

0422 SV

intelligent™ Electronic Shower Panel



Product Description

- Wall Mount Shower Panel.
- Electronic module detects the presence of the user.
- Computer based micro controller w/specially designed infra red sensors to detect within a required distance.
- Auto shut-off 8 minutes.
- All non-corrosive materials.

Features

- Pre-plumbed, easy installation
- Wall housing constructed of high resistance ABS, supported by a stainless steel frame-work
- Waterproof
- Vandal Proof / Tamper cycle
- Remote control re-programmable Cold Start / Non-interrupt / Detect Range / Detect Frequency

Certification

IAPMO cUPC
ADA / ANSI Compliant

Model Choice

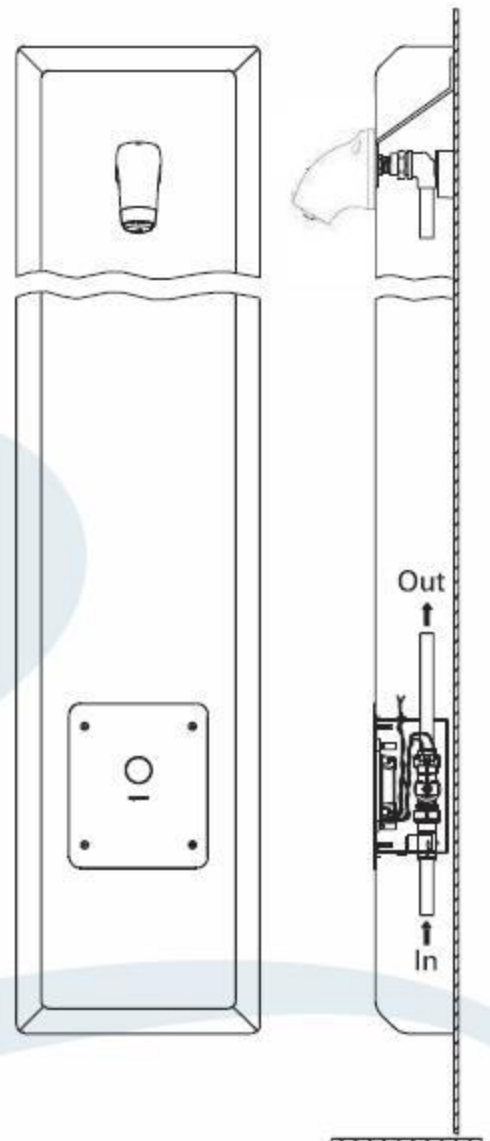
0422 without shower head
0422SV with shower head

