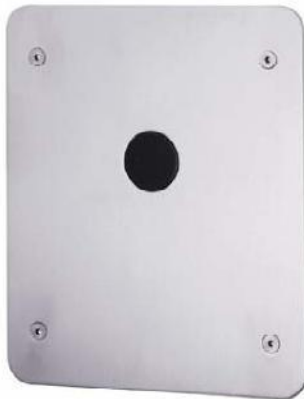


**0420**

**intelligent™ Electronic Shower Control, Flush Mount**



**Product Description**

- Flush Mount.
- 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**

- All Stainless Steel / 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 :**

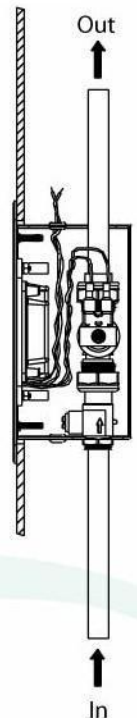
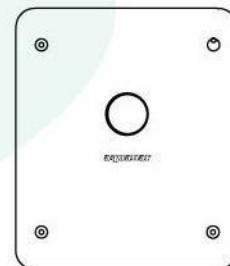
- 0420 without shower head
- 0420SV with shower head

**Options**

- 04-186 Transformer 120/24Vac
- QS 80. 044 Shower Head

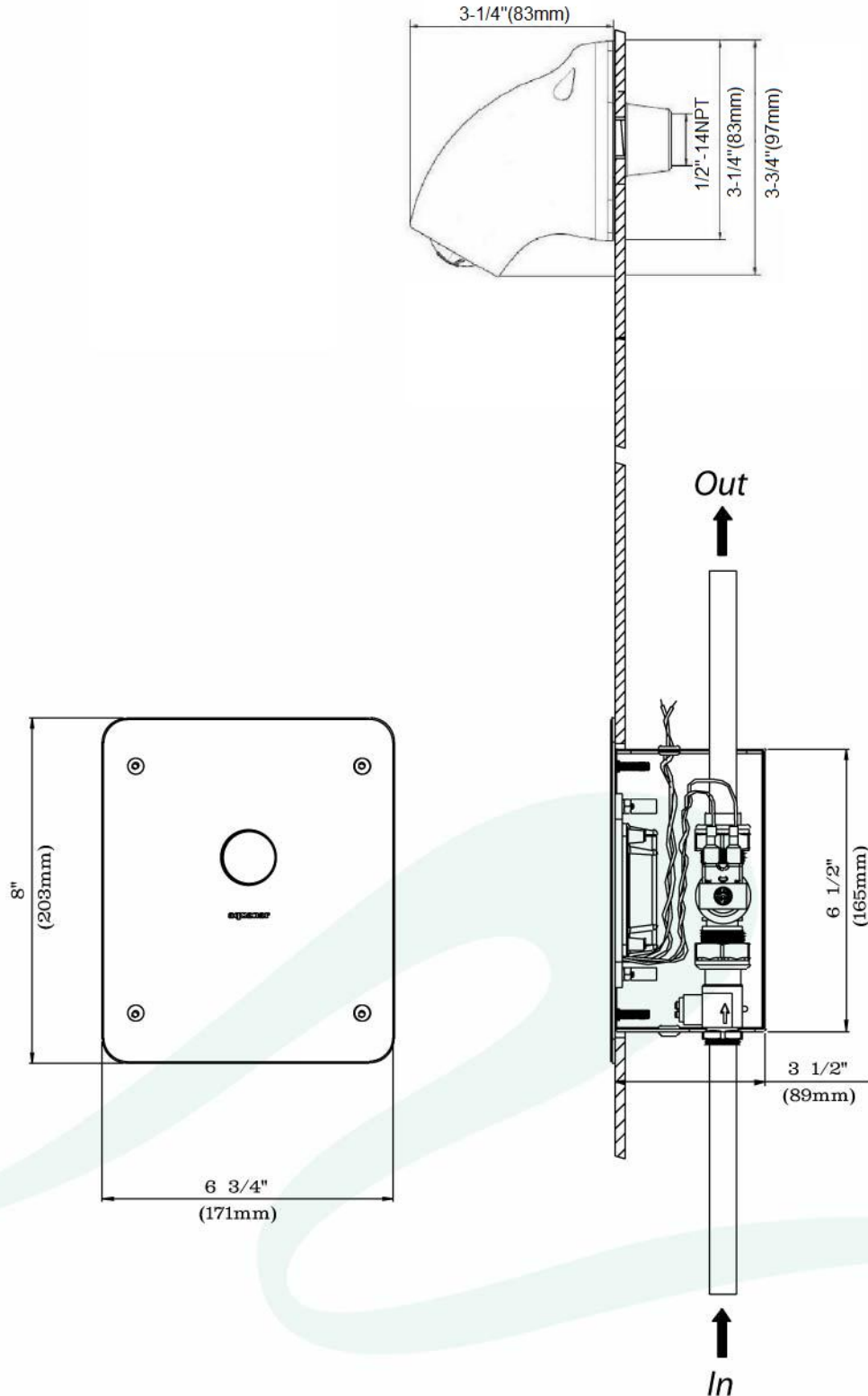
Mixer: MP4 1/2" supply

( see mixer sections for more details )



**0420**

**intelligent™ Electronic Shower Control, Flush Mount**  
**TECHNICAL SPECIFICATIONS**



## 0420

# intelligent™ Electronic Shower Control, Flush Mount

## 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 faceplate is 14ga. stainless steel to withstand abuse and maintain a good appearance. The wall housing is constructed of 304 stainless steel 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.

