

# IXDL 40/90/130/160/200 Y-3/1 (c/w EC motor)

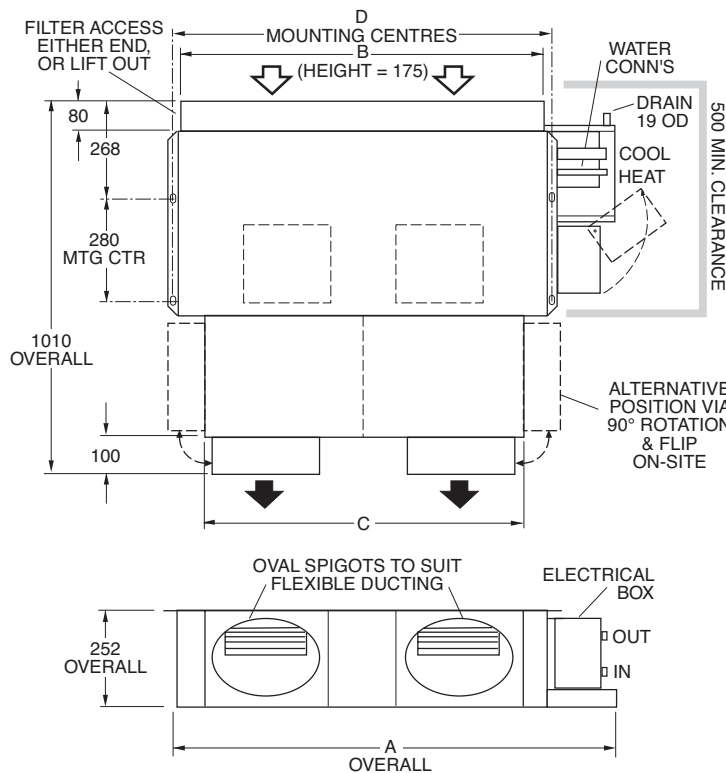
## Ducted Multizone Fan Coil Units

## Installation & Maintenance

**Fig. 1 Dimensions (mm)**

IXDL 90Y model shown

Not to Scale



**Note:**

1. Allow adequate clearance for the filter (if fitted) to be removed.
2. IXDL have two half length filters, except the IXDL 40Y which is one piece.

| MODEL     | A    | B    | C    | D    | S/A SPIGOTS  | WATER CONN'S BSP MALE |     | NO. FANS/ OUTLETS/ ZONES |
|-----------|------|------|------|------|--------------|-----------------------|-----|--------------------------|
|           |      |      |      |      |              | COLD                  | HOT |                          |
| IXDL 40Y  | 705  | 473  | 323  | 529  | 250 dia (x1) | 25                    | 13  | 1                        |
| IXDL 90Y  | 1205 | 973  | 820  | 1030 | 250 dia (x2) | 25                    | 13  | 2                        |
| IXDL 130Y | 1605 | 1373 | 1252 | 1430 | 250 dia (x3) | 25                    | 13  | 3                        |
| IXDL 160Y | 1954 | 1722 | 1630 | 1780 | 250 dia (x4) | 25                    | 13  | 4                        |
| IXDL 200Y | 2355 | 2122 | 2037 | 2178 | 250 dia (x5) | 25                    | 13  | 5                        |

**GENERAL**

The IXDL-Y ducted fan coil units must be installed in accordance with all national and local safety codes.

**Optional**

- 13 BSP (1/2") part no. 060-085-001
- 25 BSP (1") part no. 060-085-003.

This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

**INSTALLATION**

**Positioning & Mounting**

Provide 500 mm minimum clearance to the electrical box end of the unit.

Allow adequate clearance for the filter to be withdrawn from either end of the unit. To make it easy, the filter is in two half lengths (except IXDL 40Y). Alternatively the filter may be lifted out of its track.

Corner supply air spigots are mounted on an 'L' shaped plate that can be unscrewed, rotated and flipped on site to achieve a side exit position.

Install the unit suspended on threaded rods or bolts and locking nuts (not supplied). Alternatively mount each unit on vibration isolators on a suitable platform.

The unit must be installed level. Use the adjustable support bracket (see figure 3) to lower the drain pipe outlet and provide a slope in the drain tray.

