



## Valve

Max working pressure:	10 bar
Min working pressure:	0.5 bar
Power requirements:	6VDC, 1.4W

## Sensor Assembly

Ingress protection:	IP68 (sensor) IP66 (vent box)
Operating temp range:	0 to 40°C

## Main Control Unit

Control classification:	Multi purpose control
Mains supply:	230V $\pm$ 10%, 50/60HZ, Max load 0.85A
Environmental:	0 to 40°C, Max 85% RHI

## Cable specification

Mains supply:	3 core up to 2.5 mm <sup>2</sup> , switched fused spur
Control valve:	2 core 1mm <sup>2</sup> , 50m max length
Vent box:	2 core 1mm <sup>2</sup> , 100m max length
Repeater Panel:	5 core 1mm <sup>2</sup> , 100m max length

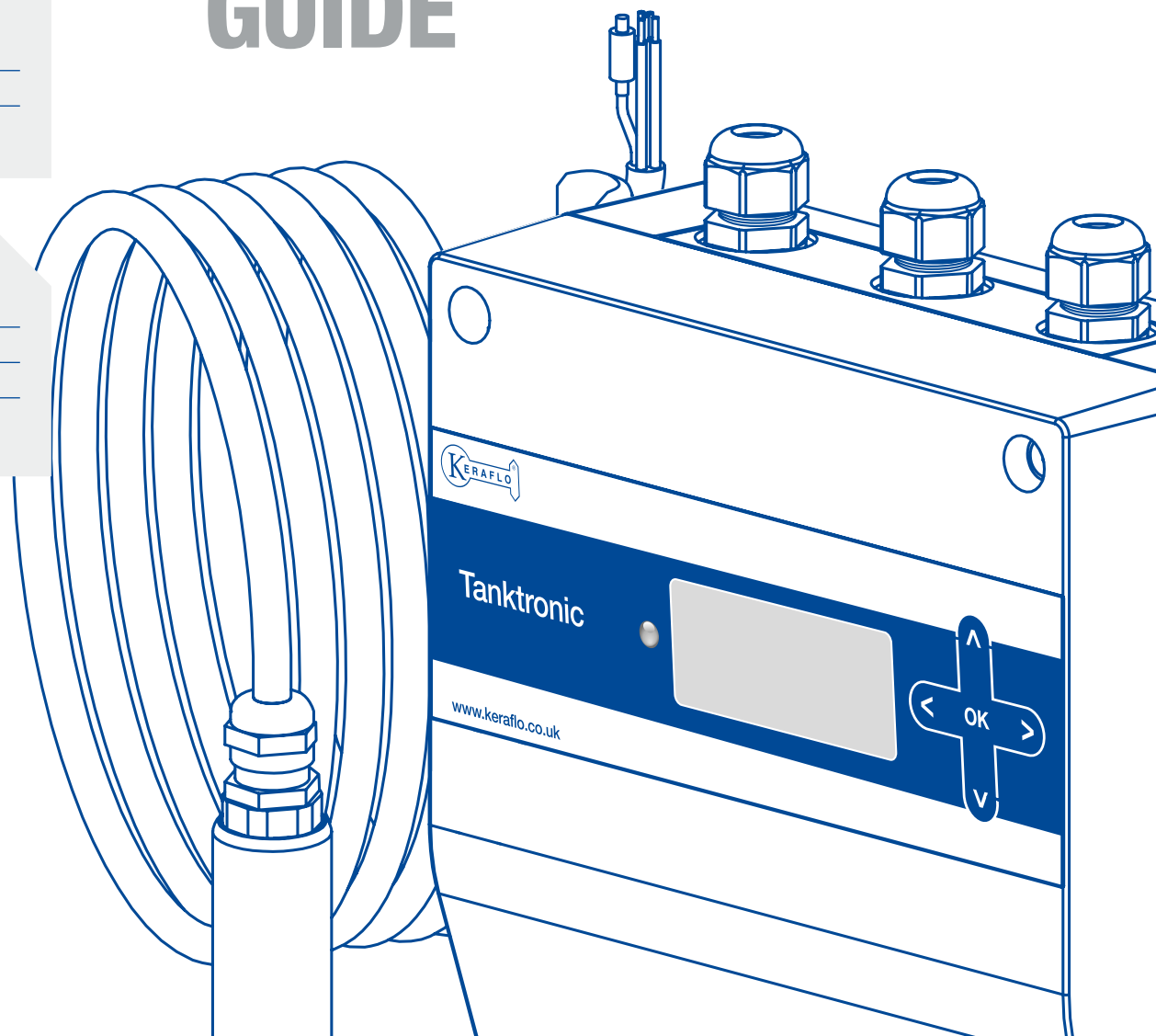


**WARNING**  
Mains voltage inside panel



Made in  
BRITAIN

# TANKTRONIC<sup>®</sup> INSTALLATION GUIDE



**0118 921 9920**  
**info@keraflo.co.uk**  
**www.keraflo.co.uk**



Keraflo Ltd, Unit 1, Woodley Park Estate,  
59-69 Reading Road, Woodley, Reading, Berkshire, RG5 3AN

TT/21B-01

# TANKTRONIC CONTENTS

## INTRODUCTION

- 1. Parts supplied **P4**
- 2. Unit dimensions **P5**

## INSTALLATION

- 1. Assessing system layout **P6**
- 2. Installing the sensor in the tank **P8**
- 3. Installing the valve assembly **P10**
- 4. Mounting Main Control and Repeater Units **P12**
- 5. Mounting S-Module and Battery Modules **P13**
- 6. Wiring **P14**
  - a. Standard set-up **P15**
  - b. Optional devices **P16**
- 7. Connecting to mains power **P17**

## COMMISSIONING

- 1. Initial start up **P20**
- 2. Standard set-up **P21**
- 3. Advanced set-up **P25**
  - a. Additional tanks **P26**
  - b. Sensor set-up **P26**
  - c. Pilot and control valves **P28**
  - d. Devices **P29**
  - e. Level offset **P33**
  - f. Holiday mode set-up **P35**
- 4. Connecting to building management systems (BMS) **P37**
- 5. System maintenance **P38**

## USER GUIDE

- 1. Checking tank and system status **P42**
- 2. Alarms **P43**
- 3. Tank Lock **P44**
- 4. Override holiday time **P45**

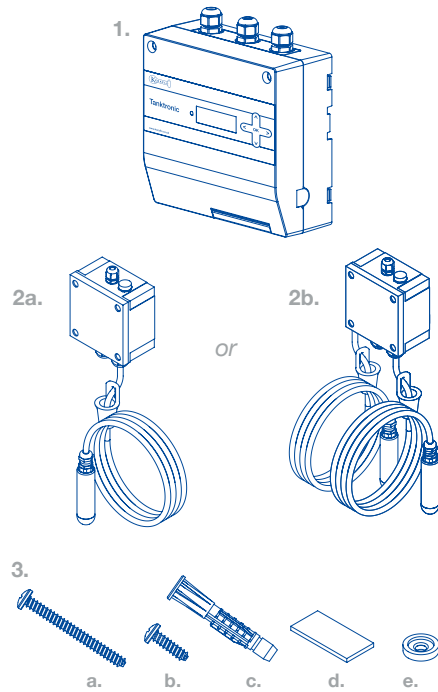
## MENU MAP

**P46**

# INTRODUCTION

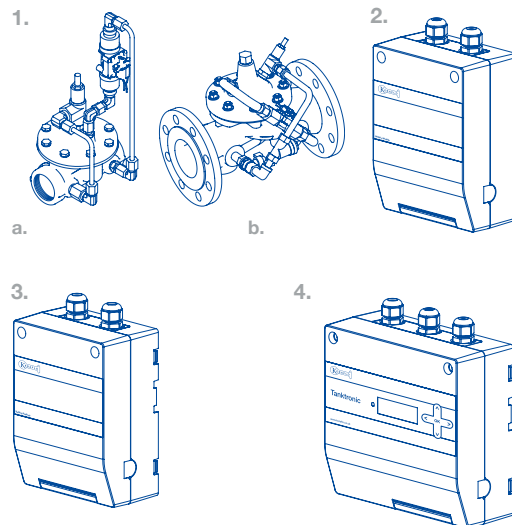
## Parts supplied as standard

1. Main Control Unit including power supply
2. Vent box, sensor and bung
  - a. Single sensor (3m or 5m cable) or
  - b. Twin sensor (3m or 5m cable)
3. Fixings
  - a. 4 x #6 screws for mounting main control unit
  - b. 4 x #4 screws for mounting vent box
  - c. 4 x Wall fixing plugs
  - d. 4 x Self-adhesive pads
  - e. 4 x floating washers