Options

04-186
Transformer 120/24Vac

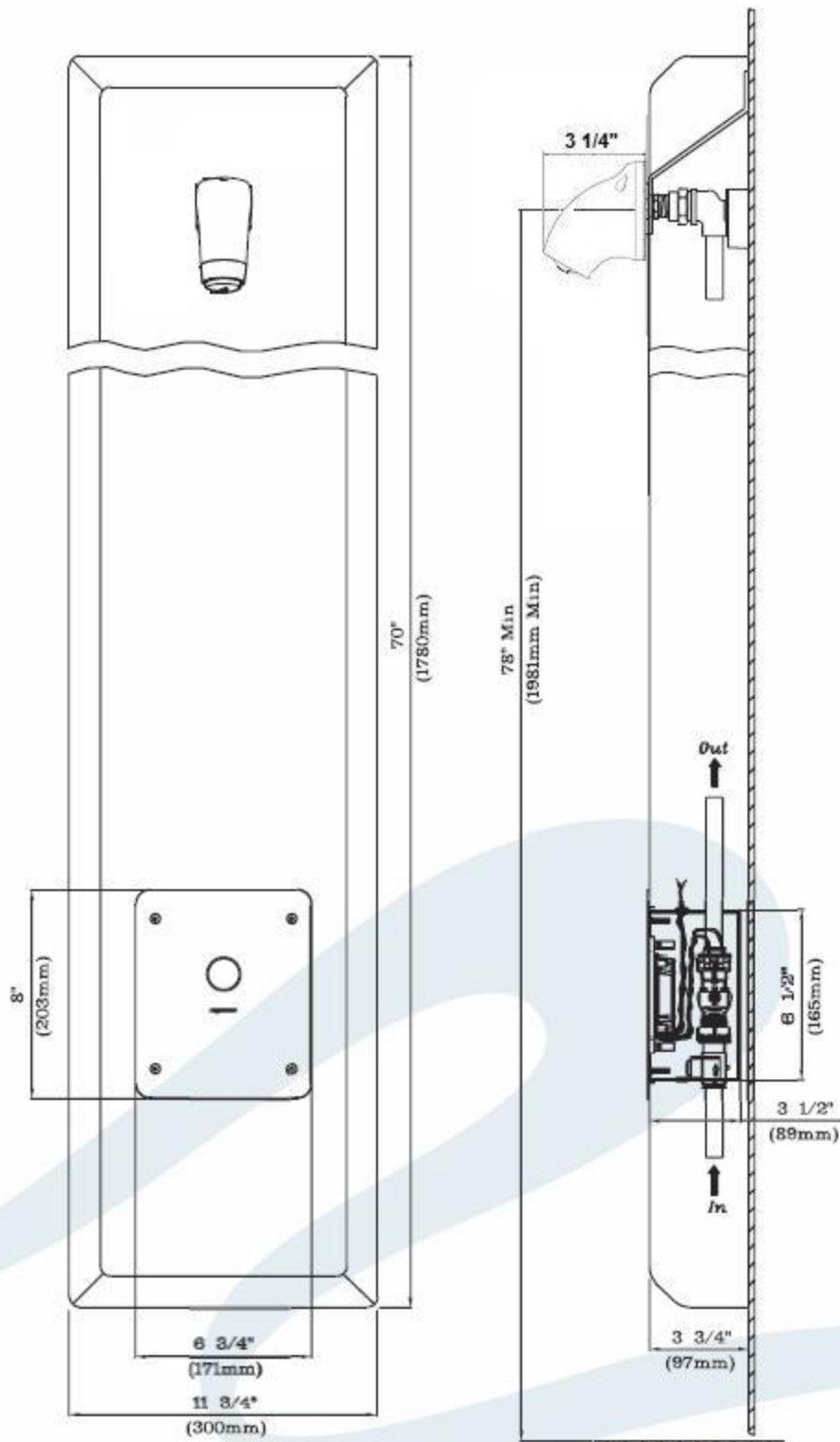
QS 80. 044
Shower Head
(included in 0420SV)

Mixer : MP4
(see mixer sections for more details)



0422 SV

intelligent™ Electronic Shower Panel TECHNICAL SPECIFICATIONS



0422 SV

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PRODUCT DESCRIPTION

Function:

The electronic module detects the presence of the user. A computer based micro-processor with specially designed infra-red sensors is programmed to detect a user within a required distance.

Packaging:

The entire unit is constructed of non-corrosive materials. The installation is rapid with the pre-plumbed and pre-mounted hardware. The faceplate is 14 ga. stainless steel to withstand abuse and maintain a good appearance. Wall housing constructed of high resistance ABS, supported by stainless steel frame-work for lifetime durability. The electronic module enclosure is made of high impact plastic and is sealed. There are no electro-mechanical devices (for adjustments) to hinder sealing or which may require troublesome disassembly.

Adjustments:

Adjustments are pre-set by the factory for normal usage; reprogramming the control unit to suit special conditions is possible from an optional remote reprogrammer module. This user-friendly module permits easy function changes in the distance and time cycles, for example:

- * Non-interrupt cycle: 1 - 15 sec.
- * Detection delay: 0 - 14 sec.
- * Cold-start: 2 - 30 sec.
- * Sensitivity (detect range): Level 1 to level 15 (10" - 32")
- * Address (Detect Frequency) Frequency 1 to 4
- Tamper cycle: 8 min. auto-stop
- (*re-programmable)

Technical Specifications:

- Electrical requirements: 24 V.A.C. 15 V.A.
- Electro-mechanical valve: 24 V.A.C. 50/60 Hz
- Operating water pressure: 15 to 150 psi
- Water flow rate: Adjustable
- Water connection: 1/2" copper

Special Note- Opposed Mounting:

When installing showers directly opposed to each other (face-to-face), the controls can trigger each other on. Simply program (using a remote control) the 'Address' frequency mode to a different one that the opposed shower detector is using. Example...a shower frequency address is at #1 and the one mounted on the opposite wall can be set to address #2. This is a design-incorporated feature, thereby eliminating unwanted activation.

