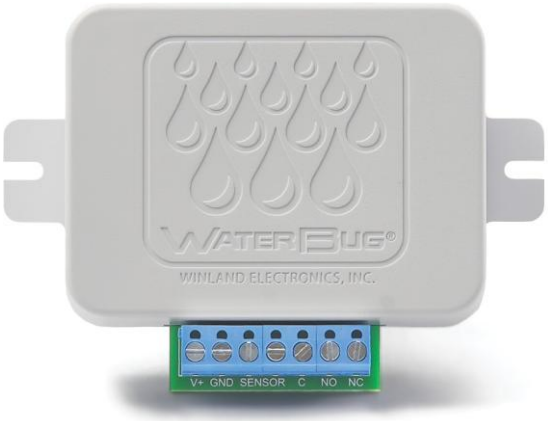
WINLAND™
ELECTRONICS, INC.

WATERBUG®

WaterBug® 200 Device Only Product Guide
WB200-DO (M-001-0180)



This Package Contains:

- 1 WB200 Device
- 1 Mounting Kit (2 screws and 2 anchors)

Introduction:

Thank you for your purchase of the Winland™ WaterBug® model WB200-DO. The WB200-DO is the same WB200 device that customers have purchased for many years as their trusted water detection device. All water sensors are now sold separately from this device to allow for customization of water sensing applications. The WB200 is completely electronic and designed to detect water only (distilled, deionized water and rainwater cannot be detected). For proper operation, this device MUST be used in conjunction with an alarm system, sounder, etc. The WB200 is designed to mount on a wall or other flat vertical surface with the selected sensor type placed in the location(s) where water leakage is most probable. The WB200 is ideal for use in homes, offices, computer rooms, document storage areas, warehouses, sump pumps, and basements to name a few examples. Do NOT put device into a cooler/freezer environment.

Safety Information:

WB200 relay output is intended only for use as low voltage, low-current alarm connections, and not for direct switching or control of AC-mains powered loads. Additionally, local codes may further dictate or limit the types of loads and associated wiring to be used with the low-current Form C relay output used with the WB200. Connecting AC-mains type circuits to the WB200 may result in an electric shock and/or fire hazard.

Connect only sensors specified in this manual to the sensor terminals. Using sensors not specified in this manual may damage the WB200 or cause improper or unreliable operation.

Do not connect a load to the relay outputs that exceed limitations stated in the WB200 specification sheet at the link at the end of this manual. Loads exceeding the specified limitations may damage the WB200, or result in improper or unreliable operation.

The WB200 printed circuit board (PCB) contains electrostatic discharge (ESD) sensitive components. No troubleshooting or diagnostics will require the PCB to be exposed. Opening the device may void the warranty.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

wb200.winland.com

Installation of WB200-DO:

Locate the area where the WB200 will be mounted. Using the WB200 as a guide, mark the two locations on the mounting surface where the holes will be drilled to use the case's mounting flanges. If mounting on drywall, use the two provided drywall anchors. Once the holes have been drilled, place the WB200 against the surface and drive the screws into the holes or anchors. If using multiple sensors, the sensors MUST be wired in parallel to the two terminals marked "SENSOR" (see Figure 1). See Winland YouTube Channel or video.wb200.winland.com for additional product information.

Sensor types CANNOT be mixed per WB200 device.

