

Thank you for purchasing the ZWCFS1 Z-Wave enabled Wireless Water & Freeze Alarm. Leaking pipes, corroded water heaters, fixtures in bathrooms and laundry rooms, automatic water and ice dispensers, etc. can all cause water damage. The ZWCFS1 is a Z-Wave™ enabled device and will send a water leak alert on any Z-Wave™ enabled network. ZWCFS1 sensors are most effective at water damage prevention when properly used with a WaterCop Z-wave automatic shut off valve (sold separately). However, a ZWCFS1 unit that is not in a Z-Wave™ network will still alert you to water leaks using the audio alarm.

## Specifications:

<b>Power:</b>	One 3.6V 1/2AA 1200mAh Lithium Battery, ER14250J, LS14250 or equivalent
<b>Battery Life:</b>	Calculated to be 1 to 2 years with no alarms and default Z-Wave™ network settings.
<b>Frequency Range:</b>	908.42MHz (US)
<b>Distance Range:</b>	Max 100ft line of sight in unobstructed environment
<b>Product Size (LxWxD):</b>	2.4" x 1.6" x 0.8"
<b>Product Weight:</b>	0.2 lb
<b>Operating Temperature:</b>	-10°C (14F) to +70°C (158F)
<b>Reported Temperature:</b>	Reported temperature is at the unit and has a +/- 2°C accuracy
<b>System Requirement:</b>	Any Z-Wave™ enabled network and controller

## Testing the ZWCFS1

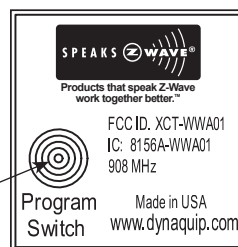
Moisten a paper towel and place over both of the small metal pads on the back of the water sensor until you hear the audible alarm sound. The water alarm may take up to 4 or 5 seconds before it sounds. If the alarm fails to sound, your battery may be old or dead or incorrectly installed, the sensor may not be moist enough, or the water sensor may be damaged.

If you do hear the audible alarm, remove the moistened paper towel, dry the small metal pads of any water residue, and hold the button for 2 seconds to clear the alarm. You can then add your water alarm to any Z-Wave™ enabled network and controller.

## Using the ZWCFS1 in a Z-Wave™ Network

The button in the rear casing is used for including or excluding the ZWCFS1 in a Z-Wave™ network. Refer to your controller's User Manual for specific details on network inclusion, exclusion, and association.

Press this button



**Inclusion in (adding to) a network:** 1) Set up the inclusion mode at the controller; 2) Press and hold the button for approx. 2 seconds until the controller indicates the unit has been included in the network. Also, a beep will be heard when the inclusion completes. Inclusion and exclusion are always done at normal transmit power mode.

**Exclusion from (Removing from) a network:** 1) Set up the exclusion mode at the controller; 2) Press and hold the button for approx. 2 seconds until the controller indicates the unit has been removed from the network. A beep will also be heard when the exclusion completes.

**Awake Mode:** To remain awake and listen for commands (when in a network), press and hold the button for at least 2 seconds. The ZWCFS1 will stay awake for approx. 30 seconds.

**Association:** Once in a network, a controller can be used to associate the ZWCFS1 with other devices in the Z-Wave™ network, such as a light or another remote audible alarm. Refer to your controller's documentation on how to associate the ZWCFS1 to another device in your network. The ZWCFS1 supports two association groups. A maximum of 5 associated devices are allowed in each group.

The ZWCFS1 sends the Basic Set Command to the associated nodes assigned to Group 1 to convey that a water Alarm is active. If no nodes are assigned to Group 1, then a Binary Sensor Report (value = 0xFF) is broadcast. The reports are sent at regular intervals while the water alarm is active. When the water alarm is cleared via the button, one additional report (with status = no alarm) is sent.

The ZWCFS1 sends the Basic Set Command to the associated nodes assigned to Group 2 to convey that a Freeze Alarm is active. If no nodes are assigned to Group 2, then a Binary Sensor Report (value = 0xFF) is broadcast. The reports are sent at regular intervals while the freeze alarm is active. When the freeze alarm is cleared due to temperature rise, one additional reports (with status = no alarm) is sent.

