

TankManager™

**AUTOMATIC DISCHARGE PUMP CONTROLLER
AND LEVEL INDICATOR**

OWNER'S MANUAL



➔ DOMETIC

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SAFETY INSTRUCTIONS

WARNING: When using this device, always exercise basic safety precautions, including the following:

- Read all instructions before installation or use.
- Never connect this device to any electrical circuit with other than 12 or 24 volt Direct Current or exceed the amperage draw specified.
- Never install the control panel or the control module in an atmosphere with potentially flammable or explosive vapors.
- This product is not to be installed in shower facilities.
- Never install the control module below the water line.

PRODUCT FEATURES

- Provides four holding tank level indication lights for Empty, Low, Mid, and Full levels. One level light is always on to confirm that electrical power is applied.
- Includes keyed selector switch and “Discharge Pump On” light. An optional “Check Seacock” light is available to use in conjunction with a seacock interlock switch.
- Prevents accidental overboard discharge in restricted waters when control switch is turned to “Off” position.
- Simplifies plumbing by eliminating wye valves, seacocks, and vented loops for multiple toilet installations.
- Will eliminate stagnating sewage trapped in interconnecting hoses by wye valve operation.
- For use with a T-series discharge pump, TankWatch® 4 level indicator cap and optional seacock interlock system.
- 12 and 24 VDC models available.
- Key Switch Configuration 1 – Automatic Start–Automatic Shut-off Mode and Manual Mode:
 - Two different modes, automatic or manual, for holding tank discharge pump control.
 - Automatically discharges sewage directly overboard in unrestricted waters while in the “Automatic” mode.
 - In the “Automatic” mode, the Mid level float will activate the discharge pump. The pump will then run until the Low level switch is deactivated.
 - The Full level float will turn on the discharge pump if the Mid level float fails.
 - The “Automatic” mode will automatically maintain holding tank level between the Low and Mid level.
 - The “Manual” mode provides direct discharge pump control regardless of the level of the holding tank.
- Key Switch Configuration 2 – Manual Start–Automatic Shut-off:
 - Provides a manual start and an automatic shut-off of the discharge pump.
 - Key switch must be turned to the momentary Start position to activate the discharge pump. If the key switch is then left in the Auto Off position, the discharge pump will shut off automatically when the Low float is deactivated.
 - Holding the key switch in the start position will activate the pump regardless of the level of the holding tank.

Some fine-tuning of the float switch locations may be necessary to obtain proper operation of the unit.

NOTE: Keep in mind that once you enter a No Discharge Zone, the TankManager must be switched to the “Off” position and the key removed to prevent illegally discharging your holding tank. The United States Coast Guard will allow a key-operated switch as a means to secure the overboard discharge pump system instead of securing it with a padlock or wire tie.

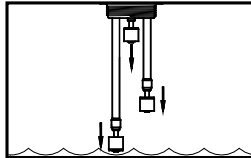
SYSTEM OPERATION DIAGRAM

TankManager Pump Controller / Level Indicator

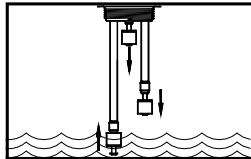
Switch Configuration 1

Auto Start - Auto Shut-off Mode:

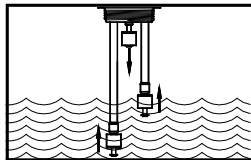
Automatically empties holding tank at Mid level, which is adjustable at time of installation. Full level float will turn on pump if Mid level float fails.



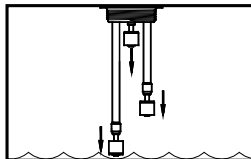
- Tank is empty.
- Empty light on.



- Tank contents between Low and Mid level probe.
- Low light on.



- Mid light on.
- Tank contents reach Mid level probe. Holding tank discharge pump starts automatically.
- Discharge pump light on.

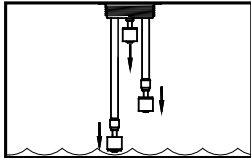


- Discharge pump shuts off automatically when tank level drops below Low probe.
- Discharge pump light off.
- Empty light on.