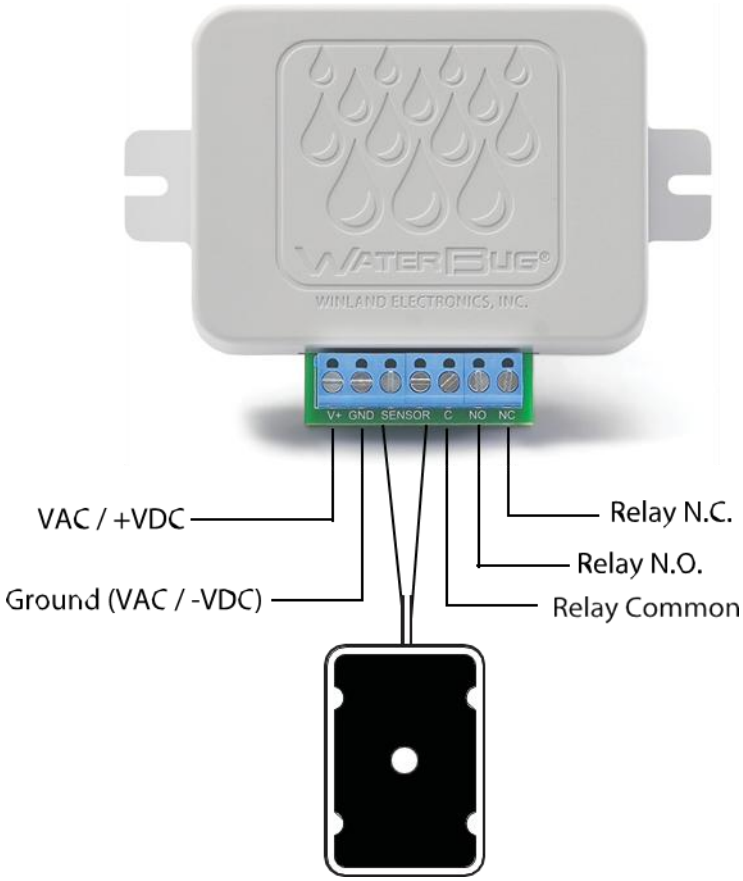


Figure 1: W-S-U is used for example only.

Terminal Block Connections:

Relay contacts are accessible on the terminal block (See Figure 1). The WB200 is in normal condition when power is applied, and no moisture is detected. It is in alarm condition when water is detected by any one of the remote sensors. If the WB200 is not operating properly, check the polarity of the power supply connections.

Notes:

-When connecting DC power to the WB200 be sure to observe polarity and test to see if the WB200 is operating properly.
-AC – Power input wires are interchangeable
-DC – Positive to V+ and negative to Ground

Testing:

-This may be done by forming a short between the two "SENSOR" terminals on the device. To create a short, you may use a jumper wire.

Troubleshooting:

-Please see Winland YouTube Channel or video.wb200.winland.com for additional troubleshooting information.

Wiring Guide for WB200:

-Please see wiring.wb200.winland.com for further sensor specific wiring details.

Installation of WaterBug® Sensors:

W-S-U (M-001-0106): the W-S-U (unsupervised water surface sensor) may be mounted securely to the floor or a wall (see Figure 2). Mounting the W-S-U to a vertical surface like a wall enables you to monitor an area for rising water levels. If a W-S-U is to be bolted down in a permanent installation, drill only in the innermost center recessed area. A film of moisture forming a bridge between the two metallic contacts on a W-S-U sensor is all that is needed for the unit to signal an alarm condition. The W-S-U will not create an alarm condition due to high humidity or condensation.

