



Operation and Service Guide: Showers

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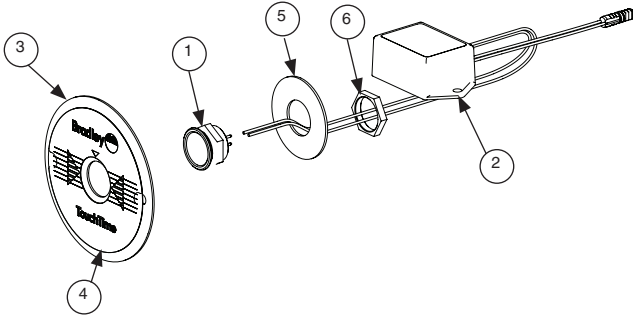
TouchTime® - DC (Models: HN200, HN200-T24, HN250, HN250-T24, HN250-BF)

⚠ WARNING The TouchTime activation must be connected with a 12V DC plug in adapter. Connections to 110 VAC can cause personal injury and will result in damage to the electronics.

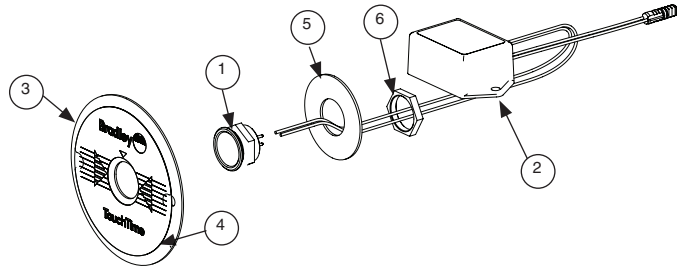


Activation of the pushbutton takes place only when it is released, thereby preventing "hold open" activation.

Mechanical Pushbutton



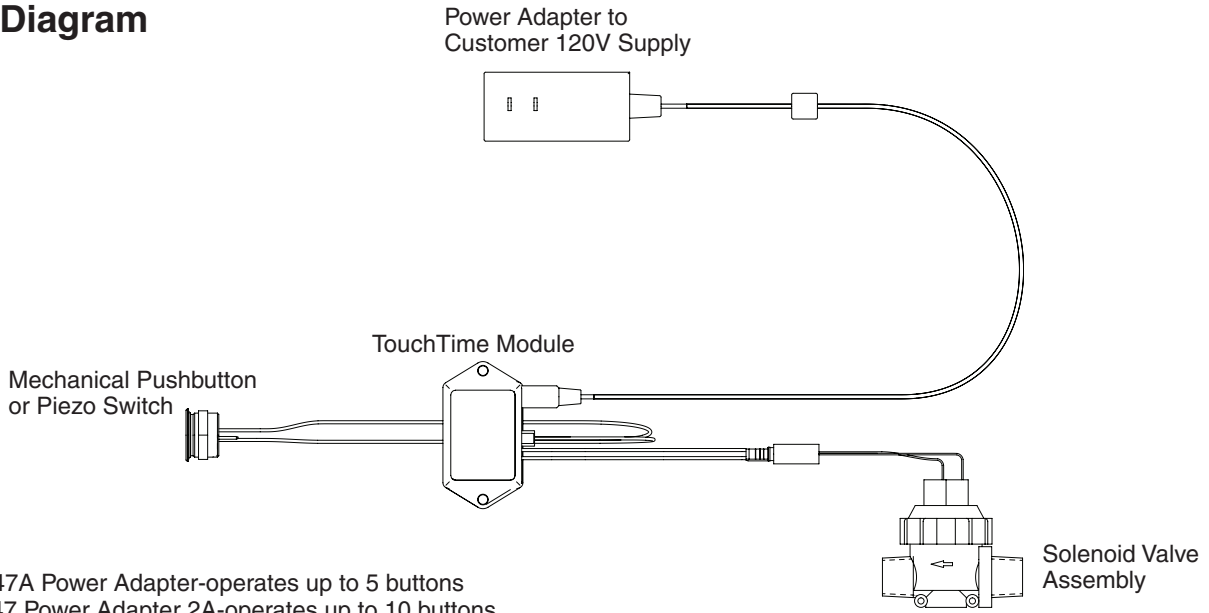
Piezo Switch



Item	Part No.	Description
1	S83-368	Mechanical Pushbutton
2	S83-360	TouchTime Module
3	159-400	Escutcheon - Flat
4	204-465	Decal (on face of escutcheon)
5	142-002CB	Flat Washer
6	110-258	Nut, Hex SS