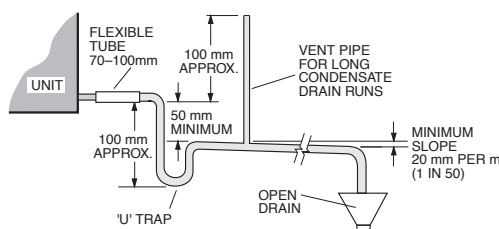
**WATER SUPPLY & RETURN**

The IXDL unit's IN and OUT water connections are male pipe threaded (refer Fig. 1). **Warning:** overtightening of connections to the main water supply may damage the unit.

It is recommended you use two **temperzone** 600 mm flexible high pressure water hoses. These have female pipe threaded connections at each end. Maximum water pressure for each hose is 1720 kPa (250 psi). The IXDL unit alone, excluding hoses, will withstand 4480 kPa (650 psi).

Poor quality water supply must be pre-filtered and it is essential that adequate water treatment is maintained, particularly where open cooling towers are used.

**Fig. 2 Condensate Drain**



### Condensate Drain

The condensate drain should be trapped outside the unit cabinet. The trap should have a vertical height of at least 50 mm. The drain should have a slope of at least 1 in 50 and must not be piped to a level above the unit drain tray. (Refer Fig.2). Use flexible tube to connect the unit's drain stub to the external drain pipe.

For long condensate pipe runs, fit a vent pipe near the drain trap. The top of the vent pipe must be at least 100 mm above the IXDL unit's drain tray.

It is essential that the drainage system for the evaporator is checked by pouring water in the drain tray and seeing that it discharges at the end of the drain and does not overflow the drain tray.

### ELECTRICAL WIRING

Electrical work must be carried out by a qualified electrician in accordance with AS/NZS 3000 and the wiring diagram.

The electrical supply required is:

1 phase 220-240 V a.c. 50 Hz with neutral and earth. The supply to have an isolation switch adjacent to the unit but not attached to the unit. Recommended external circuit breaker size is 5 amp.

The disconnection must be incorporated in the fixed wiring in accordance with the wiring regulations.

### FAN SPEED

The fan speed of each fan can be independently and variably controlled by separate 0–10V dc inputs. The fans will operate once 1.0V dc is reached and will stop when the voltage drops below 0.7V dc. Maximum speed is reached at 10V dc input.

It is unlikely that voltages of more than about 6–7 volts dc will be required to meet the on site performance requirements. Higher voltages may cause water carry over within the unit (off the coil).

Independent control of each fan/motor allows tailoring to meet the specific requirements of each zone. Each fan has a taco terminal which gives feedback of the fan/motors current performance.

If the air returning to the indoor unit is regularly expected to be above 50%RH, then the coil face velocity should be limited to be 2.5 m/s or less (refer Air Handling graph in Technical Data pamphlet).

High humidity levels can occur in tropical or subtropical conditions, and/or when heavily moisture laden fresh air is introduced. Select a fan speed voltage that avoids water carry-over problems.

### COMMISSIONING

1. Check that the thermostat is correctly wired and set at the desired temperature.
2. Check that the air filter is clean.
3. Check that the fan runs freely without vibration.
4. Check condensate drain for free drainage.

### MAINTENANCE

#### Weekly For First Four Weeks

1. Check air filter; vacuum clean as necessary.
2. Check condensate drain for free drainage.

#### Monthly

Check air filter; vacuum clean as necessary.

