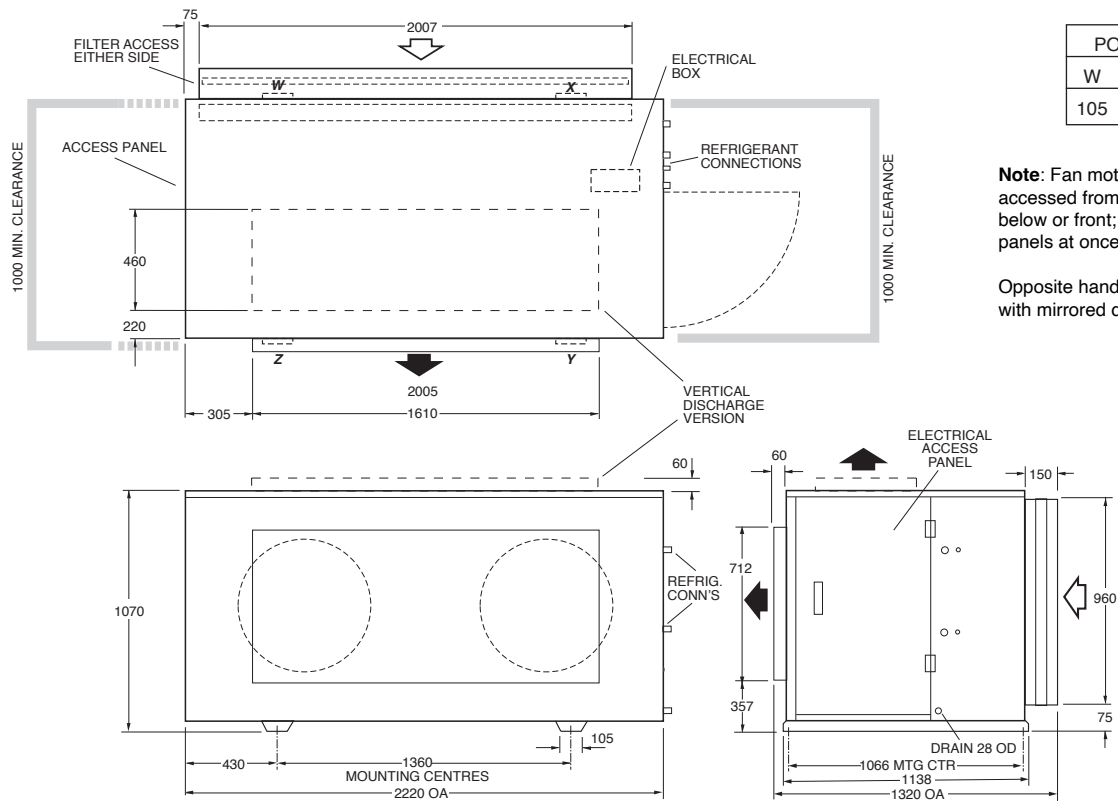
⁴ Filter sizes are nominal; refer to Temperzone for actual measurements.

DIMENSIONS (mm)