## Optional parts

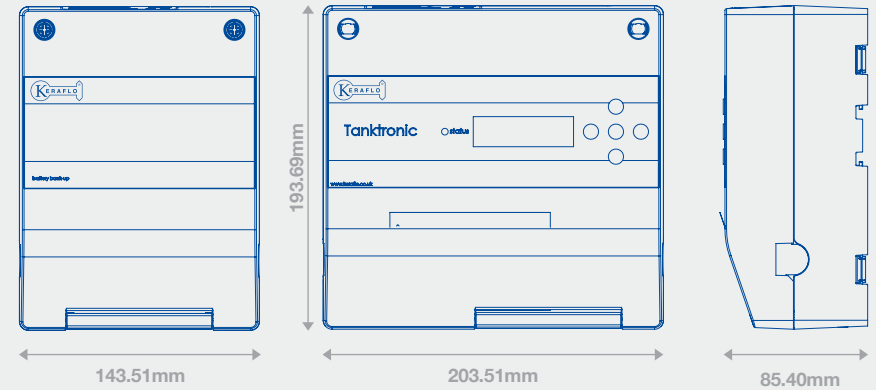
1. Control valve assembly
  - a. PVC fitting (3/4" to 1 1/2" valve)
  - b. Flanged fitting (2" to 6" valve)
2. Battery Module
3. S-Module
4. Repeater Unit



## Dimensions

Battery Module  
S-Module

Main Control Unit  
Repeater Unit



## Main Control Unit (MCU)

The primary monitoring and control hardware for the Tanktronic system. The unit can manage up to 4 x individual tank sensors and 2 x Keraflo control valves plus additional third party devices.

## S-Module

An expansion module that increases Tanktronic's operational capacity. Each S-Module will allow 2 x control valves to be added, plus additional third party devices. Up to two S-Modules can be joined to a single MCU.

## Repeater Unit

Works as an interface extension to the MCU, allowing the user to monitor and control the Tanktronic system from another location. The Repeater Unit can be located up to 100m from the water tank(s) and does not require a separate power supply.

## Battery Module

Provides a back-up power source to the mains supply, providing up to two days of normal operation before power is expended. **We strongly recommend fitting this module if the building application is particularly dependant on Tanktronic's 'Holiday Schedule' function.**

# INSTALLATION

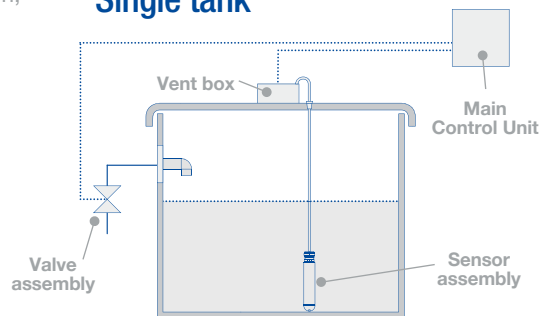
## 1. ASSESSING SYSTEM LAYOUT



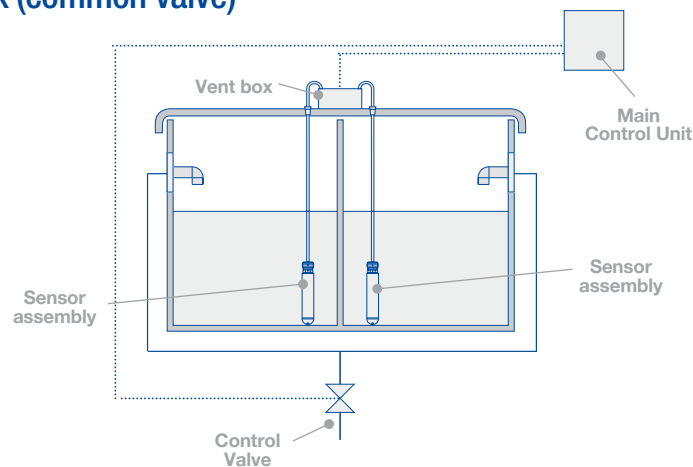
Before commencing installation, isolate mains power and water supply.

Before installing your Tanktronic system, make sure you understand the system layout you require. It is suggested that you assess the tank environment to establish the best position for the equipment. This assessment also ensures that you have adequate cable and fixings to complete the installation before starting.

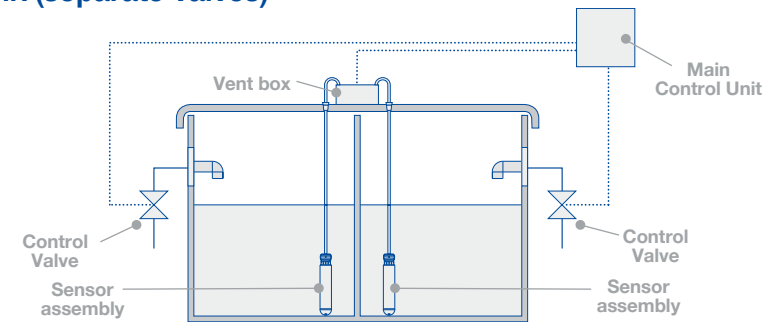
### Single tank



### Twin tank (common valve)

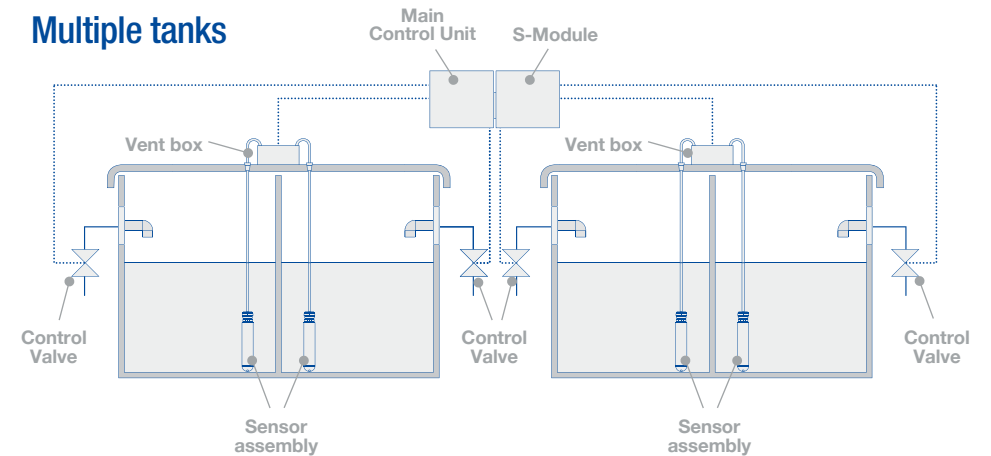


### Twin tank (separate valves)



NOTE: For monitoring only, omit valve assembly.

### Multiple tanks



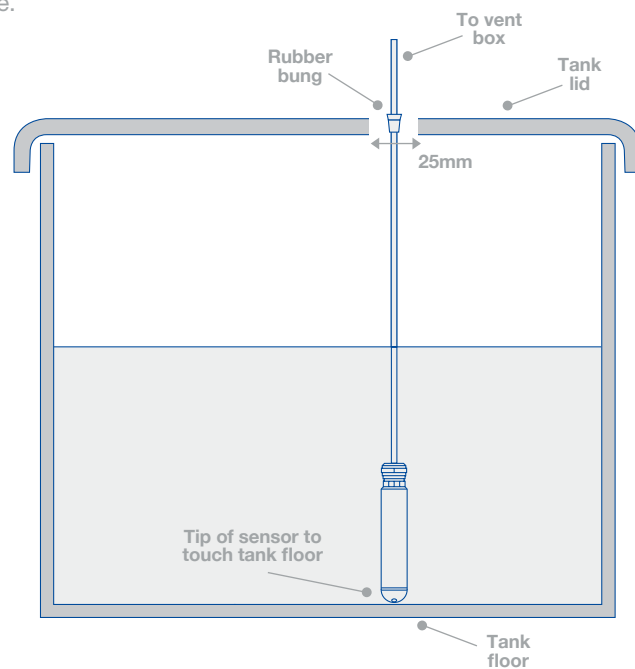
## 2. INSTALLING THE SENSOR IN THE TANK

Allocate one sensor to each tank. It is advisable to label each sensor (Sensor 1 for example) and its corresponding tank (Tank 1 for example) prior to lowering the sensor into the tank.

1. A 25mm hole should be drilled in the top of the tank, preferably away from the water inlet pipe.

2. Lower the sensor into the tank so it is suspended with the tip of the sensor touching the bottom of the tank. Take care not to allow debris to enter the tank. It is suggested that the tank is drained down and chlorinated before refilling.

3. A tapered rubber bung is fitted to the sensor cable to hold the sensor in place in the tank; slide this bung down the cable and force into the hole through which the sensor has been lowered, securing the cable in place.