## During an alarm

If water is detected at the monitoring location, the unit will sound an 82 decibel, audible alarm and will send an alert message to the Z-Wave™ network (if included in the network already). Pressing and holding the button for 2 seconds will clear the Water Alarm. If freezing conditions are detected, no audible alarm will sound but an alert message is sent to the Z-Wave™ network (if included in the network). Depending on your Z-Wave™ controller, it is possible to receive a remote alert. For example, with some gateway controllers, you can receive an email or cell phone text message when an alarm is activated. With a gateway's remote access and depending on your specific controller's capabilities you will be able to check the status of any ZWCFS1 in your network.

## Choosing a mounting location

The ZWCFS1 is suitable for use in dry, interior locations only. Avoid placing the ZWCFS1 close to a metal frame, or other metal enclosures that may affect RF range. Also, avoid areas with rapid temperature swings. Place the unit so that any leaks that may occur will not drip directly on the unit.

Recommended ZWCFS1 uses: under sink, next to sump pumps, water heaters, laundry room, bathroom floor, storage area, garage, utility sink, vacation/recreation homes, boats, etc.

## Low Battery

The ZWCFS1 will broadcast an alert on the Z-Wave™ network at regular intervals when it detects a low battery condition. In addition, it will periodically sound an audible 'chirp'. Your controller may be able to be configured to monitor the ZWCFS1 wake up notifications. If these stop, then this might be an indication that the battery has died or that transmissions from the ZWCFS1 are no longer being received. Because the audible water alarm draws a large current from the battery, the battery should be replaced each time an actual water leak has been detected. After a water leak, please ensure that there is no moisture in the unit before replacing the battery. Do not install batteries that appear damaged or unsealed. When replacing batteries, the water seal may be broken around the screws. After screwing the parts back together, it is recommended to use some sealant such as silicone caulk around the screws.

## FCC Compliance Statement Statements

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference, and

This device must accept any interference received, including interference that may cause undesired operation.

FCC Warning (Part 15.21). Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Interference Statement (Part 15.105(b)). This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. No guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Industry Canada Statement per Section 4.0 of RSP-100.** The term "IC:" before the certification/registration number only signifies that the Industry Canada technical specifications were met.

**Section 7.1.5 of RSS-GEN.** Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.

## Limited Warranty

DynaQuip Controls Corporation, 10 Harris Industrial Park, Saint Clair, Missouri 63077, warrants its WaterCop electric valve actuator and electronic sensor and electronic system control components against defects in material and workmanship for a period of two (2) years from the date of original shipment. DynaQuip Controls warrants its WaterCop brass ball valve mechanical component against defects in material and workmanship for the life of the component. In the event that such defects appear within the warranty period, DynaQuip Controls will, at its option, and upon written notification thereof and substantiation that the product(s) have been stored, installed, maintained and operated in accordance with DynaQuip's recommendations and standard industry practice, repair or replace the product without charge. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation, modification, or disassembly at any place other than the point of original manufacture. This shall constitute the exclusive remedy for breach of warranty, and DynaQuip Controls shall not be responsible for any incidental or consequential damages, including, without limitation, damages or other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemicals, weather, or any other circumstances over which DynaQuip Controls has no control. DYNQUIP CONTROLS MAKES NO OTHER WARRANTIES EXPRESS OR IMPLIED EXCEPT AS PROVIDED BY THIS LIMITED WARRANTY.

The seller does not represent that the product; will prevent any property loss by sudden or accidental discharge of water from plumbing systems into living area of a residential dwelling; may not be compromised or circumvented; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained automatic water shut-off system may only reduce the risk of a sudden and accidental water loss event resulting in significant water damage and is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE OR OTHER LOSS BASED ON A CLAIM THE PRODUCT FAILED TO TURN OFF WATER SUPPLY OR GIVE WARNING OF A POTENTIAL WATER LOSS EVENT. HOWEVER, IF SELLER IS HELD LIABLE, WHETHER DIRECTLY OR INDIRECTLY, FOR ANY LOSS OR DAMAGE ARISING UNDER THIS LIMITED WARRANTY OR OTHERWISE, REGARDLESS OF CAUSE OR ORIGIN, SELLER'S MAXIMUM LIABILITY SHALL NOT IN ANY CASE EXCEED THE ORIGINAL PURCHASE PRICE OF THE PRODUCT, WHICH SHALL BE THE COMPLETE AND EXCLUSIVE REMEDY AGAINST THE SELLER. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. No increase or alteration, written or verbal, to this warranty is authorized.

DynaQuip Controls Corporation reserves the right to change or improve the design of any DynaQuip Controls manufactured product without assuming any obligations to modify product previously manufactured or sold.