Not to Scale

ISD 840KBX-P Indoor Unit

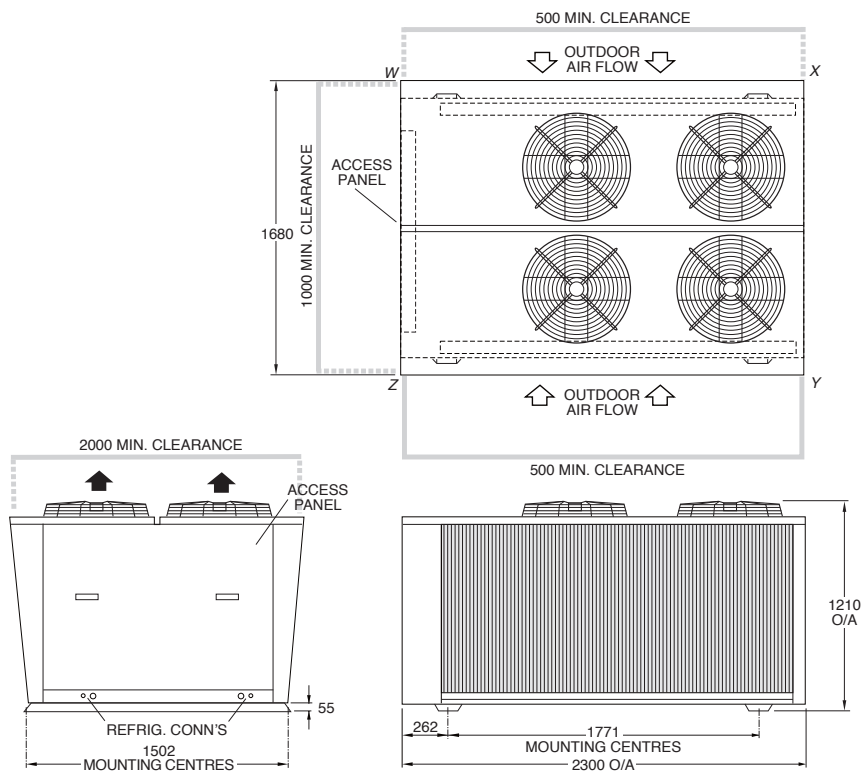


POINT LOADS (kg)			
W	X	Y	Z
105	116	66	64

Note: Fan motor can be accessed from panel above, below or front; no more than two panels at once.

Opposite hand version available with mirrored dimensions.