### a. MOUNTING VENT BOX

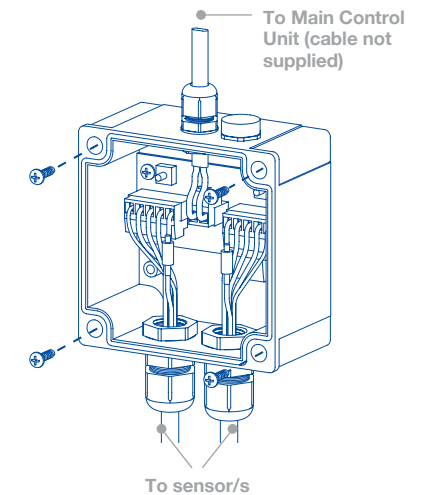
The vent box is supplied with self-adhesive pads to fix it to the top of the tank being used. Alternatively, the vent box can be secured with the four screws supplied. Four clearance holes are located in the corners of the box to facilitate such fixing.

#### Notes on positioning

To reduce the effects of turbulence, do not position the sensor close to the inlet.



**Do not cut the sensor cable and take care not to damage the clear plastic tube at the centre of the cable.**



### 3. INSTALLING VALVE ASSEMBLY (WHEN SUPPLIED)

The valve assembly consists of a pilot and control valve. Installation of valves should be in accordance with The Water Supply (Water Fittings) Regulations 1999 and BS6700:1997 Para. 2.2.4

- The control valve can be positioned either horizontally **1** or vertically **2**.
- An isolation valve must be fitted upstream of the control valve.
- Prior to installation, all pipework should be flushed through to remove debris.

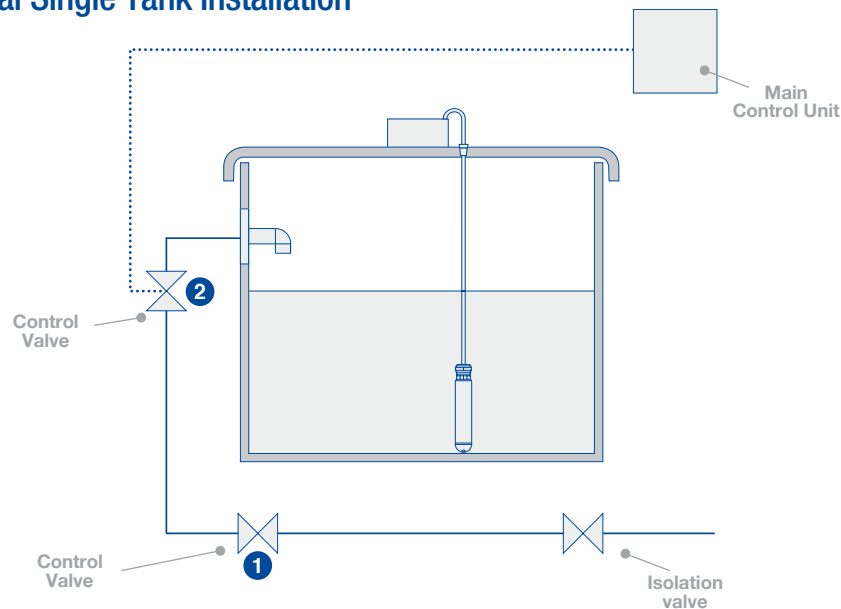
#### Maintenance

One tank/compartament may be isolated for cleaning, chlorinating or for any other reason. For further details see page 38.

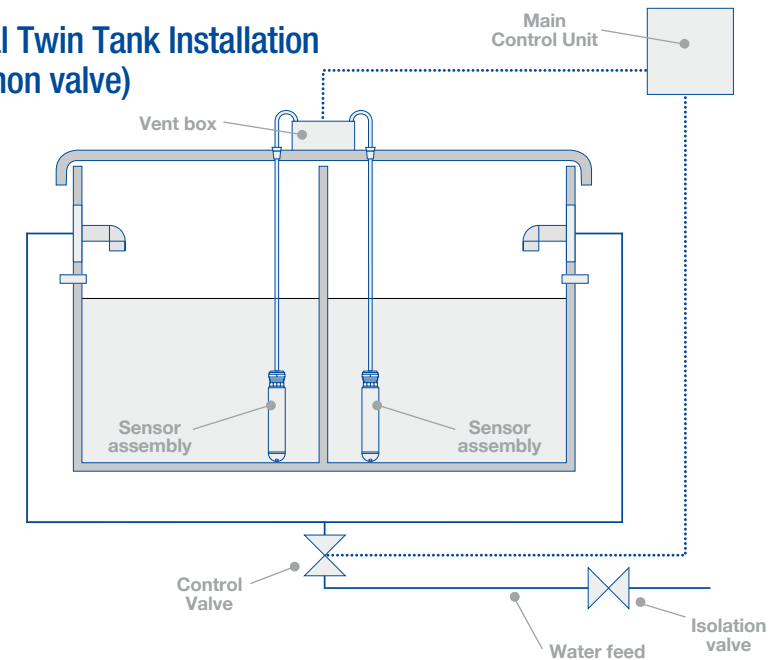
#### Note:

The preferred orientation of the control valve is vertical. If fitted horizontally fit a coarse y-strainer upstream of the control valve.

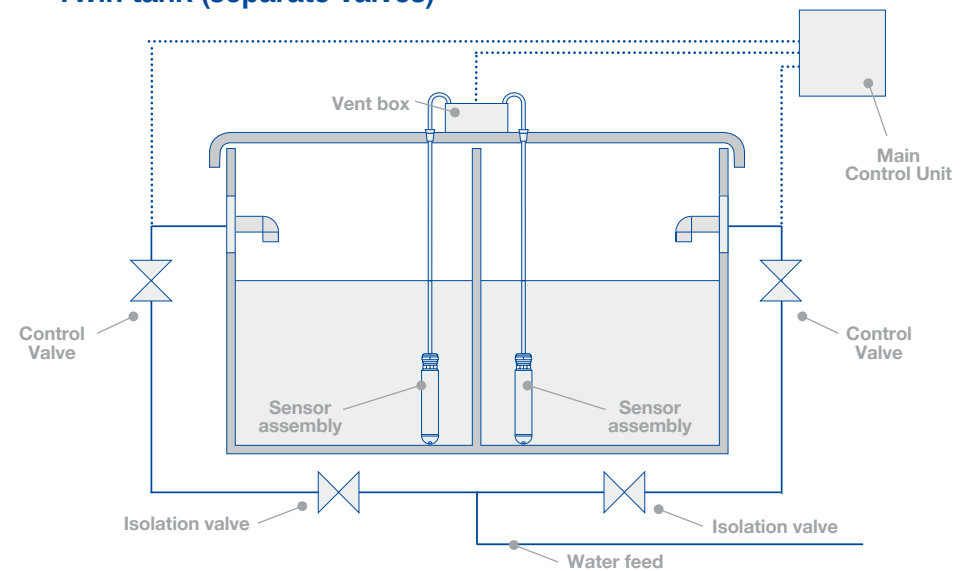
#### Typical Single Tank Installation



#### Typical Twin Tank Installation (common valve)



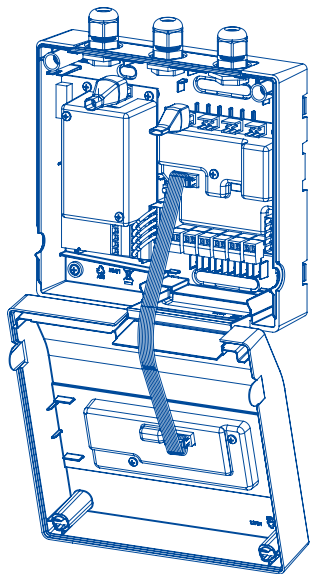
#### Twin tank (separate valves)



## 4. MOUNTING MAIN CONTROL AND REPEATER UNITS

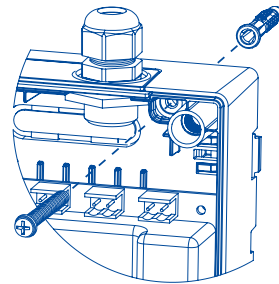
The units should be mounted to a solid surface, such as a wall, within easy reach of the tanks being monitored.

1. Open the cover and offer the unit to the wall.
2. Ensure the Unit can be opened fully, with no obstructions below the unit that could limit access.
3. A drilling template is included in the packaging and this can be used to mark the drilling points. Use the complete template to mark the position of the unit.