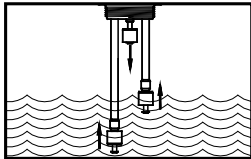
Switch Configuration 1

Manual Mode:

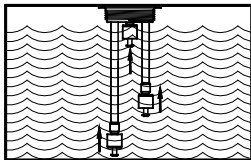
Holding tank discharge pump runs only when key switch is held in the Manual position.



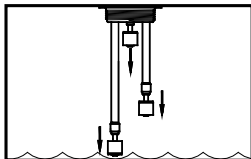
- Tank is empty.
- Empty light on.



- Tank contents at Mid level.
- Mid light on.



- Full light on.
- Holding tank discharge pump will run only when holding switch in the Manual position.
- Discharge pump light on.

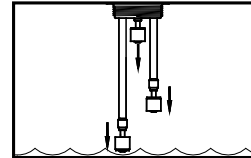


- Discharge pump shuts off when key switch is released from Manual position.
- Discharge pump light off.
- Empty light on.

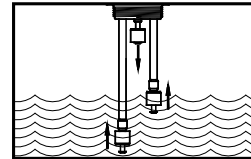
Switch Configuration 2

Manual Start - Auto Shut-off Mode:

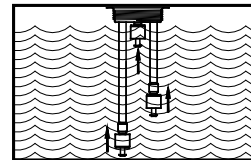
Holding tank discharge pump starts only when key switch is momentarily held in the Start position. Pump will continue running if key is returned to the Auto Off position.



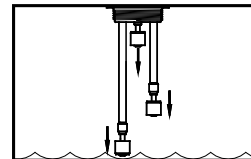
- Tank is empty.
- Empty light on.



- Tank contents at Mid level.
- Mid light on.



- Full light on.
- Holding tank discharge pump started by turning switch to the momentary Start position.
- Discharge pump light on.



- Discharge pump shuts off automatically when tank level drops below Low probe.
- Discharge pump light off.
- Empty light on.

MODELS AND ACCESSORIES

Part Number	Description
385310918	TMG Control Module, Auto Start, Single Head, 12VDC
385310919	TMG Control Module, Auto Start, Single Head, 24VDC
385310920	TMG Control Module, Auto Start, Multi Head, 12VDC
385310921	TMG Control Module, Auto Start, Multi Head, 24VDC
385310922	TMG Control Module, Manual Start, Single Head, 12VDC
385310923	TMG Control Module, Manual Start, Single Head, 24VDC
385310924	TMG Control Module, Manual Start, Multi Head, 12VDC
385310925	TMG Control Module, Manual Start, Multi Head, 24VDC
385310926	TMG Control Panel, Auto Start
385310927	TMG Control Panel, Auto Start with Seacock Monitoring Indicator
385310928	TMG Control Panel, Manual Start
385310929	TMG Control Panel, Manual Start with Seacock Monitoring Indicator
385311036	Key Replacement Kit
360301200	T-Series Discharge Pump – 12 VDC
360302400	T-Series Discharge Pump – 24 VDC
600343605	Seacock Interlock Switch for Conbraco 1-1/2" Seacock Only
600343675	Seacock Interlock Switch for Groco 1-1/2" Seacock Only
385230272	Universal Flange (3-inch NPT) with gasket and stainless steel hardware
385318714	"Do Not Flush" Panel
313000355	Level Indicator Cap without Vent, 22-inch Probes
313000350	Level Indicator Cap with Vent, 22-inch Probes
313000346	Level Indicator Cap without Vent, 45-inch Probes
313000345	Level Indicator Cap with Vent, 45-inch Probes

TankManager Model Selection and Compatibility Guide

Control Panel		TMG-CP-AS	TMG-CP-AS	TMG-CP-AS	TMG-CP-AS
		Auto Start / Without Seacock Light	Auto Start / With Seacock Light	Manual Start / Without Seacock Light	Manual Start / With Seacock Light
TMG-CM-AS-SH-12	Control Module, Auto Start, Single Head, 12VDC	X	X		
TMG-CM-AS-SH-24	Control Module, Auto Start, Single Head, 24VDC	X	X		
TMG-CM-AS-MH-12	Control Module, Auto Start, Multi Head, 12VDC	X	X		
TMG-CM-AS-MH-24	Control Module, Auto Start, Multi Head, 24VDC	X	X		
TMG-CM-MS-SH-12	Control Module, Manual Start, Single Head, 12VDC			X	X
TMG-CM-MS-SH-24	Control Module, Manual Start, Single Head, 24VDC			X	X
TMG-CM-MS-MH-12	Control Module, Manual Start, Mutii Head, 12VDC			X	X
TMG-CM-MS-MH-24	Control Module, Manual Start, Multi Head, 24VDC			X	X