Note: Address Detect Frequency reprogrammable by remote.

Address Frequency Level 1 to 4 - Changes Detection Frequency to 4 different levels without dismantling the unit.

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FUNCTION INFORMATION

- | | |
|---|---|
| A) Non-Interrupt Cycle (Run Time): 1 - 15 sec. | D) Sensitivity (Detect Range): Level 1 to level 15 (10" - 32") |
| B) Detect Delay (Detect Time): 0 - 14 sec. | E) Address (Frequency): Frequencies 1 to 4 |
| C) Cold Start (Warm-up): 2 - 30 sec. | F) Tamper Cycle: 8 mins. Auto-stop pre-set |

A) Non-Interrupt Cycle (Run Time)

The user may momentarily be out of detection range (e.g. to pick up a bar of soap); a 4 second non-interrupt cycle is factory-programmed to accommodate such absences and allow continuous water flow

** The non-interrupt cycle is re-programmable from 1-15 secs.*

B) Detect Delay (Detect Time)

The detection delay is set at 2 seconds. This is to prevent unwanted starts by passers-by in close quarters.

** The detect delay cycle is re-programmable from 0-14 secs.*

C) Cold Start (Warm-up)

Cold water from automatic showers! This *intelligent™* feature allows warm water to arrive at the showerhead. Activate the shower and as soon as the water flows, remove hand or stand back. The shower runs by itself for the 12 sec. period, or an allotted time if you wish to re-program for your building application.

Note: To conserve water, the cold start cycle is automatically available only once in a 30-minute period.

** The cold start cycle is re-programmable from 2-30 secs.*

D) Sensitivity (Detect Range)

The detection range is adjustable through re-programming and detects between 10" to 32". Factory-programmed detection range is set at level 10.

- To increase range, re-program sensitivity from level 9 to 15 (15 being the best detection for a longer range).

- To decrease range, re-program sensitivity from level 7 to 1 (1 being the least detection for a shorter range).

** The sensitivity cycle is re-programmable from level 1 to 15.*

Function Feedback

Upon power-on or activation of the remote, when the unit detects a user or object, a light appears on the detection lens to judge if sensitivity adjustment (detect distance) is correct. This feedback light feature turns off automatically after 5 mins. of normal use.

E) Address - Detect Frequency

This *intelligent™* feature eliminates possible problems of oppositely (face to face) mounted systems.

Such installation can trigger oppositely mounted units unnecessarily. With the remote, change of frequency, address 1 to 4, makes it impossible for one unit to be inadvertently triggered by another.

