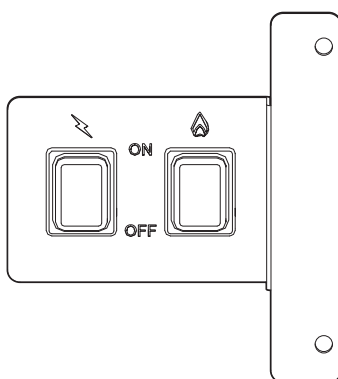


DOMETIC **HEATING** **WATER HEATERS**



Part #94853

EN Water Heater Exterior Switch Assembly

Installation Manual.2

⚠ DANGER: BURN HAZARD, FIRE, EXPLOSION, AND/OR CARBON MONOXIDE HAZARD.
 Keep the water heater area clear of combustible cleaning materials, gasoline, and other flammable vapors and liquids. Failure to obey this warning could result in damage, a burn hazard, possible explosion, carbon monoxide buildup, serious injury, or death.

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result, causing property damage, personal injury, or death.

– Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

– WHAT TO DO IF YOU SMELL GAS

Do not try to light any appliance.

Do not touch any electrical switch.

Do not use any phone in your recreational vehicle.

Clear the recreational vehicle of all occupants.

Turn off the gas supply tank valve(s) or main gas supply.

Immediately call your gas supplier for instructions.

If you cannot reach your gas supplier, call the fire department.

– Have the gas system checked and leakage source corrected by a qualified installer, service agency, manufacturer or dealer, or the gas supplier.

WARNING

Cancer and Reproductive Harm
www.P65Warnings.ca.gov



Service Center & Dealer Locations
Visit: www.dometic.com

Read these instructions carefully. These instructions **MUST** stay with this product.


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1 Explanation of Symbols and Safety Instructions


This manual has safety information and instructions to help you eliminate or reduce the risk of accidents and injuries.


1.1 Recognize Safety Information


 **This is the safety alert symbol.** It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

1.2 Understand Signal Words


A signal word will identify safety messages and property damage messages, and also will indicate the degree or level of hazard seriousness.

 **DANGER**
Indicates a hazardous situation that, if **not** avoided, will result in death or serious injury.

 **WARNING**
Indicates a hazardous situation that, if **not** avoided, could result in death or serious injury.

 **CAUTION**
Indicates a hazardous situation that, if **not** avoided, could result in minor or moderate injury.

NOTICE: Used to address practices **not** related to physical injury.

 Indicates additional information that is **not** related to physical injury.

1.3 Supplemental Directives

To reduce the risk of accidents and injuries, please observe the following directives before proceeding to install or operate this product:

- Read and follow all safety information and instructions.
- Read and understand these instructions before installing or operating this product.
- Installation must be performed by a qualified Service Technician, Service Center, OEM, or Gas Supplier.

- The installation must comply with all applicable local or national codes, including the latest edition of the following standards:

U.S.A.

- ANSI/NFPA70, National Electrical Code (NEC)
- ANSI/NFPA 1192, Recreational Vehicles Code
- ANSI Z223.1 National Fuel Gas Code
- Federal Mobile Home Construction & Safety Standard, Title 24 CFR, part 3280, or when this Standard Is not applicable, the Standard for Manufactured Home Installations (Manufactured Home Sites, Communities and Set-Ups), ANSI A255.1
- ANSI Z21.10.1, Gas Water Heaters
- A119.5, Park Trailers

Canada

- CSA C22.1, Parts I & II, Canadian Electrical Code
- CSA Z240 RV Series, Recreational Vehicles
- CAN/CGA B149 Installation Codes
- CAN/CSA-2240 MH Series, Mobile Homes
- CSA 4.1 (latest edition)

1.4 General Safety Messages

⚠ WARNING: FIRE AND/OR EXPLOSION HAZARD.
Failure to obey the following warnings could result in death or serious injury:

- Follow the information in this manual exactly.
- Do **not** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

2 Intended Use

This water heater exterior switch assembly (hereinafter referred to as “switch assembly”) is intended to be an addition to an existing single-switch assembly in a recreational vehicle (hereinafter referred to as “RV”) for which it is supplied. This product is designed to provide both a gas and electronic control switch at the water heater. Use these instructions to ensure correct installation of the switch assembly. Dometic Corporation reserves the right to modify appearances and specifications without notice.