SPECIFICATIONS

Product Name: TankManager™ Automatic Discharge Pump Controller and Level Indicator

Electrical: **Output Current Capability**
 Maximum Relay Rating for 12 or 24 VDC Discharge Pump: 40 amps inrush, 30 amps continuous.
 Float Switch Rating: 20 watts with resistive load.

Current Consumption
 “Standby” Current Draw:
 12 Volts DC: 0.016 amps
 24 Volts DC: 0.016 amps
 “Pump On” Current Draw (not including pump):
 12 Volts DC: 0.190 amps
 24 Volts DC: 0.095 amps

Materials: **Control Panel Face Plate** – polystyrene with protective coating
Keylock Switch – stainless steel facing
Key – nickel-plated brass
Control Module Enclosure – ABS

INSTALLATION INSTRUCTIONS

CONTROL MODULE

1. Select a mounting location as close as possible to the peripheral equipment, such as the level indicator cap, discharge pump, and vacuum generator. This will allow all connectors to be attached without running any additional wiring harnesses.
2. Make sure the control module will not be in direct contact with water and oil.
3. Attach the control module to the selected mounting area with four screws (not supplied).
4. Route wiring according to the wiring diagram enclosed. If the mating connectors are not available, simply cut off the existing connectors and use any approved connector.

CONTROL PANEL

1. Select a mounting location away from direct contact with water and oil.
2. Confirm clearances for the panel behind the mounting surface. You will need a minimum clearance of 3 inches.
3. Cut out the mounting holes for the control panel. (See template included in this manual for cut-out and hole locations.)
4. Do not mount the control panel until all wiring is routed to the panel.
5. Route wiring following the wiring diagram enclosed. If the mating connectors are not available, simply cut off the existing connectors and use any approved connector.
6. Mount the control panel with the four #4 x 3/8-inch long pan-head stainless steel screws provided.

Notes:

The lens colors for the control panel lights are as follows:

Empty	Low	Mid	Full	Discharge Pump On	Check Seacock (Optional)
Green	Yellow	Amber	Red	Green	Yellow

The keylock switch wiring colors are as follows. Wires connect to the terminals on the back of the switch:

	Terminal 1	Terminal 2	Terminal 7	Terminal 8
Configuration 1 (Auto Start)	Red	Brown	Blue	Red
Configuration 2 (Manual Start)	Red	Brown	N/A	Blue

OPTIONAL ADJUSTABLE LEVEL INDICATOR CAP

1. The adjustable level indicator cap is designed for a 3-inch FPT opening. Order the optional universal flange (Dometic P/N 230272) if tank is made of rigid material and not a holding tank.
2. Loosen the compression nuts on the adjustable probes and install the cap into the tank. Slide the #1 probe tubing down until the float touches the bottom of the tank. Tighten #1 probe compression nut and mark the tubing at the top of the nut with a pen or pencil. Do not cut the tubing at this mark. Loosen the compression nut, slide the tubing up, and carefully cut the tubing 1 5/8-inch (41 mm) below the mark without damaging the switch wires. (NOTE: Tubing should only be cut with a roller guide tubing cutter (used for brass or copper tubing) to prevent damaging the float switch wires.) Pull the wires through the black wire cover and push the tubing down into the compression nut until the black wire cover touches the compression nut.
3. Remove the cap from the tank and adjust the #2 probe for 1/2 full level. Tighten the compression nut and cut the tubing off 3/8-inch (10mm) above the compression nut without damaging the switch wires. Slip the black wire cover on to the top of the tubing.
5. For the TankManager system to work properly, the Low float (#1 probe) must be positioned with the recessed shoulder, white band, or the letters "NO" at the bottom. The Mid and Full floats (#2 and #3 probes) must be positioned with the recessed shoulder, white band, or the letters "NO" up (see Figure 1). If the float must be repositioned, remove the C-clip from the switch body, flip the float 180 degrees, and replace the C-clip.

