



***compac***

***PREMIUM DISPENSER TECHNOLOGY***

**Installation Manual**  
**Version No 1.1.3**

**Model: Comfill**  
**Date: 3<sup>rd</sup> November 2020**



## Conditions of Use

- Read this manual completely before working on, or making adjustments to, the Compac equipment
- Compac Industries Limited accepts no liability for personal injury or property damage resulting from working on or adjusting the equipment incorrectly or without authorization.
- Along with any warnings, instructions, and procedures in this manual, you should also observe any other common sense procedures that are generally applicable to equipment of this type.
- Failure to comply with any warnings, instructions, procedures, or any other common sense procedures may result in injury, equipment damage, property damage, or poor performance of the Compac equipment
- The major hazard involved with operating the Compac C5000 processor is electrical shock. This hazard can be avoided if you adhere to the procedures in this manual and exercise all due care.
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- Compac Industries Limited has made every effort to explain all servicing procedures, warnings, and safety precautions as clearly and completely as possible. However, due to the range of operating environments, it is not possible to anticipate every issue that may arise. This manual is intended to provide general guidance. For specific guidance and technical support, contact your authorised Compac supplier, using the contact details in the Product Identification section.
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## Product Identification

### Specifications

This manual applies to the Comfill.

### Models Covered

**NOTE:** Do not use this manual for earlier models. Contact Compac for archived manuals if required.

### Validity

Compac Industries Limited reserves the right to revise or change product specifications at any time. This publication describes the state of the product at the time of publication and may not reflect the product at all times in the past or in the future.

### Manufactured By:

The Compac Comfill is designed and manufactured by Compac Industries Limited

52 Walls Road, Penrose, Auckland 1061, New Zealand

P.O. Box 12-417, Penrose, Auckland 1641, New Zealand

Phone: + 64 9 579 2094

Fax: + 64 9 579 0635

Email: [techsupport@compac.co.nz](mailto:techsupport@compac.co.nz)

[www.compac.biz](http://www.compac.biz)

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## Document Control

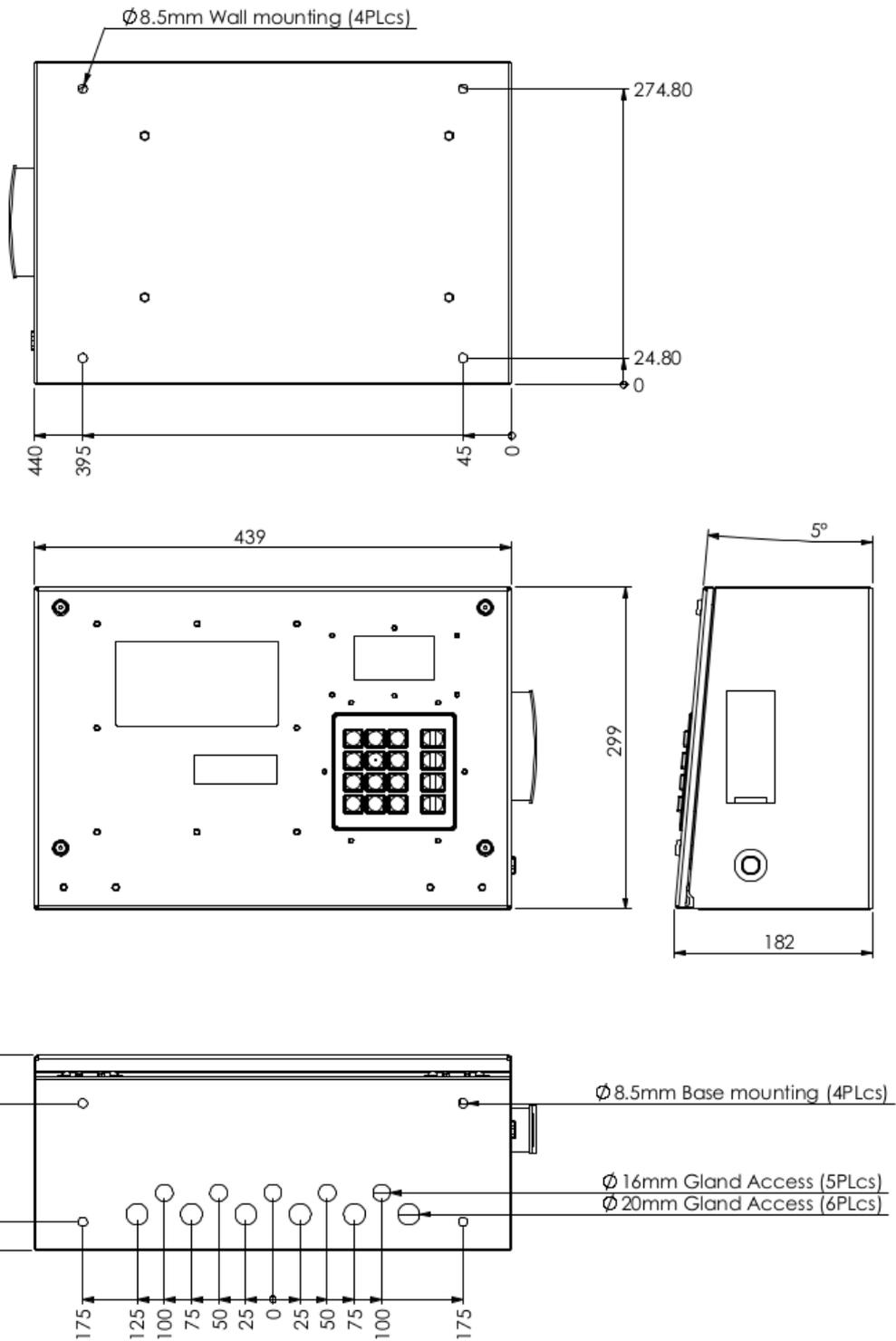
Document Information	
<b>Manual Title</b>	Comfill Installation Manual
<b>Current Revision Author(s)</b>	V Amarakoon
<b>Original Publication Date</b>	15 February 2018
<b>Authorised By</b>	W Zheng
<b>File Name</b>	Comfill Installation Manual v.1.1.2

Revision History			
Version	Date	Author(s)	Revision Notes
1.0.0	15 Feb 2018	S Laycock	New Manual
1.0.1	06 Mar 2018	S Laycock	Added new software options
1.0.2	22 Mar 2018	S Laycock	Added new software and meter connection options
1.0.3	12 Apr 2018	S Laycock	Updated software section, electronics, and error codes.
1.0.4	18 May 2018	S Laycock	Updated software options and terminal board wiring.
1.0.5	25 Jul 2018	S Laycock	Updated software options and CompacOnsite options. Added instructions on installing the sim card.
1.0.6	24 Aug 2018	S Laycock	Updated motor wiring. Updated CompacOnsite
1.0.7	31 Aug 2018	S Laycock	Added Precautions section
1.0.8	07 Dec 2018	R Liu	Updated contact information
1.0.9	23 April 2019	S Laycock	Added meter connections
1.1.0	17 June 2020	V Amarakoon	Updated Software setup (new menu layout)
1.1.1	18 Aug 2020	V Amarakoon	Added Macnaught meter connections diagram
1.1.2	23 Sep 2020	V Amarakoon	Added triac wiring and motors over 1KW
1.1.3	03 Nov 2020	V Amarakoon	Updated Veeder Root Pulser Meter

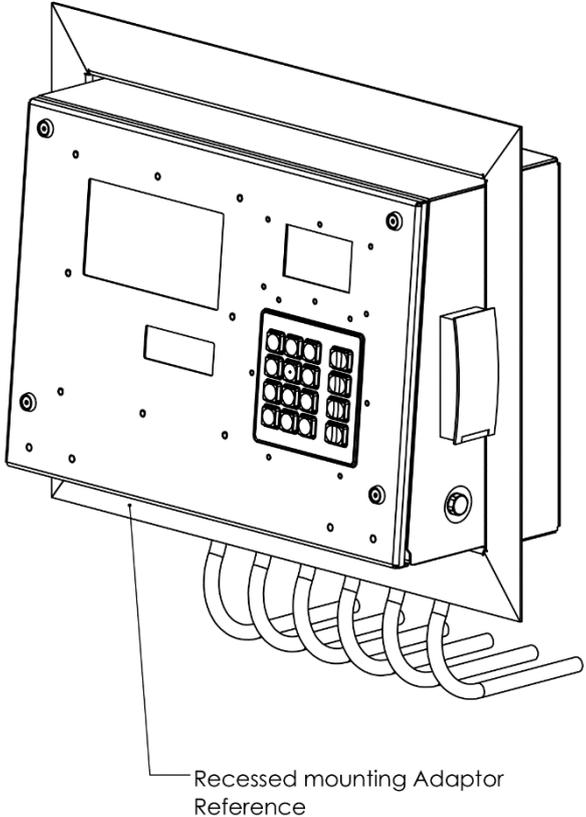
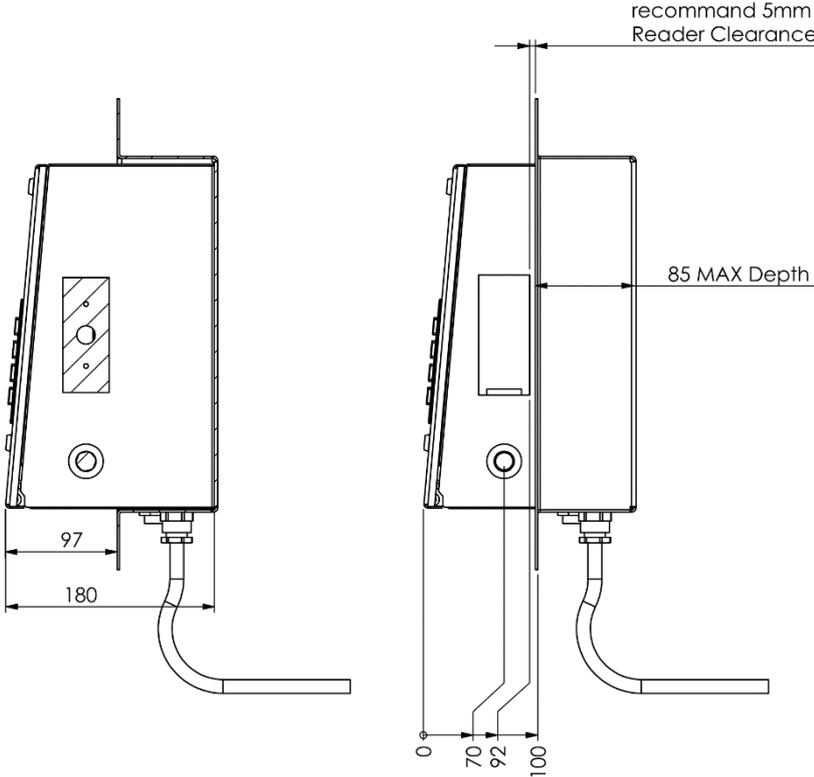
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## Footprints



# Recessed Mount Unit



## Precautions

**DANGER:** The Compac Comfill is NOT suitable for mounting in a hazardous area. Please consult the site's zone drawings to find the exact positions of the hazardous areas for each particular site.

