

# **SPEAKMAN SAFETY PRODUCTS**

## **Installation, Maintenance & Operation Instructions**

### **SEF-18XY, EYESAVER® FAUCET with SENSORFLOW, Battery or AC POWER**

#### **DESCRIPTION**

The SEF-18XY, Eyesaver® faucet series combines a Gooseneck Faucet with independently operated Eyewash. Different Models of faucets have an UCM (under counter mixture), or ACM (above counter mixer), or ThV (thermostatic valve) to adjust temperature for the Faucet, and an Infrared Sensor that controls a Solenoid Valve, powered either by Batteries or AC/DC adapter. Some models have a MO (manual override to bypass the Solenoid). The EyeWash is either with cold water or warm water adjusted and set with a TW (thermostatic mixing valve)

#### **SPECIFICATIONS**

OPERATION: Eyewash and faucet operate independently of each other

SUPPLY: 3/8 compression male connections for hot and cold inlets

FINISH: Chrome plated brass

EYEWASH ACTIVATION: Pull handle with graphics

EYEWASH SPRAYS: Aerated sprays.

FAUCET FLOW RATE: Autoflo® device controls flow to 2.2 GPM/ 8.3 LPM

EYEWASH FLOW RATE: 2.6 GPM at 30 psi. flowing. See flow data chart for additional information.

PRESSURE: 30 psi. minimum flow pressure, 80 psi. maximum static pressure

APPROVALS: Meets ASME A112.18.1, ANSI Z358.1 and CSA B125-98

VACUUM BREAKER (ST option): Approved ASSE, UPC and CSA. Meets ANSI/ASSE 1035, CSA B64.8, UPC

SHIPPING WEIGHT: 10 LBS.

#### **MODELS available:**

##### **With cold water for eyewash**

##### **With SEF-TW kit (Thermostatic Mixing Valve SE-370) for eyewash tepid water**

|                 |  |                    |
|-----------------|--|--------------------|
| <b>SEF-1810</b> | -4" Sensorflow, eyewash faucet, UCM, battery     | <b>SEF-1810-TW</b> |
| <b>SEF-1820</b> | -4" Sensorflow, eyewash faucet, UCM, AC/DC       | <b>SEF-1820-TW</b> |
| <b>SEF-1811</b> | -4" Sensorflow, eyewash faucet, TMV, battery     | <b>SEF-1811-TW</b> |
| <b>SEF-1821</b> | -4" Sensorflow, eyewash faucet, TMV , AC/DC      | <b>SEF-1821-TW</b> |
| <b>SEF-1812</b> | -8" Sensorflow, eyewash faucet, UCM, battery     | <b>SEF-1812-TW</b> |
| <b>SEF-1822</b> | -8" Sensorflow, eyewash faucet, UCM, AC/DC       | <b>SEF-1822-TW</b> |
| <b>SEF-1813</b> | -8" Sensorflow, eyewash faucet, TMV, battery     | <b>SEF-1813-TW</b> |
| <b>SEF-1823</b> | -8" Sensorflow, eyewash faucet, TMV, AC/DC       | <b>SEF-1823-TW</b> |
| <b>SEF-1814</b> | -8" Sensorflow, eyewash faucet, ACM, battery     | <b>SEF-1814-TW</b> |
| <b>SEF-1824</b> | -8" Sensorflow, eyewash faucet, ACM, AC/DC       | <b>SEF-1824-TW</b> |
| <b>SEF-1815</b> | -8" Sensorflow, eyewash faucet, UCM, MO, battery | <b>SEF-1815-TW</b> |
| <b>SEF-1825</b> | -8" Sensorflow, eyewash faucet, UCM, MO, AC/DC   | <b>SEF-1825-TW</b> |
| <b>SEF-1816</b> | -8" Sensorflow, eyewash faucet, TMV, MO, battery | <b>SEF-1816-TW</b> |
| <b>SEF-1826</b> | -8" Sensorflow, eyewash faucet, TMV, MO, AC/DC   | <b>SEF-1826-TW</b> |

**OPTIONS:**

**With an UCM (under counter mixer) in the assembly, the following parts have been added:**

- G20-1919 Undercounter Mixer Assy L/C
- G56-0030 Ucm Bracket And Screws
- 92-6634 Mixing Valve Inst. Instr Sht

OR: With a **TMV** (Thermo Mixing Valve) in the assembly, the following parts have been added:

- G20-1968 Thermo Mixing Valve
- G20-1968IMO Thermo Mixing Valve Instr Sht

With an **4"** Deck Plate in the assembly, the following parts have been added:

- G66-0186-PC 4" Deck Plate Asy

With an **8"** Deck Plate in the assembly, the following parts have been added:

- G66-0189-PC 8" Deck Plate Asy
- G66-0110 Deck Plate Hardwr Asy

**With an ACM (above counter mixer) in the assembly, the following parts have been added:**

- G20-1844 Abovecounter Mixer Assy (no bypass)
- G01-0050 Locknut Bag group
- G66-0111 Handle assy-Acm mixer

With an **8"** Deck Plate in the assembly, the following parts have been added:

- G66-0188-PC 8" Deck Plate Asy

**With an MO + UCM (or TMV) (manual override) in the assembly, the following parts have been added:**

- G20-1861 8" div valve assy
- G04-0351-PC ADA handle assy -div
- 01-0800-PC-P Bearing Sleeve
- G02-0006 Tensioner Spring
- 92-6638 Instruction card for G02-0006
- use  G76-0052 Solenoid for MO instead of G76-0033-LBL
- OR  G76-0060 Mini Sol for MO instead of G76-0059-LBL
- 24-0285 Brass Tee

With an **8"** Deck Plate in the assembly, the following parts have been added:

- G66-0187-PC 8" Deck Plate Asy

With a **Battery Power Module**, use:  G66-0169 (Batteries are inside the Power Module)

With an **AC/DC Power Module**, use:  G66-0169-AC (AC Adaptor inside)  
 66-0010 (Transformer Ac / 12 VDC)

**For all models use -Adapter Solenoid:**  05-2361  
**-Bracket Solenoid:**  56-0168

Solenoid G76-0033-LBL with (RPG 76-0039) or Mini Solenoid G76-0059-LBL with (RPG 76-0059)