PROBE SWITCH ADJUSTMENT

1. It is important that the Low and Mid floats of the TankWatch 4 level indicator cap are adjusted for the TankManager to operate properly.
2. The #1 probe must be positioned just slightly above the diptube opening or tank outlet. If this float is positioned too low, the discharge pump will not shut off properly. This is because the sewage level in the tank will never drop below the level of the tank outlet. If the Low float is adjusted below this critical level, it will never disengage and turn off the discharge pump.
3. The location of the #2 probe is entirely up to the installer. The higher the float is positioned, the longer the discharge pump cycle will be. We recommend locating the float approximately 4 inches above the #1 probe.

If either a longer or shorter pump cycle time is preferred, adjust the #2 probe accordingly. However, the Empty, Low and Mid readings may not be true after adjustment. For example, if the #2 (Mid) probe switch is raised several inches in order to obtain a longer pump cycle time, the Mid light will actually signal that the tank is slightly fuller.

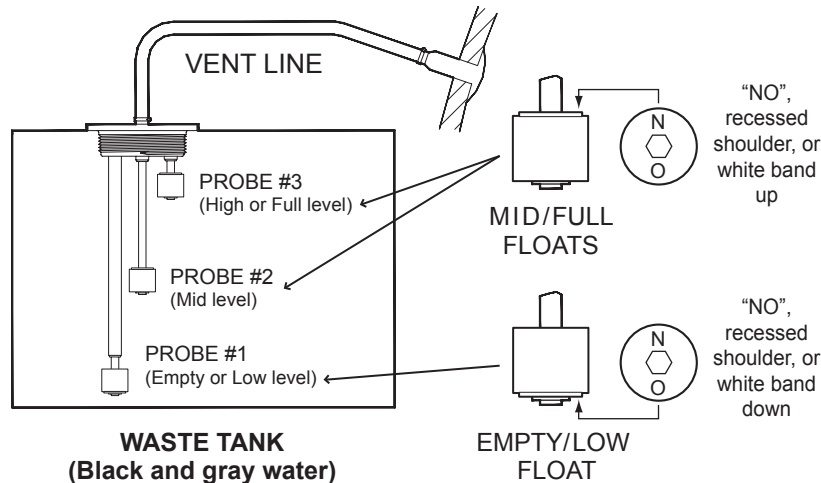


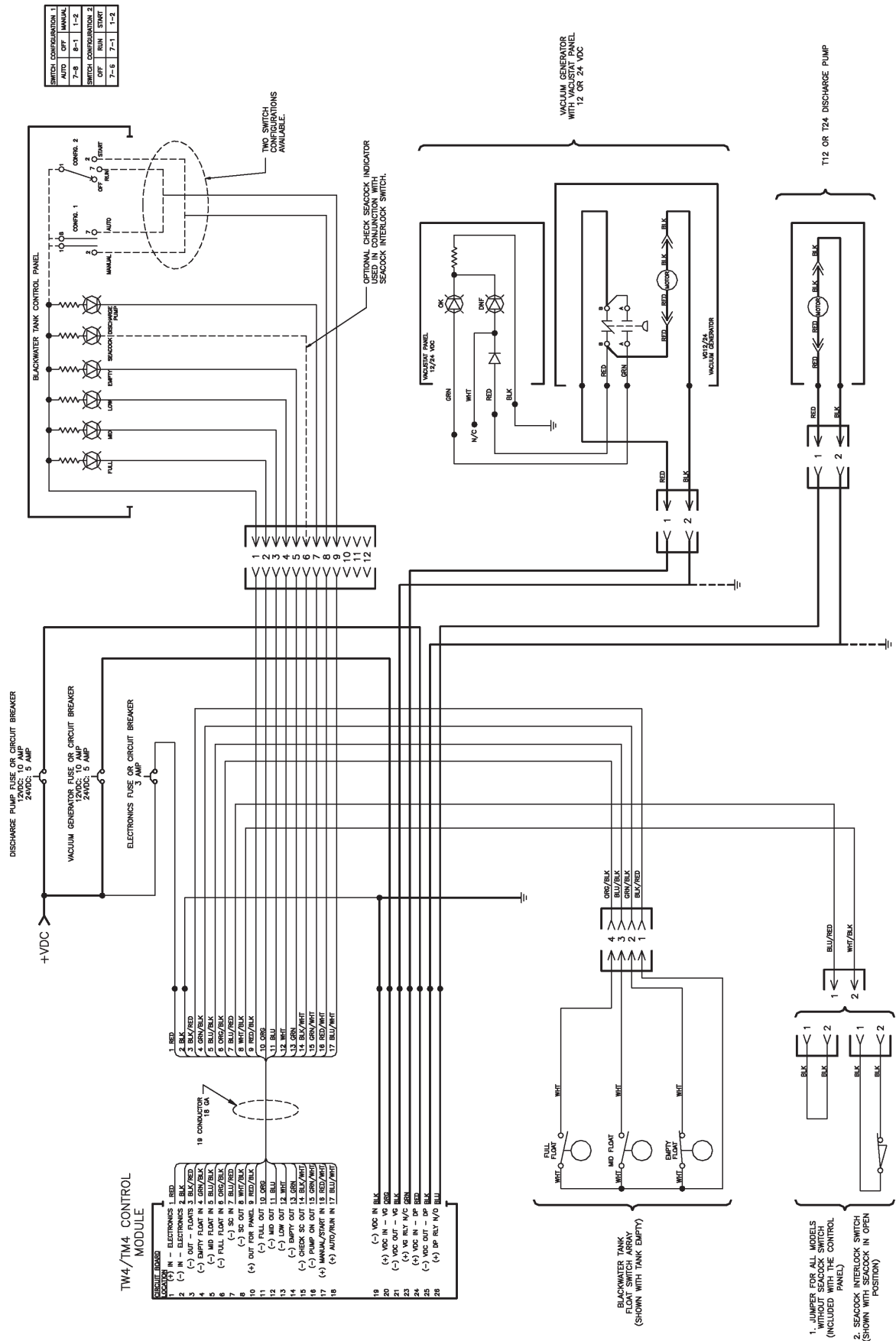
Figure 1

OPTIONAL UNIVERSAL FLANGE

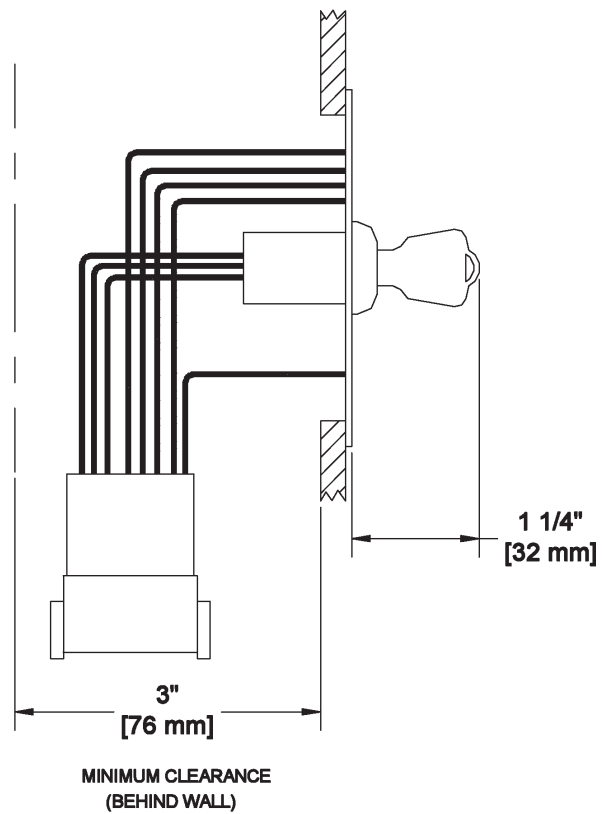
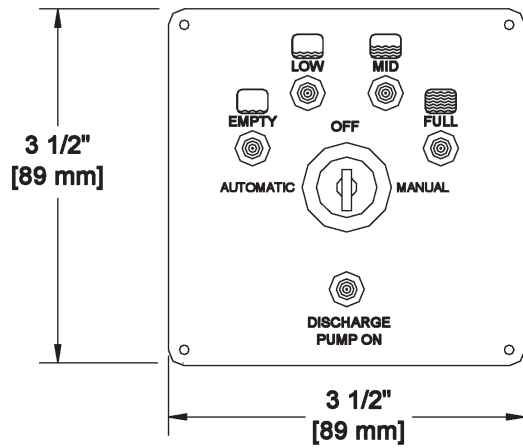
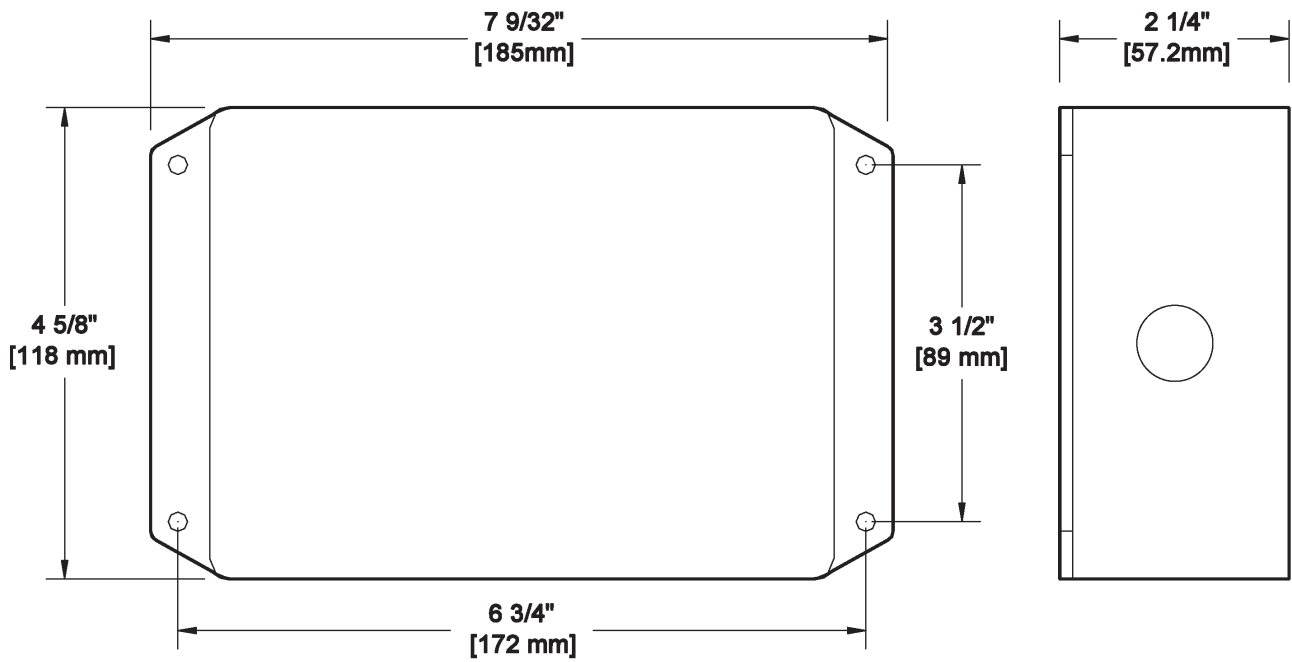
1. Find and mark the top center of the tank.
2. Cut a 4 1/16-inch (103 mm) diameter hole in the top center of the tank.
3. Slip the flange into the hole and mark the location of the five mounting holes.
4. Drill the five mounting holes with a 1/4-inch (6 mm) drill bit.
5. Remove the flange, clean all oils, grease and dirt from the mounting surface and allow to dry.
6. Apply liberal amounts of silicone rubber adhesive to the mounting surface and the underside of the flange.
7. Insert the gasket into the flange and align with the five mounting holes.
8. Secure the flange with the screws, nuts and washers provided.
9. Install the float switch cap.