For adequately ventilated fuel dispensing sites (not including CNG/NGV), in most cases the following will apply:

- The unit is not designed to be constantly exposed to the elements. A shelter should be installed to protect it.
- The card reader and PIN pad should face away from the prevailing wind especially in dusty or wet areas.
- In areas experiencing extremes of weather (heat, cold, wind, rain, salt spray etc.) consideration should be given to installing additional shelter.
- The Comfill location or protection should be such as to minimise the possibility of damage from vehicles, trailers, boats, or the like.
- On heavy vehicle sites, mounting the unit on a raised pad and/or installing bollards to help protect from damage should be considered.
- If mounting on a post, the base needs to be attached to a smooth, level surface of sufficient strength to securely hold the retaining bolts or fasteners.
- The Comfill should be placed at least 8 metres from any above ground flammable liquid storage or handling facility other than a dispenser.
- The Comfill should be placed at least 0.5 metres from any flammable liquid fuel dispensers and 1.5 metres from any LPG dispensers.
- The Comfill should be mounted so that the base of the cabinet is at least 1.2 metres above the ground.
- If the Comfill is mounted on a post, and the post is within 4 metres of a dispenser or within 1 metre of the end of any fuel dispenser hose, then the entire interior of the post may be considered a hazardous area. Any cables running through, or electrical equipment mounted in the post should be suitable for that hazardous area (refer AS/NZS 2381).
- Whenever running a cable through the post into the base of the cabinet always ensure that the cable entry into the cabinet uses a vapour tight gland.
- Generally, the area below the Comfill may be a hazardous area and therefore some appropriate signage may be required e.g. no smoking.
- Lighting should be provided during the hours of operation. Lighting should be sufficient to provide safe working conditions that include, but are not limited to, clear visibility of all markings on packages, signs, instruments and other necessary items. A minimum value of 50 lux is recommended.

For more information and guidelines on classifications of hazardous zones, please refer to AS/NZS 60079-10.1 (Classification of Areas – Explosive gas atmospheres)

These requirements do not apply to any specific site but are merely recommendations that will apply in most cases. The owner/installer must ensure that the installation complies with AS/NZS 3000, AS 1940, and any other applicable regulations.

## Pre-installation

### Static Electricity Precautions

Electronic components used are sensitive to static. Please take anti-static precautions.

An anti-static wrist strap should be worn and connected correctly when working on any electronic equipment. If an anti-static wrist strap is unavailable, or in an emergency, hold onto an earthed part of the pump/dispenser frame whilst working on the equipment. This is not a recommended alternative to wearing an anti-static wrist strap.

**NOTE:** *Compac Industries Limited reserves the right to refuse to accept any circuit boards returned, if proper anti-static precautions have not been taken.*

### Tools

Having all the correct tools will make installation, upgrade and repair procedures easy and minimise the risk of damage to components.

Before you arrive on site, make sure you have a minimum of all the tools listed here.

- 5.5mm nut driver
- 7mm nut driver
- 8mm nut driver
- T30 Torx drive bit or driver
- T10 Torx drive bit or driver
- Metric spanner set
- Metric 3/8" or 1/4" drive socket set
- 1/4" screwdriver bit holder
- 1/4" A/F spanner
- 6" adjustable spanner
- Flat blade screwdriver set (1.5 - 5mm blades)
- #0, #1, #2 Phillips screwdrivers
- #1, #2 Pozidriv screwdrivers
- Set of metric Allen (hex) keys
- Fine long nose pliers, side cutters & pliers
- Hacksaw
- Stanley knife or similar sharp blade
- Ruler
- Multimeter
- Laptop or smartphone with internet

## Installation

### Mechanical Installation

The Comfill can be mounted from the rear or the bottom of the unit. Refer to Footprints for locations of the mounting holes. To mount the unit, the following will be supplied:

- 4x M8x25 button head hex drive stainless steel screws
- 4x M8x16 button head hex drive stainless steel screws
- 8x M8 nylon washers
- 8x M8 stainless steel flat washers
- 8x M8 stainless steel nuts

Stainless steel is recommended due to the reduced risk of corrosion when exposed to weather conditions. The Comfill is suitable for outdoor installation.

M8x25 screws are recommended for mounting from the rear of the unit and are suitable for mounting to surfaces up to 10mm thick.

M8x16 screws are recommended for mounting from the bottom of the unit and are suitable for mounting to surfaces up to 4mm thick.

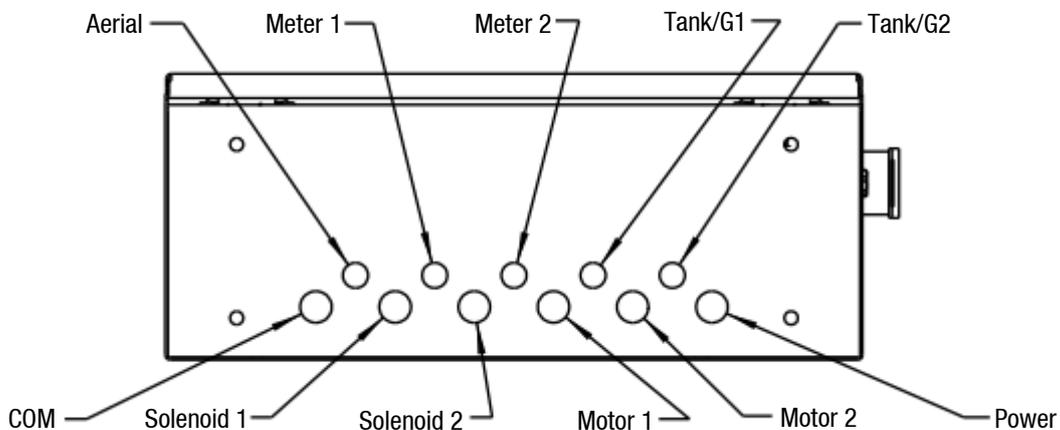
### Glanding

With the Comfill unit, the following grommets will be supplied:

- 5x 16mm rubber grommets
- 5x 19.1mm rubber grommets

Any unused gland access holes should be blanked with the supplied grommets. 19.1mm grommets will fit the 20mm access holes.

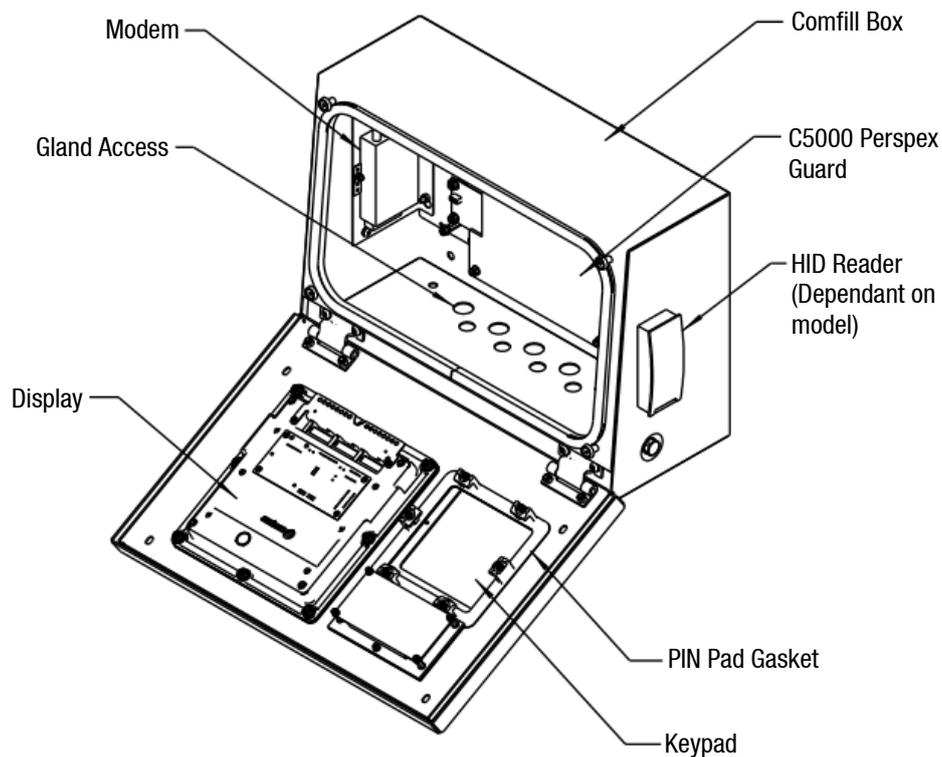
The gland access is as follows:



## Perspex Guard

A Perspex guard is supplied with the unit and will need to be removed to access the terminal board and baseboard. The location of the guard is as shown:

**NOTE:** Due to ongoing development of the Comfill, the DIN rail is not shown in the drawing.



**DANGER:** The unit must be isolated before attempting to remove or reattach the Perspex guard.

The Perspex guard is attached with 4x M4x10 pozi screws and M4 nylon washers. An 8mm nut driver will be appropriate for removing and reattaching the Perspex guard.