Dometic Corporation accepts no liability for damage in the following cases:

- Faulty assembly or connections.
- Damage to the product resulting from mechanical influences and excess voltage.
- Alterations to the product without express permission from the manufacturer.
- Use for purposes other than those described in this manual.

3 General Information

This section provides general information regarding the switch assembly.

i The images used in this document are for reference purposes only.

3.1 Compatibility

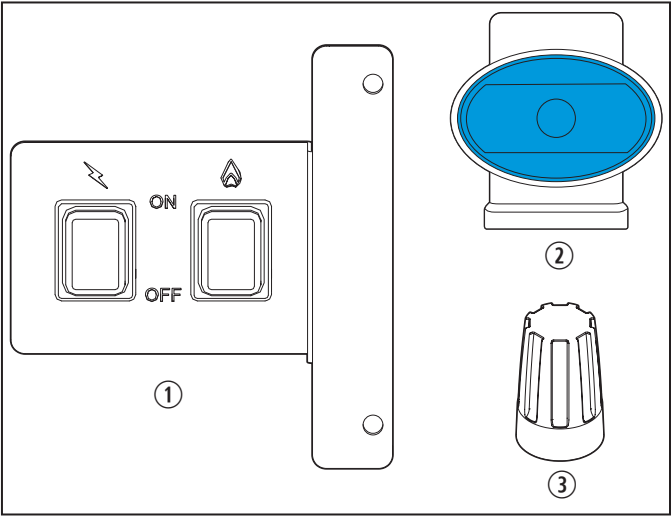
The switch assembly is compatible with the following Dometic water heater models.

Compatible Water Heaters	
94001	94005
94002	94006
94003	

Refer to the LP Gas Water Heater Installation and Operation Manual (Form 94035) for complete installation instructions.

3.2 Switch Assembly Components

This section identifies the parts included in the switch assembly kit.



1 Kit Components

- ① Switch Assembly
- ② 3M Connectors (qty. 4)
- ③ Wire Nut

3.3 Installation Tools and Materials

Dometic Corporation recommends that the following tools be used while installing the switch assembly.

Recommended Tools and Materials	
Wire Cutters	Pliers
Phillips Screw Driver	Multimeter

