

Product Manual

BRW18H Range

Introduction

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Introduction

The BRW18H models are a range of mini-remote coolers with various control options of mechanical, digital and energy saving digital thermostats. They also incorporate various product coil configurations and pump options, including variants for "SCOPE" installations that use pythons with tube-in-tube systems. The individual modules are detailed later on in this guide, but in summary they comprise the following:

- Base unit
- Control module: a range of control modules with both electronic and mechanical thermostat options covering ice bank and glycol applications
- Lid assembly: single piece lid with different pump options and various coil quantities and configurations.
- Unit mounted on metal castors

The wiring schematics included in the following pages reflect this modularity.

Safety

The BRW18H models use a R290 (Care 40, Propane) refrigerant. Below are some safety points which the end user must adopt to mitigate the risk of unsafe conditions arising.

- Service must only be carried out by a suitably qualified refrigeration engineer.
- The unit must be isolated from the electricity supply before removal of the covers.
- Do not damage the refrigeration circuit.
- Ventilation openings must be clear of obstructions.
- There must be a gap of at least 100mm between the appliance and a wall or other restriction.
- Where electrical components are replaced, the new component must be of the same type.
- Operate the unit within (ambient) operating temperatures; 10°C to 32°C.

Specification and Installation

BRW18H Specification

| | | | | |
|--|---|-------|--|-----------------------------|
| Dimensions (approx) (Height will vary depending on unit type) | Width | 430mm | Compressor | Huyai (Cubigel) NPY12LAb |
| | Depth | 515mm | Refrigerant | R290 |
| | Height | 790mm | Refrigerant Weight | 95g |
| Dry Weight | Nominal 41.5Kg (will vary depending on unit type) | | Climatic Class | N |
| Wet Weight | Nominal 74Kg (will vary depending on unit type) | | Nominal Ice Bank | 18Kg |
| Supply | 230Vac/50Hz | | IP Rating | N/A |
| Rated input | 740W | | This product contains Propane Refrigerant gas with a GWP of 3 in a hermetically sealed system | |
| Rated Current | 3.2A | | | |
| Fuse Rating | 5A | | | |

Installation

The unit must be installed by a competent person, on a firm level surface capable of supporting the weight of the machine when the bath is filled. It is important that the ventilation openings in the machine are not blocked to allow the free movement of air. Inadequate ventilation will shorten the life of the fridge system.

Note: At this stage do not connect the unit to the electrical supply

- Ensure that the ventilation openings are not blocked to allow free movement of air through the unit. **Failure to do this will seriously affect the reliability of the fridge, invalidate the warranty and shorten the life of the fridge system.**
- Locate a container beneath the bath overflow to prevent any water spillage as the bath is filled and when ice is formed in the bath.
- Fill the bath using cold water through the 'Bath Fill' opening on the top of the machine until water is displaced from the overflow.
- Connect the dispense python to the 'Recirculation' Flow and Return.
- Connect the product to the stainless steel product coils or tube in tube connections dependent on model.
- BRW18H - For details on how to install Tube in Tube/Scope dispense, please contact Brandels at <http://www.brandels.co.uk/>. Alternatively, please phone on 01253 501800 to speak to one of our advisors.
- Connect the unit to the electrical supply and turn on.
- After a short delay the compressor and fans will start.

Specification and Installation

- The unit will now begin to reduce the bath water temperature. Once the water is at the correct temperature an ice bank will begin to form. As the ice begins to form, a small amount of water will be displaced.
- Once a full ice bank is produced, the fan and compressor will switch off and the machine is ready for use.

Note: The time taken for the unit to reach operating temperature will vary depending on ambient temperature, humidity and the temperature of the incoming water supply.

Model Numbering

Unit Number (BRW18H) (W) (X) (Y)

Key:

- BRW18H Base Type
- (W) Module Type
- (X) Pump Type
- (Y) Lid/Coil Type

| Reference | Part # | Description |
|-----------|--------|-------------|
| Base Type | BRW18H | Base unit |