#### Six Monthly

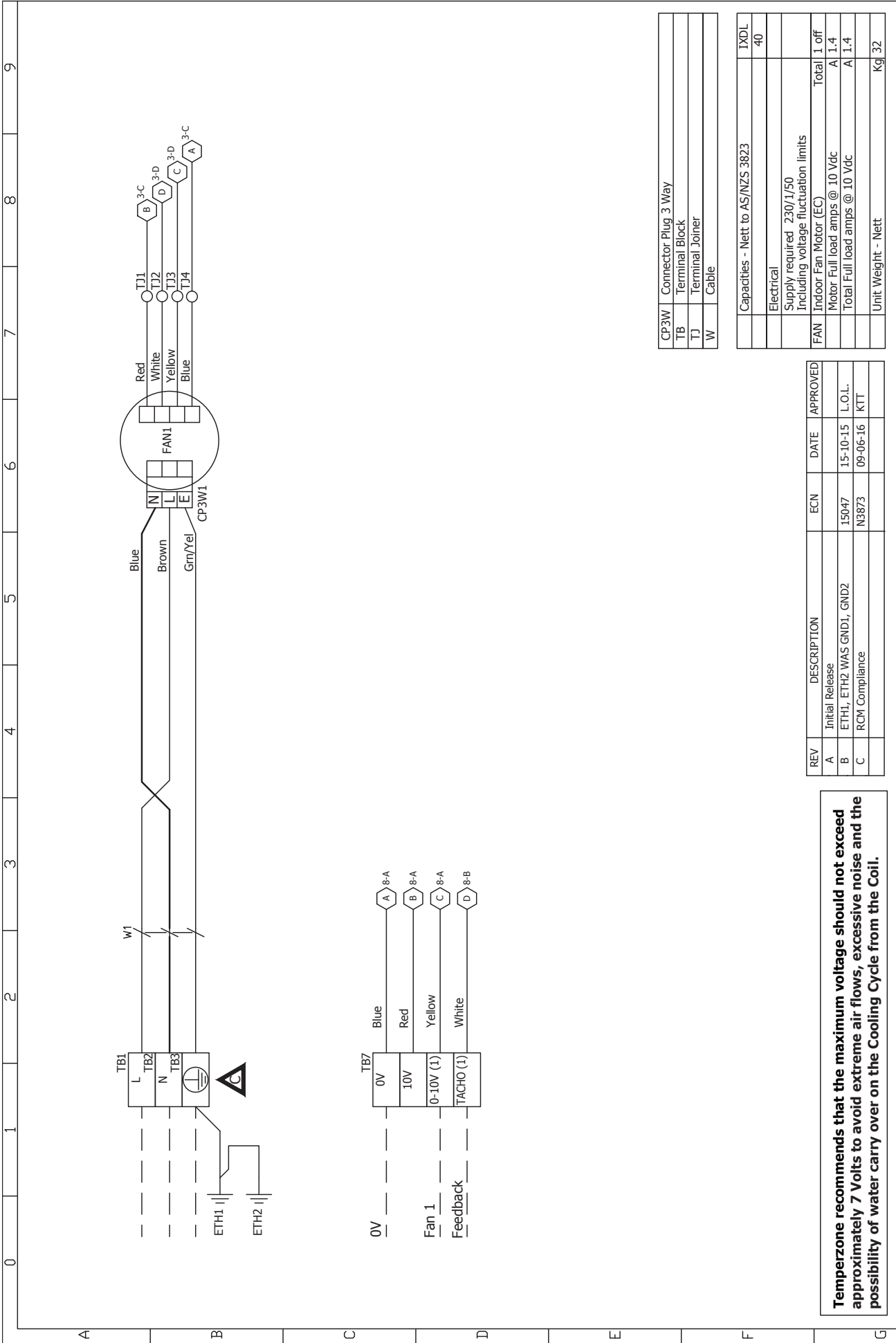
1. Check condensate drain for free drainage.
2. Check heat exchanger coil; vacuum or brush clean as necessary.
3. Check the tightness of the fan.
4. Check that fan motor is free running.
5. Check tightness of electrical connections.
6. Check air supply at diffuser outlets.

### NOTE

The manufacturer reserves the right to change specifications at any time without notice or obligation. Certified dimensions available on request.

This pamphlet replaces the previous issue no. 3977 dated 10/16.  
Fig.2 flexible drain conn. + safety add's

# IXDL 40Y



|      |                      |
|------|----------------------|
| CP3W | Connector Plug 3 Way |
| TB   | Terminal Block       |
| TJ   | Terminal Joiner      |
| W    | Cable                |

|     |  |             |
|-----|--|-------------|
|     | Capacities - Nett to AS/NZS 3823                                 | IXDL        |
|     | Electrical   | 40          |
|     | Supply required 230/1/50<br>Including voltage fluctuation limits |             |
| FAN | Indoor Fan Motor (EC)  | Total 1 off |
|     | Motor Full load amps @ 10 Vdc                                    | A 1.4       |
|     | Total Full load amps @ 10 Vdc                                    | A 1.4       |
|     | Unit Weight - Nett   | kg 32       |

| REV | DESCRIPTION               | ECN   | DATE     | APPROVED |
|-----|---------------------------|-------|----------|----------|
| A   | Initial Release           |       |          |          |
| B   | ETH1, ETH2 WAS GND1, GND2 | 15047 | 15-10-15 | L.O.L.   |
| C   | RCM Compliance            | N3873 | 09-06-16 | KTT      |