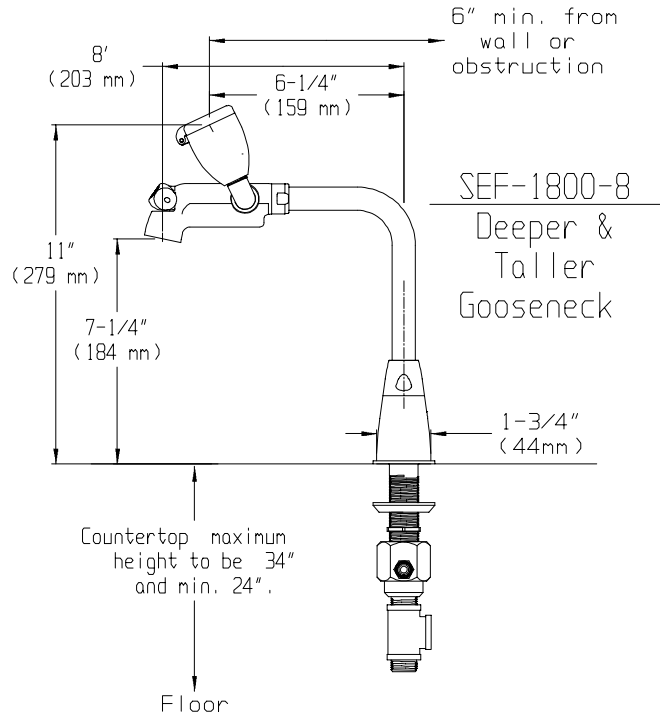
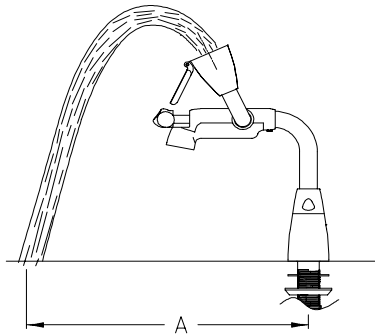
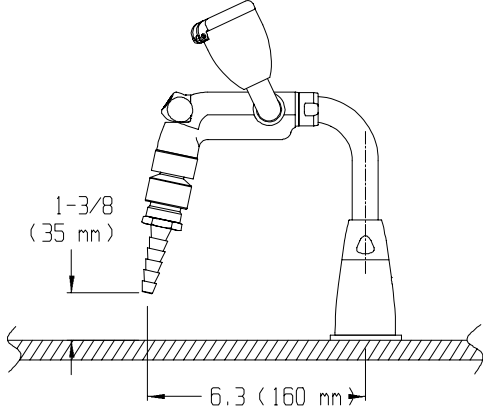
**For Aerator use:**  G05-0727-PC 2.2Gpm 15/16-27 Anti-Lime Aerator  
OR:  G05-0820-PC-P 0.5Gpm Boca  
OR:  G05-0554-PC 15/16-27 -2Gpm Laminar Flow Outlet

**SEF-18XY-TW has SEF-TW kit** (with Thermostatic Mixing Valve SE-370) for eyewash tepid water

**OPTIONS: for the Faucet**

|  |                                       |
|--|---------------------------------------|
| ◇ BOCA – Vandal-Resistant 0.5 gpm Flow Control | ◇ AC/DC Transformer with Adaptor      |
| ◇ D75 – Diamond 75 Escutcheons                 | ◇ 8 – 8" Gooseneck Depth (see figure) |
| ◇ ST – Serrated Tip with Vacuum Breaker        | ◇ TW – Thermostatic Mixing Valve      |
| ◇ HS – Supply Hoses to Stops                   |                                       |

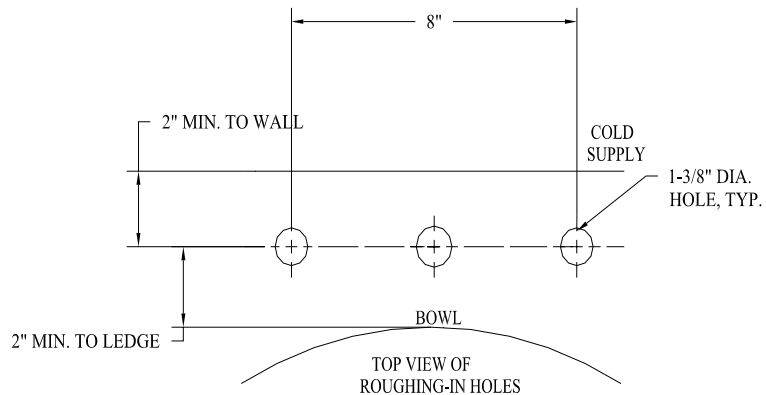
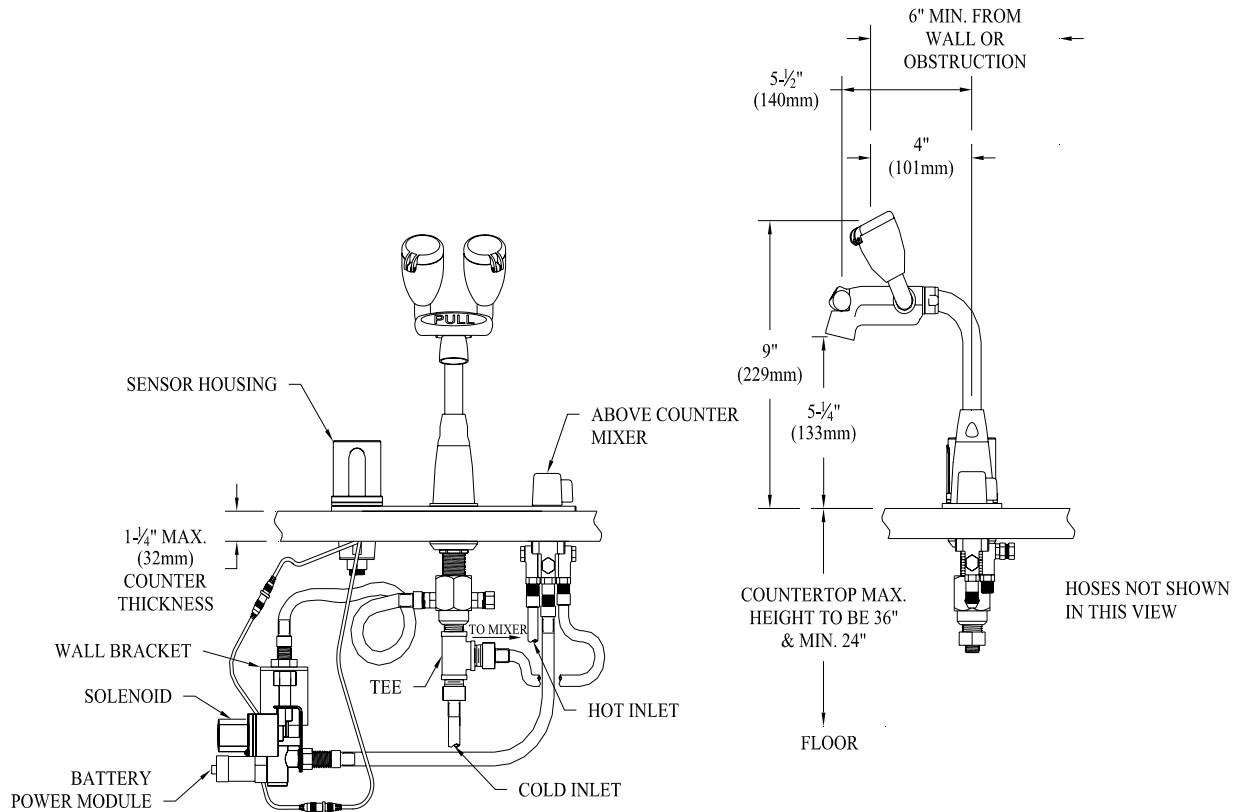
SEF-1800-ST  
AERATOR REPLACED BY VACUUM  
BREAKER AND SERRATED TIP