3.4 Switch Assembly Specifications

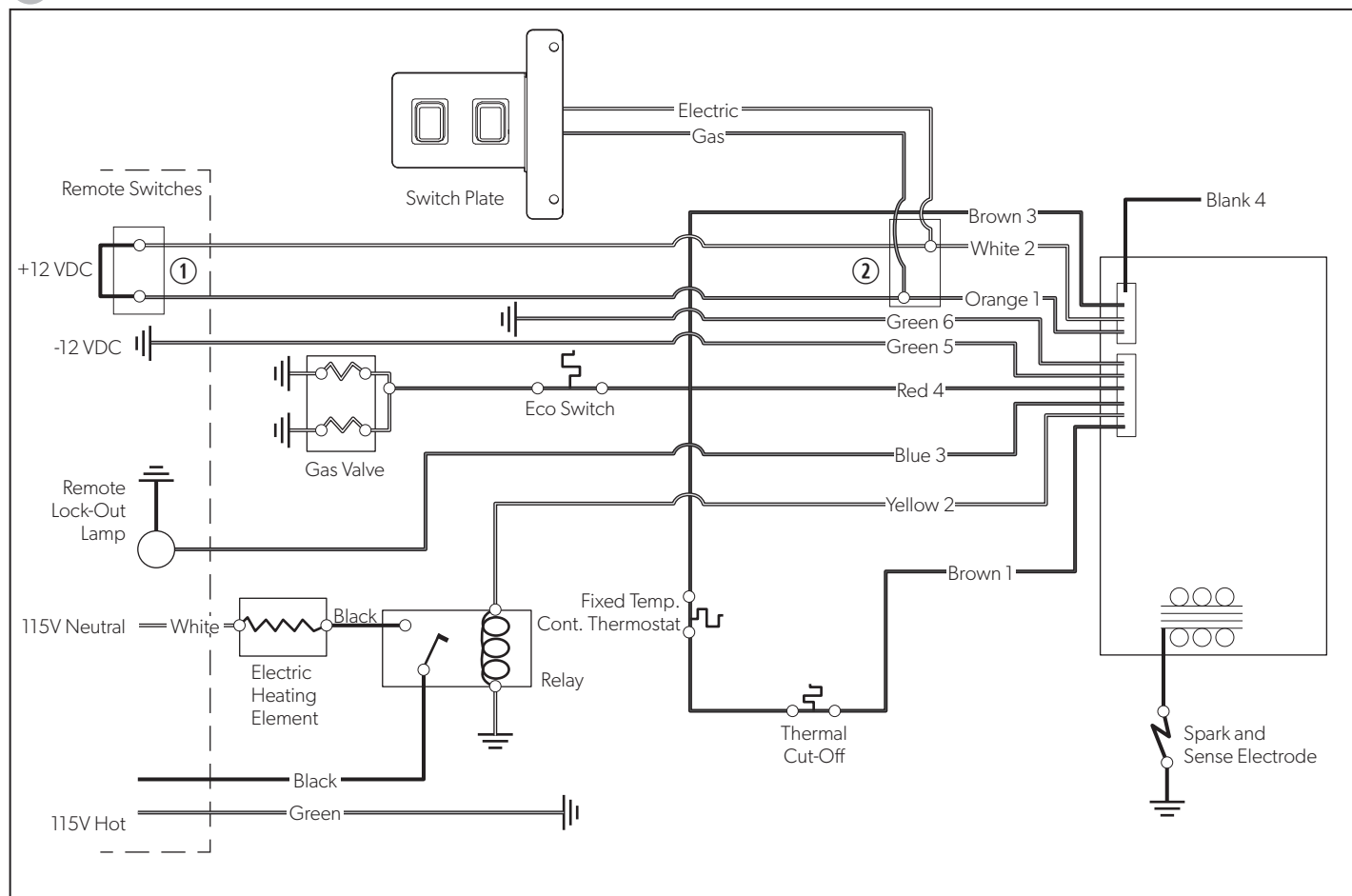
Below are the dimensions and weight specifications for the switch assembly.

Specifications

Width	Height	Shipping Weight
3.5 in. (8.9 cm)	4.0 in. (10.2 cm)	1.0 lb (0.45 Kg)

4 Wiring Diagram

i Dotted lines are wired by the customer.



2 Switch Assembly Wiring Diagram

- ① Both gas and electric wires are connected to the single 12 V wire from the existing single-switch assembly here.
- ② The switch assembly is spliced here.

5 Installation

⚠ WARNING: FIRE AND/OR ELECTRICAL SHOCK HAZARD. Failure to obey the following warnings could result in death or serious injury:

- Shut off the gas supply, disconnect the 120 VAC power from the RV, and disconnect the positive (+) 12 VDC terminal from the supply battery before installing the switch assembly.
- The water heater is equipped with a three-prong (grounding) plug for your protection against shock hazards and should be plugged directly into a properly grounded three-prong receptacle. Do **not** cut or remove the grounding prong from this plug.

⚠ DANGER: BURN HAZARD, FIRE, EXPLOSION, AND /OR CARBON MONOXIDE HAZARD.

Keep the water heater area clear of combustible cleaning materials, gasoline, and other flammable vapors and liquids. Failure to obey this warning could result in serious injury or death.

This section describes how to install the switch assembly. Please consider the following directives prior to beginning installation:

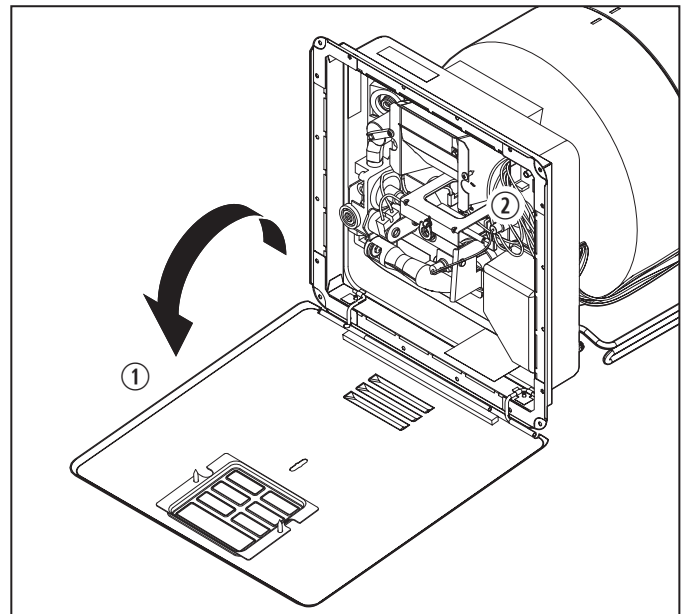
- This switch assembly **must** be installed by a qualified professional installer.