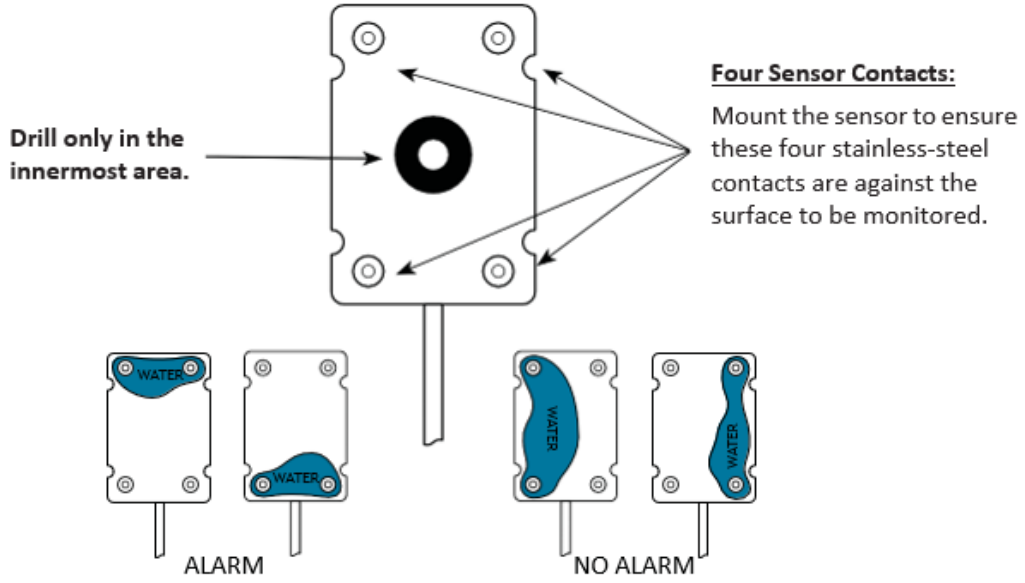


Figure 2: Unsupervised Water Surface Senser (W-S-U) view from bottom side

Note: Concrete can be semi-conductive. If experiencing false alarms, insulate all sensors mounted on concrete. Example: Place a non-conductive shim under the W-S-U.

Note: Long-term exposure to humidity and dust may create a bridge and false alarm. Use a dry, clean and lint free cloth to clean the W-S-U during recommended testing of W-S-U.

Monitoring For the Absence of Water: The WB200 device can be used to monitor the absence of water (water level) using only the W-S-U.

1. Mount the sensor at the desired minimum waterline.
2. Use the opposite set of relay contacts that you would use if you were detecting the presence of water.

Test Procedures for W-S-U: form a water bridge between the two metallic contact points (See Figure 2) with a moistened finger or cloth. If properly working, the WB200 device will activate the connected warning device within approximately three seconds. The WB200 device will reset automatically when the sensor dries and no longer has a water bridge between the two metallic contact points. **TEST WEEKLY TO ENSURE PROPER OPERATION**.

Installation of WaterBug® Sensors (Continued):

WBROPE-KIT (M-001-0185): the WBRope sensor(see Figure 3) should be placed flat on the floor or surface to be monitored. However placed, or adhered, it is important to note that once the water rope becomes wet, it must be completely dry to stop the alarm status. Ensuring future accessibility to the water rope to allow for drying should be considered in all installations. Use of a non-conductive plastic clip is recommended to fit the environment being monitored. The endcap resistor is required to be removed for use with the WB200. Retaining the endcap resistor for future use is recommended if used with other Winland™ devices. Additional water ropes can be applied to the WBROPE-KIT with the purchase of the WBRope Extension (WBROPE-EXT – M-001-0186). The water rope is highly sensitive to moisture and cannot be used in condensing environments. High humidity environments may create false alarms.