©temperzone Ltd 2016

**temperzone**

Client Wiring

Drawn: J.S.L. Date: 10-07-13

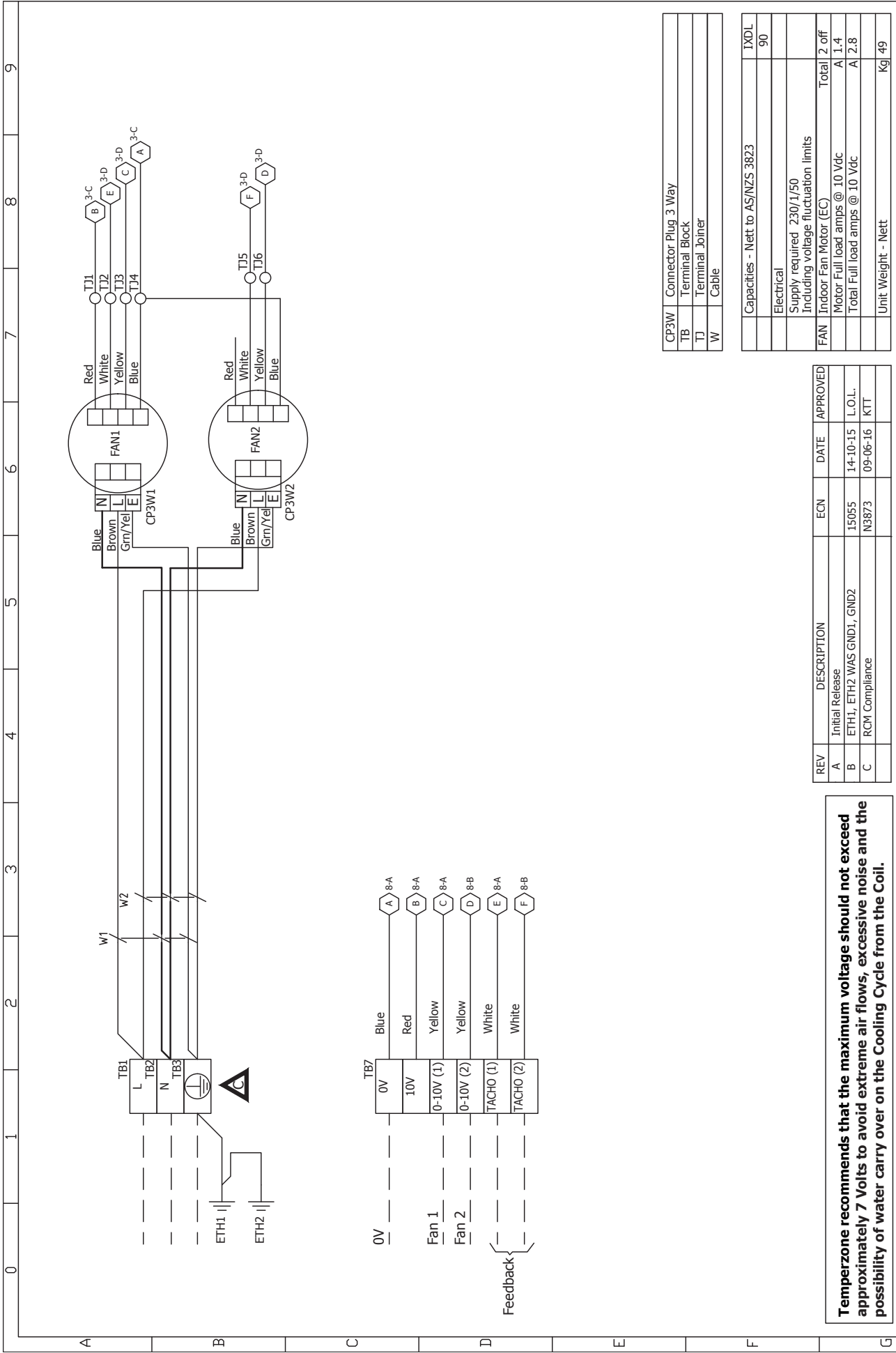
Approved: *SR*

Title: IXDL 40Y Wiring Schematic

Drawing No: 291-000-612 SHEET 1 OF 1

Rev: C

**Temperzone recommends that the maximum voltage should not exceed approximately 7 Volts to avoid extreme air flows, excessive noise and the possibility of water carry over on the Cooling Cycle from the Coil.**



| REV | DESCRIPTION               | ECN   | DATE     | APPROVED |
|-----|---------------------------|-------|----------|----------|
| A   | Initial Release           |       |          |          |
| B   | ETH1, ETH2 WAS GND1, GND2 | 15055 | 14-10-15 | L.O.L.   |
| C   | RCM Compliance            | N3873 | 09-06-16 | KTT      |