## 0420

### *intelligent™* Electronic Shower Control, Flush Mount FUNCTION INFORMATION

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

#### **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**

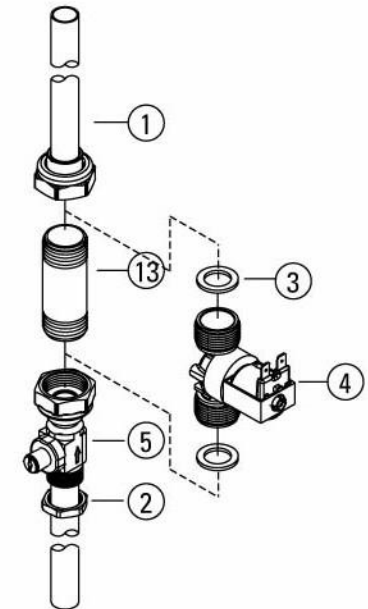
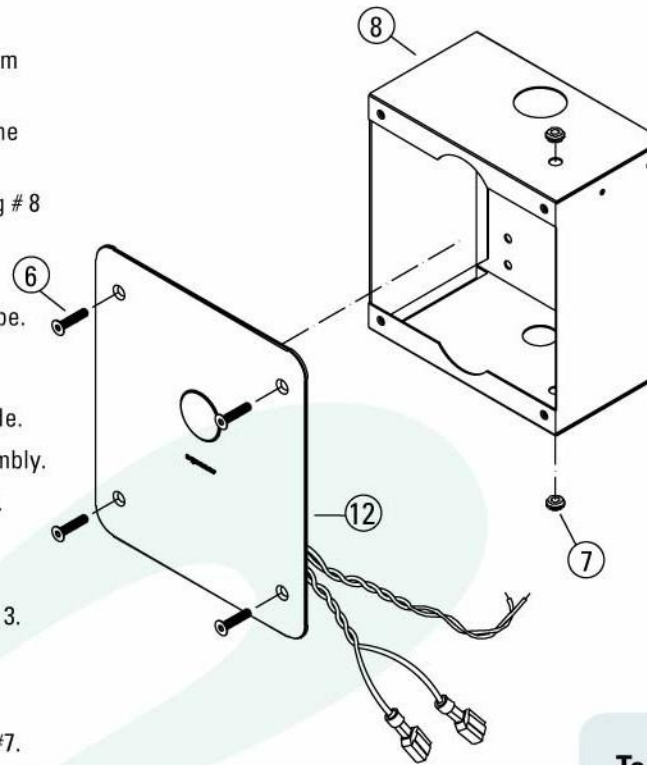
To prevent tampering, the shower will run for a maximum time of 8 minutes. The tamper cycle is not adjustable. The unit will shut off and the control will return to its regular operation only when the object is removed.

## 0420 - intelligent™ Electronic Shower Control, Flush Mount

### INSTALLATION STEPS

#### Function:

- 1 - Install the Stainless housing #8 in the wall cavity approx. 48" from the floor and recessed 1/8' from the finished surface.
- 2 - Position the housing #8 with the smaller hole to accommodate the water inlet side, normally from the bottom.
- 3 - Insert the water inlet, ball valve pipe assembly # 5 in the housing # 8 small hole, ball valve side inside the housing.
- 4 - Insert the 1/2" NPS thin brass nut #2 and tighten to the housing.
- 5 - Inside the housing, screw in the valve jig #13 to the ball valve pipe. **Do not** use any gaskets or sealants to the temporary jig.
- 6 - Screw the outlet pipe assembly #1 to the valve jig #13. It passes through the larger hole in the housing on the upper side.
- 7 - Connect the water supply to the lower side ball valve pipe assembly.
- 8 - Connect the copper outlet pipe assembly #1 to the shower head. **Ensure** that the piping is tension free to service valve.
- 9 - With 'roughing' installed, purge pipes. ( with valve jig in place )
- 10 - Close ball valve and replace jig with solenoid valve & gaskets # 3.
- 11 - Open water supply ball valve #5 and checks for leaks.
- 12 - Install the grommet #7 in the appropriate hole in the housing.
- 13 - Install the 24Vac wiring (wire spec sheet) thru rubber grommet #7.
- 14 - Connect the two wires ( insulated terminals ) from the electronic module to the tabs on the solenoid valve # 4. No polarity is required.
- 15 - Connect the 24 V wires to the electronic module ( wire twists ).
- 16 - Using the Flat Head screws #6, fix faceplate # 12 to the housing #8.
- 17 - Apply the current to the 24Vac transformer powering circuit module.
- 18 - It takes approx. 5 to 10 seconds to energize the electronic circuit.
- 19 - Test for proper function. 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

## 0420 - intelligent™ Electronic Shower Control, Flush Mount MAINTENANCE

Aquanar products are designed 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.