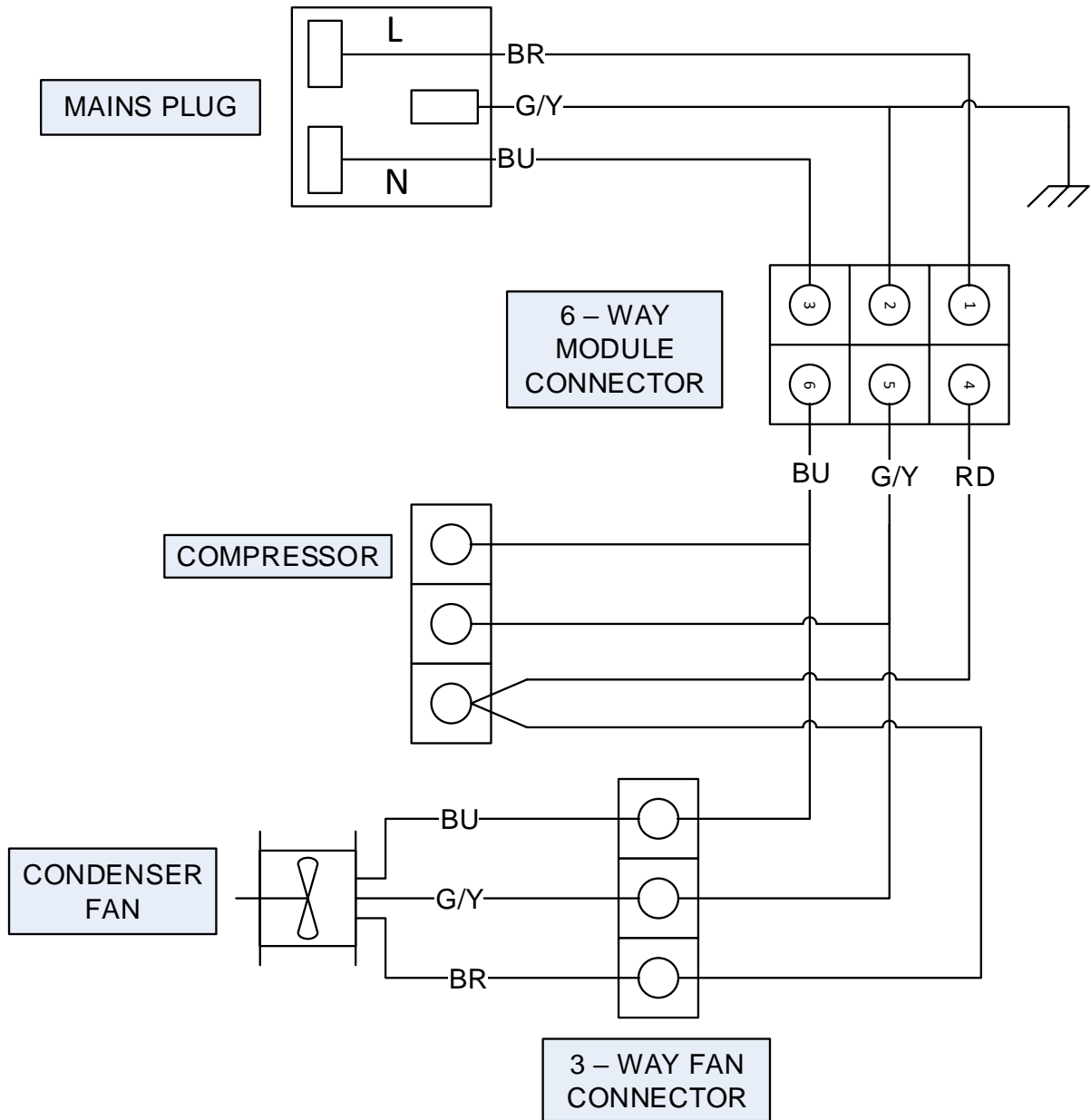
| Reference (W) | Part # | Description |
|---------------|--------|-------------------------------------|
| A | 1A6249 | Digital Eliwell |
| B | 1A6239 | Mech Ice |
| C | 1A6244 | 2 X Mech Ice + Cleaning Switch |
| E | 1A6245 | Digital Ice + Mech Ice |
| G | 1A6240 | Mech Ice + Mech Glycol |
| I | 1A6241 | 2 X Mech Ice |
| M | 1A6246 | Digital Glycol + Mech Glycol |
| T | 1A6242 | 2 X Mech Glycol |
| X | 1A5835 | DFx Glycol with Cleaning Switch |
| Z | 1A5836 | DFx Ice |
| V | 1A6243 | 1 x Mech Ice + 1 x Variable |
| W | 1A5975 | DFx Glycol |
| U | 1A6282 | 1 x Mech Ice + 1 x Visable Variable |

| Reference (X) | Part # | Description |
|---------------|--------|---------------------------------|
| Agitator | 3B6502 | Agitator |
| SPC42 | 3B3718 | 2 Stage Pump |
| SPC43 | 3B3719 | 3 Stage Pump (Up to 18.3m head) |
| SPC44 | 3B4383 | 3 Stage Pump (Up to 23m head) |

| Reference (Y) | Part # | Description |
|---------------|--------|----------------------------|
| 0 | 1A6225 | 0 Coil Lid |
| 4 | 1A6226 | 4 Coil Lid |
| 6 | 1A6227 | 6 Coil Lid |
| T1 | 1A6228 | T1 (Tube in Tube) Coil Lid |
| T2 | 1A6229 | T2 (Tube in Tube) Coil Lid |