** The address frequency is factory programmed at 1 and is reprogrammable from 1 to 4.*

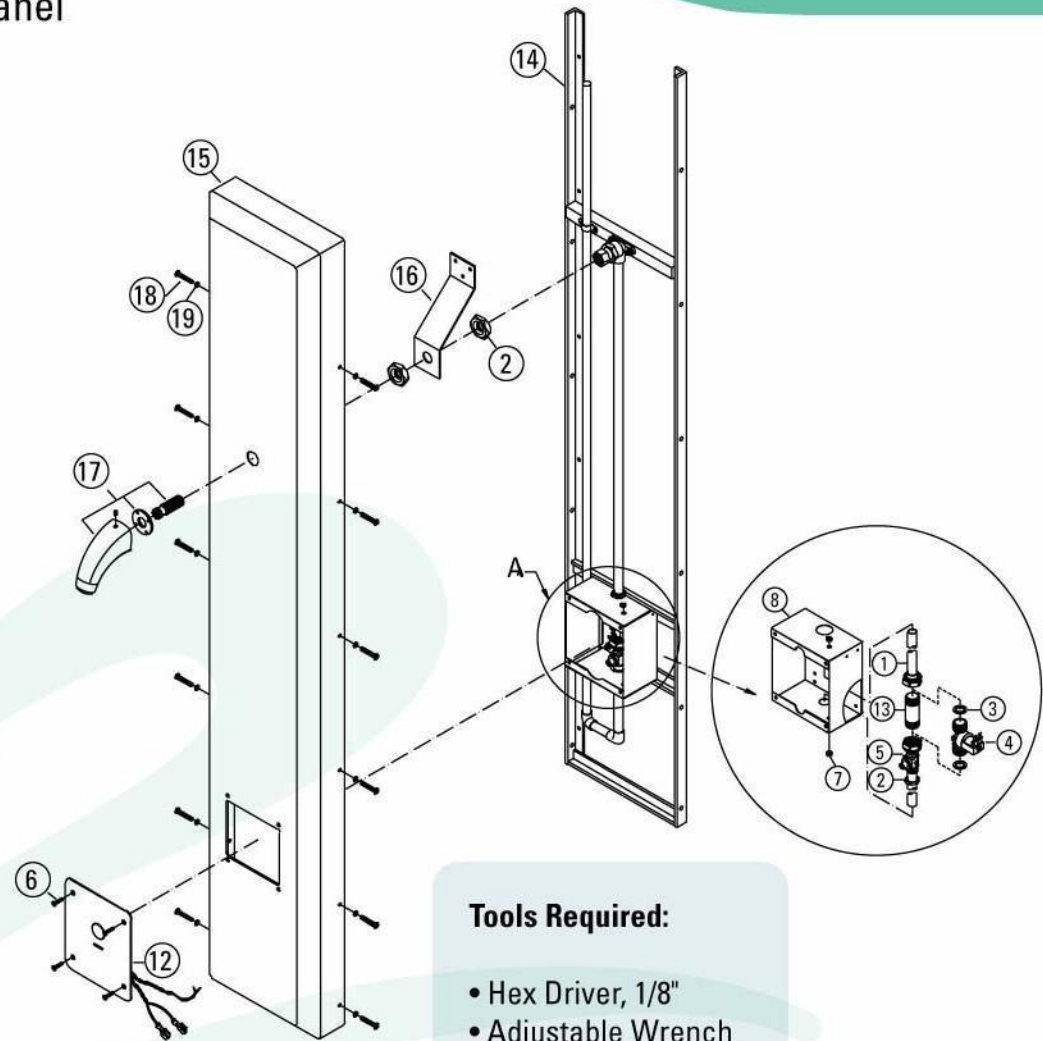
F) Tamper Cycle

To prevent tampering, the shower will run for a maximum time of 8 minutes. The tamper cycle is not adjustable. The unit will shut off and the control will return to its regular operation only when the object is removed.

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INSTALLATION STEPS

- 1 - Fix to the wall the stainless steel framework # 14 using a level. Ensure that the wall is flat not to distort the framework, shim if necessary. The mounted shower panel detection lens should be approx. 48" from the floor.
- 2 - From a top water supply, connect the piping to a tempered source.
- 3 - Solidly mount the shower head support bracket # 16 to the wall.
- 4 - Screw in the brass inlet shower head shank and seal. See the illustration on the 80.042 shower head # 17.
- 5 - Install the ABS shower panel # 15 to the framework # 14 with screws #18 and flat washers # 19 , using a 1/8" ball driver.
- 6 - With piping installed, purge waterways with jig # 13 in place.
- 7 - Close water supply ball valve
- 8 - Replace the jig # 13 with solenoid valve # 4 and red gaskets # 3.
- 9 - Open water supply ball valve # 5 and checks for leaks.
- 10 - Install the grommet # 7 in the appropriate hole in the housing # 8.
- 11 - Install the 24V wiring (wire spec sheet) thru rubber grommet # 7.
- 12 - Connect the two wires (insulated terminals) from the electronic module to the tabs on the solenoid valve # 4. No polarity is required.
- 13 - Connect the 24 V wires to the electronic module (wire twists).
- 14 - Using the Flat Head screws # 6, fix faceplate # 8 to the housing # 7.
- 15 - Apply the current to the 24Vac transformer powering circuit module.
- 16 - It takes approx. 5 to 10 seconds to energize the electronic circuit.
- 17 - Test for proper function. Upon detection, a red light in the lens area will to indicate power and function.(Make sure water supply ball valve is open)