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1	S83-369	Piezo Switch
2	S83-360	TouchTime Module
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Wiring Diagram



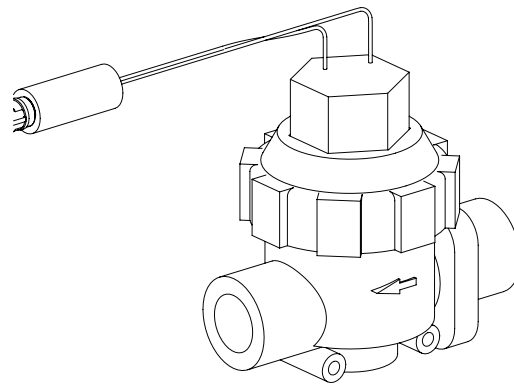
- *261-147A Power Adapter-operates up to 5 buttons
- 261-147 Power Adapter 2A-operates up to 10 buttons
- 251-026 Cable Extension 14'
- 251-027 4 way splitter
- 251-027A 2 way splitter
- 251-027B 3 way splitter



Troubleshooting – Solenoid Valve: Part nos. S07-095



Turn off water supplies to the unit before troubleshooting.



Problem	Cause	Solution
An individual operating station fails to shut off and drips.	Internal cartridge failure.	Replace S27-352B cartridge.
An individual operating station fails to turn on.	A failed cartridge for the valve or loose electrical connection to the terminal.	<p>Test the station to determine the cause.</p> <ol style="list-style-type: none"> 1. Disconnect the wires from the cartridge of an adjacent valve. Disconnect the wires from the problem valve and reconnect to the adjacent valve. 2. Turn on electrical and water supplies to the unit. Activate the pushbutton/piezo switch on the problem station, and the adjacent station should turn on. <p>If the adjacent station turns on and cycles normally, replace the cartridge on the problem valve.</p> <p>If the adjacent valve fails to turn on, inspect the wires from the pushbutton/piezo switch assembly and do the following:</p> <ul style="list-style-type: none"> • make sure there are no breaks and that the fully insulated disconnect terminals are firmly crimped in place; • turn off the electrical and water supplies; • reconnect to the adjacent valve and turn on the water supplies to the unit; • activate the pushbutton/piezo switch. If the station still fails to turn on, replace the pushbutton/piezo switch assembly.



Troubleshooting – TouchTime

Problem	Cause	Solution
Water fails to flow when pushbutton is pressed.	Plug-In Adapter	Test by plugging adapter into adjacent TouchTime module. If adapter will not power an adjacent module, then replace the plug-in adapter. Using a multimeter, check the volts for the adapter. It should be 12V ±10%. If the reading does not fall within that 10%, replace the adapter.
	TouchTime Module	Move the selector switch on the module to position 1. The green LED should cycle on for 1 second and off for 1 second continuously. If not, replace the TouchTime module.
	Solenoid Valve	The solenoid valve should open and close at the same rate. If this is not happening, see "Troubleshooting the Solenoid" and/or replace the solenoid cartridge.
	Pushbutton	With the pushbutton plugged into either connector on the TouchTime module, move the selector switch on the module to position 4. The green LED should illuminate for 4 seconds with the pushbutton is pressed and released.