**NOTE:** Always reattach the Perspex guard after working on the Comfill unit.

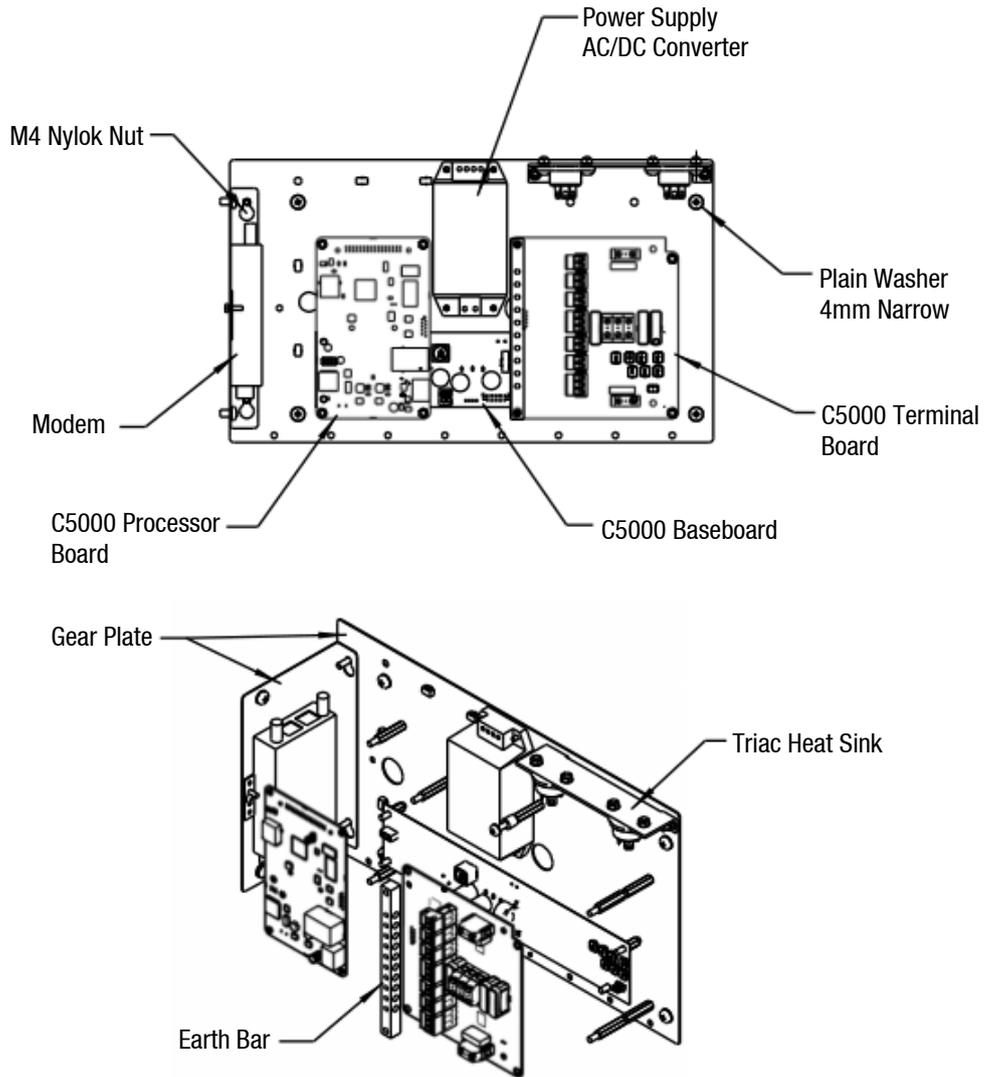
**NOTE:** Always reattach fuse covers after working on the Comfill unit.

## Electrical Installation

### Components

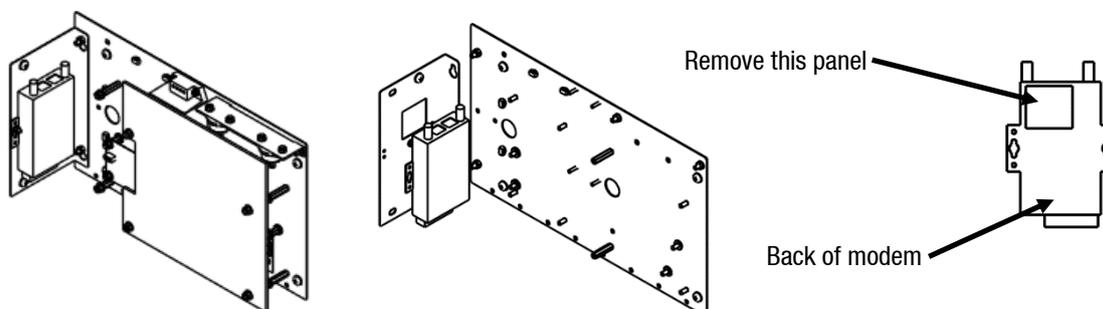
The following diagram shows the location of several of the C5000 circuit boards underneath the Perspex guard.

**NOTE:** Due to ongoing development of the Comfill, the Comms board is not shown here.



## Sim Card Installation

To install the sim card, the modem needs to be removed from the gear plate. See page 6 for the location of the modem.



As shown, the left gear plate must be removed from the main gear plate. The modem can then be removed. On the back of the modem, there is a small square panel. Remove the panel and insert the sim card. Replace the modem and gear plate. Ensure the modem is connected to the processor board – the LAN input on the modem should connect to the ethernet input on the processor board.

## Modem Antenna

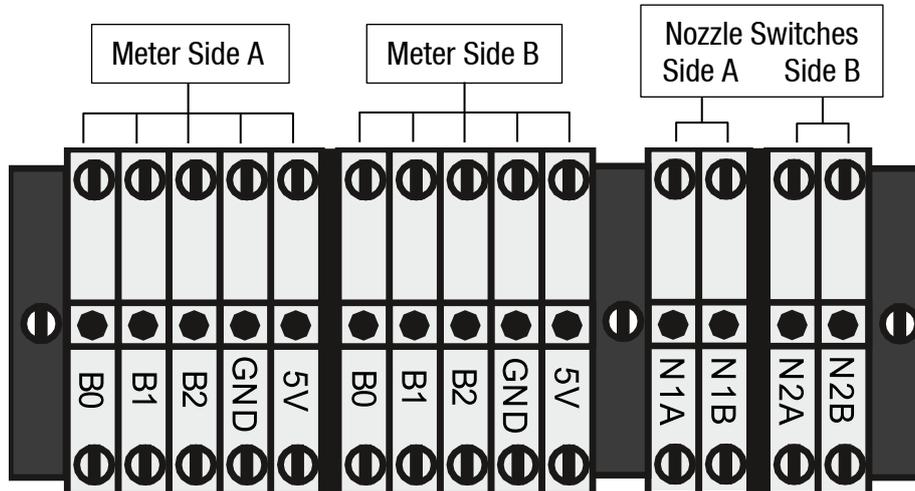
Depending on ordering and requirements, one of two options of modem antennae will be supplied. The installer will be required to attach this to the modem. The two options of supplied aerial are:

- High Gain Broomstick antenna with a 5m lead
- High Gain shorter antenna to be attached to the base, with a 2m lead

An IP67 plastic rated gland will be supplied for optional antenna glanding.

## DIN Rail Connections

When the Comfill arrives onsite, all internal wiring will already be connected. Incoming external cables will have to be inserted through the glands and then connected to the back of the DIN rail. The nozzle switch and meter will be connected to the DIN rail. The connections are as shown:



The Comfill supports encoder, V50 and some third-party meters. Some third-party meters require 10 k $\Omega$  resistors to be connected. In case of this, 6 10k $\Omega$  resistors will be supplied with the Comfill unit.

### Connecting an Encoder Meter:

The encoder connects to the DIN rail via a six-core (only five cores used) data cable. The five cores used are:

- |                 |   |  |
|-----------------|---|--|
| Orange or White | - | 5V terminal  |
| Yellow or Black | - | 0V terminal (GND)  |
| Brown           | - | B0 terminal (used for single, dual, and triple channel encoders) |
| Blue            | - | B1 terminal (used for dual and triple channel encoders)          |
| Red             | - | B2 terminal (used for triple channel encoders)                   |

Where B0, B1 & B2 are the three opto-sensor connections. Not all of these may be used depending on the meter connected.

To reverse the rotation of the encoder sensing, the B0 & B2 wires should be reversed. The error message for reverse rotation is  $\text{E r r o r}$ .

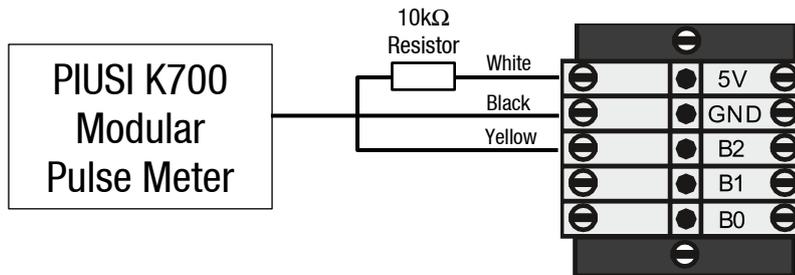
### Connecting a V50 Meter:

V50 meters can be connected directly to the K-Factor board. Refer to K-Factor Board for the location of the meter plug.

### If connecting a Piusi meter:

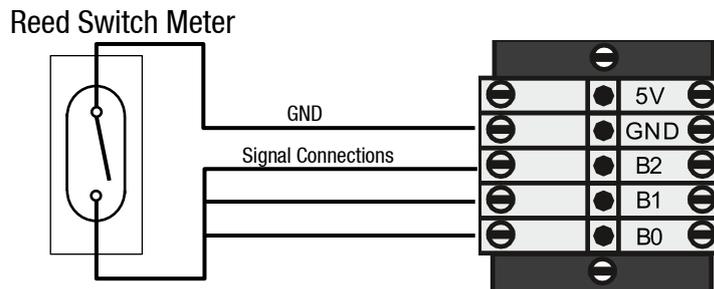
A Piusi K700 Modular Pulse Meter has three data cores. If connecting a Piusi meter, the data cores should be connected as following:

- White - 5V terminal (a resistor should be included)
- Black - 0V terminal (GND)
- Yellow - B2 terminal



### If connecting a Reed switch type meter:

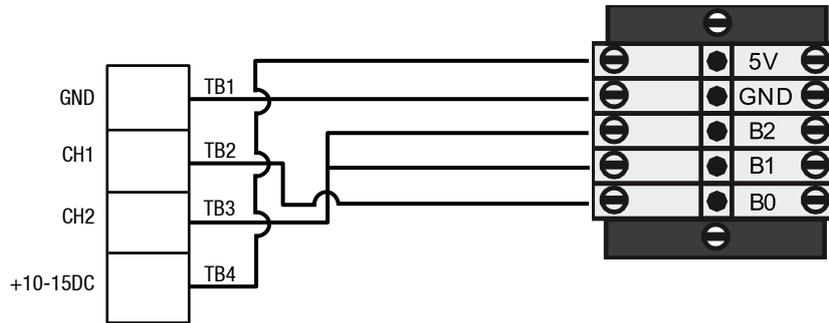
Reed switch type meters require three signal connections and one earth connection as shown:



**NOTE:** Ensure the wiring is shorted on the meter end, not the Comfill end.

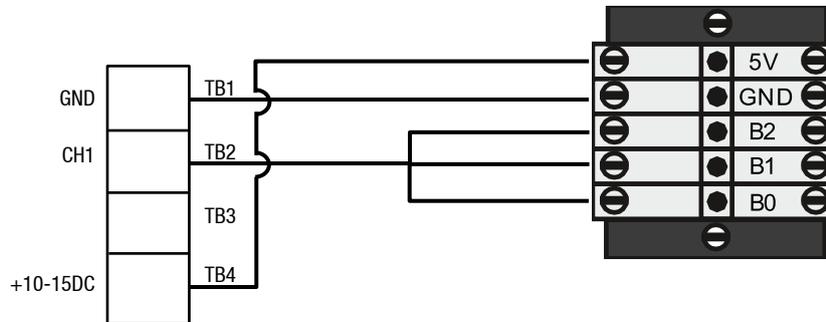
## If connecting a Veeder Root Pulsar Meter:

### Dual Channel:



**NOTE:** Ensure the wiring is shorted on the meter end, not the Comfill end.

### Single Channel:



**NOTE:** Ensure the wiring is shorted on the meter end, not the Comfill end.

### Comfill Pulses for encoder( K-factor = 1)

1 channel 50 state changes (high and low ) = 0.16 litres

2 channel 100 state changes (high and low) = 0.25 litres

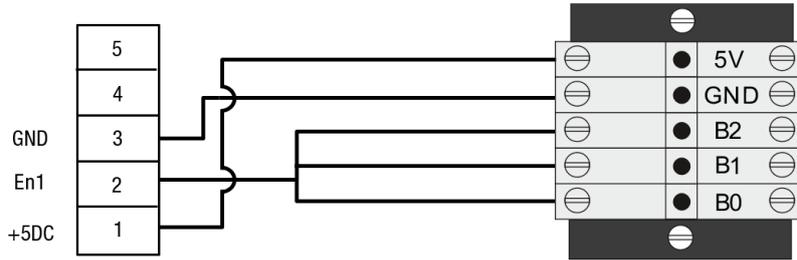
3 channel 150 state changes (high and low) = 0.50 litres

Veeder root 7671 models

767163-xxx	Bidirectional	Clockwise	Counter-clockwise	Pulses/rotation	C5000 rotations/litre, K-factor = 1
Single Channel	-32x	-42x	-51x	100	1 rotation = 0.66L
Dual channel (staggered)	-31x	-41x	-51x	50	1 rotation = 0.66L
Dual channel (overlap)	-30x	-40x	-50x	50	1 rotation = 0.66L

**NOTE:** Comfill only supports single channel and dual channel staggered signals, Dual channel overlapping signals are not supported.

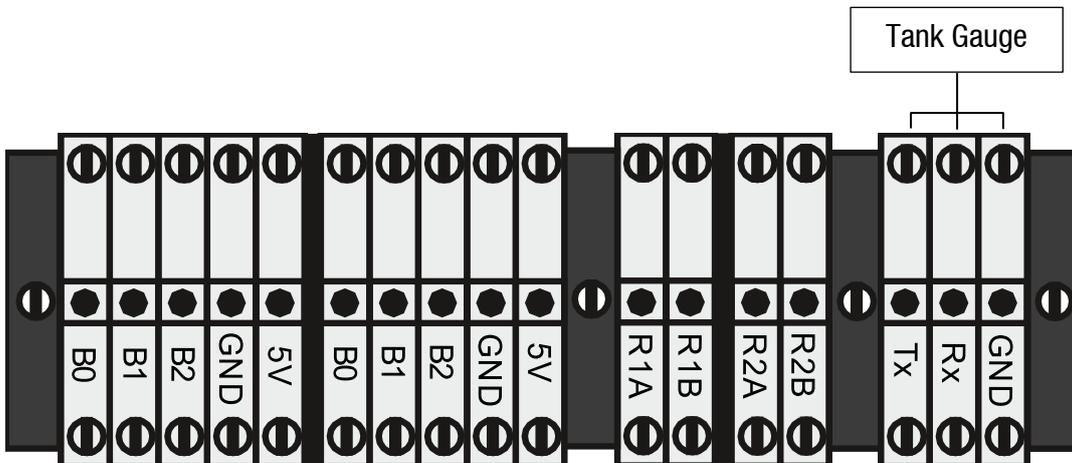
**If connecting a Macnaught meter (hall effect single channel)**



**NOTE:** Ensure the wiring is shorted on the meter end, not the Comfill end.

**If connecting a Tank gauge:**

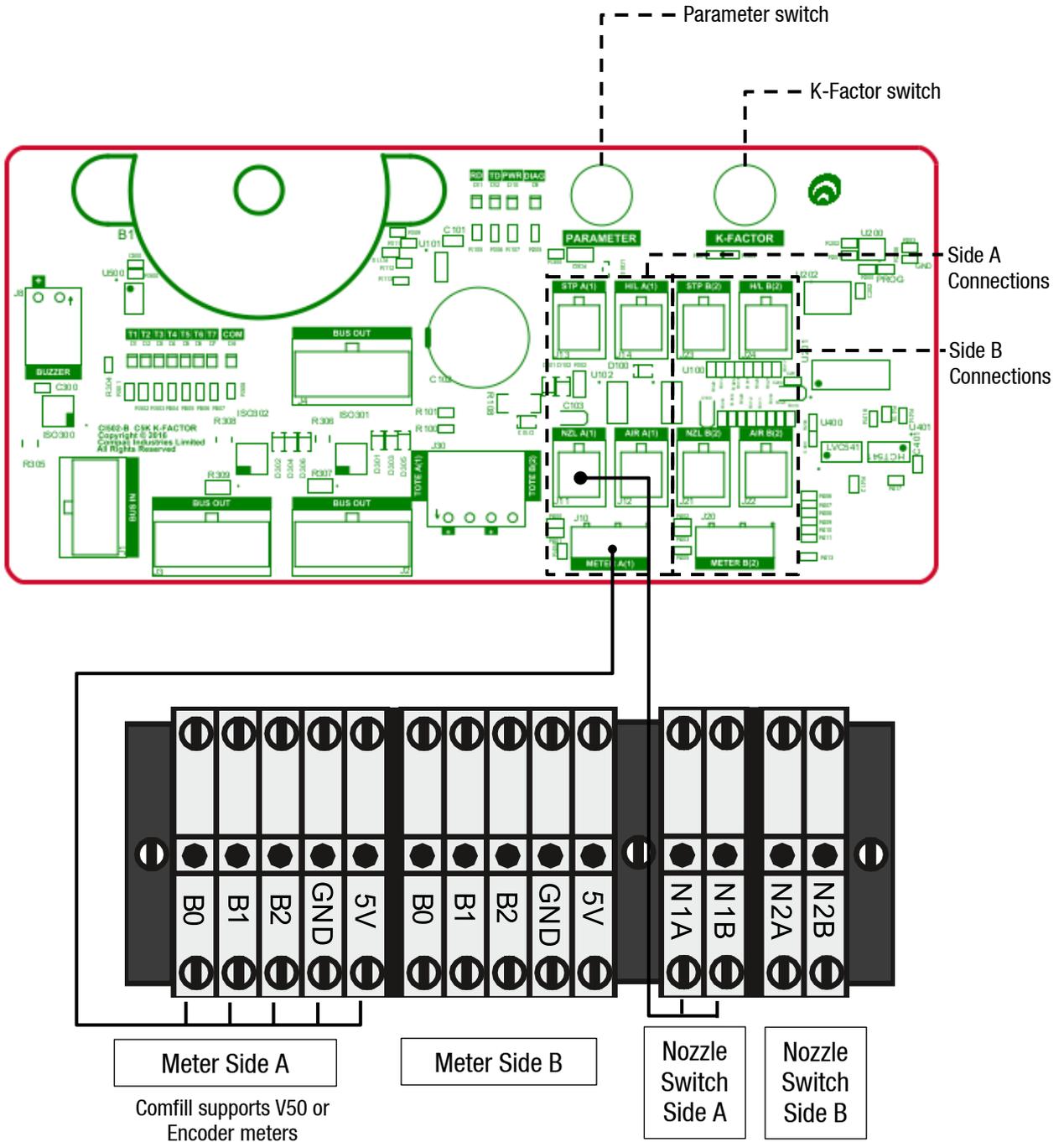
Tank gauges are optional. If a tank gauge is required, an extra terminal will be on the DIN rail. If connecting a tank gauge, it should be connected to the terminal block as shown:



**NOTE:** Configuration may change during production. Terminal blocks may not be in the same order in every unit.

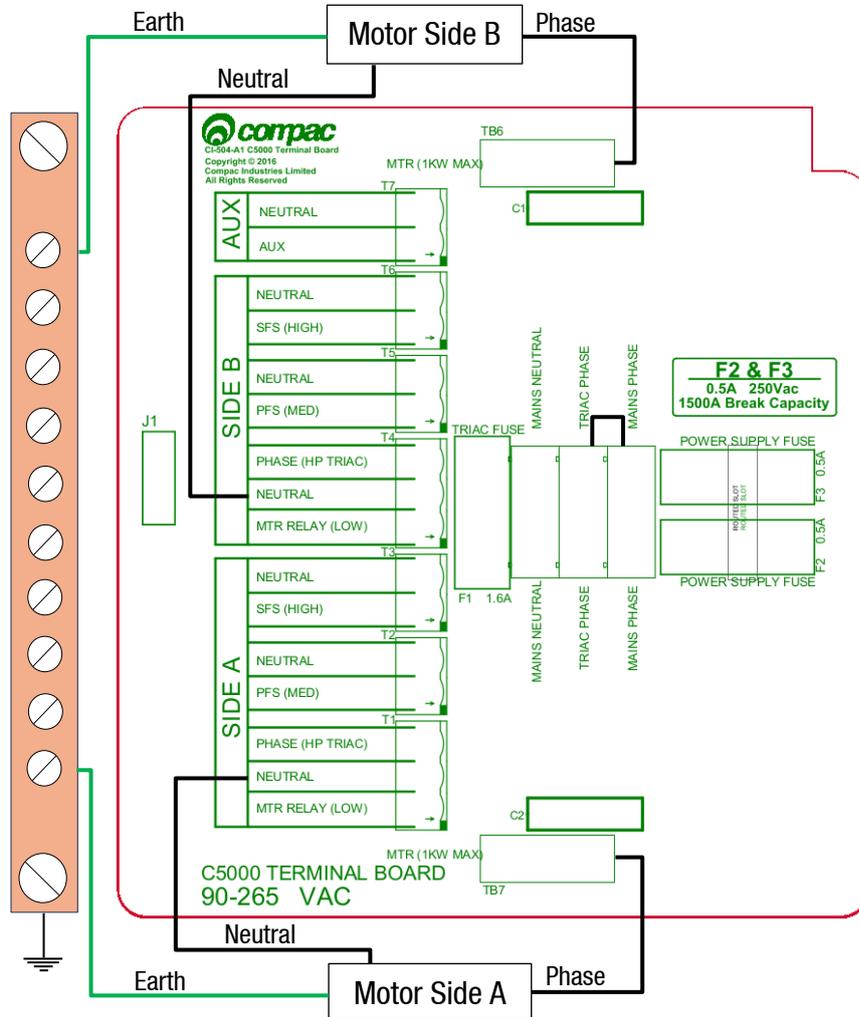
## K-Factor Board

The K-Factor board connections shown are internal and will already be connected. If connecting a V50 meter, connect directly to the meter input instead of the DIN rail.



## Terminal Board

The external incoming mains and motor connections will need to be connected onsite. The motor will need to be connected for both side A and side B as shown.