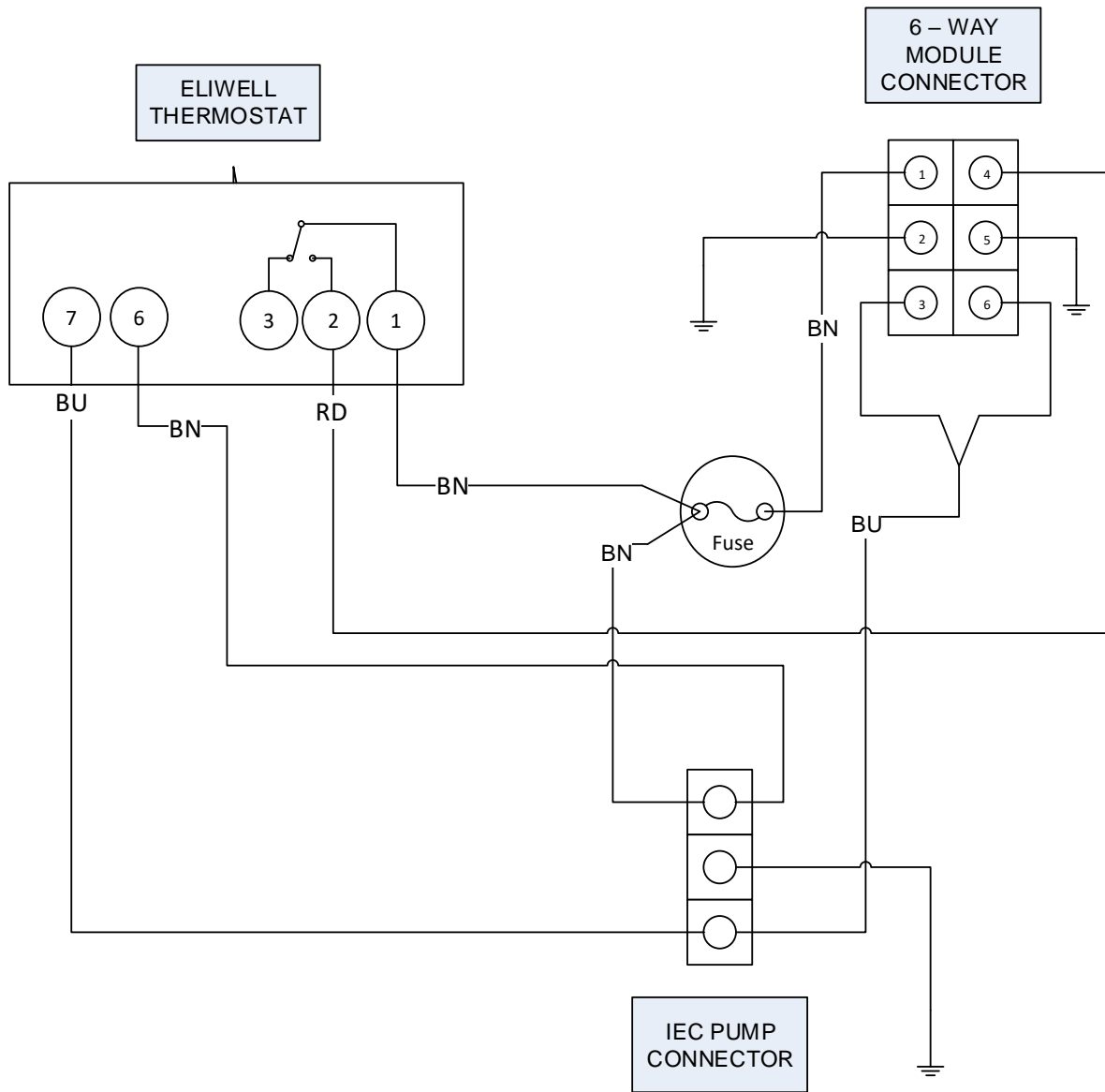
Schematics

BRW18H Base Wiring Schematic



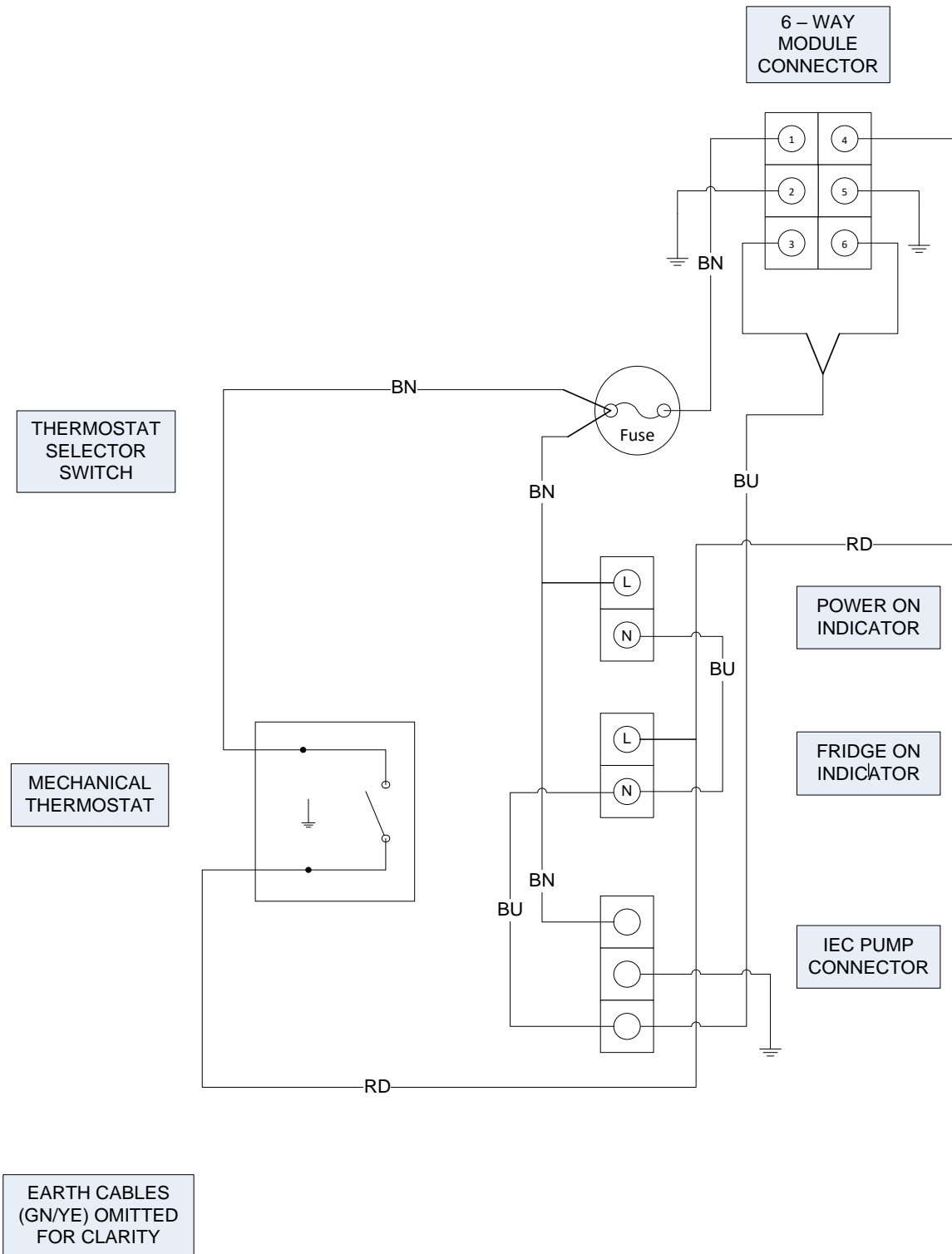
Schematics

BRW18H – Module 'A' Wiring Schematic



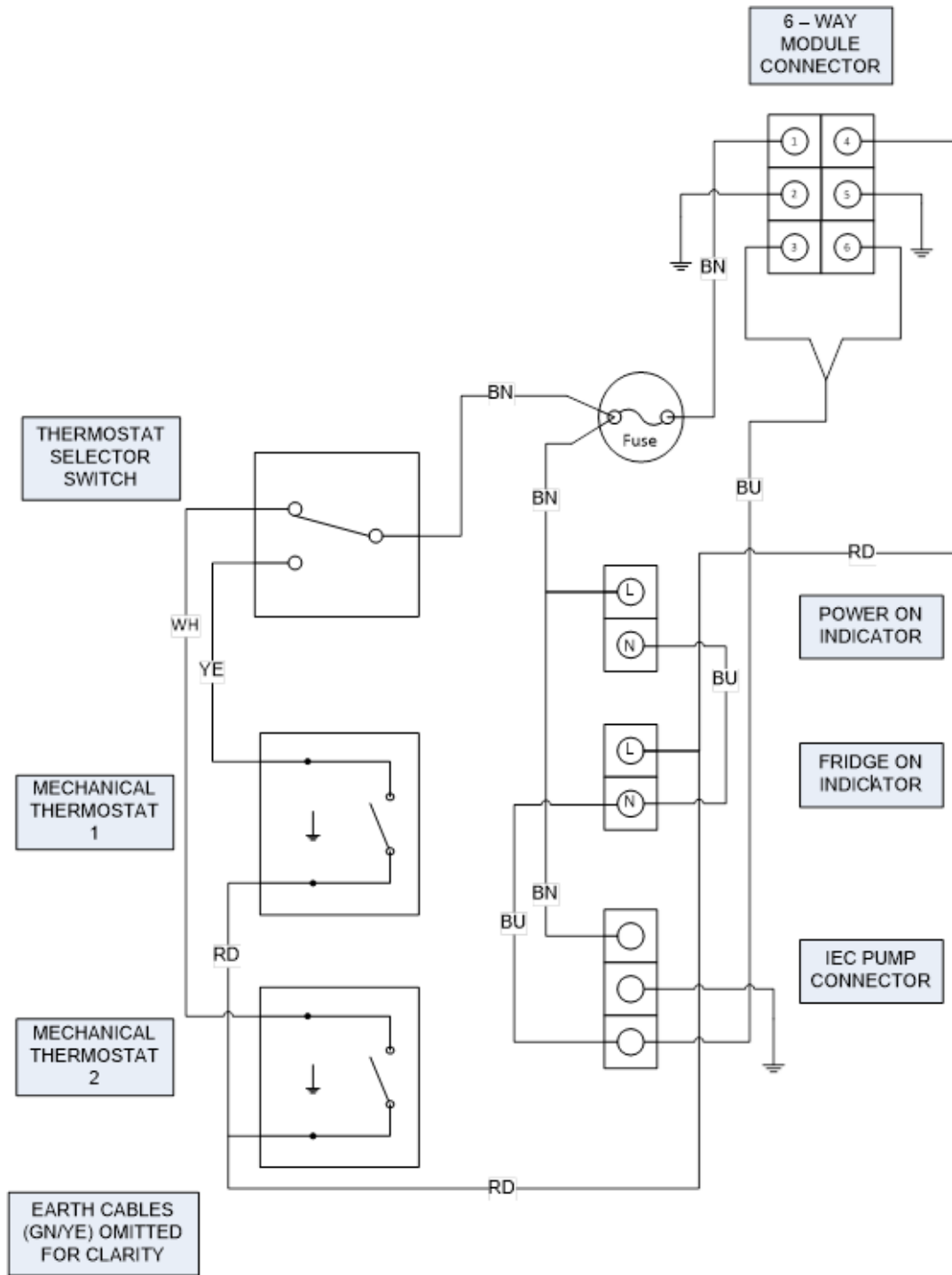
Schematics

BRW18H – Module ‘B’ Wiring Schematic



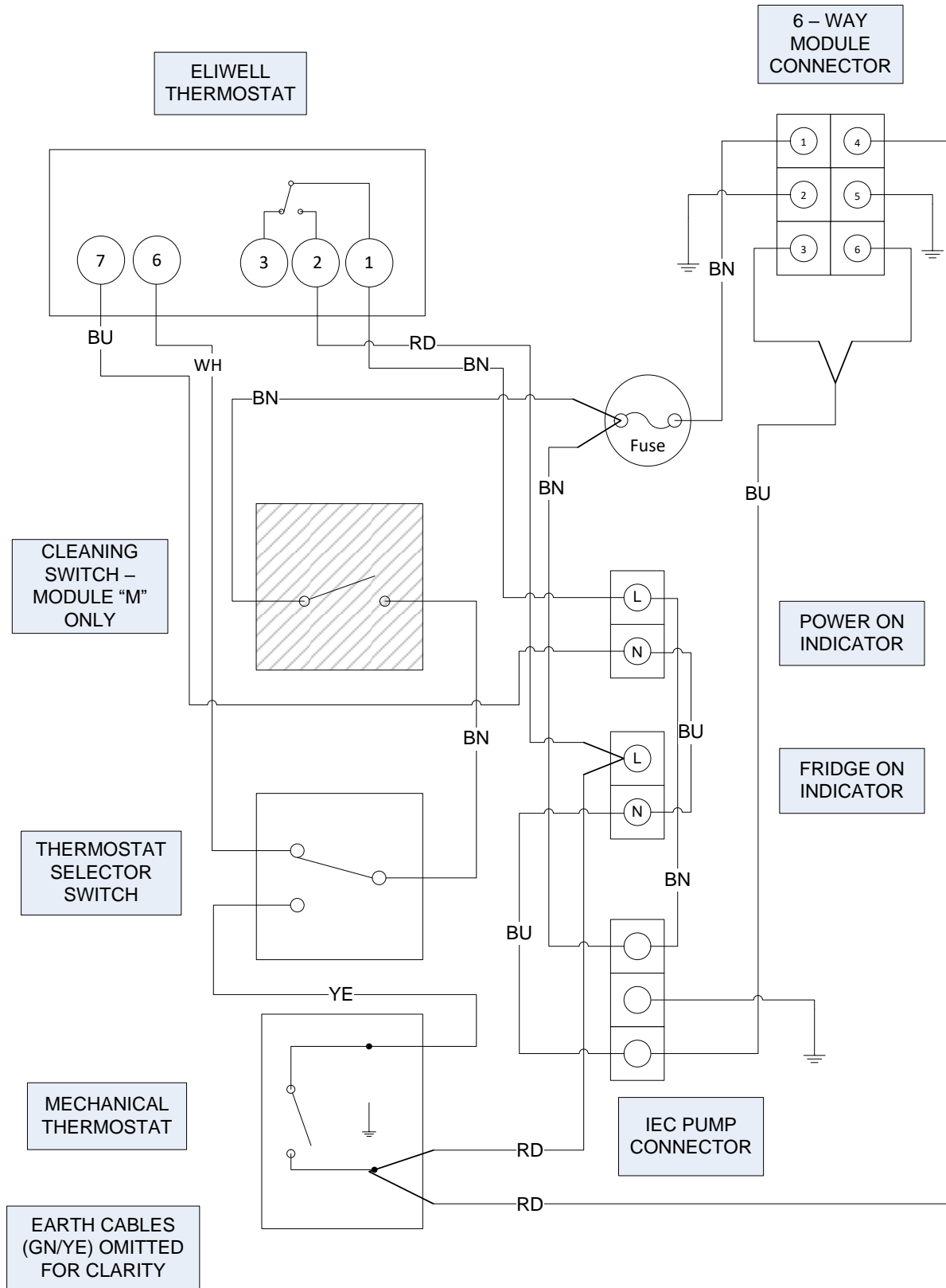
Schematics

BRW18H – Module 'G', 'I', 'V', 'U' & 'T' Wiring Schematic



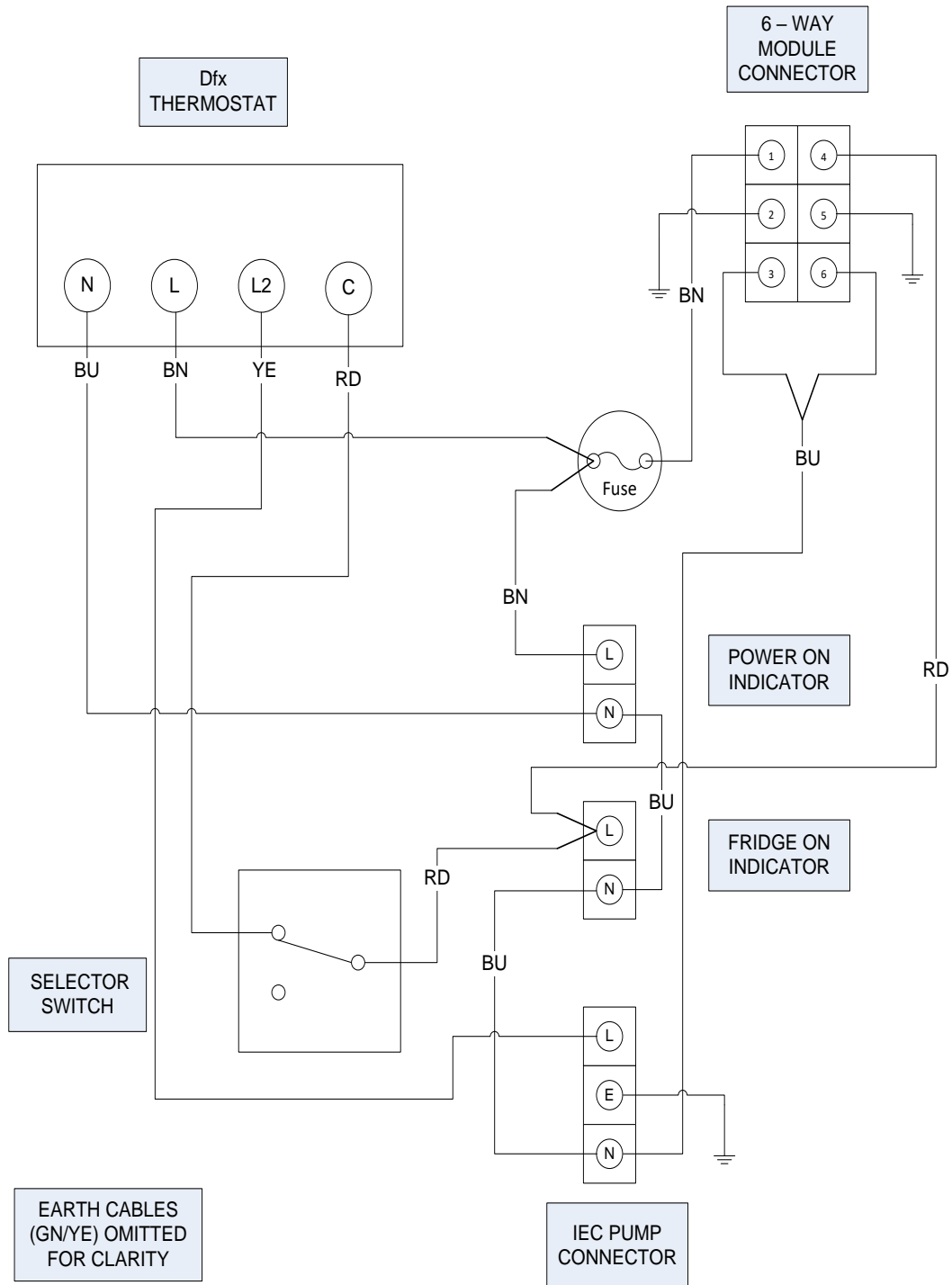
Schematics

BRW18H – Module ‘E’ & ‘M’ Wiring Schematic



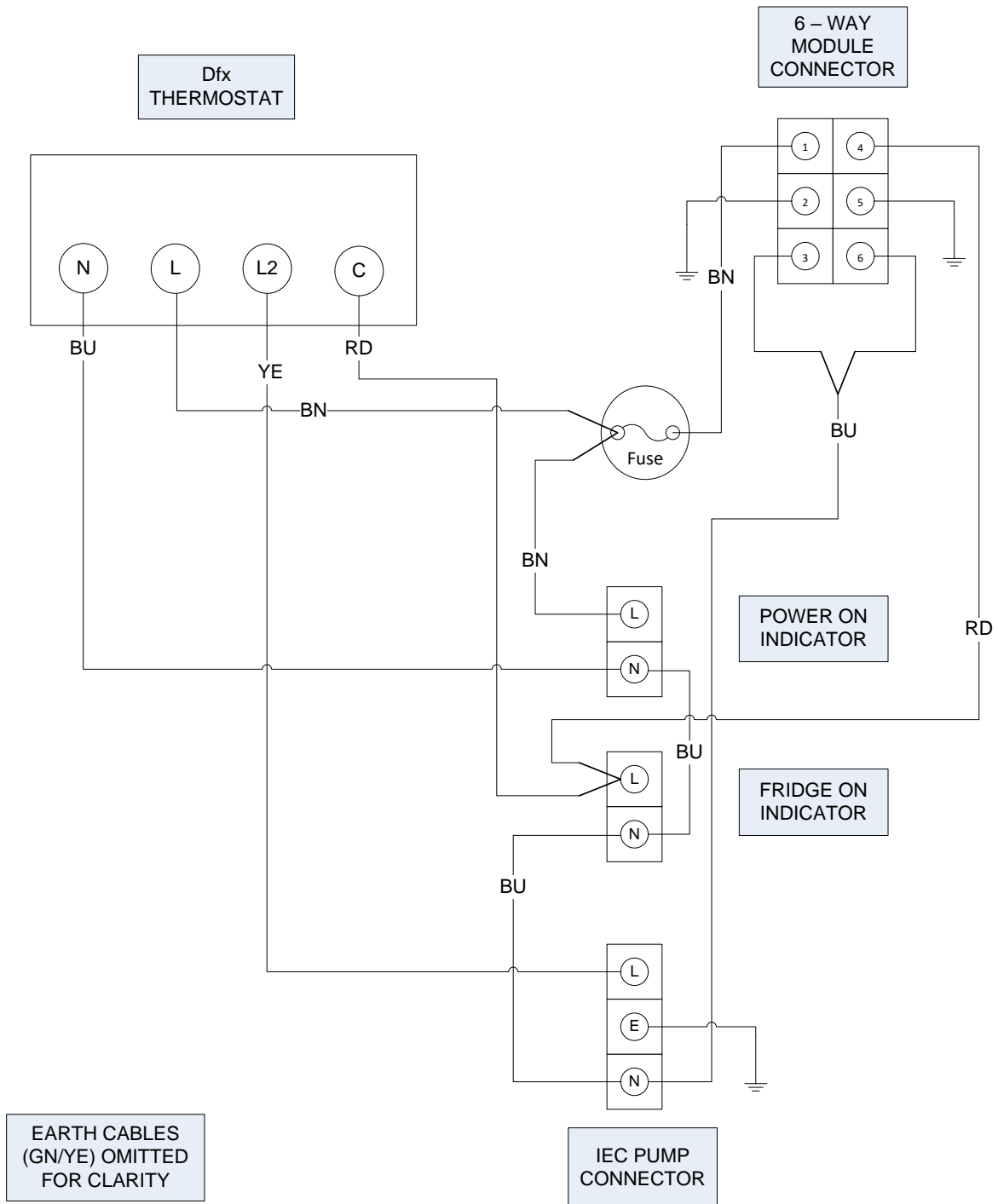
Schematics

BRW18H – Module 'X' Wiring Schematic



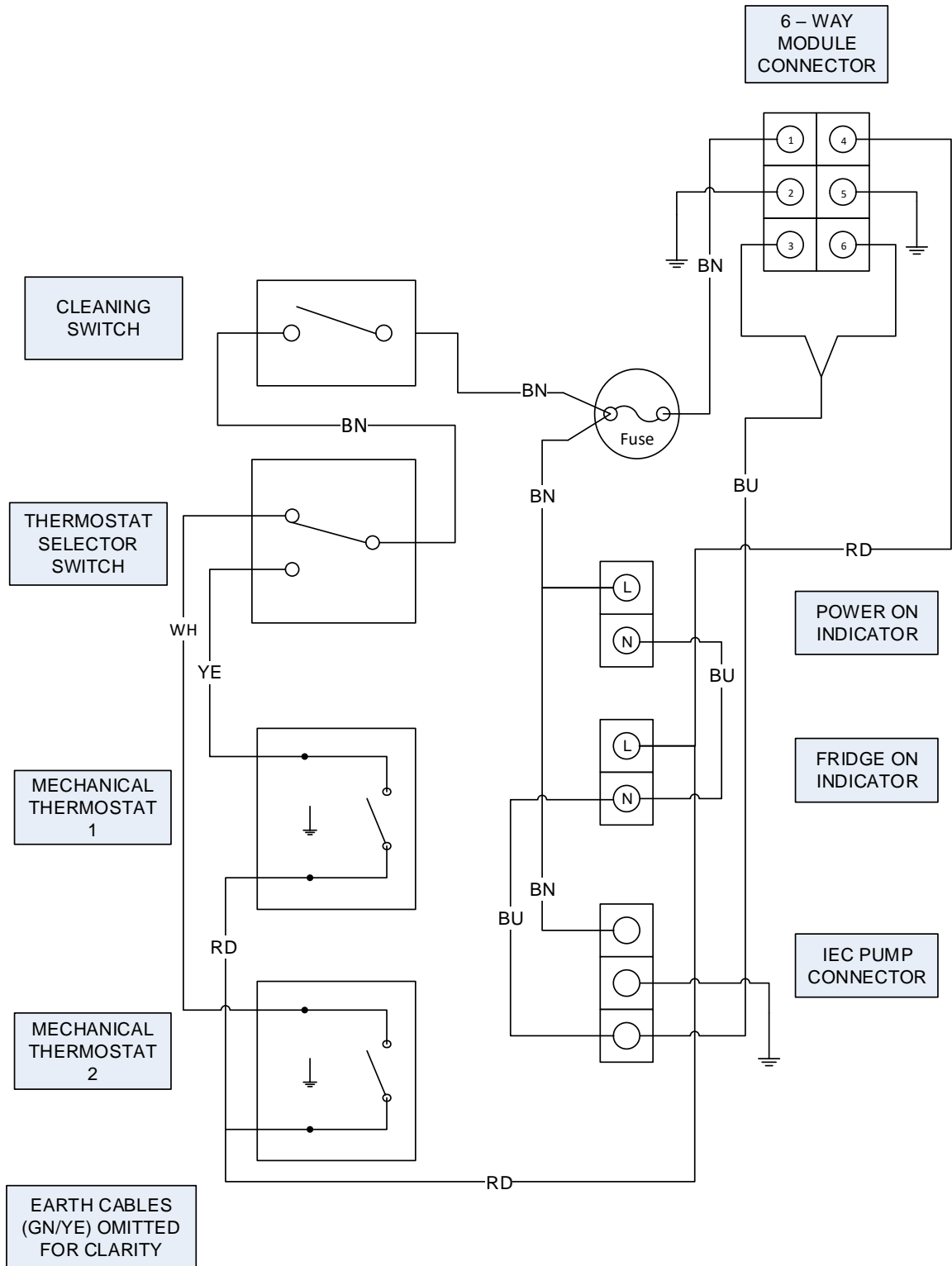
Schematics

