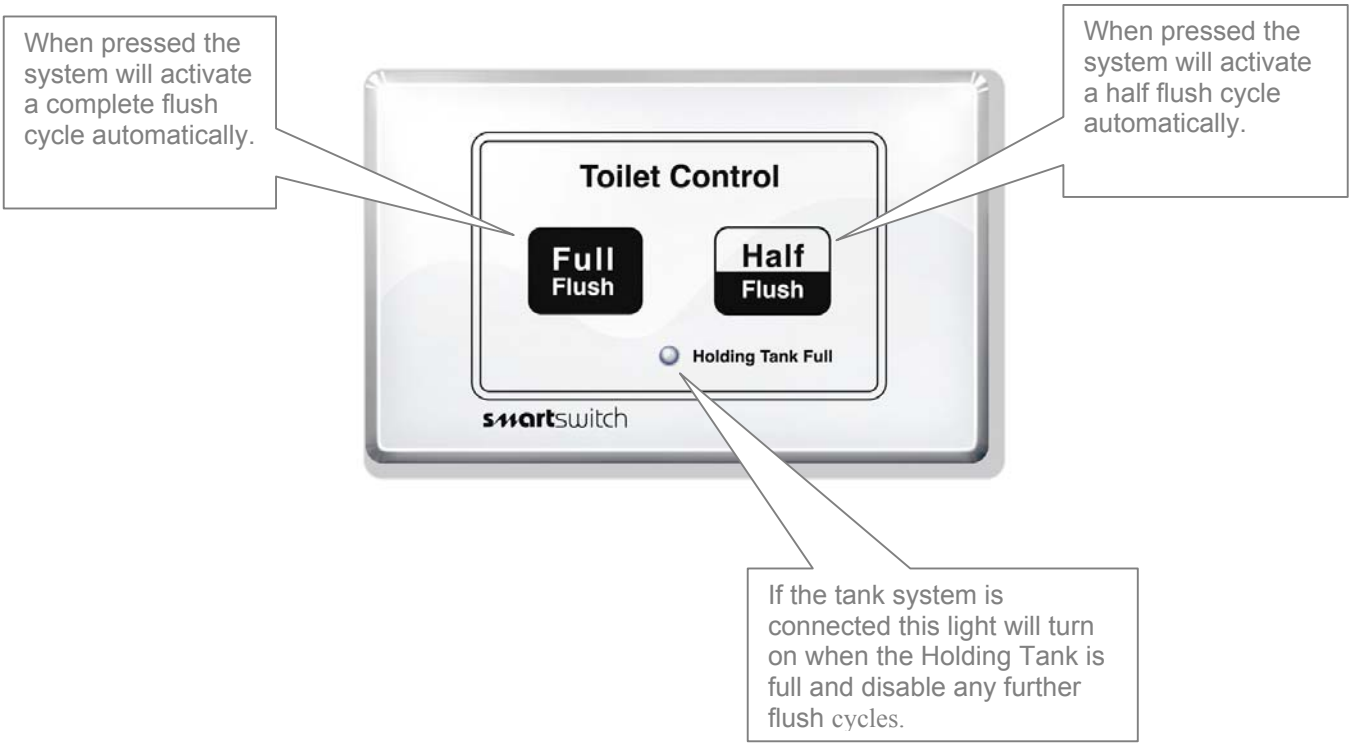
Smart Switch Toilet Controller Set-Up Instructions

Model: SMF-001

The unique Smart Switch Programmable Toilet Controller was designed for all electric marine toilets with a single motor/pump flushing system. The stylish control panel provides fully automatic programmed flushing when either button is pressed. The Half Flush provides a water/holding tank save mode. This device will turn it's own power on and off there-for drawing **no power** when not in use.



This Product has been Factory Preset and will operate without making any further adjustments.

Should you wish to alter these settings please follow proceeding instructions.

Programming:

Programmable Time Options:

Both Full & Half flush cycles are programmable from 1 to 240 seconds.

Factory Default: Full Flush = 10 seconds Half Flush = 6 seconds

We recommend using Full Flush when flushing solids and Half Flush when flushing liquids.

Advisory Warning

1.5 litres per flush is the recommended minimum Full Flush setting for discharge lines of less than 6 feet. Dilution is the secret to efficient waste transfer, through pipes and must be considered when programming your controller. Increase your flush volume appropriately if the discharge line is greater than 6 feet in length.