OSA 840RKTBGV Outdoor Unit



POINT LOADS (kg)			
W	X	Y	Z
192	92	95	196

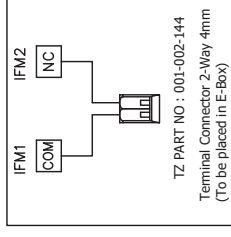
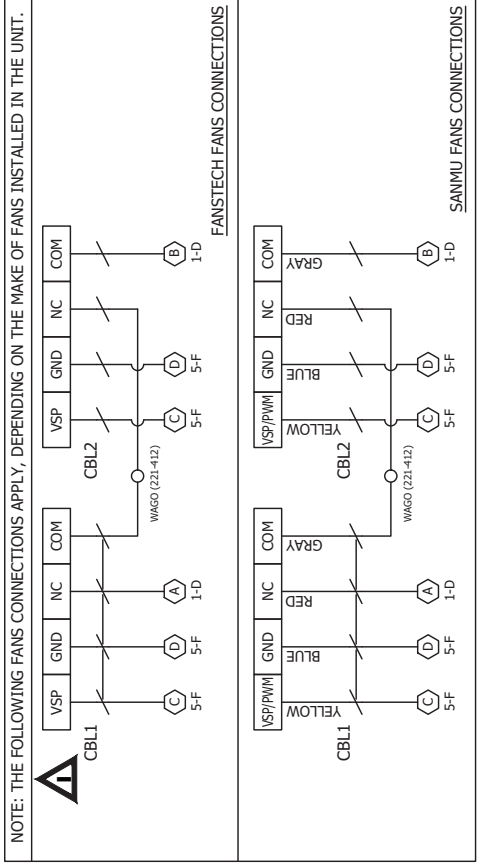
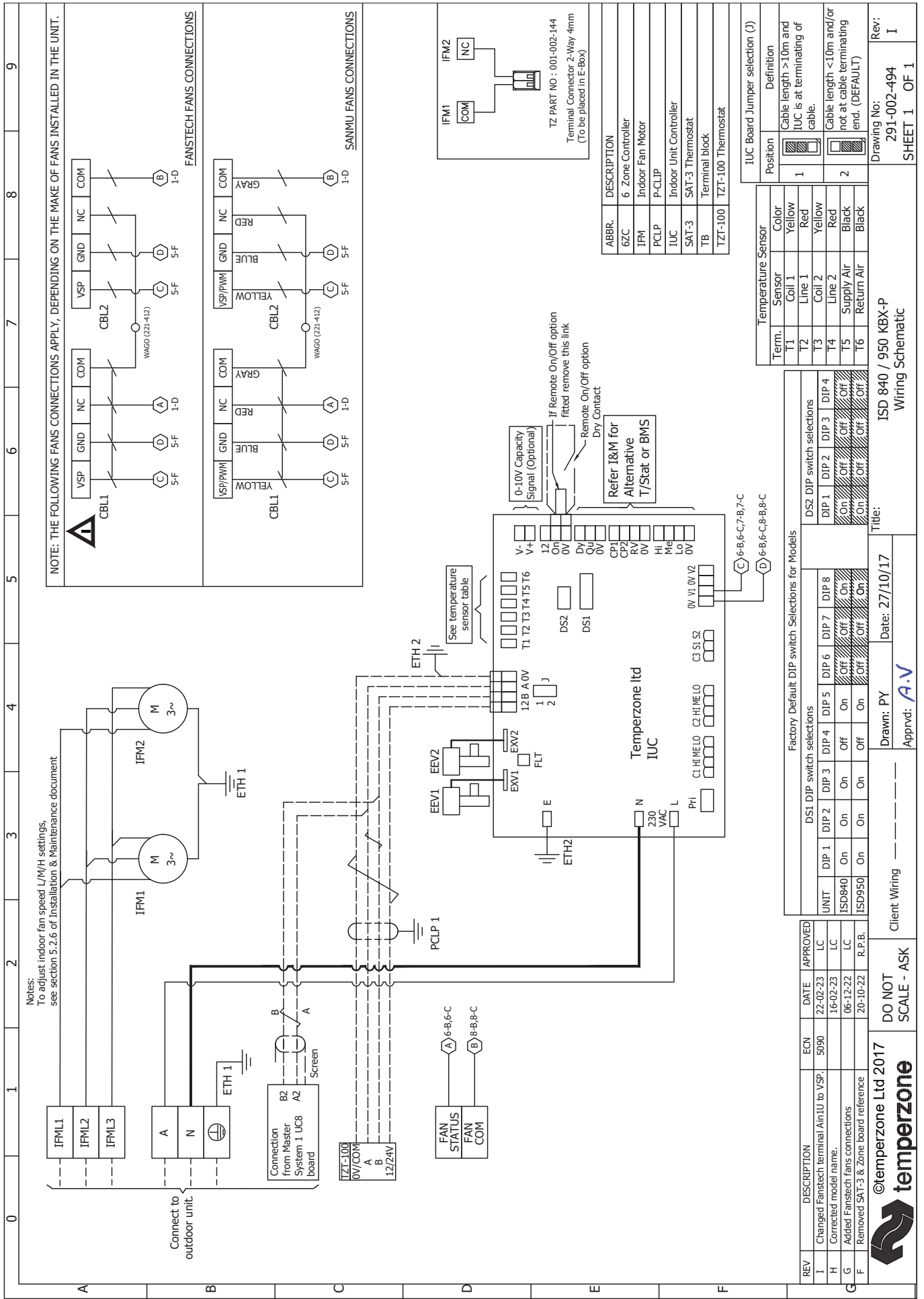
Recommended Connecting Pipe Sizes
 Suction : 35 mm OD (x2)
 Liquid : 16 mm OD (x2)

NOTE

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



INDOOR UNIT WIRING



ABBR.	DESCRIPTION
6ZC	6 Zone Controller
IFM	Indoor Fan Motor
PCLP	P-CLIP
IUC	Indoor Unit Controller
SAT-3	SAT-3 Thermostat
TB	Terminal block
TZT-100	TZT-100 Thermostat