**FLOW DATA**

| Flowing Pressure-<br>(BAR)       | psi.          | 30<br>(2.07) | 40<br>(2.76)     | 50<br>(3.45)  | 60<br>(4.14)  | 70<br>(4.83)  | 80<br>(5.52)  |
|----------------------------------|---------------|--------------|------------------|---------------|---------------|---------------|---------------|
| Flow Rate-<br>(LPM)              | gpm           | 2.6<br>(9.8) | 2.9<br>(11)      | 3.0<br>(11.4) | 2.8<br>(10.6) | 2.8<br>(10.6) | 3.0<br>(11.4) |
| Distance Eyewash<br>Plume, 'A' - | ins.<br>(cm.) | 13<br>(33.0) | 14-1/2<br>(36.8) | 15<br>(38.1)  | 15<br>(38.1)  | 15<br>(38.1)  | 16<br>(40.6)  |

**Model SEF-1814 -8" Sensorflow, eyewash faucet, ACM (Above Counter Mixer), battery**



**IMPORTANT:**

The supply line shall provide an uninterrupted flushing fluid at a minimum of 30 psi flow pressure. If shut off valves are installed in the eyewash supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

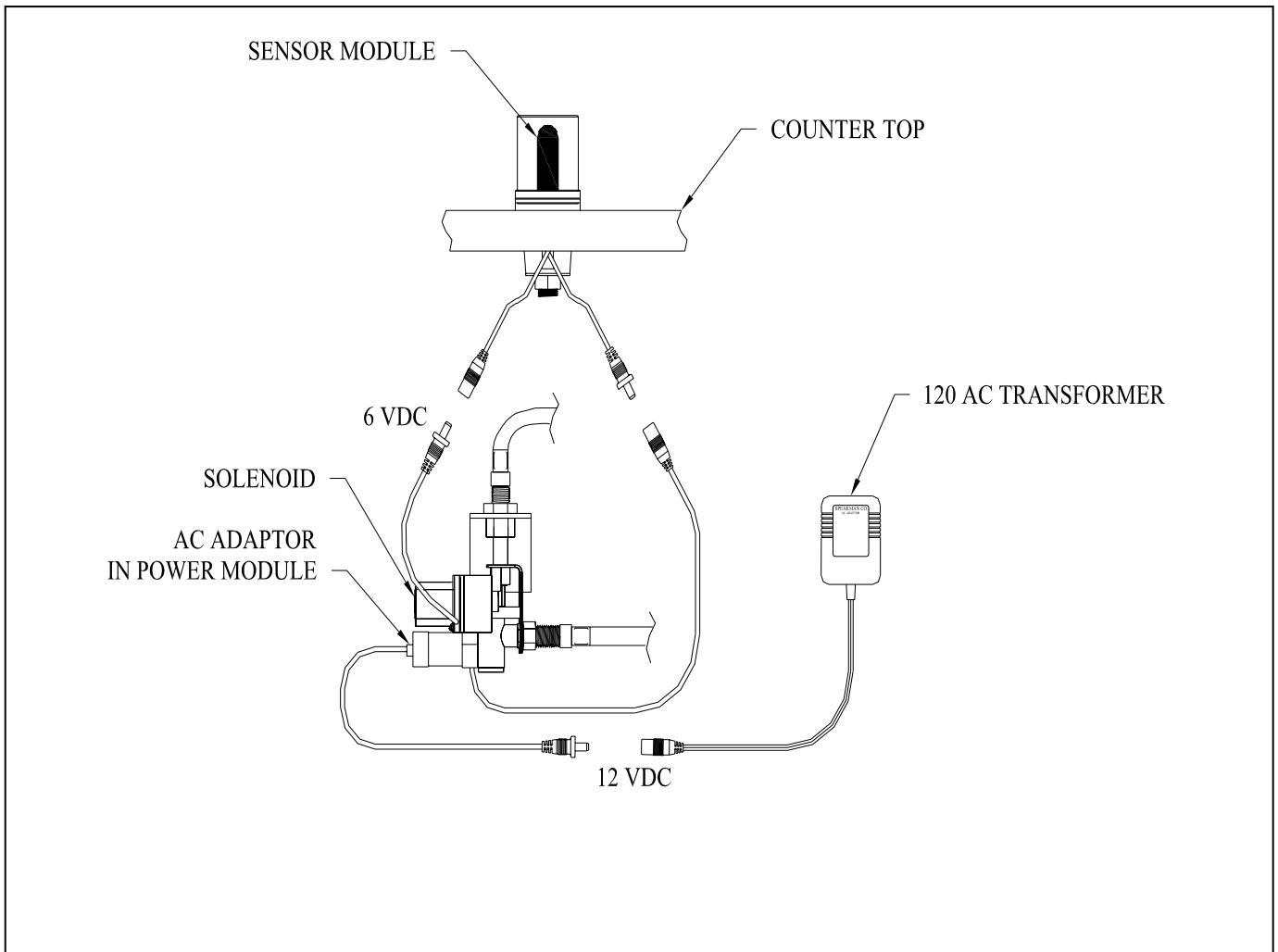
**Model SEF-1824 -8" Sensorflow, eyewash faucet, ACM, AC/DC**

Is similar to **Model SEF-1814 but with AC/DC adapter instead of batteries**

For any option, when using 120VAC (alternative current supply), replace the G66-0169 (Battery Power Module) with G66-0169-AC (AC Power Module). Also add a Transformer 120VAC to 12VDC.