### Maintenance

- 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

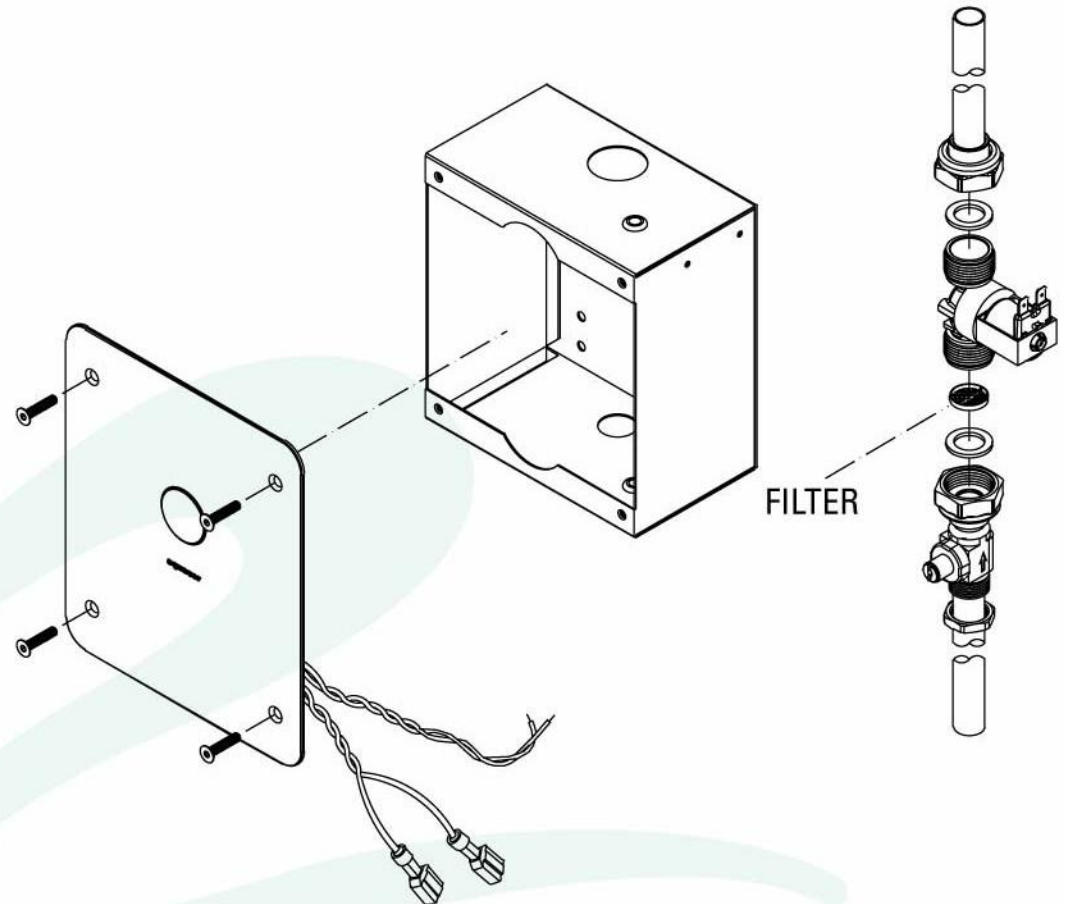
- With flat screwdriver, close water source at ball valve.
- Remove the solenoid valve and check if filter is clear of debris.
- Remove filter, clean and rinse with warm water. Dry and reassemble.

### 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.

### Re-assembling

To re-install, reverse the above steps.





## 0420

### *intelligent™* Electronic Shower Control, Flush Mount SPECIFICATION EXAMPLE

The electronic module consists of the emitter, receiver and micro-controller circuit in one compact sealed unit. It should be factory programmed and reprogrammable on site, **without dismantling the unit**, utilizing a remote control. For ease of distance adjustments, a temporary presence indicator light shall be included ( 5 minutes adjustment cycle ). The electronic module shall be flame retardant, waterproof and contain no accessible adjustment device to hinder waterproofing. A template nipple for the magnetic valve during 'roughing-in', a water flow control and shut-off service valve and a 24VAC magnetic solenoid valve (15 to 150 psi).

- Unit construction to be entirely of corrosion-proof materials; wall enclosure of 20 gauge, 304 stainless steel, vandal resistant front plate of 14 gauge, 304 stainless steel.
- The shower control shall be configured to allow detection beyond the water stream and, once activated, does not stop until the user has left the detection zone. (It is not an electronically activated timer.) A safety auto shut-off activates in case of vandalism, 8 minutes of solid, non movement detection, and returns to normal use when the object is removed.
- Detect frequency 'address' feature eliminates problems of oppositely mounted (face to face) systems by re-programming a different detection frequency with a remote control.
- A class II-120V/24Vac transformer of the proper rating can be supplied as an extra. The remote control reprogrammer is offered as an option.
- ADA Compliant