Term.	Temperature Sensor	Color	Position	Definition
T1	Coil 1	Yellow	1	Cable length > 10m and IUC is at terminating of cable.
T2	Line 1	Red	2	Cable length < 10m and/or not at cable terminating end. (DEFAULT)
T3	Coil 2	Yellow		
T4	Line 2	Red		
T5	Supply Air	Black		
T6	Return Air	Black		

Factory Default DIP switch Selections for Models	
UNIT	DIP 1 DIP 2 DIP 3 DIP 4
ISD840	On On Off On
ISD950	On On Off On

DS2 DIP switch selections	
DIP 1	On
DIP 2	On
DIP 3	Off
DIP 4	Off

DS1 DIP switch selections	
DIP 1	On
DIP 2	On
DIP 3	On
DIP 4	On
DIP 5	On
DIP 6	Off
DIP 7	Off
DIP 8	Off

REV	DESCRIPTION	ECN	DATE	APPROVED
I	Changed Fanstech terminal Ain1U to VSP.	5090	22-02-23	LC
H	Corrected model name.		16-02-23	LC
G	Added Fanstech fans connections		06-12-22	LC
F	Removed SAT-3 & Zone board reference		20-10-22	R.P.B.



©temperzone Ltd 2017

DO NOT SCALE - ASK

Client Wiring

Drawn: PY
Approved: A.V

Date: 27/10/17

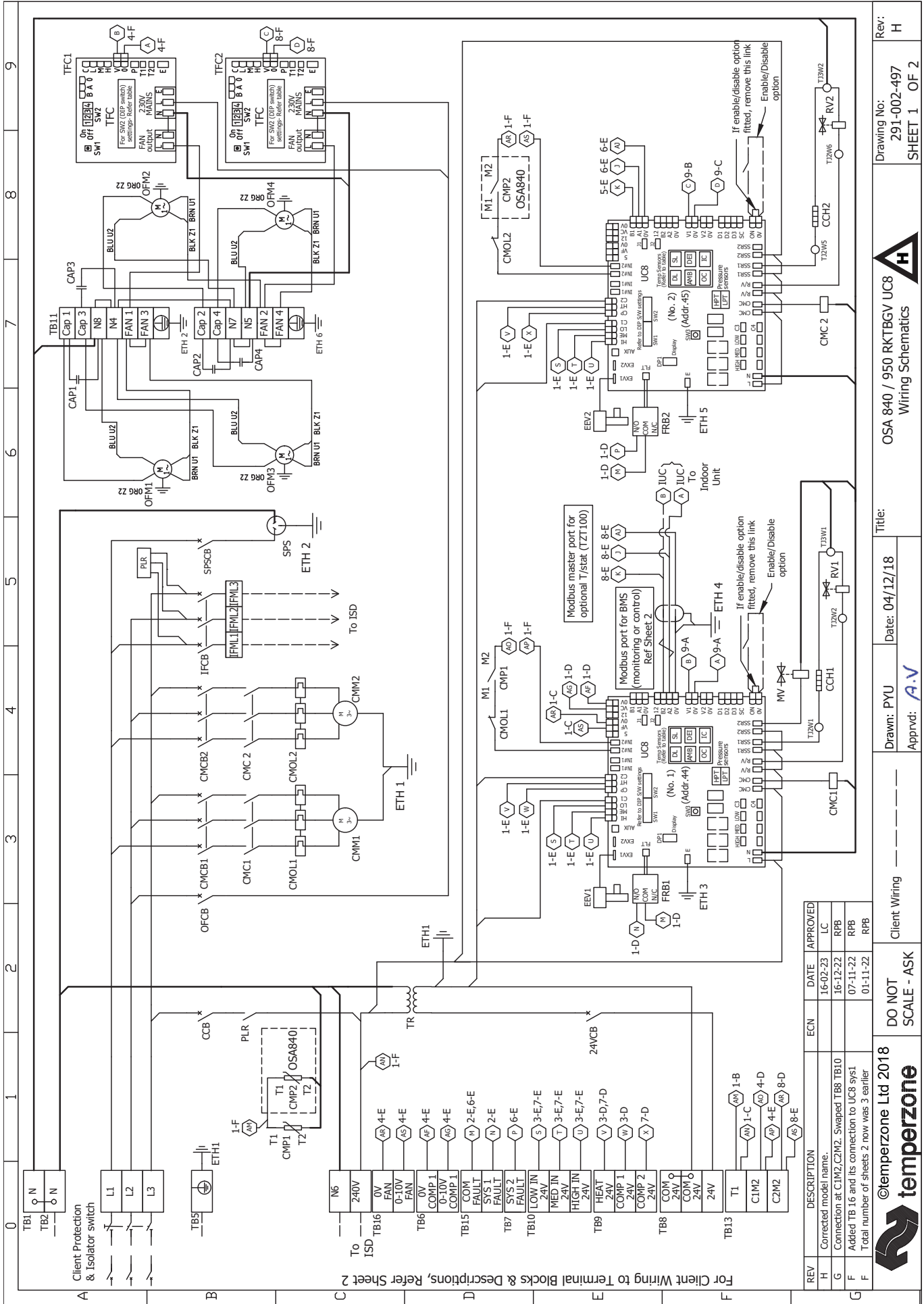
Title: ISD 840 / 950 KBX-P
Wiring Schematic