BRW18H – Module 'W' & 'Z' Wiring Schematic



Schematics

BRW18H – Module 'C' Wiring Schematic



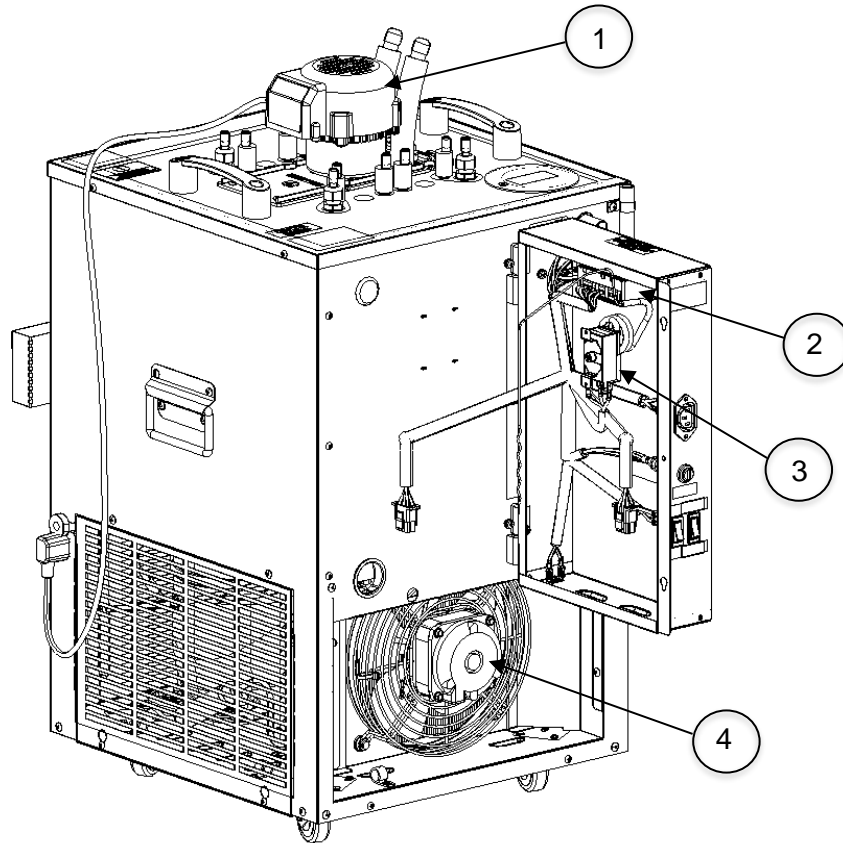
Fault Finding

Prior to any fault finding, please ensure all connections to the chiller are sound and that the incoming supply is turned on. Ensure that all electrical connections to the chiller and in the chiller are secure and in good condition, the power is on and that the chiller has had adequate time to reach operating temperature.

| | | |
|-------------|--|---|
| No Drinks | Frozen product coil | <p>Check thermostat probe is correctly located into the bath probe well.