5.1 Wiring the Switch Assembly

This section describes how to wire the switch assembly to the water heater.

- i** Refer to “Wiring Diagram” on page 5 for a comprehensive wiring schematic.
- i** Label all wires prior to disconnecting when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

1. For your protection, before installing the switch assembly, be sure to:
 - Shut off the gas supply.
 - Disconnect the 120 VAC power from the RV.
 - Disconnect the positive (+) 12 VDC terminal from the supply battery.

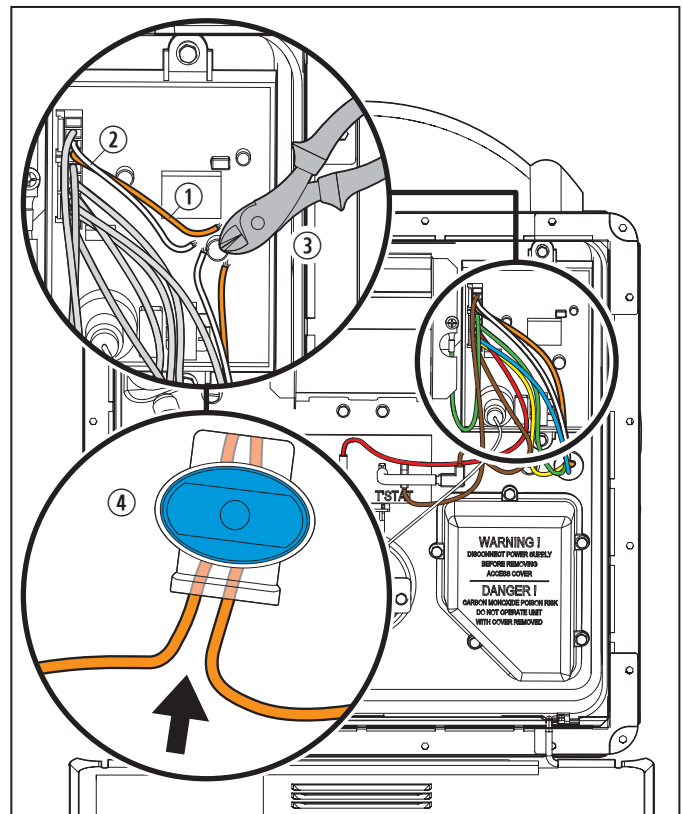


3 Opening the Access Door

① Access Door

② DSI Control Board

2. Locate and open the water heater access door.



4 Inserting the Wires into the 3M Connector

① Orange Wire

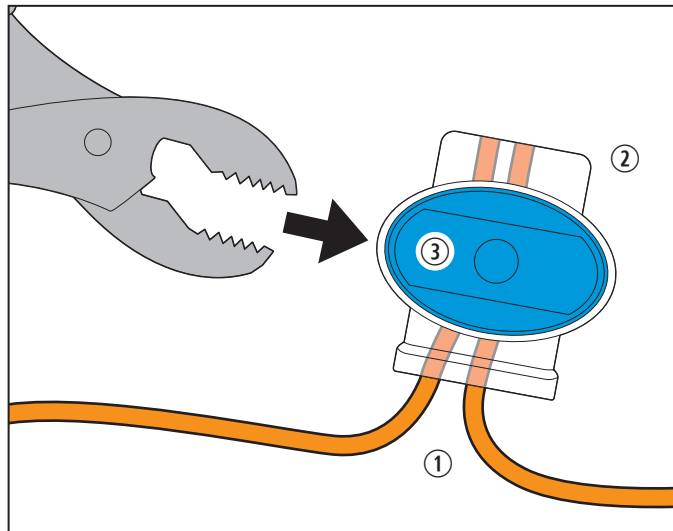
③ Wire Cutters

② White Wire

④ 3M Connector

3. Cut the orange and white wires on the DSI control board at approximately midway. Do not strip the wires.
4. Insert a wire from the switch assembly and a cut wire of the same color from the DSI control board into a 3M connector. Match wires by color: orange to orange, white to white.

i The 3M connector has three holes, but any of the three can be used with either wire.