**Temperzone recommends that the maximum voltage should not exceed approximately 7 Volts to avoid extreme air flows, excessive noise and the possibility of water carry over on the Cooling Cycle from the Coil.**

|      |                      |
|------|----------------------|
| CP3W | Connector Plug 3 Way |
| TB   | Terminal Block       |
| TJ   | Terminal Joiner      |
| W    | Cable                |

|                                      |                       |
|--------------------------------------|-----------------------|
| Capacities - Nett to AS/NZS 3823     | IXDL                  |
| Electrical                           | 90                    |
| Supply required                      | 230/1/50              |
| Including voltage fluctuation limits |                       |
| FAN                                  | Indoor Fan Motor (EC) |
| Motor Full load amps @ 10 Vdc        | Total                 |
| Total Full load amps @ 10 Vdc        | 2 off                 |
| Unit Weight - Nett                   | A 1.4                 |
|                                      | A 2.8                 |
|                                      | Kg/ 49                |

©temperzone Ltd 2016

Client Wiring \_\_\_\_\_

Drawn: J.S.L. Date: 10-07-13

Approved: **SR** *PLC*

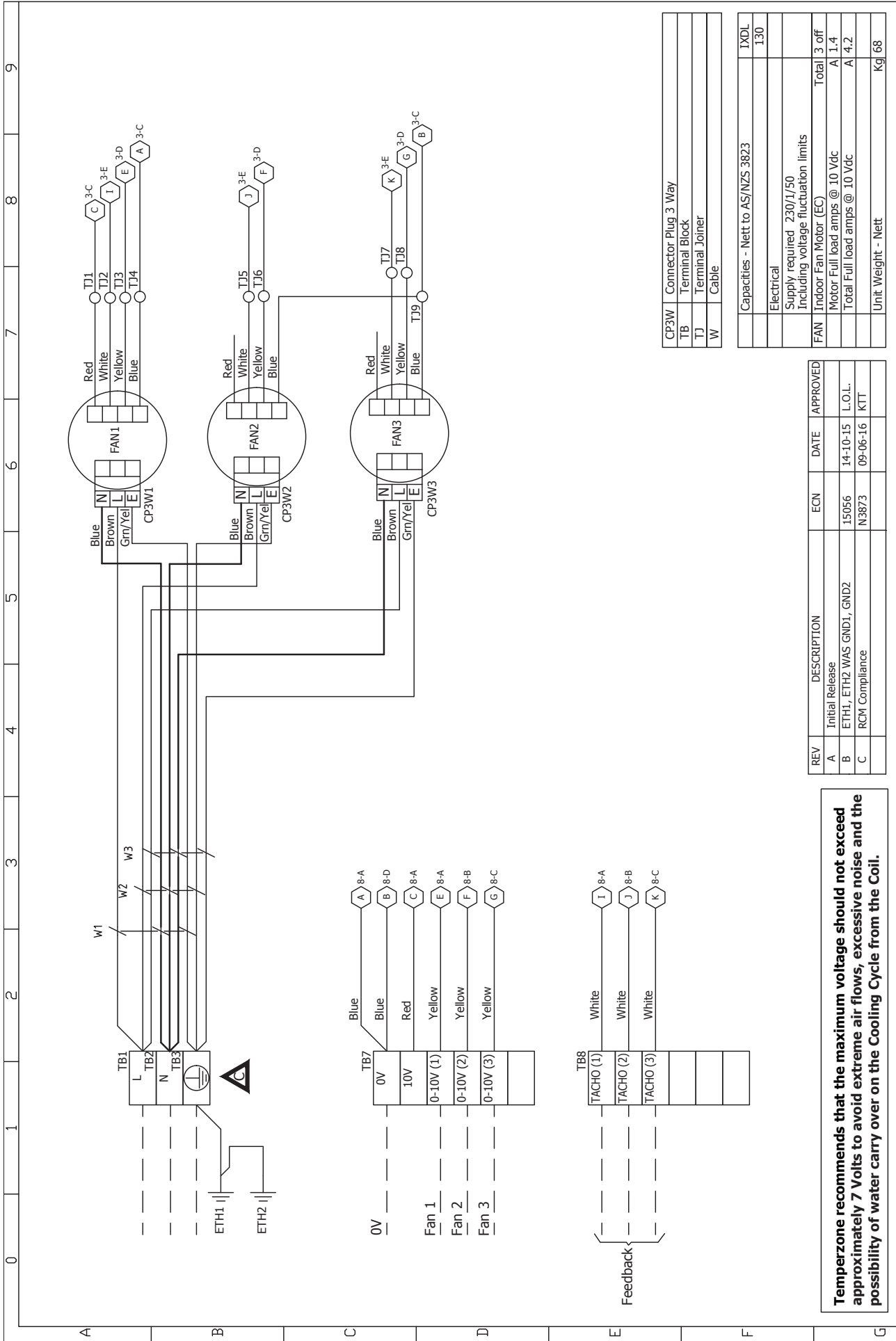
Title: IXDL 90Y Wiring Schematic

Rev: C

Drawing No: 291-000-565

SHEET 1 OF 1

# IXDL 130Y



| REV | DESCRIPTION               | ECN   | DATE     | APPROVED |
|-----|---------------------------|-------|----------|----------|
| A   | Initial Release           |       |          |          |