Programming the Device:

Full Flush

Press and hold, for 3 seconds, both the Full & Half Flush buttons at the same time. The Holding Tank Full LED will display three quick flashes indicating you have entered program mode. Release both buttons. Press the Full Flush button the number of seconds required for the cycle e.g. If you need a 12 second Full Flush cycle, then press the Full Flush button 12 times. The Tank LED will give one quick flash for each valid key press. Now press the Half Flush button. The device will program itself, give three quick flashes and automatically exit out of program mode.

Half Flush

Press and hold, for 3 seconds, both the Full & Half Flush buttons at the same time. The Holding Tank Full LED will display three quick flashes indicating you have entered program mode. Release both buttons. Press the Half Flush button the number of seconds required for the cycle e.g. If you need a 6 second Half Flush cycle then press the Half Flush button 6 times. The Tank LED will give one quick flash for each valid key press. Now press the Full Flush button. The device will program itself, give three quick flashes and automatically exit out of program mode

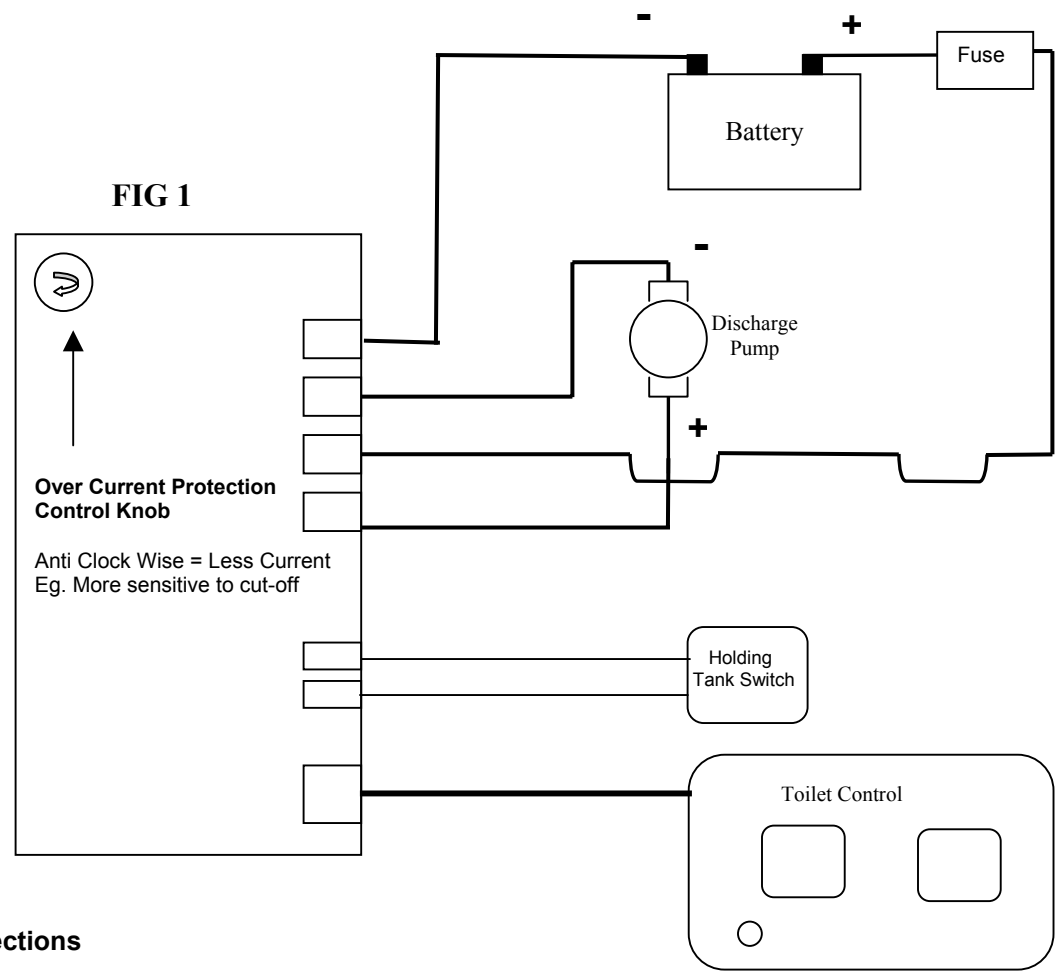
The device is now programmed and ready for use.