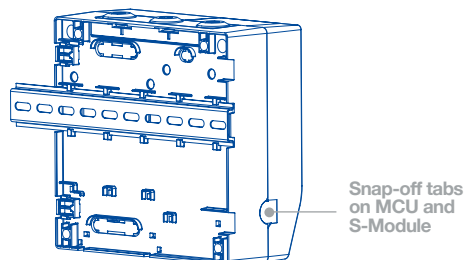
4. Mark the position of the mounting holes as per the drilling template. Pay particular attention to ensure that the cable glands are free from obstruction.  
**NOTE: Remove the unit prior to drilling.**

5. Drill 8mm diameter holes and insert wall fixing plugs.



6. Screw unit in position using floating washers and #6 screws provided. Take care not to trap the ribbon cable when closing the unit.

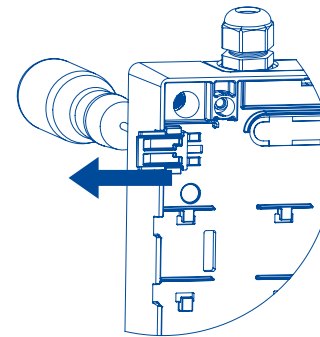
It is also possible to mount the units on a DIN Rail.



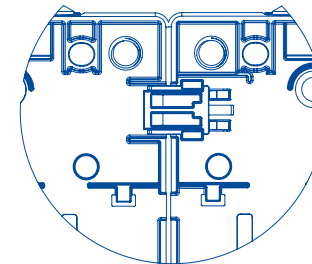
## 5. MOUNTING S-MODULE AND BATTERY BACK-UP MODULES

If the installation involves multiple tanks or a battery back-up is required, please follow the instructions below.

1. Slide tabs with a screwdriver as shown below.  
**NOTE: These tabs are not load-bearing and any extra units should be supported during fitting.**



2. Align the subsidiary module to the main control unit using the tabs.



3. Mark the position of the mounting holes. A drilling template is included in the packaging; this can be used to mark the drilling points. Push out and use the central part of the template to mark the position of the battery back-up box. Pay particular attention to ensure that the cable glands are free from obstruction. **NOTE: Remove the unit prior to drilling.**

4. Drill 8mm diameter holes and insert wall fixing plugs.
5. Screw unit in position using floating washers and #6 screws provided.
6. Repeat for additional modules or the Battery Module.

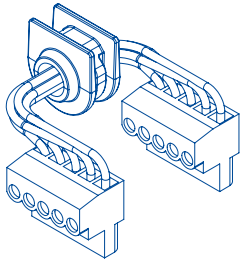
### Mounting additional modules

- Additional modules can be mounted on either side of the Main Control Unit.
- Up to two S-Modules can be connected to the Main Control Unit.

## 6. WIRING

### Connecting subsidiary S-Module and Battery Module

The subsidiary S-Module and the Battery Module are each supplied with a 5-way connector.



### Interfacing with Main Control Unit

The Main Control Unit will need to be configured to recognise the S-Module(s) when connected. Refer to **Advanced Set-up** section for details (see page 25).

### Battery Back-up

The Battery Module will provide approximately 2 days of normal operation before power is expended.

### Connecting Repeater Panel

The Repeater Panel is supplied with connection plugs, the connection wire of required length will need to be sourced.

The Repeater Panel is connected using the multipin connector to the power ports as illustrated (see page 16).

### Interfacing with Main Control Unit

The Main Control Unit will automatically recognise the Repeater Panel and operate accordingly.

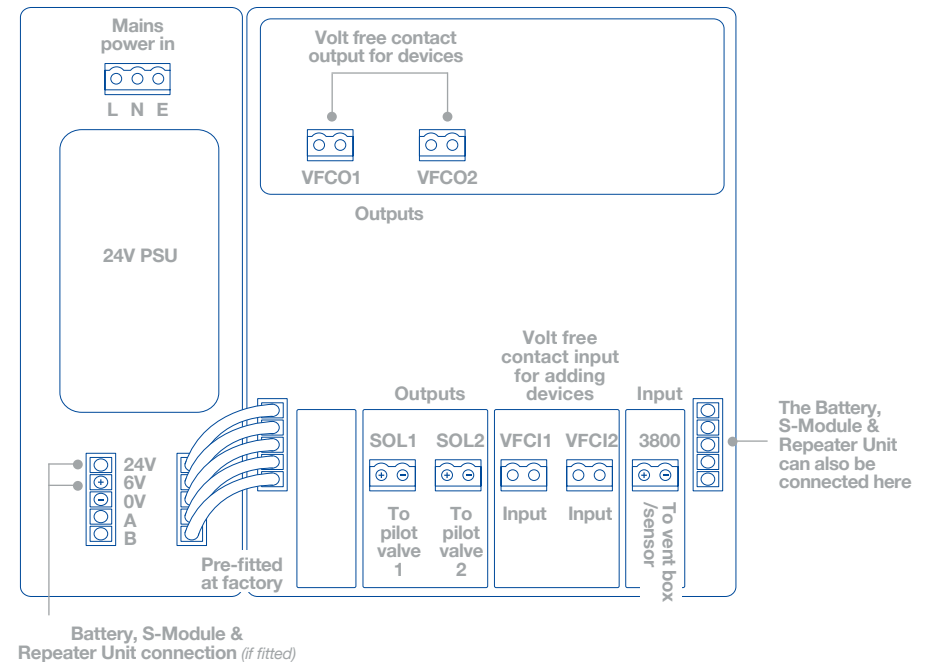


**For cable specification refer to back page.**

## a. STANDARD SET-UP



**Ensure mains power is isolated**



### Pilot valve

For single tank or twin tanks with a common valve:

- Connect Pilot Valve to SOL1, observing polarity

For 2 x single tanks or twin tanks with separate valves:

- Connect first Pilot Valve to SOL1 and second Pilot Valve to SOL2, observing polarity

For more additional pilot valves, an S-Module will be required.



## Sensor

The sensor is supplied pre-wired to the vent box. The 'net' connector in the vent box will need to be wired (over the required length) to the '3800' connector in the Main Control Unit. 2 x electrical plugs are supplied for this purpose but wire must be sourced as required.

Please note polarity.

## b. OPTIONAL DEVICES

### Adding devices

Tanktronic uses volt-free contacts to carry both inputs and output devices.

#### Inputs

Devices could include

- Leak detection
- Override button

#### Outputs

Devices could include

- Additional filling valves
- Low level alarm
- Dump valve
- Secondary shut-off valve
- Immersion heater
- Pump override



For cable specification refer to back page.

### Additional connections using the S-Module

Adding the optional S-Module unit will allow 2 x control valves to be added, plus additional third party devices\*. Up to two S-Modules can be joined to a single MCU.

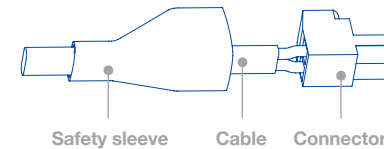
Please proceed to the commissioning section page 29 for details on adding devices.

\* Third party devices not supplied by Keraflo

## 7. CONNECTING TO MAINS POWER

Tanktronic requires a 230v/50Hz single phase supply from a switched fused 3A supply.

1. Connect with a suitable spec power cable, first slide the cable through the safety sleeve, then attach it to the connector.



2. Slide the safety sleeve back over the connector before pushing the assembly firmly into the required socket. See diagram on page 16.
3. Ensure cables are fed through the cable glands.
4. Replace Main Control Unit cover.



Isolate water supply when setup is complete.



For cable specification refer to back page.



Do not power up unit until all previous installation stages are completed and wiring carried out to BS7671 IEE regulations.

# COMMISSIONING



**Before powering up unit ensure all water connections and wiring are completed.**

## Standard set-up wizard

Tanktronic features a set-up wizard that allows standard set-ups to be configured quickly and easily. The wizard proceeds through a series of configuration steps using default settings intended to satisfy most simple systems.

## Advanced set-up

For more complicated set-ups the wizard can still be used, but where more specific settings are required the settings can be changed manually.

## Tank layout set-up reference

TANK LAYOUT	SET-UP	NOTE
1 x Single	WIZ	–
2 x Single	WIZ	–
3 x Single	ADV	S-Module required
4 x Single	ADV	S-Module required
1 x Twin separate valve	WIZ	–
1 x Twin common valve	WIZ	–
2 x Twin separate valve	ADV	S-Module required
2 x Twin common valve	ADV	S-Module required

## Quick reference checklist

Prior to commissioning Tanktronic, it is recommended to list the settings required, as applicable, below. (Default settings as indicated).

	DEFAULT	SET UP	ENTER REQUIRED SETTING
Area	(10.0m)	WIZ	.....
Close Level	(1.2m)	WIZ	.....
Fill Delay	(0.2m)	WIZ	.....
Alarm Level High	(0.2m)	WIZ	.....
Override Level High	(0.3m)	WIZ	.....
Alarm Level Low	(0.2m)	WIZ	.....
Override Level Low	(0.3m)	ADV	.....
Alarm Temp High	(20°C)	WIZ	.....
Override Temp High	(22°C)	ADV	.....
Alarm Temp Low	(5°C)	WIZ	.....
Override Temp Low	(3°C)	ADV	.....