| B   | ETH1, ETH2 WAS GND1, GND2 | 15056 | 14-10-15 | L.O.L.   |
| C   | RCM Compliance            | N3873 | 09-06-16 | KTT      |

|      |                      |
|------|----------------------|
| CP3W | Connector Plug 3 Way |
| TB   | Terminal Block       |
| TJ   | Terminal Joiner      |
| W    | Cable                |

|                                      |                               |
|--------------------------------------|-------------------------------|
| Capacities - Nett to AS/NZS 3823     | IXDL 130                      |
| Electrical                           |                               |
| Supply required 230/1/50             |                               |
| Including voltage fluctuation limits |                               |
| FAN                                  | Indoor Fan Motor (EC)         |
|                                      | Total 3 off                   |
|                                      | Motor Full load amps @ 10 Vdc |
|                                      | A 1.4                         |
|                                      | Total Full load amps @ 10 Vdc |
|                                      | A 4.2                         |
|                                      | Unit Weight - Nett            |
|                                      | Kg/ 68                        |

**Temperzone recommends that the maximum voltage should not exceed approximately 7 Volts to avoid extreme air flows, excessive noise and the possibility of water carry over on the Cooling Cycle from the Coil.**



©temperzone Ltd 2016  
Client Wiring

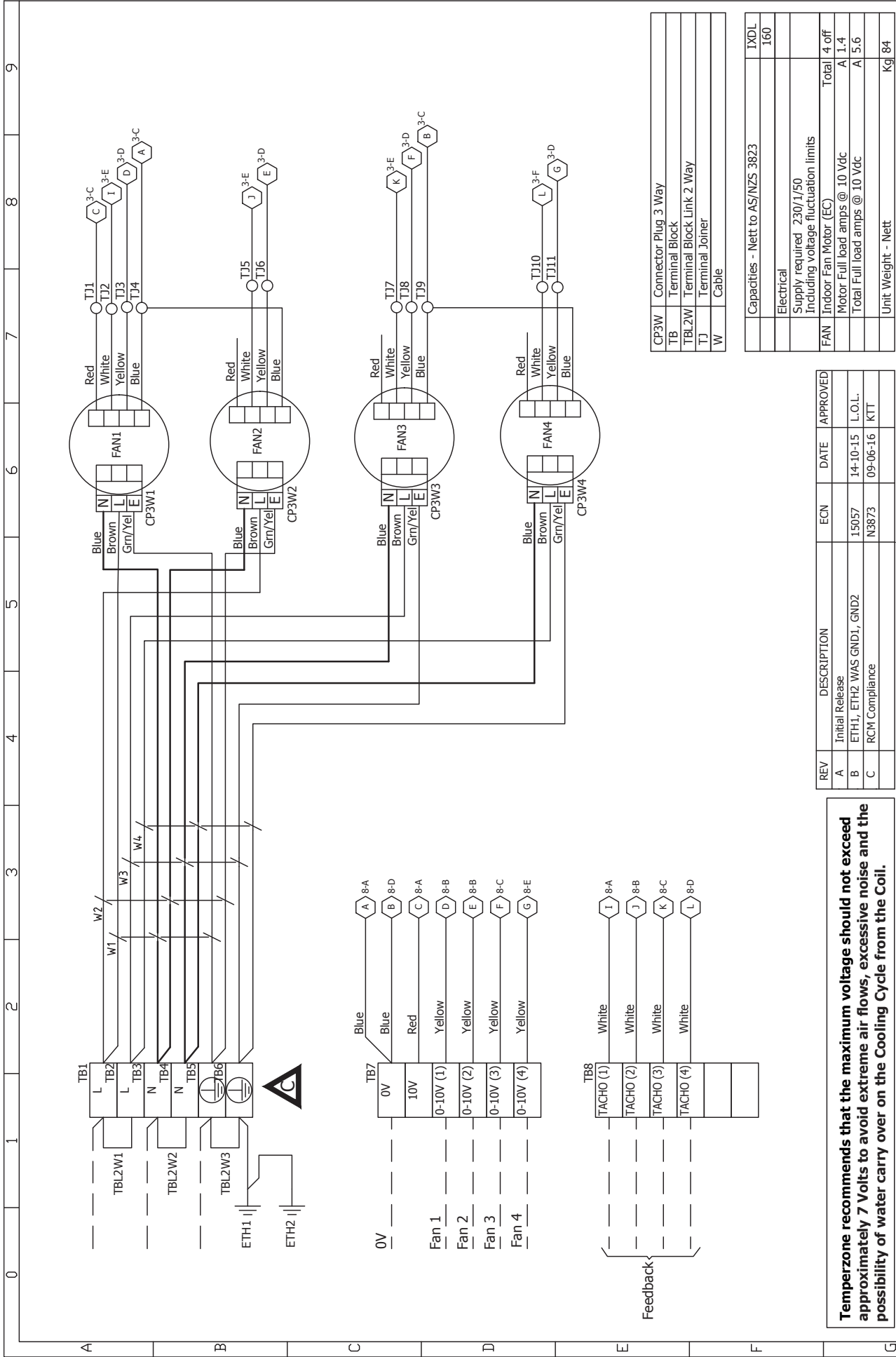
Drawn: J.S.L. Date: 10-07-13  
Apprvd: SR