The Transformer supplies 12VDC (direct current) which is further stepped down and filtered to 6VDC by the AC Adapter for the 6V Solenoid.

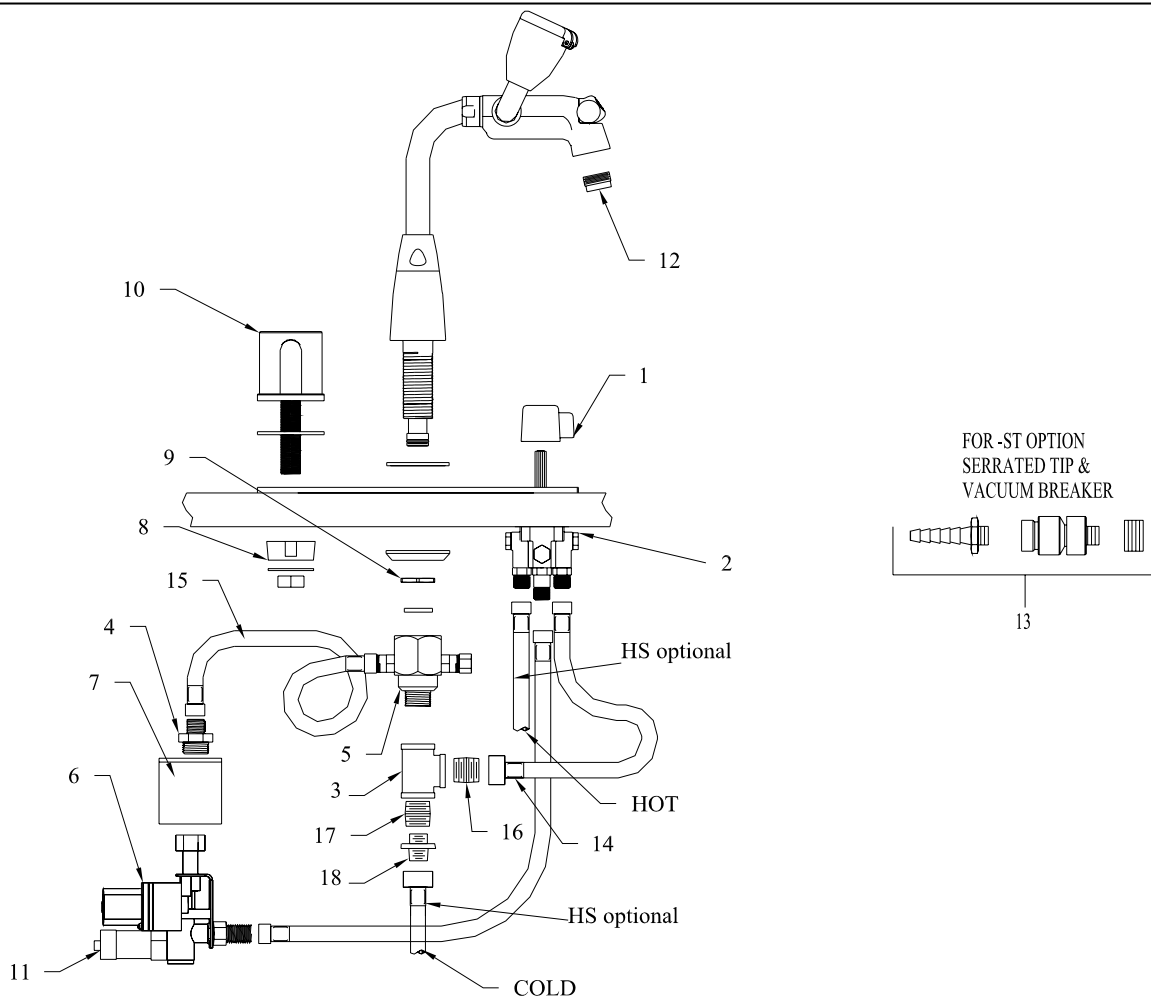
**Wiring for AC/DC option:**



# PACKING LIST

| Item | Description                       | Qty. | Item | Description   | Qty. |
|------|-----------------------------------|------|------|---|------|
| 1    | Above Counter Mixer               | 1    | 10   | Sensor Housing Assembly   | 1    |
| 2    | Valve Mounting Hardware Bag Group | 1    | 11   | Power Module  | 1    |
| 3    | Cold Inlet 1/2" Tee               | 1    | 12   | Aerator (BOCA- .5gpm or LF- 2.2gpm)                                 | 1    |
| 4    | Adaptor for Solenoid              | 1    | 13   | Serrated Tip and Vacuum Breaker for -ST option, (replaces item #12) | 1    |
| 5    | Base Tee adapter Assembly         | 1    | 14   | 3/8" Compression -to 1/2"NPSM Hose                                  | 1    |
| 6    | Mini Solenoid 6VDC                | 1    | 15   | 3/8" Compression -to 3/8" Compression                               | 1    |
| 7    | Wall Bracket                      | 1    | 16   | Nipple 1/2" I.P -1" long  | 1    |
| 8    | Sensor Mounting Hardware Group    | 1    | 17   | 05-1860 Threaded Bushing 1/2" x 3/8"                                | 1    |
| 9    | Gooseneck Mounting Hardware       | 1    | 18   | 05-2271 Adapter 3/8"NPTx 3/8"compr                                  | 1    |

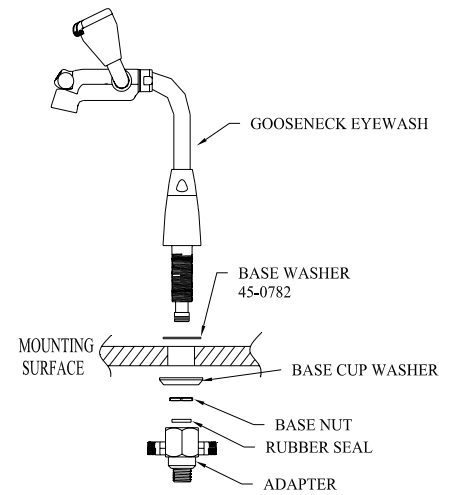
## Model SEF-1814 -8" Sensorflow, Eyewash faucet, ACM, battery