Drawing No: 291-002-494
SHEET 1 OF 1

Rev: I

0	1	2	3	4	5	6	7	8	9																																																																						
<p>Important Notes:</p> <p>1) Crankcase Heater Note 24 Hour power required for control circuit and crankcase heaters</p> <p>2) Mode Selection <ul style="list-style-type: none"> Switch on mains power to the controller and wait until the display shows a flashing decimal point. Hold down pushbutton SW3 until the display shows the letter 'n', then release the button. The display will show the currently selected expansion device mode. If the LED display is not showing '5', press the pushbutton until the LED shows '5'. Wait 30 sec for settings to save and controller to auto-restart. </p> <p>3) TZT 100 Note To connect TZT100 to unit use 2 pair twisted cable - screen grounded. (F/UTP 24G (0.2mm²) or thicker recommended)</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Sensors (S) / Transducers (T)</th> </tr> <tr> <th>Name</th> <th>Type</th> <th>Colour</th> </tr> </thead> <tbody> <tr> <td>DL</td> <td>Discharge Temp</td> <td>S</td> <td>RED</td> </tr> <tr> <td>SL</td> <td>Suction Temp</td> <td>S</td> <td>WHITE</td> </tr> <tr> <td>AMB</td> <td>Ambient Temp</td> <td>S</td> <td>BLACK</td> </tr> <tr> <td>DEI</td> <td>De-ice Temp</td> <td>S</td> <td>BLUE</td> </tr> <tr> <td>LPT</td> <td>Suction Pressure</td> <td>T</td> <td></td> </tr> <tr> <td>HPT</td> <td>High Pressure</td> <td>T</td> <td></td> </tr> </tbody> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">SAT-3 & TZT100 connection to UC8 terminals</th> </tr> <tr> <th>UC8 terminals</th> <th>SAT-3</th> <th>TZT100 Terminals</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>12V</td> <td>12/24V</td> </tr> <tr> <td>B2</td> <td>B</td> <td>B</td> </tr> <tr> <td>A2</td> <td>A</td> <td>A</td> </tr> <tr> <td>0V</td> <td>GND</td> <td>0V/COM</td> </tr> <tr> <td>Screen to 0V</td> <td></td> <td></td> </tr> </tbody> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">UC8 DIP switch settings (No.1)</th> </tr> <tr> <th>DIP switch</th> <th>On/Off</th> <th>UC8 DIP switch settings (No.2)</th> </tr> </thead> <tbody> <tr> <td>1,2,4,7,8,10</td> <td>On</td> <td>1,4,7,8,10,11</td> </tr> <tr> <td>All Others Off</td> <td>Off</td> <td>All Others Off</td> </tr> </tbody> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">TFC DIP switch settings</th> </tr> <tr> <th>DIP switch</th> <th>On/Off</th> <th>option</th> </tr> </thead> <tbody> <tr> <td>-</td> <td>On</td> <td>If enable/disable option fitted, remove this link</td> </tr> <tr> <td>1, 2, 3, 4</td> <td>Off</td> <td>Enable/Disable option</td> </tr> </tbody> </table>	Sensors (S) / Transducers (T)			Name	Type	Colour	DL	Discharge Temp	S	RED	SL	Suction Temp	S	WHITE	AMB	Ambient Temp	S	BLACK	DEI	De-ice Temp	S	BLUE	LPT	Suction Pressure	T		HPT	High Pressure	T		SAT-3 & TZT100 connection to UC8 terminals			UC8 terminals	SAT-3	TZT100 Terminals	12	12V	12/24V	B2	B	B	A2	A	A	0V	GND	0V/COM	Screen to 0V			UC8 DIP switch settings (No.1)			DIP switch	On/Off	UC8 DIP switch settings (No.2)	1,2,4,7,8,10	On	1,4,7,8,10,11	All Others Off	Off	All Others Off	