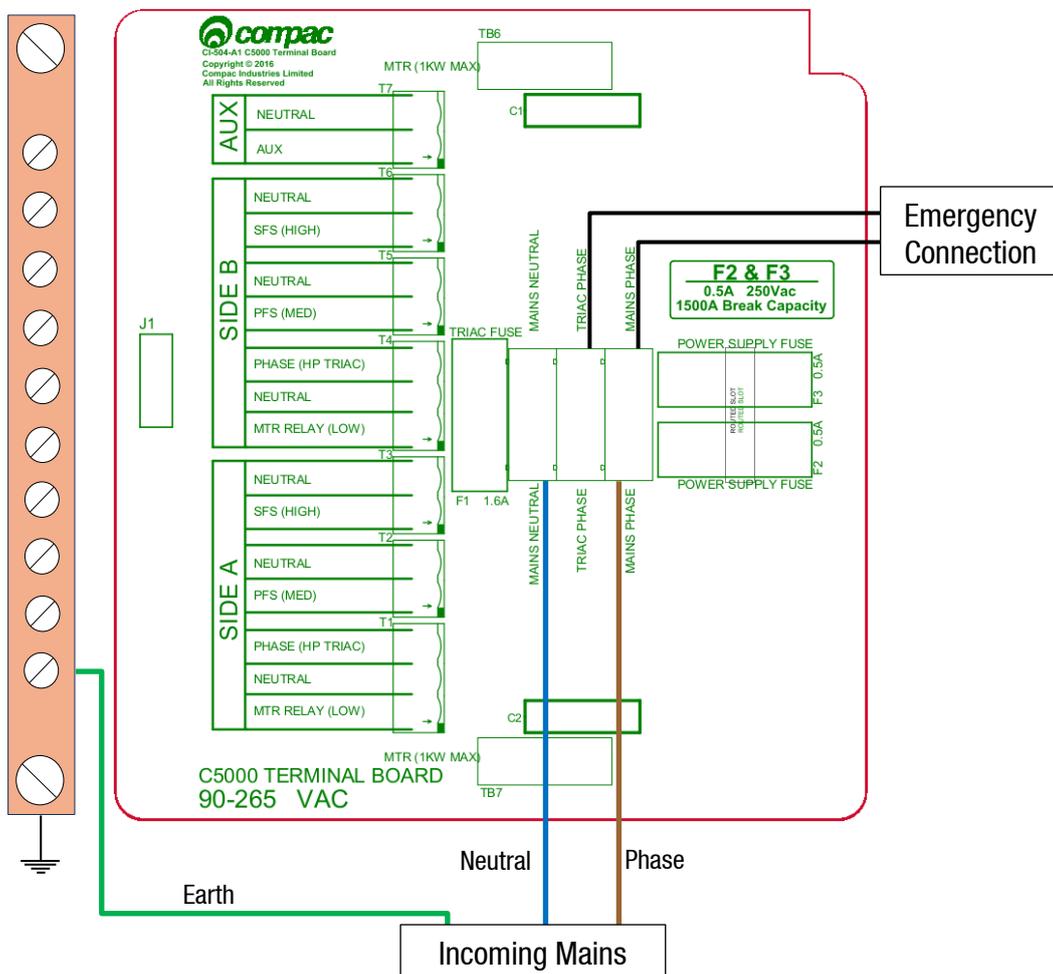


**Installation**

The incoming mains will be wired into the terminal board. The incoming mains wiring is as follows. Wires have standard colours which are shown. In case these are unclear, the colours are as follows:

- Incoming mains phase: Brown
- Incoming mains neutral: Blue
- Incoming mains earth: Green/Yellow

If wiring in an emergency connection, it should be connected to the triac-phase loop. Cutting this loop will cut power to all outputs on the terminal board. An emergency stop switch should be installed.



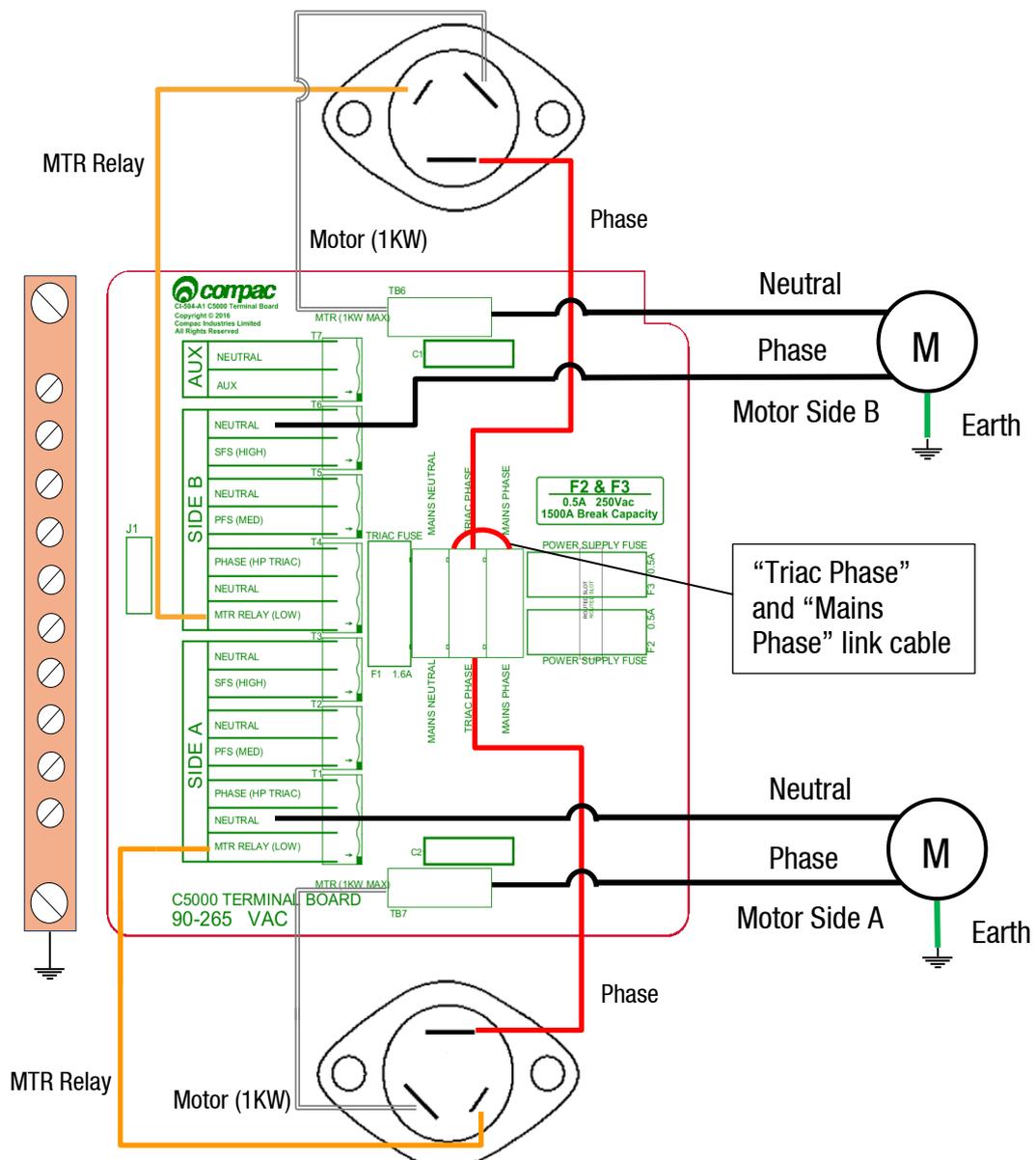
## Triac Wiring (For motors up to 1KW)

The triac wiring will be pre-installed and, in most cases, will not need to be changed. The wires are colour coded with standard colours. In case these are not clear, the colours are as follows:

Wire colour code	Terminal Board	Triac Spade Terminal
Red	Triac Phase	Phase
Orange	MTR Relay(LOW)	Gate
White	MTR (1KW MAX)	Load

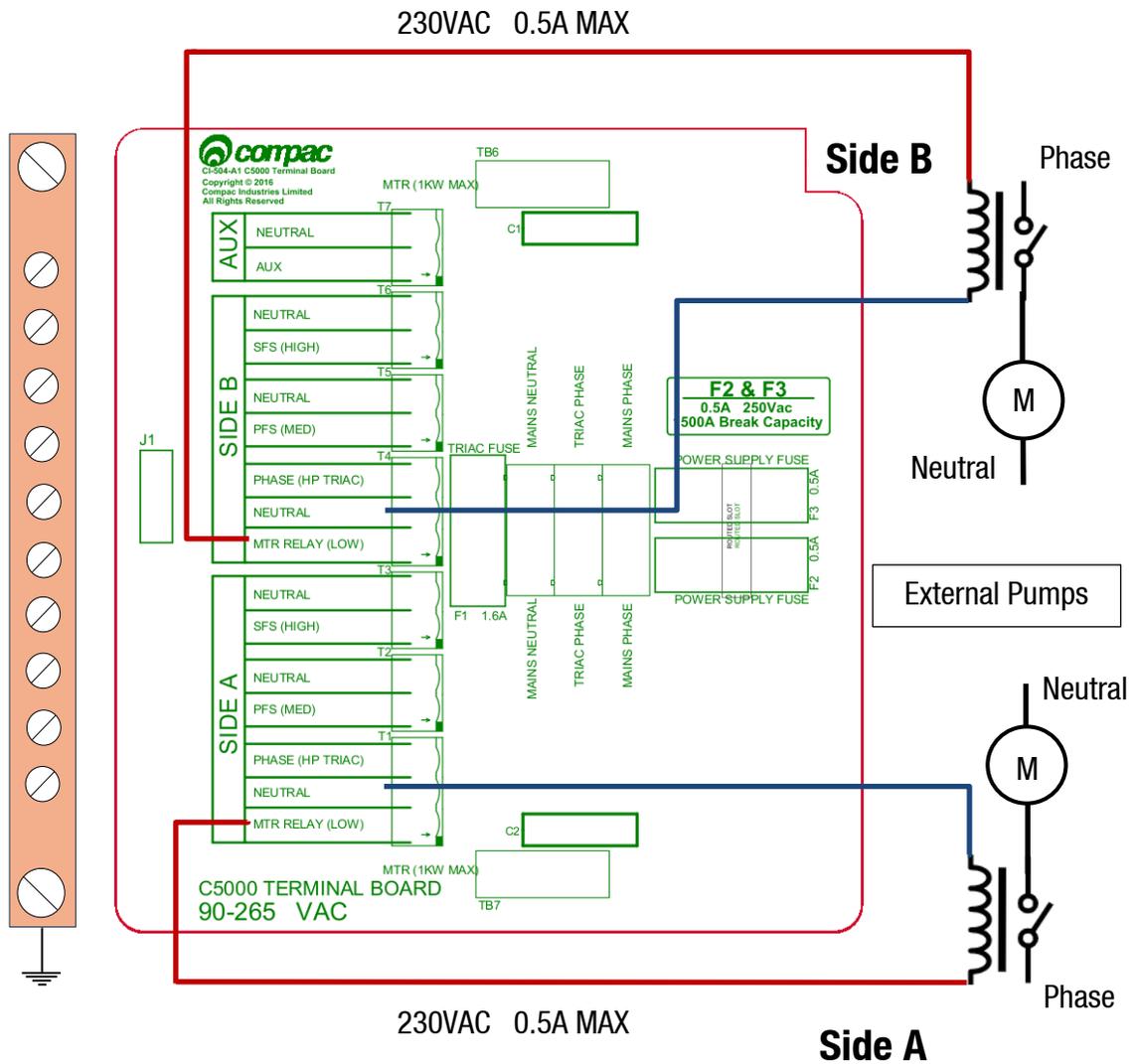
The correct orientation of the triac is important for wiring. Wire the triac(s) to the terminal board terminals using  $0.75mm^2$  coloured wires and link the Mains Phase and Triac Phase using a  $1.5mm^2$  red wire.