Please see Over Current Protection Setup Page 4

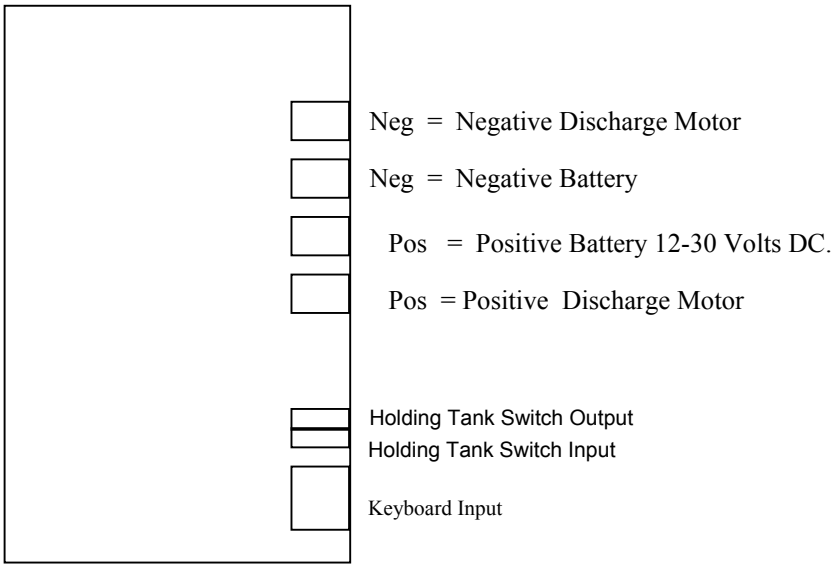
Electrical Specifications:

Supply Voltage	=	12-30 Volts DC (Auto-Sensing)
Quiescent Current	=	Zero Amps
Input	=	EMI Protected
Data Retention	=	40 years (without power)
Motor Output	=	80 Amps
Protection	=	Reverse Polarity, Over Voltage, Over Temperature, Short Circuit.

FIG 1



Connections



Full Flush:

Pressing this button will activate the system for the programmed time.

Half Flush:

Pressing this button will activate the system for the programmed time.

Holding Tank Full: (Optional)

If the vessel is fitted with a Holding Tank Full Sensor Switch, it can be wired to the controller as per diagram FIG 1 – page 3. If this sensor is on, due to a full tank, it will disable the controller until the tank has been emptied. If this feature is not required leave the Float Switch Input unconnected. Note: This input is looking for a positive signal when tank is full.

Over Current Protection Setup:

This feature will prevent the discharge motor, or wiring, from burning out. It could prevent extensive and expensive repairs due to blockages.

After programming the cycle times, turn the Over Current Protection Control Knob (as seen in Fig 1 - page 3) fully clockwise and press either button to ensure the system is fully operational.

Start turning the Over Current Protection Control Knob in small amounts anti-clockwise and with every adjustment press and hold the Full or Half Flush button for a few seconds. Repeat this until the motor cuts off and the LED flashes five times. You have adjusted too far therefore turn the Knob clockwise a small amount, until the motor does not cut off. The system is now set.

Over Current Protection:

If the discharge motor jams the unit has built-in over current protection circuitry, which will cut the motor off and display **five quick flashes** on the Holding Tank Full LED. Both Full and Half Flush buttons will be disabled. Once the blockage is removed, press either button to resume the operation. If the blockage is still present the above will happen again.

Short Circuit Protection Discharge Motor:

If the discharge motor has a fault, or is shorted, the unit has built-in protection circuitry, which will cut the discharge motor off and display **three sets of two quick flashes** on the Holding Tank Full LED. All operations will be cancelled.

Open Circuit Detection:

If the discharge motor or wiring is open circuit the unit will display **ten quick flashes** on the Holding Tank Full LED.

Over heat protection:

The device has over temperature automatic cut-off.

Error Codes:

Fault	LED Code	Action
Over Current Discharge Motor	● ● ● ● ●	Adjust Over Current Control Knob
Short Circuit Discharge Motor	● ● ● ● ● ●	Call authorized Dealer
Open Circuit Discharge Motor	● ● ● ● ● ● ● ● ● ●	Check wiring

" Warning "

This device should be fuse protected and mounted in a dry area, as close to the Toilet as is practical. DO NOT cover the ventilation slot on the top of this device.

If the keyboard is mounted in an area where it may experience moisture or wetting, please ensure that a bead of silicon is placed around the keyboard to waterproof it.

Fitting Face Panel:

Drill a small hole, approx 6mm, through the wall for the cable. Align panel, ensuring level and fasten with screws supplied. Remove the protective film from the clip on surround panel and clean with a soft cloth. Clip in place.