TFC DIP switch settings			DIP switch	On/Off	option	-	On	If enable/disable option fitted, remove this link	1, 2, 3, 4	Off	Enable/Disable option	<p>2) Mode Selection</p> <ul style="list-style-type: none"> Switch on mains power to the controller and wait until the display shows a flashing decimal point. Hold down pushbutton SW3 until the display shows the letter 'n', then release the button. The display will show the currently selected expansion device mode. If the LED display is not showing '5', press the pushbutton until the LED shows '5'. Wait 30 sec for settings to save and controller to auto-restart. 	<p>Client Wiring</p>	<p>BMS Control</p>
Sensors (S) / Transducers (T)																																																																															
Name	Type	Colour																																																																													
DL	Discharge Temp	S	RED																																																																												
SL	Suction Temp	S	WHITE																																																																												
AMB	Ambient Temp	S	BLACK																																																																												
DEI	De-ice Temp	S	BLUE																																																																												
LPT	Suction Pressure	T																																																																													
HPT	High Pressure	T																																																																													
SAT-3 & TZT100 connection to UC8 terminals																																																																															
UC8 terminals	SAT-3	TZT100 Terminals																																																																													
12	12V	12/24V																																																																													
B2	B	B																																																																													
A2	A	A																																																																													
0V	GND	0V/COM																																																																													
Screen to 0V																																																																															
UC8 DIP switch settings (No.1)																																																																															
DIP switch	On/Off	UC8 DIP switch settings (No.2)																																																																													
1,2,4,7,8,10	On	1,4,7,8,10,11																																																																													
All Others Off	Off	All Others Off																																																																													
TFC DIP switch settings																																																																															
DIP switch	On/Off	option																																																																													
-	On	If enable/disable option fitted, remove this link																																																																													
1, 2, 3, 4	Off	Enable/Disable option																																																																													