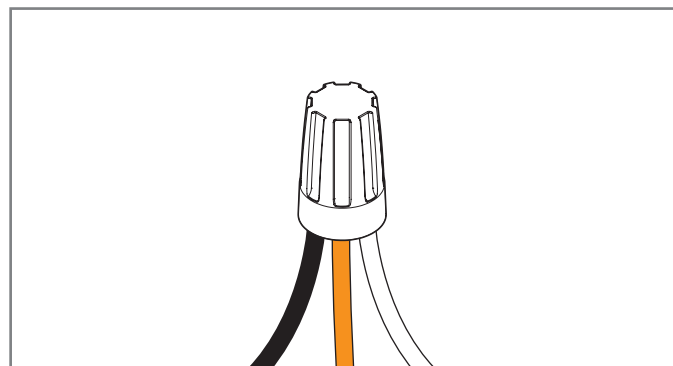


5 Securing the Wires in the 3M Connector

- ① Wires ③ Blue Button
② 3M Connector

5. Make sure the wires are pushed all the way into the 3M connector until they are visible past the blue button.
 6. Use a pair of pliers to press the blue button completely down into the 3M connector housing.
- i** Some waterproofing gel may squeeze out past the blue button.
7. Repeat steps 4–6 with the next 3M connector and set of wires until all four 3M connectors are in place.

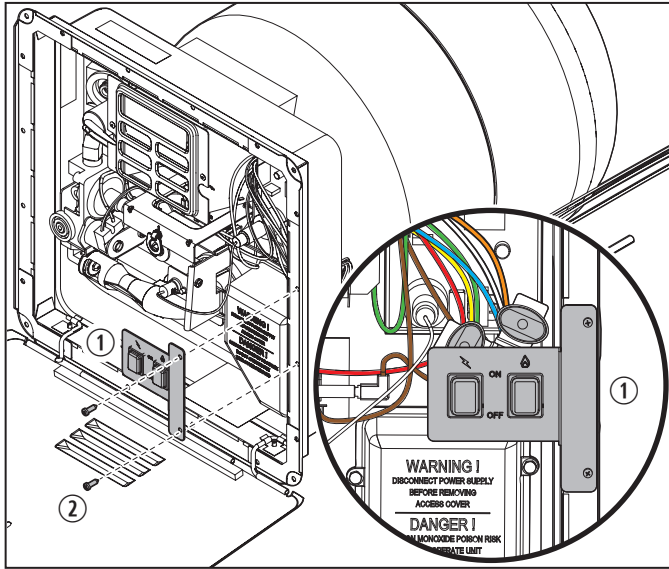
i There should be two 3M connectors with orange wires and two 3M connectors with white wires.



6 Connecting to 12V Wire

8. Outside the water heater, connect the orange wire and white wire to the existing 12 V wire coming from the interior switch using a wire nut. (See "Wiring Diagram" on page 5.)
- i** If there is no incoming 12 V wire to connect to (for example, a pilot model water heater), then a 12 V source will need to be installed by a qualified professional installer.

5.2 Mounting the Switch Plate



7 Mounting the Switch Plate to the Water Heater

- ① Switch Plate ② Mounting Screws

1. Position the switch plate with the letters and symbols oriented properly.

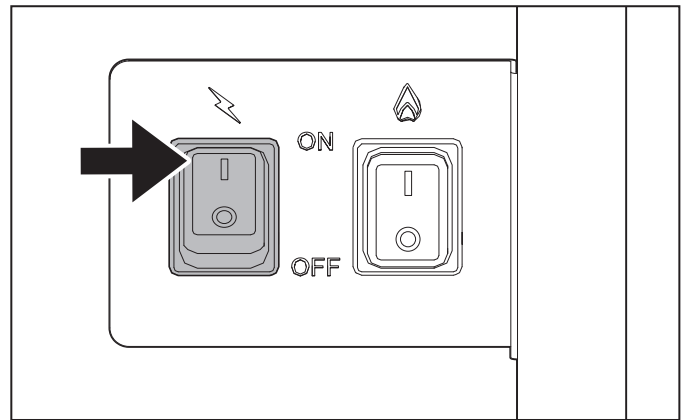
NOTICE: Do **not** route wires around sharp objects or where they could be damaged.