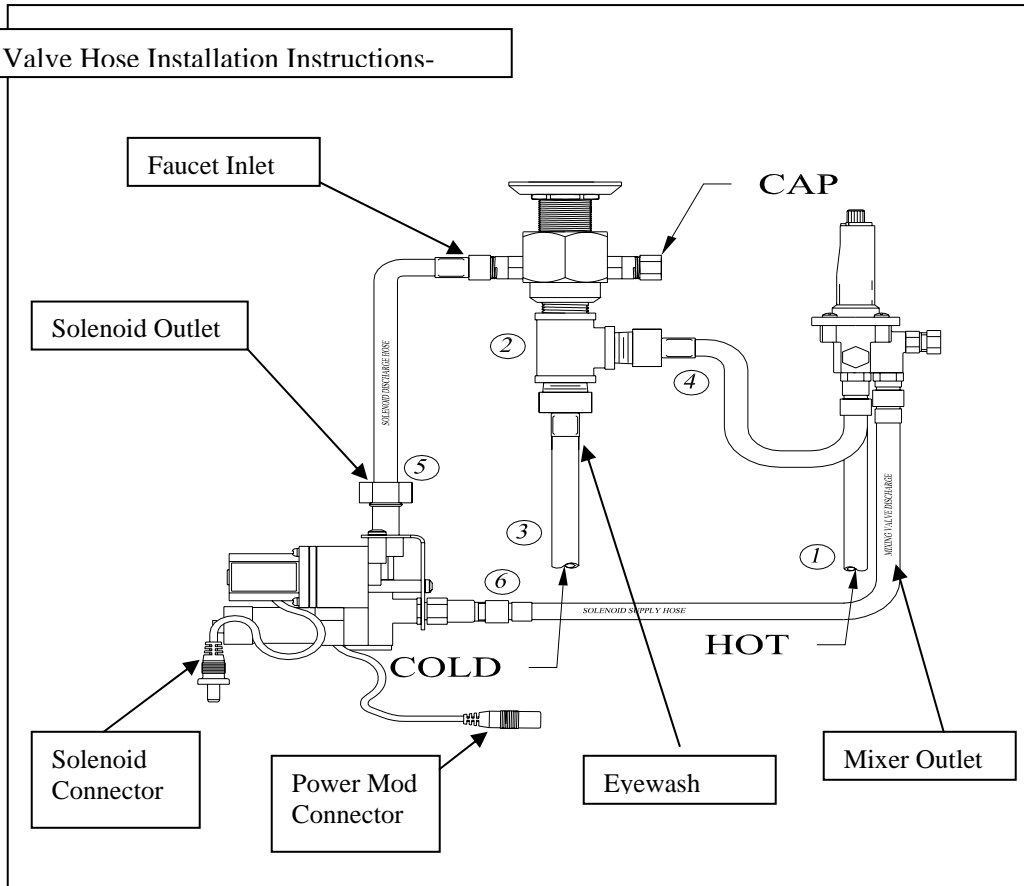
## INSTALLATION

### Step 1: Gooseneck Eyewash Mounting-

- Place the gasket and deck plate onto the sink bowl or counter top. Slip the grooved  $\varnothing 2.20$ " base washer **45-0782** onto the gooseneck and slip through center hole of sink.
- The eyewash swivels through  $200^\circ$  of rotation. Position the base of the gooseneck eyewash so the setscrew hole in the base is pointing towards the back of the sink or countertop. **Note-** For rigid gooseneck, position the gooseneck and tighten the setscrew in the mounting base. From below the sink slip the cup washer onto the shank and use the nut to tighten the assembly down onto the sink or countertop.
- Important-** Next insert the rubber seal into the base adapter and screw the adapter onto the shank of the gooseneck eyewash until it bottoms out (Tape may be applied to the shank). If the adapter needs to be positioned for hose attachment, it can be backed off up to a max  $1/2$  turn.
- Apply tape or sealant and connect the tee and nipples so that the tee outlets are accessible.



### Step 2: Valve Hose Installation Instructions-



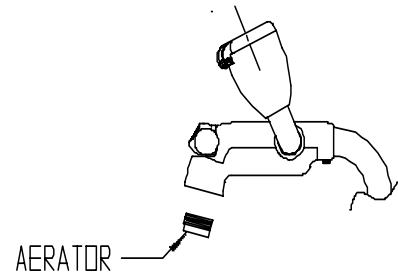
- Attach hot water main supply through the hose to HOT inlet port of Mixer.
- Attach Base Tee Adapter to eyewash inlet cold port of the gooseneck assembly.
- Attach cold water main supply through the hose to the TEE on eye wash inlet.
- Connect the same TEE to the COLD inlet port of Mixer with another hose.
- Connect the solenoid outlet port to the side inlet port of the gooseneck faucet, using enclosed Solenoid adapter and wall mounting bracket. Ensure that the opposite side of the gooseneck inlet is capped off.
- Connect the solenoid inlet port to the outlet of the Mixer valve.

### Step 3: Solenoid Wall Mount Instructions-

- After hoses are connected, and the wall bracket is in place, securely tighten the screws on the wall in a convenient place.
- The IR Sensor comes standard with Battery powered operation. The product can be purchased also with an option that has AC/DC transformer and an Adapter that goes into Sensor in place of batteries.

### Step 4: Unit Flushing-

- After the assembly is complete, turn the hot and cold water supplies on and check for leaks.
- Activate the faucet to flush both the hot and cold sides of fixture. Check all connections for leaks.
- Install the aerator into the faucet outlet.
- Activate faucet and then activate the eyewash by pulling the handle and assure proper spray formation and no leaks.

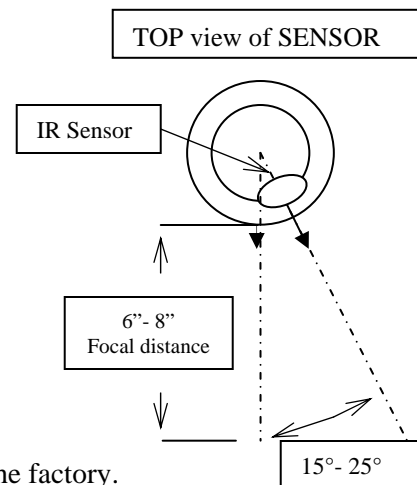


## OPERATION

**Faucet-** Place hands in IR sensor zone (Item 10) to activate the faucet. The sensor housing, located to the left of the faucet, contains a sensor module. The sensor utilizes a 6 – 8 inch long invisible infrared sensing beam. For optimal use of the faucet, angle the sensor housing window between 15° and 25° toward the faucet stream from the center location.