Tools Required:

- Hex Driver, 1/8"
- Adjustable Wrench
- Soldering Tools

0422 SV - intelligent™ Electronic Shower Panel MAINTENANCE

Aquanar products are design and engineered with precision and specially chosen components. Replacement with genuine Aquanar parts are an important factor in product performance. Non genuine parts may void warrenty. Remove power from breaker source.

Remove faceplate & electronic module. Disconnect electrical tabs on the solenoid valve and the two power wires. (Wire twists)
Check carefully that corrosion did not form on connections.
If corrosion or wire damage is present, repair accordingly.

Cleaning the Solenoid valve / filter

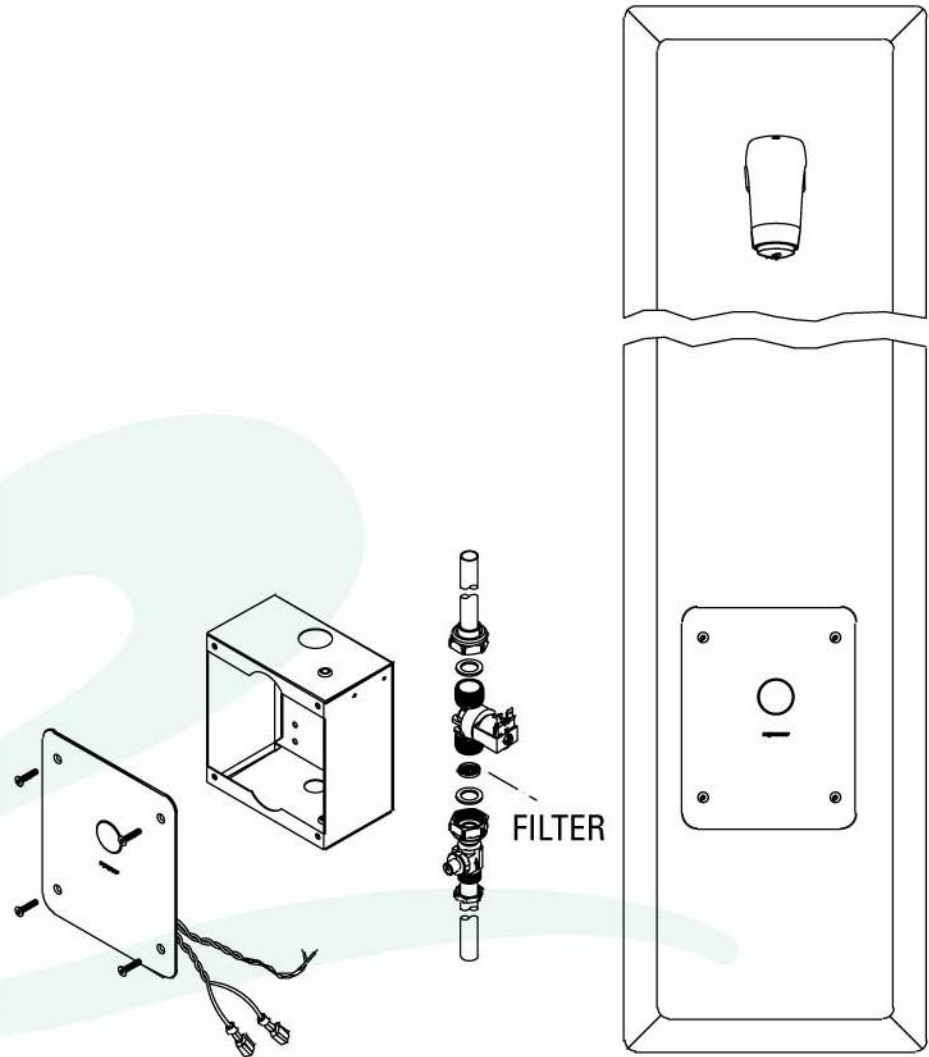
- With flat screwdriver, close water source at ball valve.
- Remove the solenoid valve and check if filter is clear of debris.
- Remove filter, clean and rinse with warm water. Dry and reassemble.