IXDL 130Y  
Wiring Schematic

Drawing No: 291-000-564  
SHEET 1 OF 1

Rev: C

# IXDL 160Y



|       |                           |
|-------|---------------------------|
| CP3W  | Connector Plug 3 Way      |
| TB    | Terminal Block            |
| TBL2W | Terminal Block Link 2 Way |
| TJ    | Terminal Joiner           |
| W     | Cable                     |

|                                      |                               |
|--------------------------------------|-------------------------------|
| Capacities - Nett to AS/NZS 3823     | IXDL                          |
|                                      | 160                           |
| Electrical                           |                               |
| Supply required 230V/1/50            |                               |
| Including voltage fluctuation limits |                               |
| FAN                                  | Indoor Fan Motor (EC)         |
|                                      | Motor Full load amps @ 10 Vdc |
|                                      | Total Full load amps @ 10 Vdc |
|                                      | Unit Weight - Nett            |
|                                      | Total                         |
|                                      | A 1.4                         |
|                                      | A 5.6                         |
|                                      | Kg 84                         |

| REV | DESCRIPTION               | ECN   | DATE     | APPROVED |
|-----|---------------------------|-------|----------|----------|
| A   | Initial Release           |       |          |          |
| B   | ETH1, ETH2 WAS GND1, GND2 | 15057 | 14-10-15 | L.O.L.   |
| C   | RCM Compliance            | N3873 | 09-06-16 | KTT      |