**Temp. Control** - To achieve the desired temperature, rotate the above counter mixer to desired comfort zone.

**Eyewash-** The eyewash is activated by pulling its handle out. Once the eyewash is activated, the eyewash caps will flip off and water will come out of the aerated spray heads. The eyewash will continually discharge water until the handle is manually pushed back into the off position. The flow of spray heads is controlled by built-in flow controls. Each spray assembly is tested and aligned in the factory.



**NOTE:** On the rubber washer under the Sensor Unit there are 2 marks ( ▼ ) at 20° apart. Use them to orient the Sensor Lenses at 20° inclination as a start median suggested point. From that point you can further adjust the lenses inclination according to your specific needs.

## TESTING PROGRAM

ANSI Z358.1 requires that all emergency equipment shall be tested weekly to verify proper operation and inspected annually to assure conformance with ANSI Z358.1 requirement.

## MAINTENANCE (CARE and CLEANING)

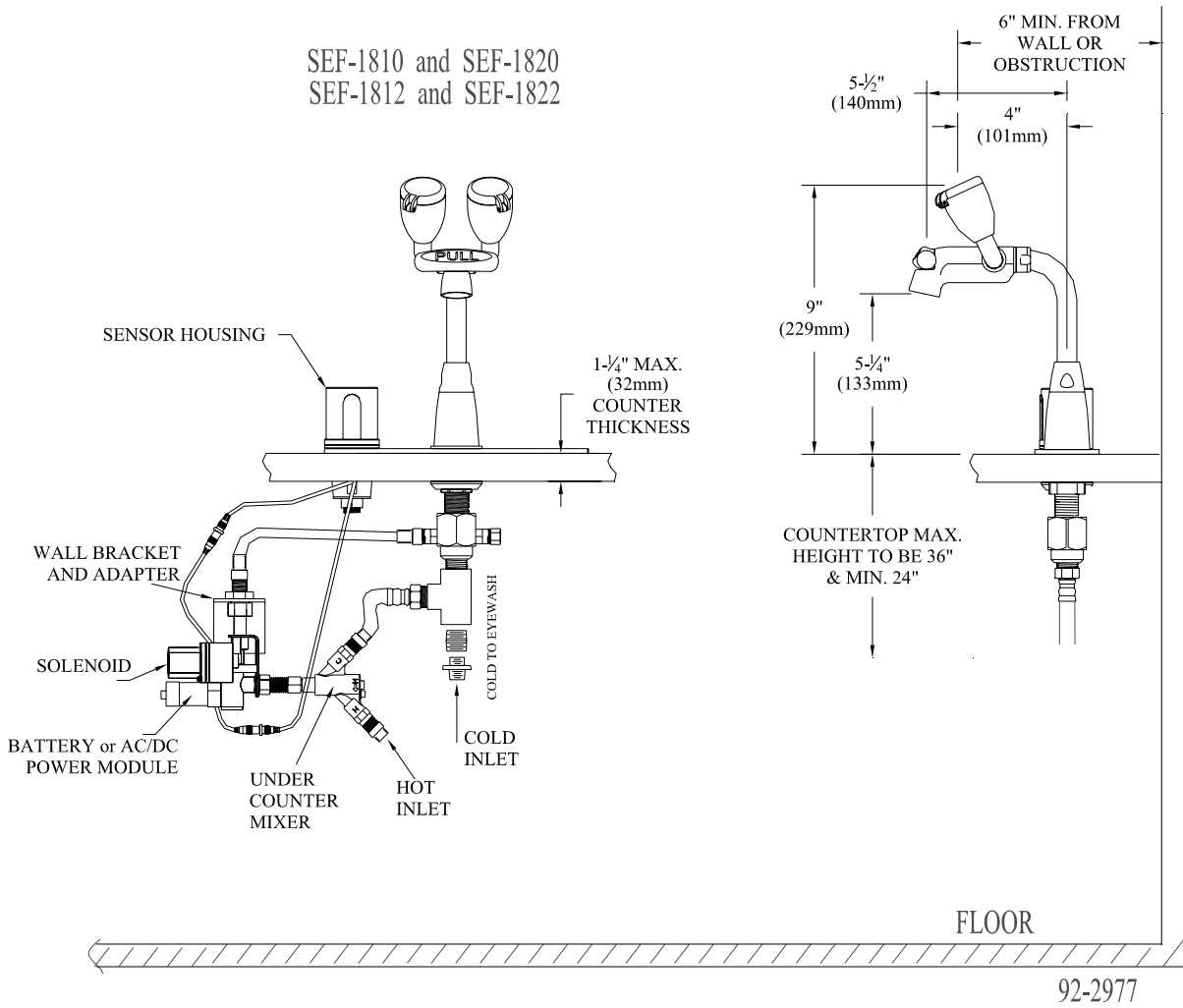
Valves are washer-less and require no routine maintenance. The gleaming finish of your SPEAKMAN Eyesaver® faucet can be cleaned by using mild soap and warm water. Rinse thoroughly and dry immediately with a soft, clean cloth for best results.



## **REPAIR PARTS LISTING**

| <b>Part or Group</b> | <b>Description</b>   | <b>Refer to Packing List</b> |
|----------------------|--|------------------------------|
| RPG38-0388           | Yellow spray head and aerator repair parts assembly        | Part of item 11              |
| RPG49-0003           | Repair parts for internal seals of the gooseneck eyewash   | Not shown                    |
| G05-0724-PC          | Faucet 2.2 GPM aerator 15/16-27                            | Item 12                      |
| G05-0820-PC-P        | Faucet 0.5 GPM aerator 15/16-27                            | Item 12                      |
| G05-0554-PC          | Faucet with 15/16-27 Laminar Flow Outlet                   | Item 12                      |
| RPG04-0366           | Eyewash handle with yellow text and set screw              | Part of item 11              |
| RPG 76-0033-LBL      | Solenoid Valve Assembly                                    | Item 6                       |
| RPG76-0039           | Solenoid Repair Kit  | Part of item 6               |
| G66-0168             | Infrared Sensor Assembly                                   | Part of item 10              |
| RPG66-0044           | Solenoid Filter Screen                                     | Part of item 6               |
| G66-0169             | Battery Power Module                                       | Item 17                      |
| RPG76-0041           | 3 volt Lithium Batteries (2)                               | For Battery Module only      |
| G66-0169-AC          | AC Power Module  | See wiring for AC            |
| G20-1919             | UCM under counter mixer                                    |                              |
| G20-1968             | TMV thermo mixing valve (for Faucet water)                 |                              |
| G20-1844             | ACM above counter mixer                                    |                              |
| SEF-TW Kit           | SE-370 thermostatic mixing valve (for eyewash tepid water) |                              |