### NOTE:

WIZ Program via set-up wizard

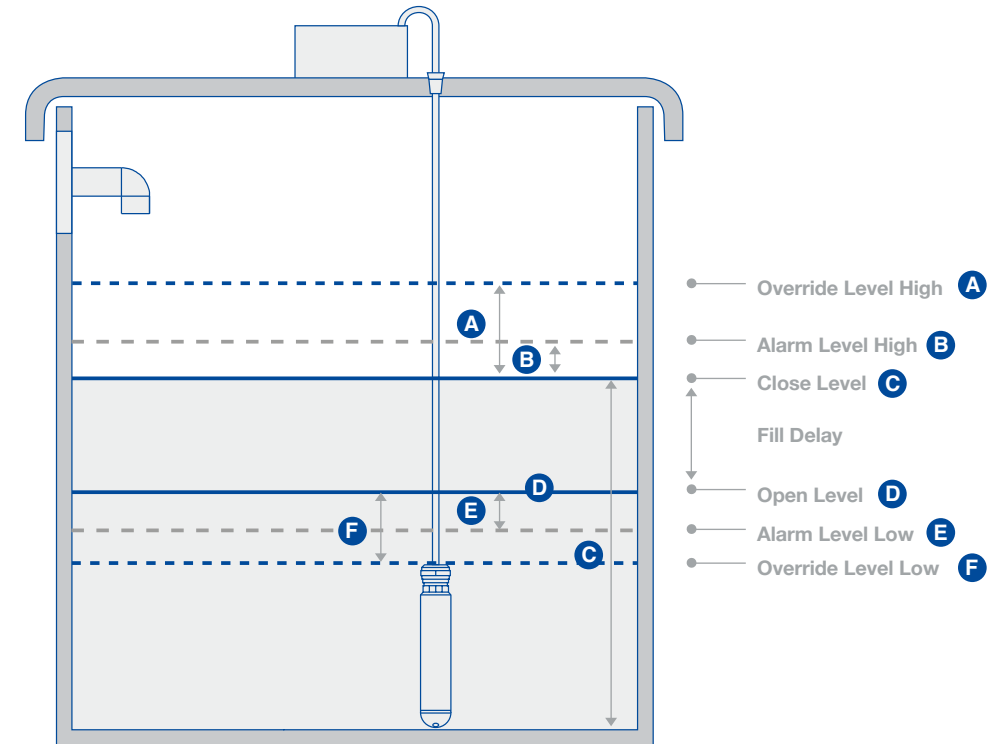
ADV Additional programming via advanced set-up function

## Tank set-up criteria

The various monitoring criteria shown below must be set up for each tank.

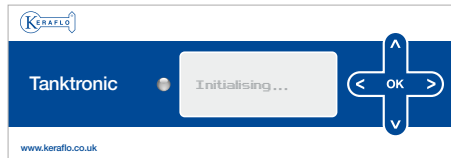
### Note:

Levels A, B & D are relative to level C.  
Levels E & F are relative to level D.



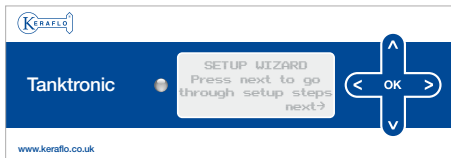
# 1. INITIAL START-UP

When power is first connected, the screen back-light comes on and screen will read 'Initialising...'. The status LED is constant amber.



All system checks will be complete after approximately 10 seconds.

On initial start-up the unit will default into the standard set-up wizard.



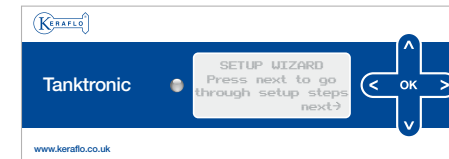
If Tanktronic's Wizard has previously been completed, the display will default to the HOME screen. The LED will flash red to indicate if it is in an alarmed status.



The set-up wizard can be accessed by selecting System >Config > Setup Wizard

# 2. STANDARD SET-UP SET-UP WIZARD

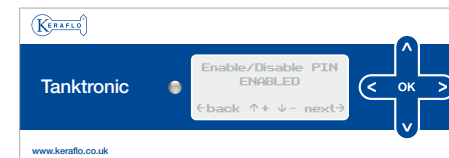
On initial start-up the unit will default into the standard set-up wizard.



Note: If Tanktronic has previously been operated, the display will default to the home screen. The set-up wizard can be accessed by selecting System >Config > Set-up Wizard.

## 1. Enable PIN

Protects Tanktronic from unauthorised use. Select either 'enabled' or 'disabled' and save.



Press **>** to continue.

## 2. Set PIN

The default pin is 0000. Select new code numbers using the **▲** or **▼** buttons.

To select the next digit use the **>** button.



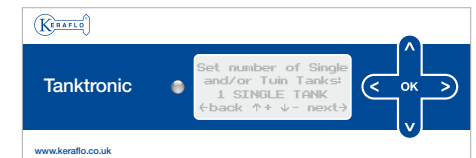
Press **>** to continue.

## 3. Number of tanks

Select your standard system layout:

- 1 x Single Tank
- 2 x Single Tanks
- 1 x Twin Separate Valves
- 1 x Twin Shared Valves

Use **▲** or **▼** to select.



Press **>** to continue.

**NOTE: For 3 or more tanks use Tank Layout Menu:**

**System >Config > Tank Layout**  
Once the wizard is complete

## 4. Tank area set-up

Setting the Tank Area will allow Tanktronic to calculate the volume of stored water when the sensor is submerged. The volume is displayed on the HOME screen in litres.

The Area will need to be entered for each tank.

### To calculate your tank area:

For a square or rectangular tank  
Area = width x length

For a circular tank  
Area =  $3.142 \times \left(\frac{\text{diameter}}{2}\right)^2$

The default setting is 10m<sup>2</sup>. Use  or  to set the desired value.

Press  to continue.

## Close level

The Close Level is the maximum desired water level inside the tank. If fitted, the valve will close when this level is reached.



Use  or  to set the desired Close Level.

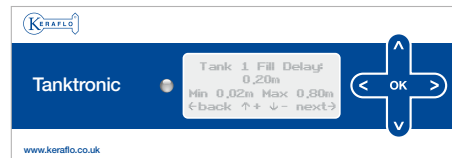
Press  to continue.

## Fill delay

The difference between the Close Level and the Open Level is referred to as the Fill Delay. The valve will open and begin to fill the tank once the level of water in the tank drops to the Open Level.



**The Fill Delay is set relative to the Close Level, not relative to the bottom of the tank.**



Use  or  to set the desired Fill Delay.

Press  to continue.

## Level alarms

If the high and low levels are reached high and low level alarms are triggered.



Use  or  to set the maximum water level.

Repeat for multiple tanks.

Press  to continue.



Use  or  to set the minimum water level.

Press  to continue.

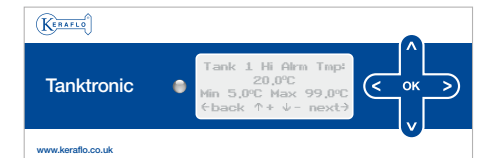
## Temperature alarms

If minimum and maximum levels are reached high and low temperature alarms are triggered.

### High temperature alarm



**It is recommended that the building use and environment are considered when setting the High Temperature Alarm, and that the relevant Building and Water Regulations are consulted to provide guidance as regards biological contamination.**

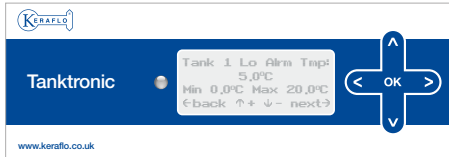


Use  or  to set the maximum water temperature.

Press  to continue.

### Low temperature alarm

Use **▲** or **▼** to set the minimum water temperature.



Press **▶** to continue.

Tanktronic will prompt to 'save new settings'.

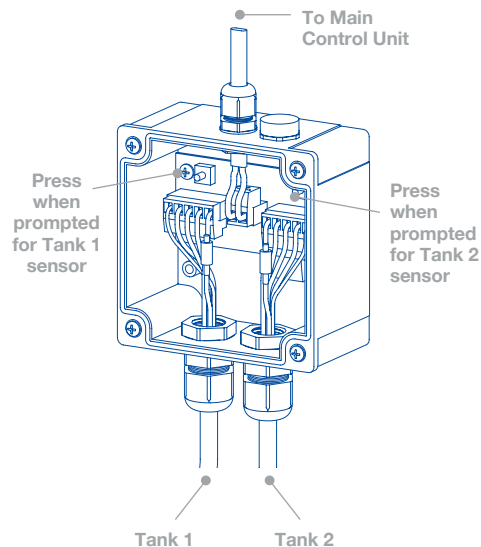
Press **▶** to save.