</p> <p>Check the agitator is running. If supply voltage is present, renew agitator assembly.</p> <p>If agitator is running with no water agitation check agitation blades.</p> |
| Warm Drinks | Insufficient airflow through the fridge. | <p>Check that the condenser is not blocked.</p> <p>Check for blockages and obstructions to ventilation grills.</p> |
| | Cooling Fan Not running | <p>Check supply to cooling fan motor.</p> <p>If supply present replace fan motor.</p> <p>If supply not present check connections, thermostat, high side protection (model dependent) and fuse.</p> |
| | Compressor not running | <p>Check supply to Compressor.</p> <p>If supply present return for repair.</p> <p>If supply not present check connections, thermostat, high side protection (model dependent) and fuse.</p> |
| | Fridge failure | <p>If compressor & fan are running and there is no cooling, return for repair.</p> |

Replacement Parts, Removal, Transportation and Disposal

Replacement Parts



| Item No | Replacement Parts | Part No's |
|---------|---|--------------------------------------|
| 1 | Pump | See table (Ref X) on page 5 |
| 2 | Eliwell Control Eliwell 1.5m probe DFx Control DFx Probe | 3B3472 3B4341 3B5544 3B5545 |
| 3 | Mech Thermostat - Ice Mech Thermostat - Glycol | 1A6262 1A5766 |
| 4 | Fan motor | CPART0045S |

Replacement Parts, Removal, Transportation and Disposal

Removal, Transportation and Disposal

Important: Before removal from the installation, ensure all electrical, product and gas connections are disconnected.

Disposal of Scrap Units

It is illegal to simply scrap a refrigeration unit. Before a unit can be scrapped it must first have the gas removed by a specialist using special equipment. Please contact Booth Dispensers Ltd., who will be happy to provide a quotation for disposal.

Transportation

Important: This unit must be transported in an upright position

As with all refrigeration systems, irreparable damage can be caused by laying the unit on its side or even transporting upside down. Where the unit is transported by a carrier, the carton should always be marked in a conspicuous manner, the correct upright position in which it must be handled.

If a unit has been transported incorrectly it should be placed in the correct upright position and left for 24 hours before attempting to run the system.

Failure to observe the above precautions could seriously damage the system, and would void any warranty.

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