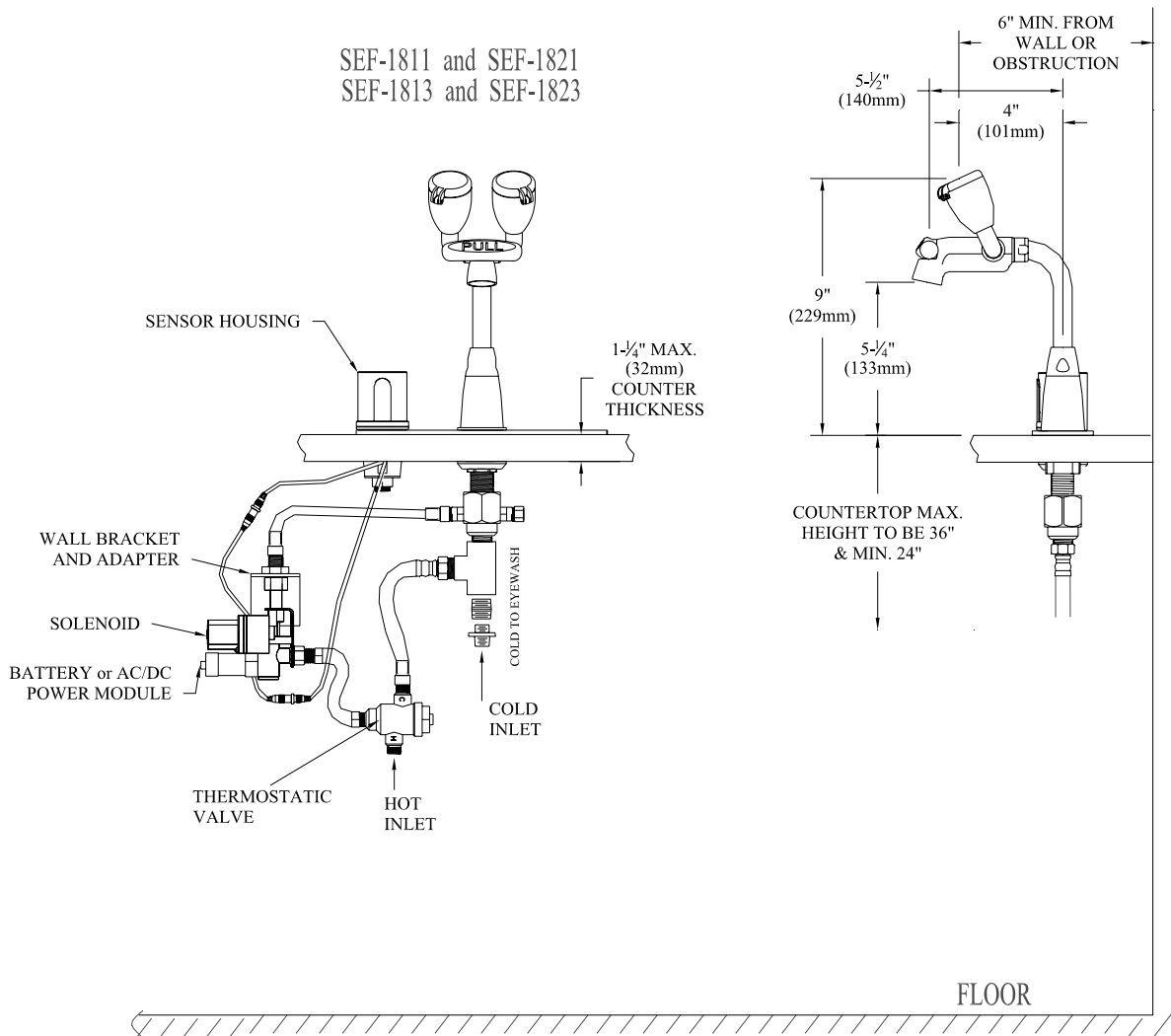
**Rough In**



|                 |  |
|-----------------|--|
| <b>SEF-1810</b> | -4" Sensorflow, eyewash faucet, UCM, battery |
| <b>SEF-1820</b> | -4" Sensorflow, eyewash faucet, UCM, AC/DC   |
| <b>SEF-1812</b> | -8" Sensorflow, eyewash faucet, UCM, battery |
| <b>SEF-1822</b> | -8" Sensorflow, eyewash faucet, UCM, AC/DC   |