**Note: If you have selected multiple tanks you will be prompted to repeat.**

### Multiple Tank Sensors

In multiple tank configurations, the wizard will require you to link each sensor to a specific tank.

Tanktronic's set-up wizard will now prompt you to push the 'select' button in the vent box (see diagram below). This prompted procedure is repeated for the secondary tank.



## 3. ADVANCED SET-UP



Each device, e.g. pilot valve or sensor, uses an address on the system. This defaults to **Address 1 on Tank 1 and Address 2 on Tank 2. On more advanced set-ups this can be modified by the user.**

On initial start-up Tanktronic will automatically enter the standard set-up wizard for basic settings to be programmed. On completion of the wizard you may enter the advanced set-up facility where all system settings can be adjusted.

### Configuring additional S-Module Unit(s)

The Main Control Unit must be configured to recognise the additional S-Module Unit(s) is fitted.

From the MAIN MENU select:

**System**

**Config**

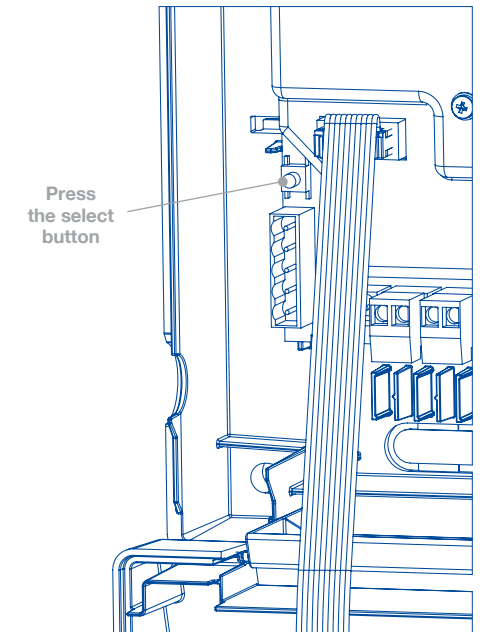
**S-Modules**

Select '**number of S-Modules**' using the **▲** or **▼** button. Press **▶** to save.

### Linking the S-Module

You will now need to link the S-Module(s) to the Main Control Unit. After the steps above, press '**Select S-Module**' or for multiple modules '**Select All**'.

Tanktronic will now prompt you to press the select button on each S-Module to connect to the Main Control Unit.



## a. ADDITIONAL TANKS

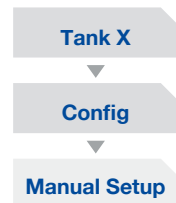
The standard set-up wizard allows 1 single tank, 2 single tanks or 1 twin tank (separate or common valves) to be configured. A wider range of tank set-ups can be accessed via the procedure below.



Set number of tanks (1-4 single, 1-2 twin or twin and single).

**N.B. The Main Control Unit can handle 2 x Keraflo Pilot Valves. For more valves an S-Module unit will be required.**

Individual settings for sensors and pilots can now be configured manually by selecting each tank via the main menu, e.g:



Refer to pages 22 - 24 for further details of specific settings.

**Note: Advanced set-up will provide two advanced levels of operation:**

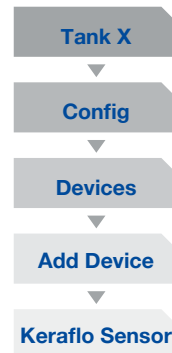
- Override level high & low
- Override temperature high & low

Refer to diagram on p19.

## b. SENSOR SET-UP

If additional tanks have been added the system must be configured so it recognises the sensor of each tank.

From the MAIN MENU screen select:



Name the sensor and select next free input address. Set tank sensor offset level (if applicable).

**N.B. It is useful to match the Tank Number to input address, but not essential.**

The sensor must be linked to the Main Control Unit. After the steps above choose **'Select Device'**. The screen will prompt you to push the **'Select'** button located in the vent box assembly, see diagram on p24.

On completion the display will update to **'Success device Address Set'**.

Press **OK** to exit.

The sensor has now been set up on the system.

Repeat for each new sensor.

## Sensor calibration

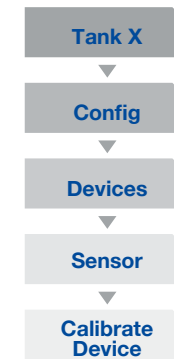
**NOTE: This step is only necessary if level readings appear to be incorrect.**

Calibrating the sensors will ensure accurate level readings are obtained whilst the sensor is in use. Failure to do this may result in false readings or nuisance alarms.



**Ensure the sensor is out of the water before calibration commences.**

From the MAIN MENU screen select:



Select **>** or **OK** and calibration will begin.

When complete, the following message will appear **'Sensor Calibration Complete'**; select **OK**. This will take about a second.

The water level will read as 0.00m when the sensor is out of the water.

The sensor can now be lowered into the tank. As the sensor is lowered, the HOME screen level reading will update.

**NOTE: There is a slight delay to allow the sensor to settle at a particular depth before that level is displayed on the screen. This is to prevent nuisance readings caused by turbulent water.**

Repeat for each new sensor.

## c. PILOT AND CONTROL VALVES

### Commissioning and testing

Complete the tank setup setting the appropriate level settings. See diagram on page 19.

Ensure pilot valve is connected. SELECT:

Tank 1 > Config > Devices > Pilot > Edit  
Tank 2 > Config > Devices > Pilot > Edit

Then select address : SOL1 or SOL2 and select 'shared' or 'separate' inlets

The closing speed of the valve can be adjusted to avoid water hammer developing in the supply pipe as the control valve closes. The closing speed adjustment screw is the slotted screw with lock nut found on the top cover of the control valve. The closing speed should be set to provide a slow closure of the control valve. If the closing speed is too short, water hammer will be heard. This must be avoided to prevent damage to the pipe and system.

Turning the closing speed adjustment screw clockwise will increase the delay. If the control valve fails to close or does not close quickly enough, the closing speed adjustment screw should be turned anti-clockwise to shorten the closure time.

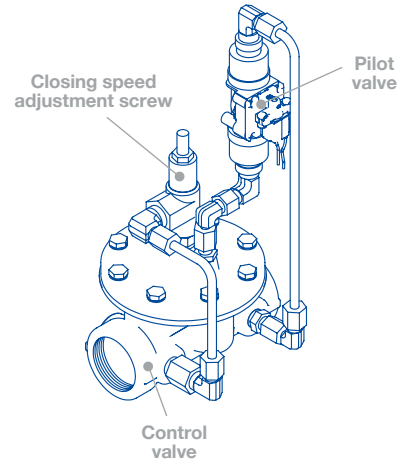


**For Twin Tanks you must identify the Pilot Valve as common or separate.**

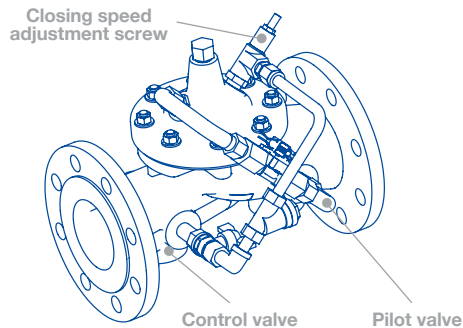
### Servicing and maintenance

No routine maintenance should be necessary. If debris has entered the water supply, isolate the supply to the control valve assembly and inspect/clean as appropriate.

#### Control valve with screw-thread fittings



#### Control valve with flange fittings



## d. DEVICES

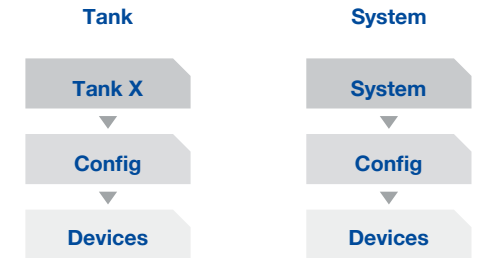
Tanktronic allows third party devices (alarms, valves, pumps etc) to be switched on or off, based on water and temperature levels in the tank(s).

The Main Control Unit features 2 x volt-free contact inputs (VFCI) and 4 x volt-free contact outputs (VFCO). For electrical connection details see page 15.

### Operation

Devices can be configured to be controlled by either individual tanks or the entire system.