©temperzone Ltd 2016

Client Wiring

Drawn: J.S.L. Date: 03-07-13

Approved: SR

IXDL 160Y

Wiring Schematic

Drawing No: 291-000-553

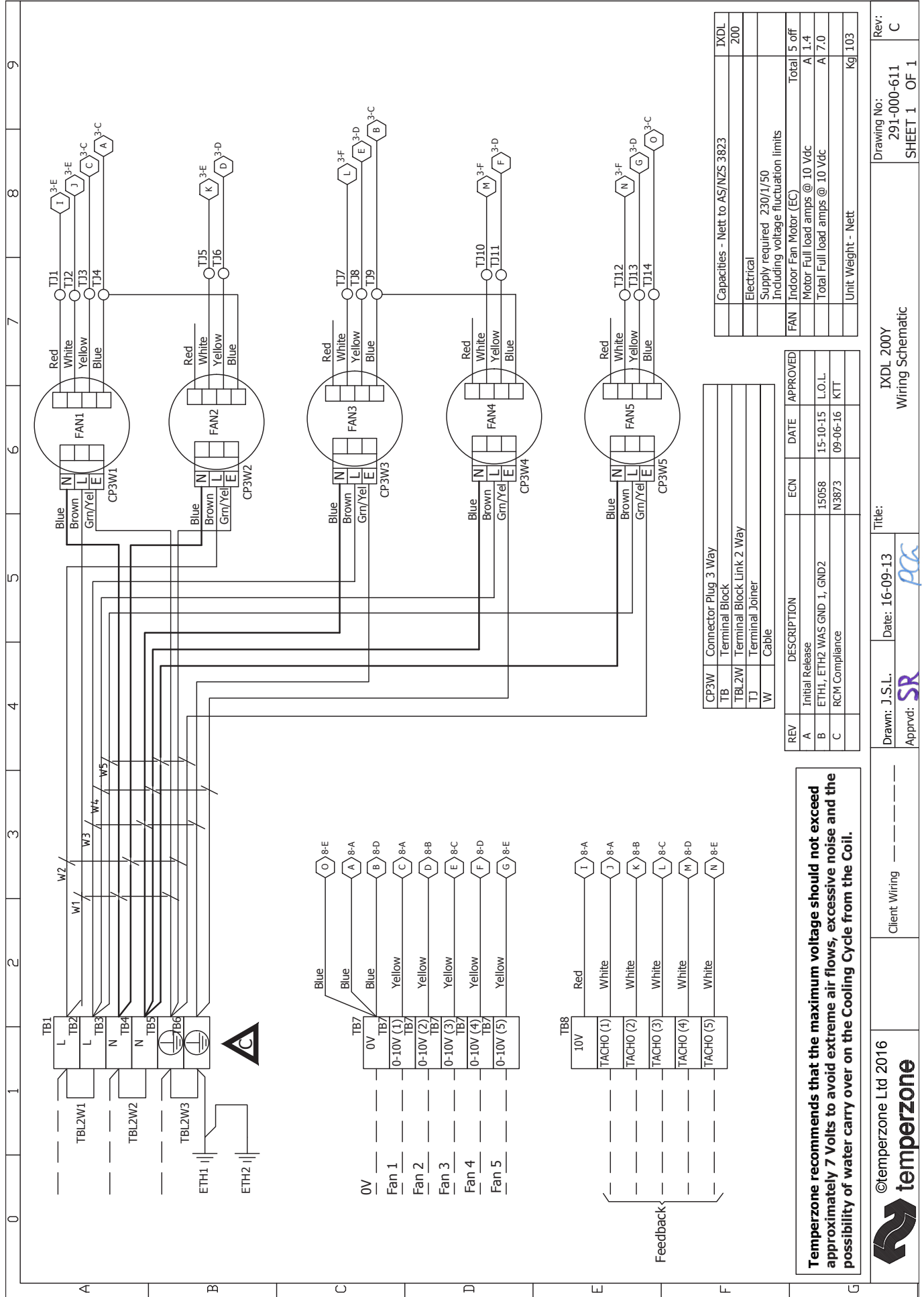
SHEET 1 OF 1

Rev: C

**Temperzone recommends that the maximum voltage should not exceed approximately 7 Volts to avoid extreme air flows, excessive noise and the possibility of water carry over on the Cooling Cycle from the Coil.**



# IXDL 200Y



|                                      |                       |
|--------------------------------------|-----------------------|
| Capacities - Nett to AS/NZS 3823     | IXDL                  |
|                                      | 200                   |
| Electrical                           |                       |
| Supply required 230/1/50             |                       |
| Including voltage fluctuation limits |                       |
| FAN                                  | Indoor Fan Motor (EC) |
|                                      | Total 5 off           |
| Motor Full load amps @ 10 Vdc        | A 1.4                 |
| Total Full load amps @ 10 Vdc        | A 7.0                 |
| Unit Weight - Nett                   | Kg 103                |

| REV | DESCRIPTION                | ECN   | DATE     | APPROVED |
|-----|----------------------------|-------|----------|----------|
| A   | Initial Release            |       |          |          |
| B   | ETH1, ETH2 WAS GND 1, GND2 | 15058 | 15-10-15 | L.O.L.   |
| C   | RCM Compliance             | N3873 | 09-06-16 | KTT      |

| CP3W  | Connector Plug 3 Way      |
|-------|---------------------------|
| TB    | Terminal Block            |
| TBL2W | Terminal Block Link 2 Way |
| TJ    | Terminal Joinder          |
| W     | Cable                     |

**Temperzone recommends that the maximum voltage should not exceed approximately 7 Volts to avoid extreme air flows, excessive noise and the possibility of water carry over on the Cooling Cycle from the Coil.**