Comfill can support up to two 1KW single phase motors via the triac outputs.



## Motors over 1KW

The external pump connections are as shown below. Wire in the required side(s).



### Connecting to external pumps

For third party pump motors over 1KW, the contactor coil needs to be connected to the “MTR RELAY (LOW)” terminal and neutral terminal beside it. The MTR relay (low) output is 230VAC and it can supply up to 0.5A. However, the total output from 7 triac outputs (T1-T7) must not exceed 1A.

Connect the Nozzle and meter connections to the DIN rail as necessary (Refer to the “K-Factor board” for the DIN rail terminals diagram to connect nozzles and meters).

## Software

This section details what options are available for the unit and what each setting means. Some settings may not be available for each specific unit.

### System

#### Card Records

Before cards can be added, card records need to be set up from the Comfill unit. When setting up card records, a PAN length, BIN range, and access number can be specified. These are encoded onto the card and can be used to restrict access to the pumps. PAN length is the number of digits that make up the BIN number and card number. The BIN range gives access to a range of cards that have similar BIN numbers. BIN numbers are always 6 digits long. To make this into a BIN range, two numbers must be added. For example, if a card had the following card number:

7824331000132017

The card is 16 digits long, therefore the PAN length is 16.

The BIN number is 782433. To allow all cards with the same BIN number access:

BIN low should be set to 78243300.

BIN high should be set to 78243399.

This would allow all cards with a BIN number of 782433 access. The Access number is used to further restrict cards. This is a 5-digit number and will be encoded onto the cards. 0 should be entered into the Access field if the card does not have an access number. Once the card records are set up, specific cards can be entered into the system using PAN numbers.

If a card is hotlisted, it will be accepted even if the card PAN number has not been entered. Otherwise, the card's individual PAN number will have to be entered as a card. Prompts are an optional setting which may be chosen when setting card records. The prompts that are selected when entering a card will appear when that card is swiped; for example, if odometer is selected, the card holder will have to enter an odometer number to access the fuel pump. Cards can be enabled or disabled.

#### Passcode

For security, the unit has a passcode. This can be used to access settings from the unit. For extra security, if the settings are accessed with the passcode, some options are not able to be changed, such as the K-Factor setting. These must be accessed by pressing the K-Factor switch.

The unit supports three different authorisation modes: PIN, HID or Cardreader. The system can be set up from either CompacOnsite or from the unit itself.

## Pumps

The Comfill supports two configurations, single and dual, enabling two pumps to be used simultaneously if one card is used. These pumps are assigned a side so that they may be individually customised. Each side must be numbered between 1-99.

**NOTE:** Entering a pump number 0 will disable the pump.

Individual settings for each pump include the fuel product used, which has a name and product code, and the meter used at each pump. The unit supports encoder meters (max frequency 3.5Khz) or V50 meters. The K-Factor, used to calibrate fuel flow, can also be set for each pump. The state of the pumps can be either operational or locked, which may be desired if the pump is not operating normally. Pumps have two solenoids for product flow. If the solenoids are unavailable, the pump preset should also be unavailable. Solenoid delay, the amount of time it takes the solenoids to turn on after lifting the nozzle, can be customised for each side. Auto authorisation can be enabled for a pump, allowing the pump to be authorised without lifting up the nozzle.

### Preset Cutoff and Rounding

Preset cutoff is used to deliver an accurate amount of fuel. When dispensing fuel, two solenoids are used for fuel flow. When the dispensed amount of product reaches the preset cutoff, one solenoid is turned off to slow delivery rate and dispense an accurate volume of product.

A two-digit number can be assigned to determine the preset rounding in litres. The first digit determines how the preset is rounded down, and the second digit determines how the preset is rounded up. For example, if Preset Rounding is set to 89 and the preset is 40.

40.08 is within .08 of 40 and would therefore be rounded down to 40.

39.91 is within .09 of 40 and would therefore be rounded up to 40.

### Flow Range

A flow range is needed for each pump to dispense an accurate amount of product. If too much or too little fuel is dispensed, the meter cannot accurately measure the dispensed fuel and therefore should cut off and display an end of sale message. The flow range will vary for different products. Flow low should be the lower value of the flow range, while Flow high is the highest possible flow.

**NOTE:** Flow range is optional. The default value is 0.

A flow timeout can be set, which cuts off the motor after the set amount of time. The default is 000, which is 20 seconds.

### Unit Price and End of Sale

For the Comfill, the unit price is always 1. If the setting is changed in the unit to something different, the unit price will remain as 1.

End of sale indicators show why the motor stopped during the last sale. Refer to End of Sale for the full list of these.

## Cards and Card Users

Card numbers must be added for a card to be valid. Card or HID numbers can be added. These numbers should correlate to the earlier card setup done in the system section.

Cards can also have User IDs, which are optional prompts for cards. If a User ID is asked for the customer dispensing fuel will have to enter a valid User ID. If a user ID is not required, and instead the retailer wants a different prompt (such as Fleet number) user ID can be configured to ask for different prompts.

## Meters

The unit supports encoder or V50 Modbus meters. The encoder meters can be single, dual or triple channel. Single channel encoders measure the fuel dispensed. Dual channel encoders do this as well as determine the rotation of the meter (and therefore the direction of fuel flow). Triple channel meters can determine if the meter is correctly connected and functioning.

## K-Factor

The K-Factor is used to calibrate product flow. It is a ratio of litres dispensed per revolution of the meter. The K-Factor may need to be calibrated after periods of time. To calibrate the pump, dispense fuel into a certified measuring container and compare the display value with the one dispensed.

Example:

Display shows 10.00    True volume 20.00

To calculate the correct K-Factor from the information above; firstly, record the existing K-Factor.

$$\begin{aligned}
 \text{New K Factor} &= \text{Existing K Factor} * \frac{\text{Dispensed Amount}}{\text{Displayed Amount}} \\
 &= \text{Existing K Factor} * \frac{20}{10} \\
 &= \text{Existing K Factor} * 2
 \end{aligned}$$

Unique ID is for a V50 meter only.

## Tanks

Tanks can be set up with their corresponding product, number, and capacity.

### Tank Gauging

Tank gauging is used to determine how much fuel is left in a tank. The Comfill supports four tank gauges: Veeder-Root, Fafnir, Vega and Virtual. To accurately gauge the volume of fuel, the tank number, safe fill level and capacity are required. These depend on the tanks onsite. If a Vega electronic dipstick is used, please note that more information will be required; the position of the probe in the tank is needed. A Tank Strapping table ID will be required to calculate volume. A Vega electronic dipstick may also be connected differently; the gauge channel may change depending on the connection to the Comms board.

### Device

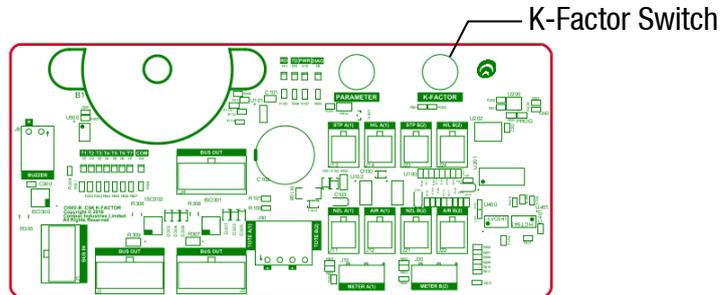
As the C5000 electronics are used for a variety of units, the variant can be changed. For the Comfill, the variant should always be set to COMFILL.

The Comfill does not have a slave display and the slave display setting should be set to none.

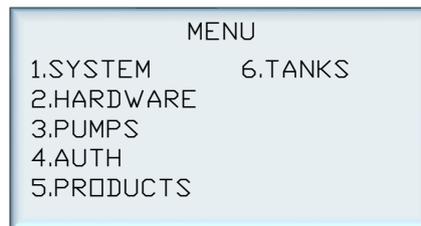
To update the software, contact Compac.

## Software Setup

To change settings from the unit you must either have access to the K-Factor switch, which is located on the inside of the unit on the K-Factor board or have the passcode to the unit.



Pressing the K-Factor switch will bring up a menu displaying set up options on the Keypad display. The available options are shown below. The same menu can be accessed by pressing Cancel on the standard display and entering the passcode.



**IMPORTANT NOTE:** The settings shown on each individual unit will depend on the current software version. Not all the options shown here may be displayed on every unit.

**NOTE:** If the menu is accessed by entering the passcode, not all the settings will be available. K-Factor and meter setup can only be accessed by pressing the K-Factor switch.

The K-Factor switch must be sealed after servicing.

**NOTE:** The system has a timeout of 15 seconds.

Some software setup options are not shown here. Instead, only options which are required to set up the unit are explained. Refer to the Fillmaster Service Manual for a full list of software set up instructions.

### Setup Instructions

To set up the site, first set up the available products.

1. Go to Products
2. Select a product number and enter an available product

```

MENU
1.PRD #01      NOT SET
2.PRD #02      NOT SET
3.PRD #03      NOT SET
4.PRD #04      NOT SET
5.PRD #05      NOT SET
                Next(<#>)
    
```

Once products have been set, the site tanks can be set up. Select TANKS from the main menu and select TANK A or TANK B.

```

TANK A
1.TYPE      NONE
2.ENABLED   DISABLED
3.TANK #    00
4.PRODUCT
5.CAPACITY  00000000
                Next(<#>)
    
```

```

TANK A 2
1.SFL      00000000
                (<*)PREV
    
```

1. The tank gauge type can be changed by selecting 1. The options are VDR, Vega, Virtual, Fafnir.
2. Tank gauging can be enabled or disabled by pressing 2.
3. The tank number and capacity can be set by selecting the desired functionality and entering the new value.
4. The product can be set by pressing 4 and selecting an established product.