Product Care

Aquanar products are constructed of the highest quality materials. Although durable and robust, abrasives and harsh chemicals can damage surfaces. Clean Stainless steel faceplate and lens with a damp soft cloth. Dry with a soft towel. Housing is constructed of a high impact ABS material. The white color and textured finish is chosen for both ease of maintenace and cleaning. Soft sponge surface with a mild soap and water, rinse thoroughly and dry with a soft towel.

Re-assembling

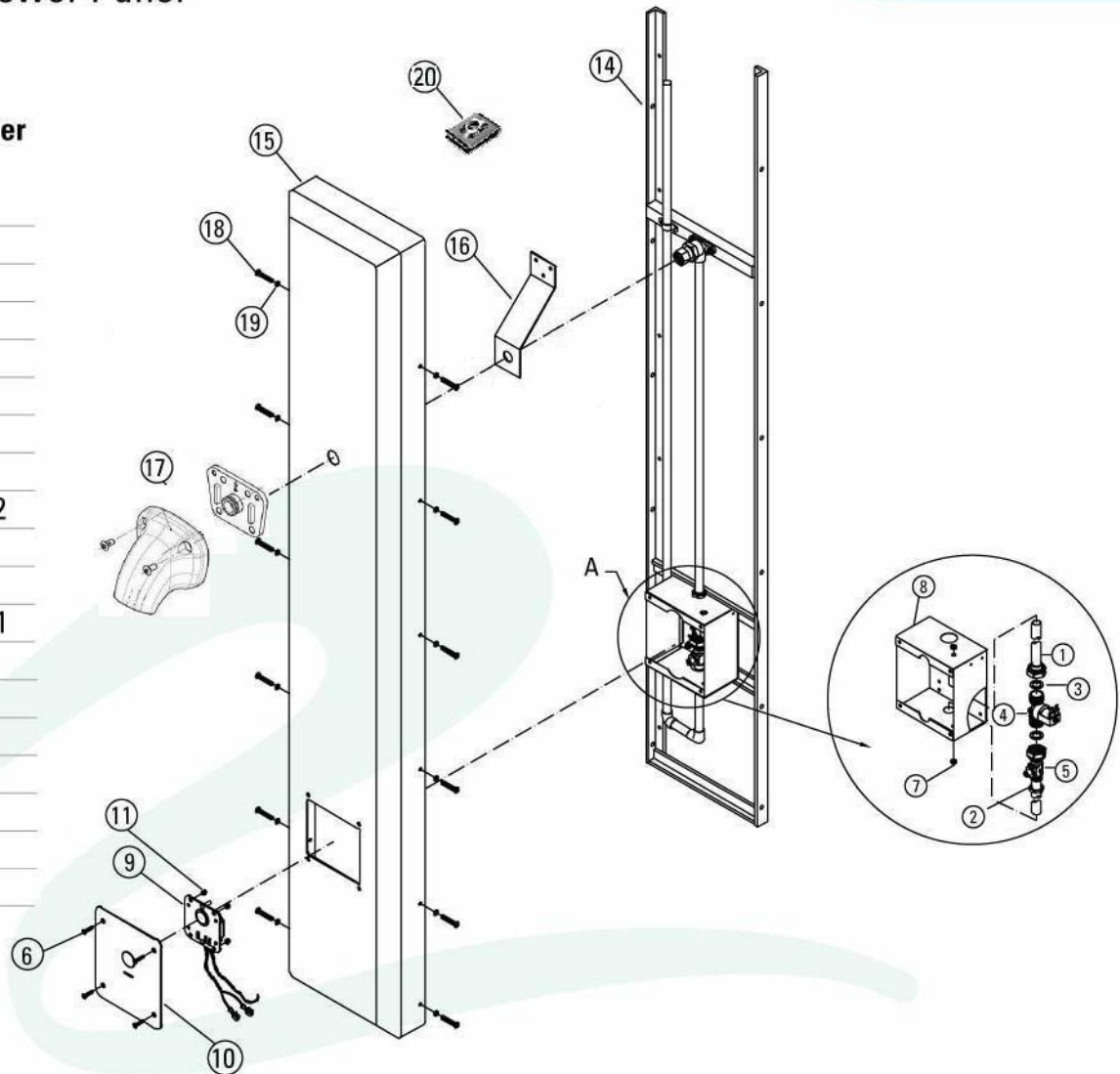
To re-install, reverse the above steps.