<p>24VCB 24 VOLT CIRCUIT BREAKER</p> <p>CAP CAPACITOR</p> <p>CBL CABLE</p> <p>CCB CONTROL CIRCUIT BREAKER</p> <p>CCH CRANKCASE HEATER</p> <p>CMC COMPRESSOR CONTACTOR</p> <p>CMCB COMPRESSOR CIRCUIT BREAKER</p> <p>CMM COMPRESSOR MOTOR</p> <p>CMOL COMPRESSOR OVERLOAD</p> <p>COMP COMPRESSOR MOTOR PROTECTION</p> <p>EEV ELECTRONIC EXPANSION VALVE</p> <p>ETH EARTH</p> <p>FRB FAULT RELAY BOARD</p> <p>IFC INDOOR FAN CONTACTOR</p> <p>IFCB INDOOR FAN CIRCUIT BREAKER</p> <p>IFM INDOOR FAN MOTOR</p> <p>IBB INSULATED BUS BAR</p> <p>MIS MAIN ISOLATOR SWITCH</p> <p>MV MODULATING VALVE</p> <p>OFCB OUTDOOR FAN CIRCUIT BREAKER</p> <p>OFM OUTDOOR FAN MOTOR</p> <p>PR PHASE RELAY</p> <p>PLR PHASE LOST RELAY</p> <p>RCBO RESIDUAL CURRENT CIRCUIT BREAKER WITH OVERLOAD</p> <p>RV REVERSING VALVE</p> <p>SPS SINGLE PHASE SOCKET</p> <p>TB TERMINAL BLOCK</p> <p>TFC TRIAC FAN CONTROLLER</p> <p>TJ TERMINAL JOINER</p> <p>TR TRANSFORMER</p> <p>UC8 UNIT CONTROLLER 8</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>ECN</th> <th>DATE</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>Corrected model name.</td> <td></td> <td>16-02-23</td> <td>LC</td> </tr> <tr> <td>G</td> <td>Connection at C1M2,C2M2. Swapped TBS TB10</td> <td></td> <td>16-12-22</td> <td>RPB</td> </tr> <tr> <td>F</td> <td>Added TB 16 and its connection to UC8 sys1</td> <td></td> <td>07-11-22</td> <td>RPB</td> </tr> <tr> <td>F</td> <td>Total number of sheets 2 now was 3 earlier</td> <td></td> <td>01-11-22</td> <td>RPB</td> </tr> </tbody> </table>	REV	DESCRIPTION	ECN	DATE	APPROVED	H	Corrected model name.		16-02-23	LC	G	Connection at C1M2,C2M2. Swapped TBS TB10		16-12-22	RPB	F	Added TB 16 and its connection to UC8 sys1		07-11-22	RPB	F	Total number of sheets 2 now was 3 earlier		01-11-22	RPB	<p>©temperzone Ltd 2018</p>	<p>DO NOT SCALE - ASK</p> <p>Client Wiring</p>	<p>Drawn: PYU</p> <p>Appvd: <i>A.V</i></p>	<p>Date: 04/12/18</p>	<p>Title: OSA 840 / 950 RKTGBV UC8 Wiring Schematics</p>	<p>Drawing No: 291-002-497</p> <p>SHEET 2 OF 2</p>	<p>Rev: H</p>																																														
REV	DESCRIPTION	ECN	DATE	APPROVED																																																																											
H	Corrected model name.		16-02-23	LC																																																																											
G	Connection at C1M2,C2M2. Swapped TBS TB10		16-12-22	RPB																																																																											
F	Added TB 16 and its connection to UC8 sys1		07-11-22	RPB																																																																											
F	Total number of sheets 2 now was 3 earlier		01-11-22	RPB																																																																											

OUTDOOR UNIT WIRING



REV	DESCRIPTION	ECN	DATE	APPROVED
H	Corrected model name.		16-02-23	LC
G	Connection at C1M2, C2M2. Swapped TB8 TB10		16-12-22	RPB
F	Added TB 16 and its connection to UC8 sys1		07-11-22	RPB
F	Total number of sheets 2, now was 3 earlier		01-11-22	RPB

temperzone Ltd 2018

DO NOT SCALE - ASK

Client Wiring

Drawn: PYU
 Apprvd: A.V

Date: 04/12/18

Title: _____

OSA 840 / 950 RKTBCV UC8
 Wiring Schematics

Drawing No: 291-002-497
 SHEET 1 OF 2

Rev: H