Safe fill level can be changed by pressing 1 and entering the new value in litres.

Now the site tanks have been set up. Next, the pumps should be configured for the unit. To do this:

1. Go to Pumps > Select the relevant pump
2. To allow the pump to be used, first set a pump number between 00 and 99
3. Select the product that will be used at the pump
4. Enable the pump
5. Used the (#) key to scroll for more options. Ensure the unit price is correct

```

SIDE A CONFIG 1
1.NUMBER      05
2.PRODUCT     UNLEADED
3.ENABLED     ENABLED
4.INFO        IDLE
5.METER
                Next(<#>)
    
```

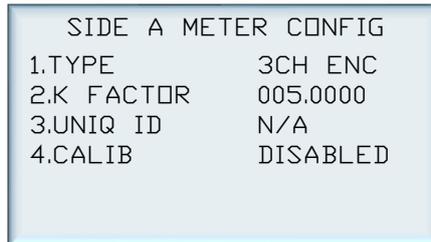
```

SIDE A CONFIG 2
1.FLOW
2.PRESET
3.MODE
4.COMMS
5.ADVANCED
                (<*)PREV
    
```

All other options for pumps are optional or have default values. If these optional settings are desired, the pump can be customised. Refer to Software for information on these options. To change these settings, simply scroll between options using the (#) and (\*) keys. Select the desired setting and enter the desired value. The Fillmaster Service Manual gives full instructions on changing each setting.

Next, the meter should be set up. To set up the meter:

1. Select PUMPS from the main menu, select pump number and then select METER will bring up the following menu.



2. Ensure the correct meter is selected. Fillmaster currently only has 3 channel encoder, so this should be selected
3. Ensure the K-Factor is correct. Refer to software for instructions on how to calibrate the K-Factor

The unit is now operational. For further settings and customisation of the unit refer to the service manual supplied with the unit.

### Finding the Device ID

The device ID is required to log on to CompacOnsite. If this is not known, it can be found by selecting SYSTEM from the main menu and then select DEVICE.



## CompacOnsite

The unit can be set up online via CompacOnsite. To access CompacOnsite, the device ID is needed. The following should be entered into an internet browser, replacing device ID with the specific ID of the unit. Refer to Software Setup for instructions on finding the Device ID.

<https://deviceID.compaconsite.com>

The standard passwords are shown below.

### IMPORTANT NOTES:

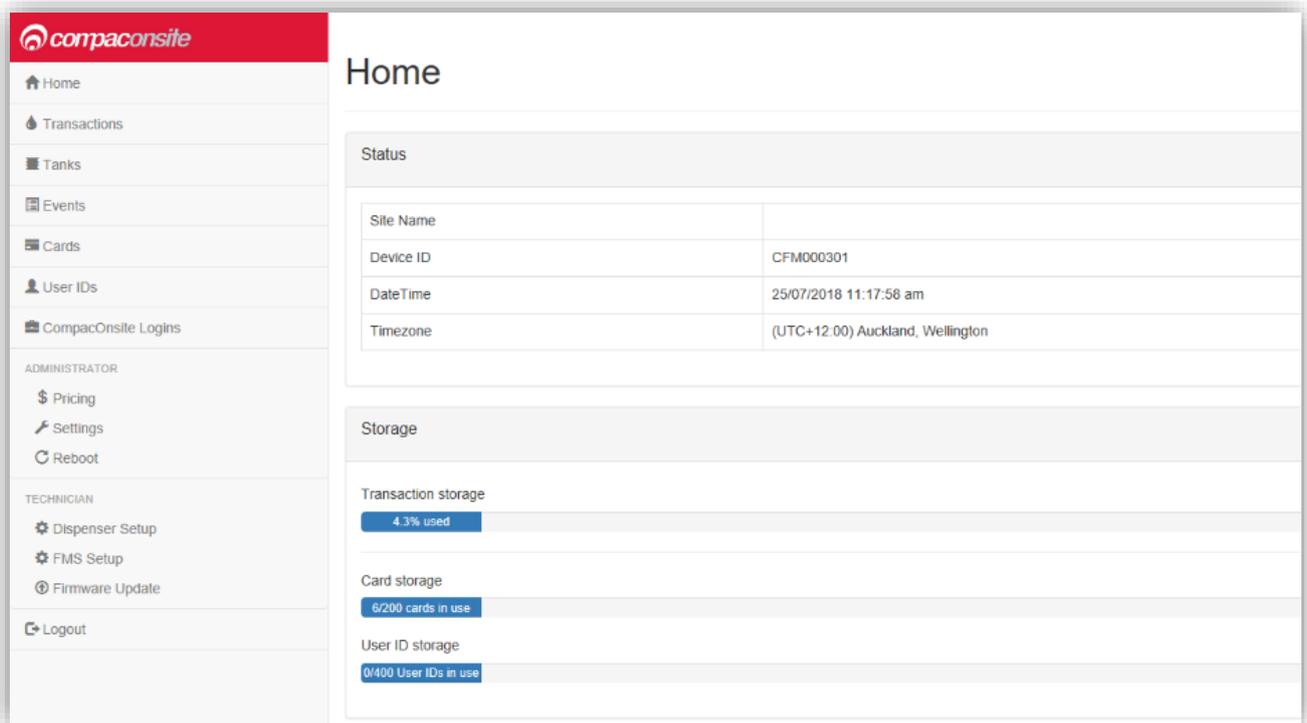
**For the security of the site, ensure the passwords are changed once the unit is installed.**

**Access to online data is heavily dependant on the unit being powered on and connected to the internet. Ensure the unit is online in order to have full access to all site data.**

Username	Password
user	c0mpac5KUser
admin	c0mpac5KAdmin
tech	c0mpac5KTech

After log in, the CompacOnsite home screen will appear.

**NOTE:** The side bar will look different depending on the access level of the user.



## Users

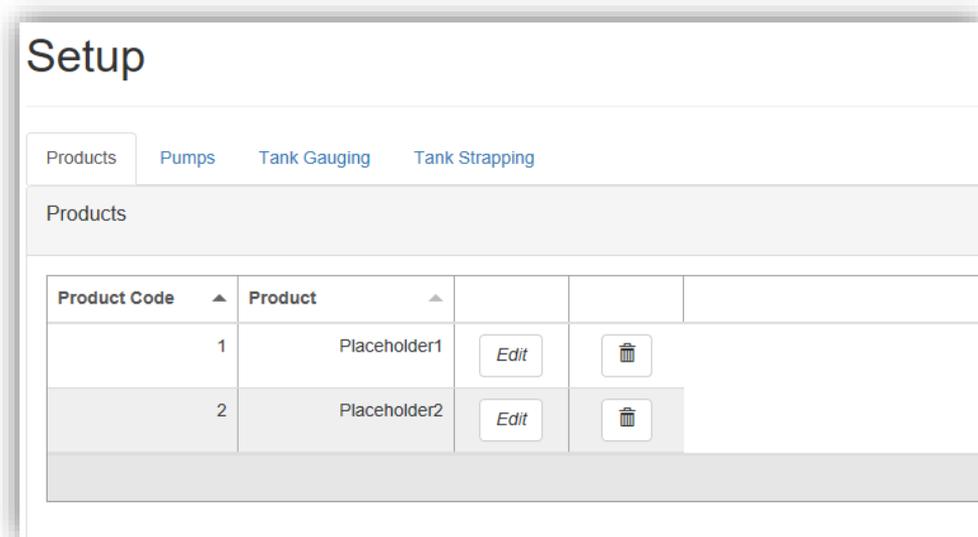
There are three different user options when logging into Compac Onsite; standard, technician and administrator. Each user can access different functionalities. Standard users can access all basic functionalities, such as tanks, cards and transactions. Admin users can also access these, as well as being able to access the system settings and reboot. The technician can access all these options, as well as being able to access set up options which are needed when setting up the site.

## Technician Options

Technician users can access both administrator and standard user options. As well as this, they can access site setup options.

## Dispenser Setup

Dispenser Setup will bring up a setup menu with four options; Products, Pumps, Tank Gauging and Tank Strapping.



In the Products tab, the current products can be viewed.

To create a product, Add Product can be selected. The product must be named and numbered before it can be saved. The following menu will appear.

Create Product

**Product Code:**  
Select product code...

**Product Name:**

Submit

Pressing Submit will add the product. When a product is edited the same menu will appear, and the product's name and number can be changed before resubmitting.

To delete a product, select the recycle bin icon in the products table, and click OK on the pop-up.

The next tab is the Pumps tab. From this tab, the configuration of the unit (single or dual) can be chosen, as well as the settings for each pump.

## Setup

Products **Pumps** Tank Gauging Tank Strapping

### Pumps

Side A

<b>Pump number (1-98)</b>	0
<b>Product</b>	
<b>Meter type</b>	
<b>State</b>	Disabled

Update

Depending on the chosen configuration, only one side may be displayed.

To change the Pump number simply enter the new value and press Update.

To change the product, meter type or state, select the relevant option from the drop down menus and press update.

The Tank Gauging tab shows which tank gauge is selected for each tank.

Enabled	Gauge Type	Product	Capacity (L)	Safe Fill Lev...	Gauge C...	Tank Num...	
X			0	0	0	0	Edit
X			0	0	0	0	Edit

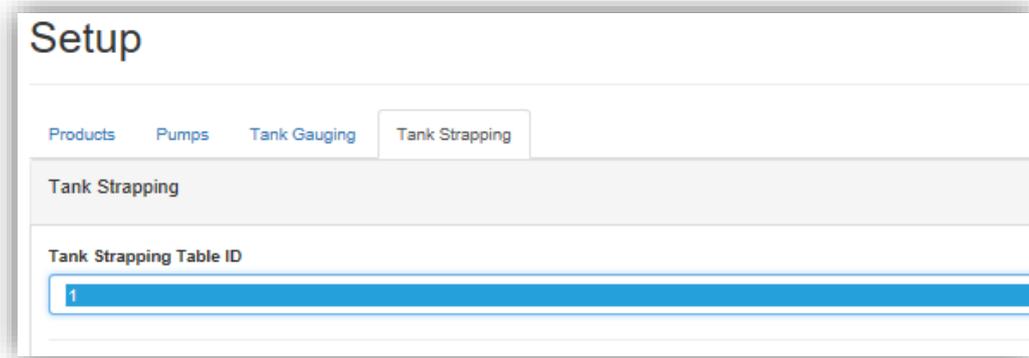
The current settings can be viewed. To edit a row, select Edit.

To change a setting, enter the new setting and Submit the new values.

If a Vega tank gauge is being used, more information is required. The required fields will automatically appear if a Vega meter is selected.