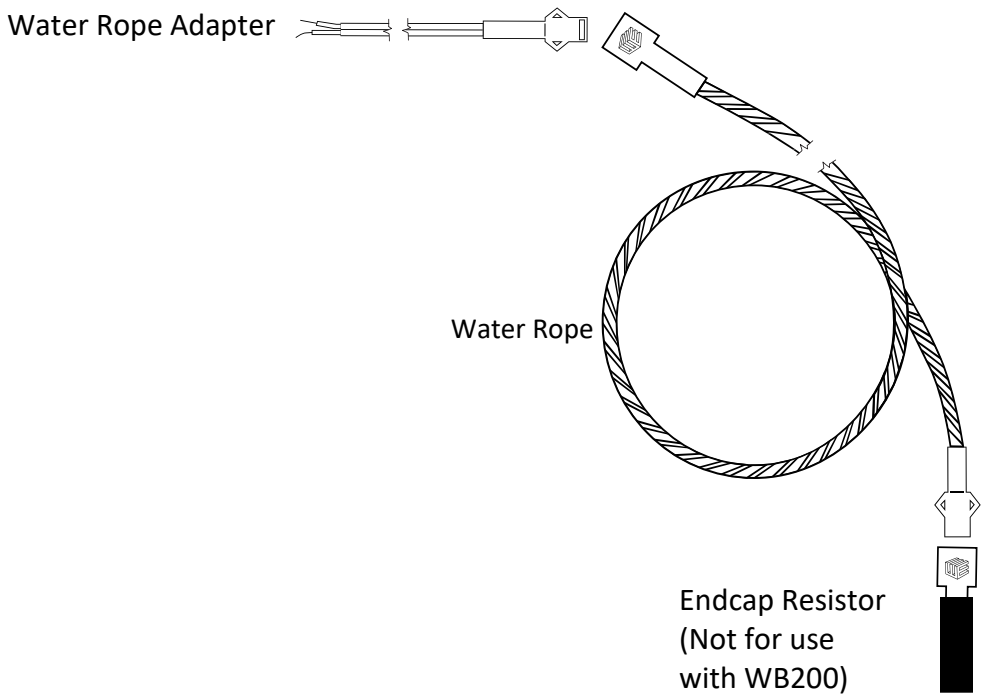


Figure 3: WaterBug® Rope Kit (WBROPE-KIT)

NOTE: The water rope sensor may not create an alarm for dampness on the surface. The water rope sensor will create an alarm with just a few drops of liquid that contact the wire inside the mesh.

Test Procedures for WBROPE-KIT and WBROPE-EXT: soak the water rope in a container with a small amount of water or apply water droplets directly onto the mesh that will reach the wire inside of the mesh. If working properly, the WB200 will activate the connected warning device within approximately three seconds. The WB200 will reset automatically when the water rope dries completely. A dry, clean and lint free cloth will help to absorb the water on the rope. Saturation may increase the time to dry the rope. **TEST WEEKLY TO ENSURE PROPER OPERATION**. **ALWAYS TEST THE WATER ROPE SECTION FURTHEREST FROM THE WB200 DEVICE TO ENSURE THE ENTIRE WATER ROPE IS CONNECTED.**

Additional Device, Sensor and Accessory Option Information:

WB200-DO Wiring Guide	http://wiring.wb200.winland.com
WB200-DO Specification Sheet	http://spec.sheet.wb200-do.winland.com
W-S-U Placement Guide	http://surface.placement.winland.com
W-S-U Specification Sheet	http://spec.sheet.w-s-u.winland.com
WBROPE-KIT Specification Sheet	http://spec.sheet.wbrope-kit.winland.com
WBROPE-EXT Specification Sheet	http://spec.sheet.wbrope-ext.winland.com
12VDC-KIT Specification Sheet	http://spec.sheet.12vdc-kit.winland.com

ENVIRONMENTAL COMPLIANCE:

Please see http://environmental-compliance.winland.com for all environmental compliances

WARRANTY AND SERVICE INFORMATION

Winland Electronics, Inc. (“Winland”) warrants to the original purchaser from Winland that each product of Winland’s that it manufactures shall be free from defects in material and factory workmanship for a period of one (1) year from the date of purchase, when properly installed and operated under normal conditions according to Winland’s instruction.

Winland’s obligation under this limited warranty is limited to correcting the product without charge, at its factory any part or parts thereof which are returned, transportation charges prepaid, to the factory within one year of the date of purchase subject to Winland’s examination showing to Winland’s satisfaction to be covered by this warranty.

Product returns will not be accepted unless a Return Material Authorization has been issued by Winland, which is subject to purchaser’s identification of the purchase order number and product serial number. UNAUTHORIZED RETURN SHIPMENT OR SHIPMENT CONTRARY TO WINLAND’S WRITTEN INSTRUCTIONS

WILL VOID THIS LIMITED WARRANTY. Correction of such defects by repair, replacement, or refund of the amount paid for the product, at Winland’s option, shall constitute fulfillment of all Winland’s obligations under this limited warranty. Repaired and replacement parts will be warranted for the remainder of the original product warranty. Repairs not covered by this limited warranty may be offered by Winland for a charge.

This limited warranty shall not apply to any of Winland’s products which have been subject to misuse, negligence, accident, or which have been repaired or altered outside of Winland’s factory.

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