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Adjusting the TouchTime Module



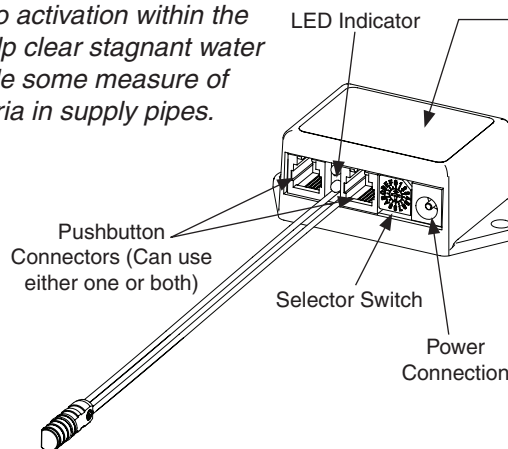
The TouchTime module is set at the factory with the selector switch in position 7. This provides a 60 second time out period.



The 24 hour flush function will activate water flow for a period of 60 seconds any time there has been no activation within the past 24 hours. This function is used to help clear stagnant water from the plumbing system and can provide some measure of prevention against the formation of bacteria in supply pipes.

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To adjust the TouchTime module to a different time out period, turn the selector switch to the desired time out setting (4 through 9 for no flush, A through F for 24 hours flush) as indicated on the module label.



S83-360 Timer	
Indicators Red = Disabled Green = In Use/Activation Length	
Diagnostic - See Instructions	
0: Test Timer Module I/O	
1: Solenoid Open & Close 1s	
Custom - See Instructions	
2: Push Button Light On/Off	
3: Timeout Period	
Timeout Setting	
4: 4s, no flush	A: 4s, 24hr flush
5: 15s, no flush	B: 15s, 24hr flush
6: 30s, no flush	C: 30s, 24hr flush
7: 60s, no flush	D: 60s, 24hr flush
8: 180s, no flush	E: 180s, 24hr flush
9: 300s, no flush	F: 300s, 24hr flush
114-325 Rev A	



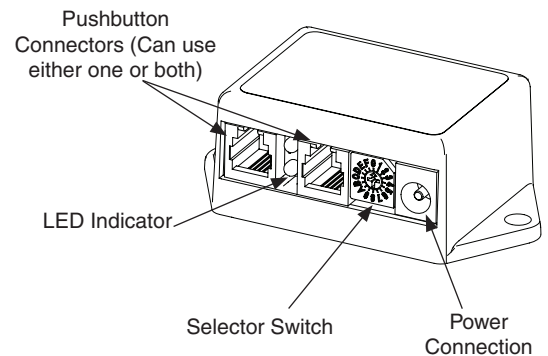
How to Test the TouchTime Module (S83-360)

Supplies Needed

- Small flat blade screwdriver - to set the selector switch
- Switch or Pushbutton - either piezo electric or mechanical
- 12VDC plug in adapter
- Solenoid



Use a pushbutton/piezo switch, plug in adapter and solenoid from an adjacent functioning assembly.



1. Discharge and reset the TouchTime module.
 - a. Connect solenoid, plug in adapter and pushbutton/piezo switch.
 - b. Set selector switch on TouchTime module to position 1.
 - c. Activate the solenoid. The solenoid should cycle open and close each second.
 - d. Remove power from TouchTime module. The green LED will stop flashing in 1 to 2 seconds.
 - e. Wait at least 5 seconds. This allows the TouchTime module to completely discharge and reset.
2. Test the TouchTime module.
 - a. Set the selector switch on TouchTime module to position 0 (diagnostic position for testing TouchTime module).
 - b. Connect power to TouchTime module and verify green and red LEDs remain on after 2 seconds.
 - c. Move selector switch to position 1. The green and red LEDs should flash quickly for 2 seconds (LEDs flash about 10 times).
 - d. Verify the solenoid cycles open and close each second.
 - e. Verify the green LED turns on and off with each solenoid click.
 - f. Move selector switch to position 4 (timeout setting = 4 seconds).
 - g. Press and release the pushbutton to initiate the timing cycle. Verify the green LED lights up for 4 seconds. The solenoid clicks will match the LED.
3. Test is complete. Set the selector switch on the TouchTime module to the desired setting (4-F).