2. Mount the switch plate to the right side flange in the middle mounting holes using two mounting screws that secure the water heater to the RV.
3. Tighten the screws to hold the switch plate firmly in place.
4. Place both control switches in the OFF position.
5. See "Verification" on page 8 to test the switch assembly.

5.3 Verification

To test the switch assembly, do the following:

1. Connect the positive (+) 12 VDC terminal to the supply battery.
2. Connect the 120 VAC power to the RV.



8 Electronic Control Switch in the ON Position

3. Place the electronic control switch in the ON position. (The electronic control switch has a lightning bolt above it.)
4. Remove the heater element cover and use a multimeter to check the heater element terminals for voltage.
 - i** When the electronic control switch is turned to the ON position, the relay will close and pass 110 VAC to the element.
 - If voltage is detected, continue with Step 5.
 - If no voltage is detected, see "Troubleshooting" on page 9. After resolution, reset the electronic control sequence by turning the electronic control switch OFF and then back ON.
5. Place the electronic control switch in the OFF position.
6. Turn ON the gas supply.
7. Place the main gas switch inside the RV in the ON position.
8. Place the gas control switch on the switch assembly in the ON position. (The gas control switch has a flame above it.)
9. Verify the burner has lit.

- i** When the gas control switch at the switch assembly is turned to the ON position, the water heater will make three attempts to light. If for any reason there is no ignition, the water heater will lock out and the red lockout lamp, located inside the RV, will illuminate.
 - If the ignition lights, continue with Step 10.

- If the ignition does not light, see “Troubleshooting” on page 9. After resolution, reset the gas control sequence by turning both the main gas switch inside the RV and the gas control switch on the switch assembly OFF and then back ON.

10. After verification completion:

- Place the gas control switch in the OFF position.
- Shut off the gas supply.
- Disconnect the 120 VAC power from the RV.
- Disconnect the positive (+) 12 VDC terminal from the supply battery.

6 Troubleshooting

Problem	Possible Cause	Recommended Solution
The switch assembly is not functioning properly.	No power is getting to the water heater.	Check that: <ul style="list-style-type: none"> • The positive (+) 12 VDC terminal is connected to the supply battery. • The 120 VAC power is connected to the RV.
	The 3M connectors may not be installed correctly.	For each 3M connector, check that: <ul style="list-style-type: none"> • Both wires are visible on both sides of the blue button. • The blue button is clamped down tight. • Two orange or two white wires are present; not one orange and one white.

7 Disposal



Place the packaging material in the appropriate recycling waste bins, whenever possible. Consult a local recycling center or specialist dealer for details about how to dispose of the product in accordance with all applicable national and local regulations.

8 Warranty Information

Refer to the sections below for information about warranty and warranty support in the US, Canada, and all other regions.

8.1 United States and Canada

LIMITED WARRANTY AVAILABLE AT
WWW.DOMETIC.COM/WARRANTY.

IF YOU HAVE QUESTIONS, OR TO OBTAIN A COPY OF THE LIMITED WARRANTY FREE OF CHARGE, CONTACT:

DOMETIC CORPORATION
CUSTOMER SUPPORT CENTER
5155 VERDANT DRIVE
ELKHART, INDIANA 46516
1-800-544-4881 OPT 1

8.2 All Other Regions

The statutory warranty period applies. If the product is defective, please contact the manufacturer's branch in your region (see the back of the instruction manual for the addresses) or your retailer.

For repair and guarantee processing, please include the following documents when you send in the device:

- A copy of the receipt with purchasing date.
- A reason for the claim or description of the fault.

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A complete list of Dometic companies, which comprise the Dometic Group, can be found in the public filings of:
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