### Adding a device to an individual tank or system



Tanktronic provides a sensor and pilot as two standard devices that can be added to a tank. For other devices select:

**Add Device**

This will give the following device options to scroll through and select:

	Device name	Description & functionality	Operation	Interface	Config parameters (default value)
Tank Only	<b>Keraflo Pilot</b>	Normal inlet valve, as in default config. Opens when level drops below fill delay level threshold, and closes when level reaches close level threshold, or sensor not responding. (For twin tank shared inlet valves, both tanks are controlled together.)	tank	SOL	shared (separate)
	<b>Generic Inlet</b>	Non-latching inlet valve, same as above except on VFCO.	tank	VFCO	shared (separate)polarity (normally open)
System Only	<b>Log Alarm Out</b>	Active if any alarms are in the log.	system	VFCO	polarity (normally open)
	<b>Sys Alarm Out</b>	Active if any system alarms (mains off, sensor not responding, slave channel not responding etc.)	system	VFCO	mains off (disabled) auto/manual reset (man)polarity (normally open)
	<b>Tank Alarm Out</b>	Active if the relevant tank alarm threshold (level high/low or temperature high/low) is exceeded. If shared, then checks both tanks, if system device then checks all tanks.	tank or system	VFCO	threshold type (hi level) shared (separate) auto/manual reset (man) fail-safe state (active) polarity (normally open)
	<b>Override Out</b>	For controlling safety override inlet valve, dump valve, pump set, etc. Similar functionality to tank alarm output, it becomes active if the relevant tank override threshold (level high/low or temperature high/low) is exceeded. If shared, then checks both tanks, if system device then checks all tanks.	tank or system	VFCO	threshold type (hi level) shared (separate) auto/manual reset (man) fail-safe state (active) polarity (normally open)
	<b>Lockout In</b>	Used for leak detectors, BMS override etc. If active, close inlet valves (but not safety override valves). If shared, and tank is a twin, also close inlet valves on twin. If alarmed, creates entry in alarm log.	tank or system	VFCI	shared (separate) alarmed (disabled) auto/manual reset (man) fail-safe state (active) polarity (normally open)
	<b>Lockout Out</b>	Indicates lock-out state of tank (i.e. if lock-out input or manual lock is active). If system device, then active if any tank locked out.	tank or system	VFCO	VFCI, polarity

Scroll through devices using the  or  keys.



Select device required by **OK** or **>** button.

#### Edit name

You may now edit the device name

#### Set device address

Select which VFCO/VFCI port the device is connected to on the Main Control Valve.

#### Select type of override output (if required)

Options include:

- Low Temp
- High Temp
- Low Level
- High Level

#### Select inlet type (if required)

This screen will appear if the system is configured as a twin tank. Select either:

- Shared Inlet
- Separate Inlet

#### Select how system resets when cause clears (if required)

Select either:

- Manual Reset
- Automatic Reset

#### Select safe state in case of failure (if required)

If the system stops responding, choose here whether the device fail-safe default is active or inactive.

- Active – System fails, device switches to pre-set switching state
- Inactive – System fails, device remains in current switching state

#### Polarity (if required)

Select the required contact idle state:

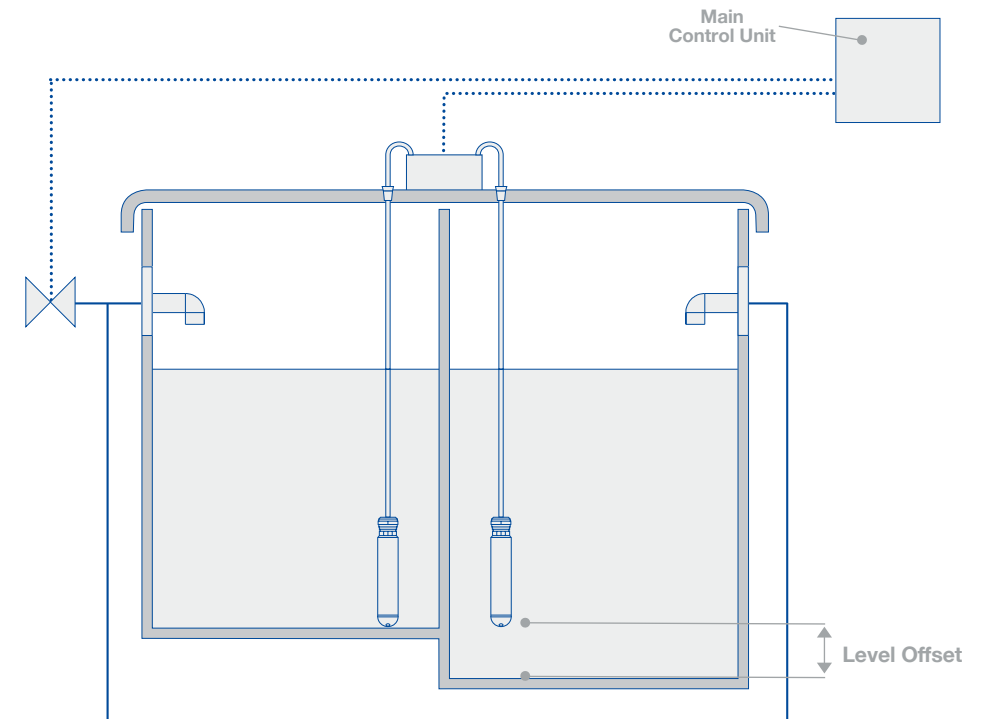
- Normally Closed – Open when active
- Normally Open – Closed when active

**NOTE:** Once a device has been added its name will appear on the devices list of the particular tank it is allocated to, or system device list.

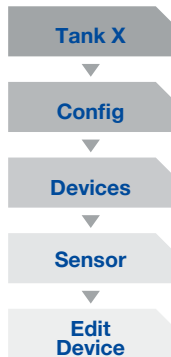
## e. LEVEL OFFSET

**NOTE:** This step is only necessary if either of the following points apply.

- The sensor does not reach the bottom of a tank.
- Two or more tanks of different sizes are being monitored and a common set of readings is required for both tanks, for example, a pair of balanced tanks with a common discharge.





Level Offset can be set with the sensor in position in the tank. Select from the MAIN MENU screen:



Scroll through the options displayed and then select:

Set Sensor Offset

Use the  and  buttons to set the necessary Level Offset. Exit to HOME screen.

The water level will now read the entered offset when the sensor is out of water.

If the initial water reading was 1.56m and an offset of 0.44m was entered, then the resultant water level reading will be 2m.

**NOTE:** There is a slight delay to allow the sensor to settle at a particular depth before that level is displayed on the screen. This is to prevent nuisance readings caused by turbulent water.

## f. HOLIDAY MODE SET-UP

Tanktronic allows the user to set a schedule of operation of the tanks at lower level - typically during 'holiday' periods of reduced activity.

### Holiday levels

Each tank can be set with its own holiday level.

- Close level
- Fill delay
- Alarm level high
- Alarm level low
- Override level high
- Override level low

To set up holiday levels for each tank, select from the MAIN MENU.



Then select:

Holiday Levels

Levels can now be set for the range of settings listed above. Refer to diagram on page 19.

**NOTE:** The alarm and over-ride levels have 'crossover' behaviour to avoid false triggers when Tanktronic switches between 'normal' and 'holiday' modes.

When switching modes, Tanktronic uses the normal high alarm and over-ride levels and the holiday low alarm and over-ride levels until the water level reaches the new target band (i.e. between close level and fill relay). This assumes the holiday levels are always set lower than normal levels.

## Holiday times

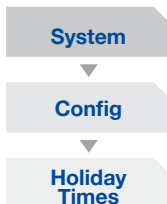
**Holiday times are set for the system, with up to 10 schedules. Each schedule has a type and start and stop times.**

The type can be:

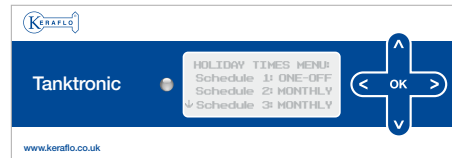
- One-off (specific start and stop dates/times)
- Unused
- Monthly
- Daily
- Yearly
- Weekly

For all types you can set the time of day, as well as the day or date.

To set up holiday times select from the MAIN MENU.



Tanktronic can run on 10 separate schedules.



Scroll and push **OK** or **>** to select a schedule to edit.

Each schedule can then be programmed by TYPE (see list above) plus START TIME and DATE and STOP TIME and DATE can be entered.

# 4. CONNECTING TO BUILDING MANAGEMENT SYSTEMS (BMS)

Tanktronic can be connected to BMS systems via the Main Control Unit's (and S-Module's) volt-free contacts.

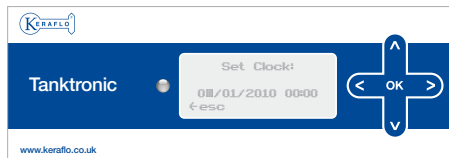
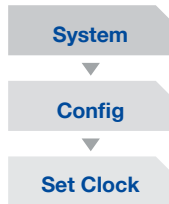
Inputs can be added to the input contacts VFCI1, outputs to any of the 2 x output contacts VFCO1, VFCO2.