Edit Tank Gauge Settings	
<b>Gauge Type</b>	<input type="text" value="Vega"/>
<b>Tank Strapping Table ID</b>	<input type="text"/>
<b>Distance from probe to product for full tank (mm)</b>	<input type="text" value="0"/>
<b>Distance from probe to tank bottom (mm)</b>	<input type="text" value="0"/>
<b>Tank Gauge Channel</b>	<input type="text"/>
<b>Product</b>	<input type="text" value="AdBlue"/>
<b>Tank Number</b>	<input type="text" value="1"/>
<b>Tank Capacity (L)</b>	<input type="text" value="0"/>
<b>Safe Fill Level (L)</b>	<input type="text" value="0"/>
<input type="checkbox"/> Enabled	
<input type="button" value="Submit"/>	

The final tab in Dispenser Setup is the Tank Strapping section. This section is only relevant if a Vega meter is fitted. Refer to Vega Tank Strapping for information.



To download the tank strapping table, select download current strapping table. At the bottom of the page, tables can be uploaded, and the table template can be downloaded. Use the table ID drop down menu to select the table ID.

### **FMS Setup**

When setting up the unit, the FMS setup tab can be used to set up card records.

Cards can be imported and exported as .csv files. This option can be found in this tab. To add a new card, fill in the required fields and check which prompts are desired. Checking Enabled will enable the card. When the card is finished, press Submit. Current cards can be viewed in the Card Prefix Table.



## Administrator Options

Administrators can access all the above options, as well as being able to access pricing, settings and reboot.

### Pricing

From pricing, the pricing for different products can be viewed and changed.

## Pricing

Product Prices

Product ▲	Product Code ▲	Active Price ▲	New Price ▲	
ULP	2	2.500	2.500	<input type="button" value="Set New Price"/>
Diesel	3	1.310	1.310	<input type="button" value="Set New Price"/>

Price Change

Apply new product prices. This will change prices on pumps.

Note: For commercial variants, price changes only apply to external pumps.

The Active Price is the price being used currently for the pumps. To change this, select Set New Price.

### Set New Price

**Product Name:**

**New Price:**

Enter the new price for any product and select Change Price. This will change the New Price. However, the unit will continue to use the Active Price until Use New Prices is selected, under Price Change. Clicking this will change the Active Price and update them to the New Price.

## Settings

Settings can be used to set site details. Enter the site details and press submit.

### Site Details

**Site Name:**

**Site Address 1:**

**Site Address 2:**

**Site Address 3:**

**Site Address 4:**

### Time

**Timezone**

Daylight Saving Time

Timezone can also be set. In some cases, timezone will be automatically synced. Enter the timezone and press submit.

## Reboot

Reboot is used to restart the application. Some settings require rebooting to update recent actions. The page needs to be refreshed after the Reboot process has been completed.

**NOTE:** *The unit can only be rebooted when no transactions are taking place.*

When someone is refuelling the C5000 unit cannot be rebooted. The pumps may stop fuelling as the transaction has been interrupted.

## Standard User Options

Users have access to all the following basic functionalities.

### Transactions

### Transactions

Transactions

Transaction storage  
0.1% used

Reference	Card Number	Local Date Time	Product	Product Code	Pump	Hose	Amount	Quantity
23	7824331000132...	02/03/2018 11:46:0...	Diesel		3	1	4.38	4.3
22	7824331000132...	02/03/2018 11:45:5...	Diesel		3	2	1.60	1.6
21	7824331000132...	02/03/2018 11:45:2...	Diesel		3	1	3.26	3.2
20	7824331000132...	02/03/2018 11:45:0...	Diesel		3	2	1.71	1.7
19	7824331000132...	02/03/2018 11:44:1...	Diesel		3	1	0.66	0.6
64	7824331000132...	23/02/2018 15:04:4...				2	2.84	2.8
63	7824331000132...	23/02/2018 13:46:3...				1	0.00	0.0
62	7824331000132...	23/02/2018 13:45:2...				1	7.26	7.2
61	7824331000132...	23/02/2018 13:43:4...				1	0.00	0.0
60	7824331000132...	23/02/2018 13:32:5...				2	2.60	2.6
59	7824331000132...	23/02/2018 13:31:5...				2	29.00	29.0
58	7824331000132...	23/02/2018 13:29:4...				1	12.10	12.1
57	7824331000132...	23/02/2018 13:28:4...				1	0.00	0.0

**NOTE:** Table columns shown on page can be expanded.

The Transactions storage is limited. When Transaction storage is at 100%, the user will have to Export CSV. This will reset the Transaction storage bar and cause the data to be stored in a separate place in the system. This allows more transactions to be recorded.

Ignore checksum   Only load new transactions

**NOTE:** Select Refresh before adding more transactions.

Transactions that have not been exported will be viewed in the screen as default. To show exported transactions untick 'Only load new transactions'.

## Tanks

The Tanks section indicates product details and volume of fuel in the tank.

Tank No.	Product	Produc...	Gross Volum...	Net Volume (L)	Safe Fill Level	Ullage	Water Height	Temperature

Deliveries indicate when the last transaction occurred, including tank number and date time.

Tank No.	Date Time	Gross			Net	
		Delivery (L)	Start (L)	End (L)	Delivery (L)	Start (L)

The data in this section can be downloaded by pressing Download. Select Refresh to view new data.

**NOTE:** A reboot is required for any changes to be applied.

## Events

Events are notable events that occur with the pumps. The main event that should be examined is the Pump Snapshot event. This is an accumulative amount of fuel that has been pumped from the selected pump. Select Download to download the list of events on screen. Select Refresh to load the most recent events.

## Events

Events

Local D...	Event	Event...	Text	Pump	Hose	Unit Price	Amount	Quantity	Tank
2083-01-05...	Controller Pow...	80							
2083-01-05...	Pump Snapshot	46		1	1	1	0	0	
2018-01-24...	Time update	76	Old: 3566346011, N...						
2018-01-24...	Controller Pow...	80							
2018-01-24...	Pump Snapshot	46		1	1	1	0	0	
2018-01-24...	Time update	76	Old: 1516766478, N...						
2018-01-24...	Controller Pow...	80							
2018-01-24...	Time update	76	Old: 1516766508, N...						
2018-01-24...	Controller Pow...	80							
2018-01-24...	Time update	76	Old: 1516766532, N...						
2018-01-24...	Controller Pow...	80							
2018-01-24...	Time update	76	Old: 1516766551, N...						
2018-01-24...	Controller Pow...	80							
2018-01-24...	Time update	76	Old: 1516766579, N...						
2018-01-24...	Controller Pow...	80							
2018-01-24...	Time update	76	Old: 1516766710, N...						
2018-01-24...	Generic Event	70							
2018-01-24...	Generic Event	70							

## Cards

In this section, a new card can be created with Create New card. Decide on a card number, PIN and owner details, then select Submit.

**NOTE:** Ensure Enabled box is ticked to validate card.

If a mistake has been made, select Edit and edit card details. Select the trash can icon if a card is not needed. The maximum Card storage is limited at 200 cards.

## Cards

Cards

Card storage

9/200 cards in use

Card Number	Enabled	PIN	Card Total (l)	Owner detail 1	Owner detail 2	
12345	✗		0.0	123	456	Edit
123213	✗		0.0			Edit
123456	✓		0.0	123	456	Edit
245687f	✗		0.0	123	456	Edit
24568789	✓		0.0	123	456	Edit
1234567890123456...	✗		0.0			Edit
1234567890123456...	✗		0.0			Edit
ABCD1234	✗	1234	0.0	K	John	Edit
ERCD1234	✗	3333	0.0	G	Q	Edit

## User IDs

User IDs consist of any 6 numbers or less. Select Edit to Edit User IDs and owner details. Tick the enable box to make the User ID valid for use. The trash can icon can be selected to permanently delete the user.

**NOTE:** A card can have multiple users.

Different users will have different User IDs. The purpose of this is to know which user has made a transaction, and ensure they are only fuelling when required.

**NOTE:** All files created **MUST** be a csv file not an excel file.

Import User IDs is another way of inserting new users. It may be easier for bulk user adding.

### User IDs

User IDs

User ID storage

3/200 User IDs in use

User ID	Enabled	Owner detail		
1235	✗	Test	Edit	🗑️
12356	✗	Test	Edit	🗑️
54321	✓	test	Edit	🗑️

## CompacOnsite Logins

For the security of the site, the standard passwords should be changed during set up of the unit. In case the passwords were not changed during installation, the process is outlined here. To change the passwords, go to CompacOnsite Logins, shown in the left options tab.

### User Management

Users

Username ▲	
tech	<input type="button" value="Edit"/>
admin	<input type="button" value="Edit"/>
user	<input type="button" value="Edit"/>

Not all users may be shown depending on the access level of the user. To edit, select Edit.

### Edit User

**Username:**

**Password**  
  
Minimum of 8 characters

Enter the desired new password, confirm this and press Submit.

## Error Codes

Error codes will show on the litres display when common faults occur. Use the following table to diagnose these faults.

Error Code	Fault	Action
Er FL0	Excess flow	Maximum flow rate exceeded
Er r 8	Excess reverse flow	Check product is not flowing back into the tank once the delivery has finished
Er r 9	Pulse Meter Error	If the problem persists, repower the unit. Replace the meter if necessary.
Er 50	Meter Modbus error	Check that the meter is plugged in correctly. Check correct configuration and correct software installed
Er 52	Meter error	If the problem persists, repower the unit. Replace the meter if necessary
Er 53	Meter stopped vibrating	Replace meter
Er 54	Temperature sensor failure	Replace meter
Er 55	Meter not ready	Wait for meter to calibrate. If the problem persists, repower the unit
Abd	Display error	Check display cable for loose wires/crimps. Replace display PCB if necessary

## Installation Checklist

When a new unit is being installed use the following checklist to make sure the unit is fully operational. Check each box or write N/A where not applicable.

Mechanical Checklist	
Check that the Comfill is securely mounted and does not shake	
Check that unit will not be exposed to harsh weather conditions	
Ensure the unit is connected properly and that unused gland access holes are blanked	
Check that the unit is not damaged and all signage is visible	
Check that the K-Factor switch is properly sealed	

Transaction Checklist	
Perform a test transaction with a valid PIN, card or HID (whichever is applicable)	
Check price and ensure correct amount of fuel is being dispensed	
Try to take fuel with an invalid PIN, card or HID and ensure it declines	
Lift the nozzle without entering a transaction and ensure no fuel is dispensed	

Comfill Software Checklist	
Check that the set up menu can be accessed from the unit with the passcode (Refer to Offline Setup)	
Check that transactions are being recorded on CompacOnsite	
Check that when settings are changed from the unit, they are also changed on CompacOnsite (and vice versa)	
Check that the retailer understands how to use CompacOnsite to get transactions  <i><b>NOTE:</b> It is recommended to give the retailer User rights to prevent them changing the settings of the Comfill.</i>	
Ensure that the CompacOnsite standard passwords have been changed	