WIRING DIAGRAMS

Single Head System Wiring Diagram



DIMENSIONAL SPECIFICATIONS



MANUFACTURER'S ONE-YEAR LIMITED WARRANTY

Dometic warrants, to the original purchaser only, that this product, if used for personal, family or household purposes, is free from defects in material and workmanship for a period of one year from the date of purchase.

If this Dometic product is placed in commercial or business use, it will be warranted, to the original purchaser only, to be free of defects in material and workmanship for a period of ninety (90) days from the date of purchase.

Dometic reserves the right to replace or repair any part of this product that proves, upon inspection by Dometic, to be defective in material or workmanship. All labor and transportation costs or charges incidental to warranty service are to be borne by the purchaser-user.

EXCLUSIONS

IN NO EVENT SHALL **DOMETIC** BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, FOR DAMAGES RESULTING FROM IMPROPER INSTALLATION, OR FOR DAMAGES CAUSED BY NEGLIGENCE, ABUSE, ALTERATION OR USE OF UNAUTHORIZED COMPONENTS. ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, ARE LIMITED TO A PERIOD OF ONE YEAR FROM DATE OF PURCHASE.

IMPLIED WARRANTIES

No person is authorized to change, add to, or create any warranty or obligation other than that set forth herein.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one (1) year from the date of purchase for products used for personal, family or household purposes, and ninety (90) days from the date of purchase for products placed in commercial or business use.

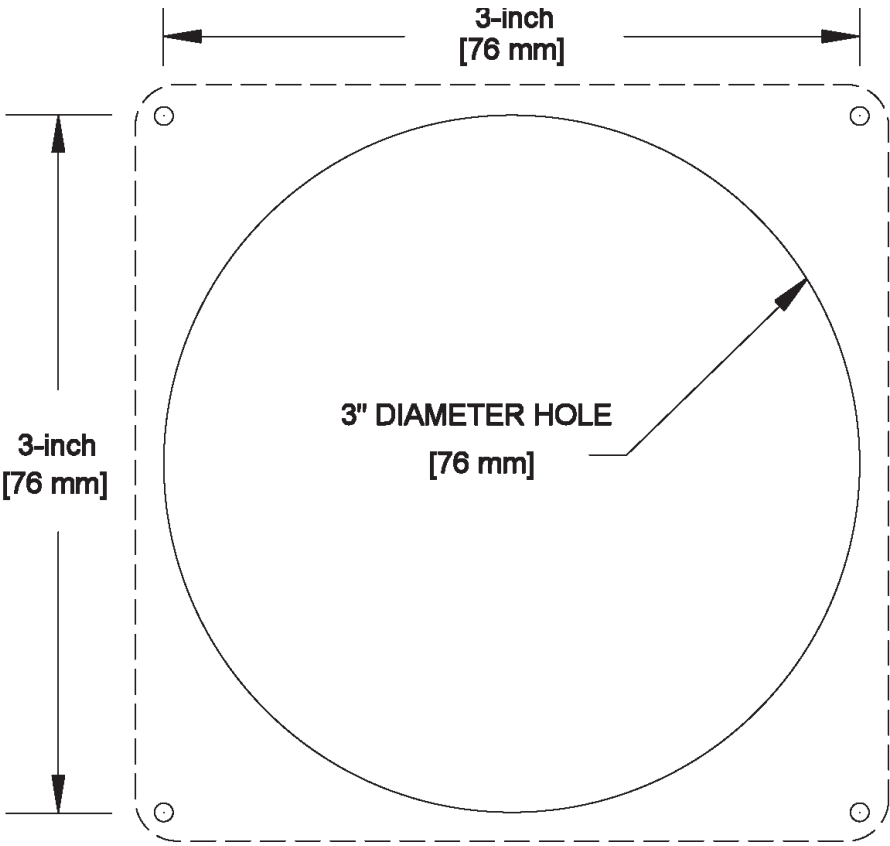
OTHER RIGHTS

Some states do not allow limitations on the duration of an implied warranty, and some states do not allow exclusions or limitations regarding incidental or consequential damages; so, the above limitations may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

To obtain warranty service, first contact your local dealer from whom you purchased this product.



CONTROL PANEL MOUNTING TEMPLATE



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