**For details refer to Electrical Connections – Section 9. Advanced set-up page 25 and Commissioning – Section 6d. Devices page 29.**

## 5. SYSTEM MAINTENANCE

### Adjusting time and date settings

Both time and date settings are accessed via the 'set clock' function.



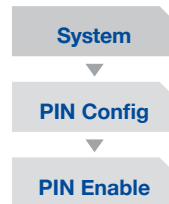
Use the and buttons to set the required DD / MM / YY. The button will proceed through the settings.

**NOTE:** The clock will automatically adjust to seasonal time changes.

### PIN

#### To enable a PIN

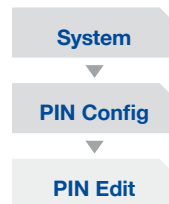
Protect Tanktronic from unauthorised use. Select from the MAIN MENU screen:



Select either 'Enable' or 'Disable' and save.

#### To change PIN

The default PIN is **0000**. To change this select from the MAIN MENU screen:



Select new code numbers using the and buttons. To select the next digit use the button. Save and return to the HOME screen.

### Resetting PIN lock-out

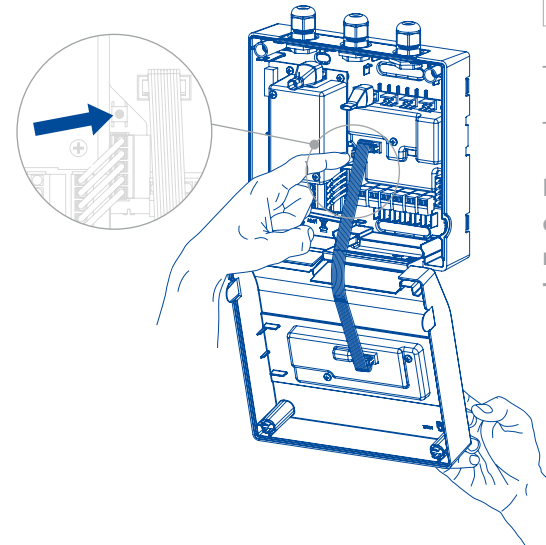
In the event of forgetting the PIN, the menu can be accessed using the following process:

1. Open the Main Control Unit housing, while still attached to the power.



**WARNING Live 230 volts**  
Do not touch mains wires inside housing

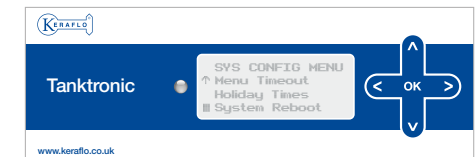
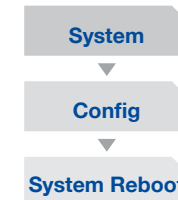
2. Press and hold the small black select button (see diagram below) for at least 20 seconds, then press whilst still holding the black select button.
3. Continue holding down the black select button and you can now access the menus without entering a PIN.



4. Once you are in the menu, you can release the black select button. To change or disable the PIN, just use the Config menu as normal.

### System reboot

Selecting System Reboot will initiate a soft-power cycle. From the MAIN MENU select:



The screen will ask 'Are you sure?'.

To confirm your action press .

**NOTE:** Rebooting the system will erase date and time settings, but not the configuration settings of the Tanktronic system.

## Factory re-set



**Initiating Factory Re-set will erase all system settings and restore defaults.**

Factory re-set is achieved by activating the Set-up Wizard.

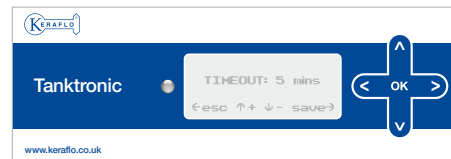
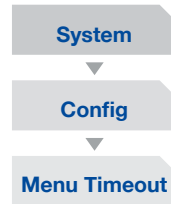


The screen will ask 'Are you sure?'

To confirm your action press **➤**.

## Menu timeout

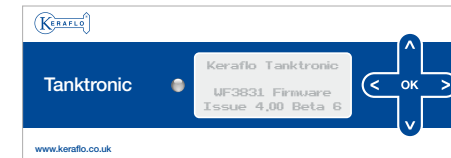
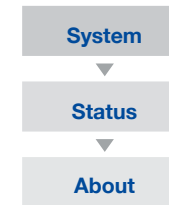
After a period of inactivity, the screen display will revert back to the HOME SCREEN. The delay period can be adjusted up to 60 mins.



Use the **▲** and **▼** buttons to adjust as required and press **➤** to save.

## Software version details

To check the software version details follow the steps below.



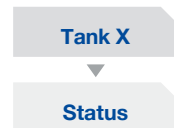
# USER GUIDE

## 1. CHECKING TANK AND SYSTEM STATUS

### Status settings

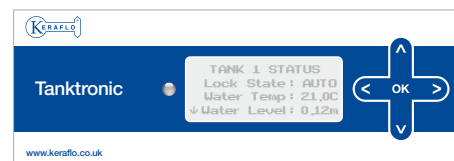
The status of Tanktronic sensors, valves and devices can be reviewed via the 'Status' menu option. This is useful for fault finding and checking the state of valves in multiple tanks.

Select from the MAIN MENU screen:



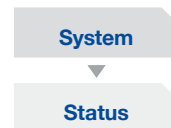
You can view status of the following:

- Lock State
- Water Temp
- Water Level
- Water Volume
- Devices
  - Device
  - Title
  - Status
  - Address



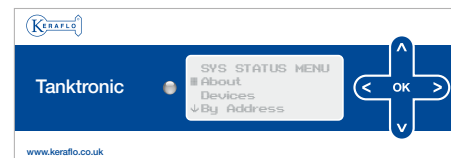
### System Status

Select from the MAIN MENU screen:



You can view status of the following:

- About (software version – see page 45)
- Devices (system devices listed)
- By Address (physical address)
- Advanced (power supply status)

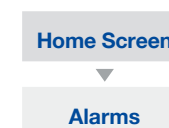


## 2. ALARMS

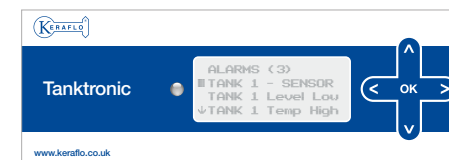
Alarm faults are logged in event order. Each fault will report:

- Device
- Fault
- Time

Select from the MAIN MENU screen:



Scroll to select Tank and press **▶** to view alarm details.



To clear an alarm scroll, using **▼** to bottom of list and select 'clear alarms' enter user PIN and press **OK**.

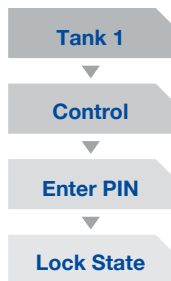


## 3. TANK LOCK

### Isolating the tank

If you need to drain a tank for maintenance, the tank can be isolated. To lock the inlet valve follow the procedure below. This will prevent nuisance alarms.

Firstly, manually isolate the tank via the balance and inlet from the MAIN MENU select your tank valves.



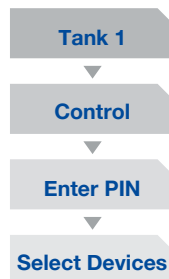
Select your lock state to 'Locked'.

**NOTE:** Once maintenance has been completed, open isolation valves and adjust 'Lock State' to auto to resume normal operation.

### Device and system testing

Tanktronic allows users the facility to momentarily control a device.

From the MAIN MENU, select your tank:



Select the device to be controlled and select 'Command', either 'Open' or 'Closed'.

The device will be controlled for a period of 10 seconds or until another key is pressed.

**NOTE:** This can be repeated multiple times as required.

## 4. OVERRIDE HOLIDAY TIMES

Tanktronic allows users to switch between the modes of operation.

### Auto (Default)

Overall system schedule; switching automatically between 'normal' and 'holiday' levels. This is the default setting.

### Normal

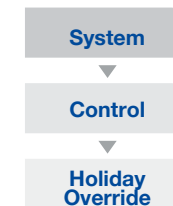
Override setting to adhere to a regular tank levels only.

### Holiday

Override setting to adhere to a reduced holiday levels only.

**Refer to Commissioning Section page 35 for details on setting the holiday levels and holiday times.**

To switch mode, select from the MAIN MENU screen.



Use or to set the desired mode and or to save.

**NOTE:** When holiday override is selected the MAIN MENU display will indicate 'holiday' status.

Override modes are temporary and are cleared automatically by the next scheduled change of mode.

# MENU MAP