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PARTS LIST

#	Description	Part Number
1	Outlet pipe assy	01-047
2	Hex nut, Brass 1/2"NPS	02-012
3	Red gaskets	02-028
4	Magnetic valve 24Vac	04-006
5	Ball pipe assy.	01-048
6	FHHSMS #10-32x.75" s.s.	08-008
7	Rubber grommet	04-018
8	Enclosure s.s.	02-001
9*	Electronic Module	AQN-0420-2
10*	Face plate s.s.	02-002
11*	Nylon locknut # 6-32	08-005
12*	Consists of parts 9, 10 & 11	AQN-0420-1
14	Framework	02-024
15	Shower housing	02-026
16	Wall brace	02-058
17	Shower head	QS80.044
18	BHHSMS #10-32x.50" s.s.	08-003
19	Washer flat s.s. #10	08-020
20	Nut	08-053



0400 Series

intelligent™ Electronic Shower SIMPLE GUIDE TO TROUBLESHOOTING

Unit not functioning - Verify power source.

If power source is known, turn off momentarily and turn back on. You now have the 'sensitivity' distance adjustment feature' indicator light' that appears in the center of the lens area when it detects persons or objects. This feature allows you to observe that the control detects an object.

Detection not occurring

Disconnect input 24VAC wires and check if there is power, 24VAC, to the input wires of the control. When 24VAC is present, turn power source off, [ie. Circuit breaker, switch etc.] Make sure that the twisted wire connection are clean and free of corrosion.

Note: It has been noted an occasion that a wire can be unintentionally twisted around the insulated part of the wire and cause a temporary or miss-connection. Twist the two metal strands of wire first to ensure a solid connection and complete with the wire twists. Turn power back on.

Detection OK and unit functions properly. - Unit is automatically reset and resumes normal function.

Detection OK but unit functions erratically.

Aquanar Electronic Controls are computers and because they have Micro-controllers, it allows them to analyze, make decisions and are specifically designed to react for human responses. But, there are things microprocessors do not like ... [ie....Arcing during connection when twisting wires with power 'ON' may make the microprocessor "goofy"] This arcing is actually a rapid succession of 'off' and 'on' and should be avoided. It is not dangerous for the unit but it may cause improper function of the micro-control... If so, turn power 'OFF' from the main source for five to ten seconds, and then turn it back 'ON'. This allows the microprocessor to re-initialize and the unit will then function normally.

Detection and indicator lamp is still not functioning

Return unit to factory for verification and/or repair

Indicator light stays on constantly after restoring power.

If no person is in the detection zone and the indicator light is on, the control is detecting a wall or other object. If an object is constantly detected for a period of 8 minutes, the unit automatically shuts off until the object is removed. At this time, the control appears to be not functioning. (Shut down mode.) Do not forget that if the control continuously detects a constant object like a wall, whether you are placing yourself in front of this control and remove yourself, the control has you or the wall as a constant detection and will not react. [It is constantly in the detection mode and shuts off after this 8 minute time span.] Reprogram the adjustment 'sensitivity' level to a shorter distance, to eliminate the detection of this constant object. The unit will now function normally.

Note: Understanding how the electronic control functions, including the detection 'feed back' features, makes servicing easy and rapid. Experience and past observations have resulted in a rapid adjustment in a few minutes for 95% of cases.