**92-2977**

SEF-1811 and SEF-1821  
SEF-1813 and SEF-1823

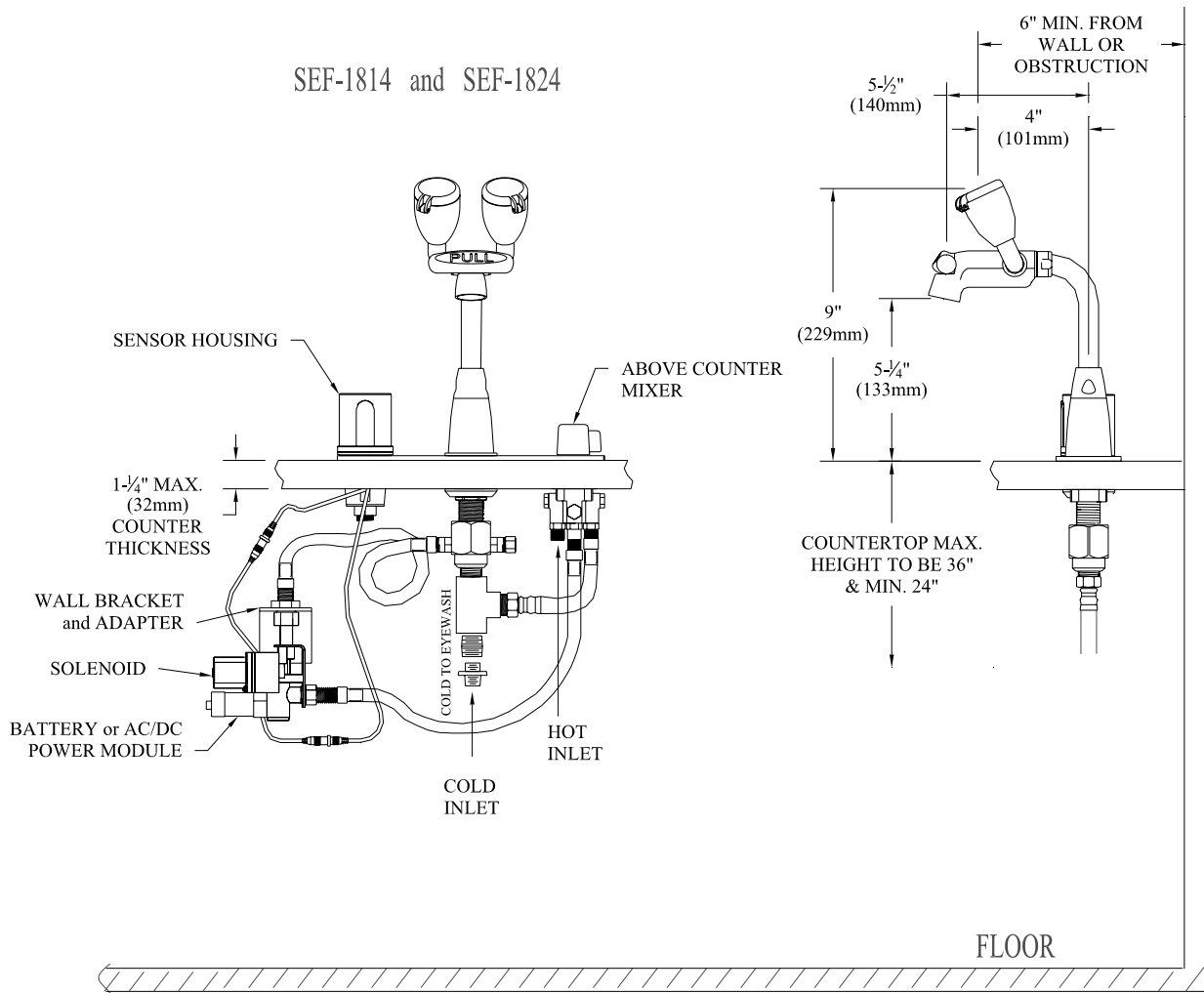


92-2978

|                 |  |
|-----------------|--|
| <b>SEF-1811</b> | -4" Sensorflow, eyewash faucet, TMV, battery |
| <b>SEF-1821</b> | -4" Sensorflow, eyewash faucet, TMV, AC/DC   |
| <b>SEF-1813</b> | -8" Sensorflow, eyewash faucet, TMV, battery |
| <b>SEF-1823</b> | -8" Sensorflow, eyewash faucet, TMV, AC/DC   |

**92-2978**

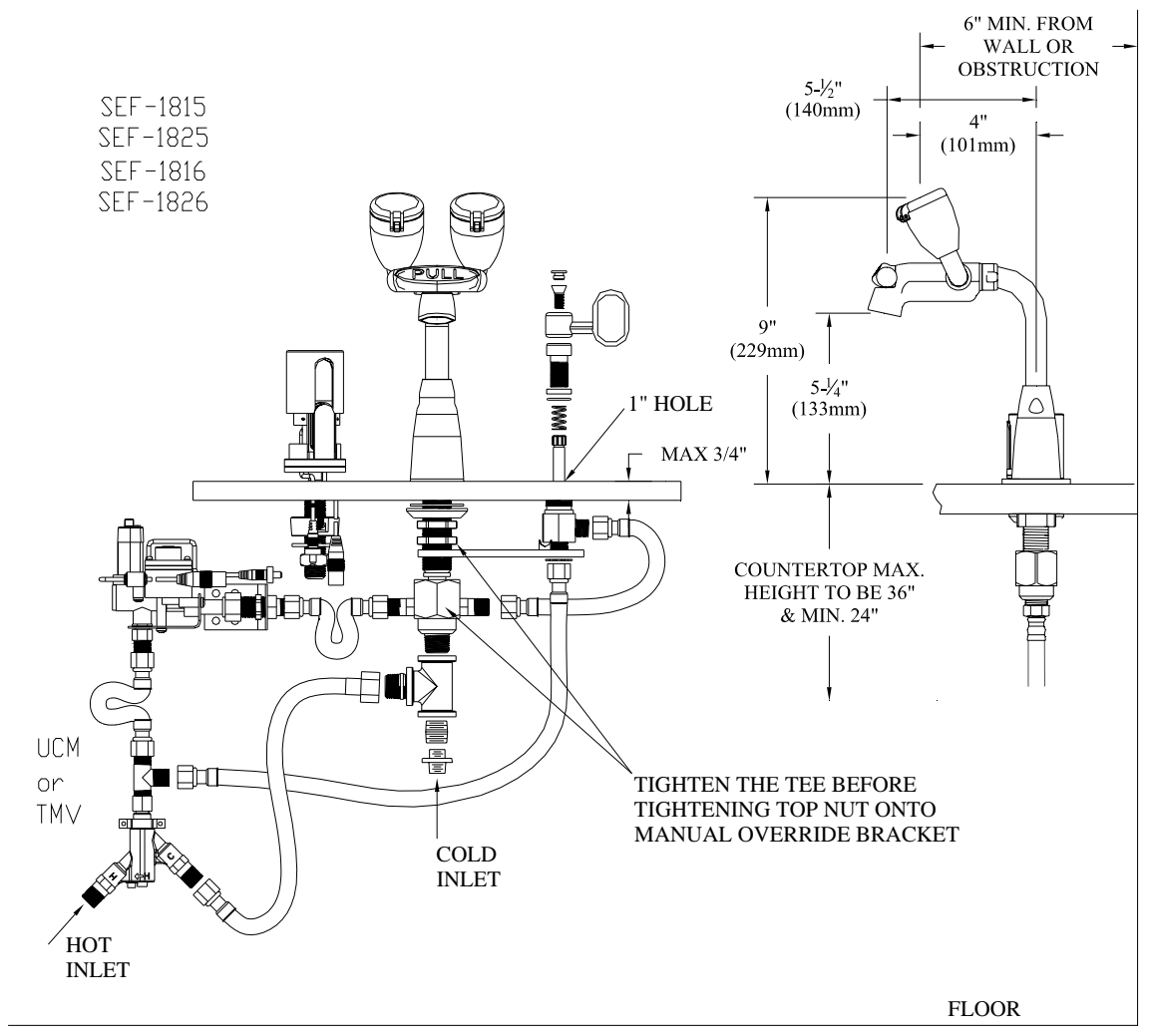
SEF-1814 and SEF-1824



92-2979

|                 |  |
|-----------------|--|
| <b>SEF-1814</b> | -8" Sensorflow, eyewash faucet, ACM, battery |
| <b>SEF-1824</b> | -8" Sensorflow, eyewash faucet, ACM, AC/DC   |

**92-2979**



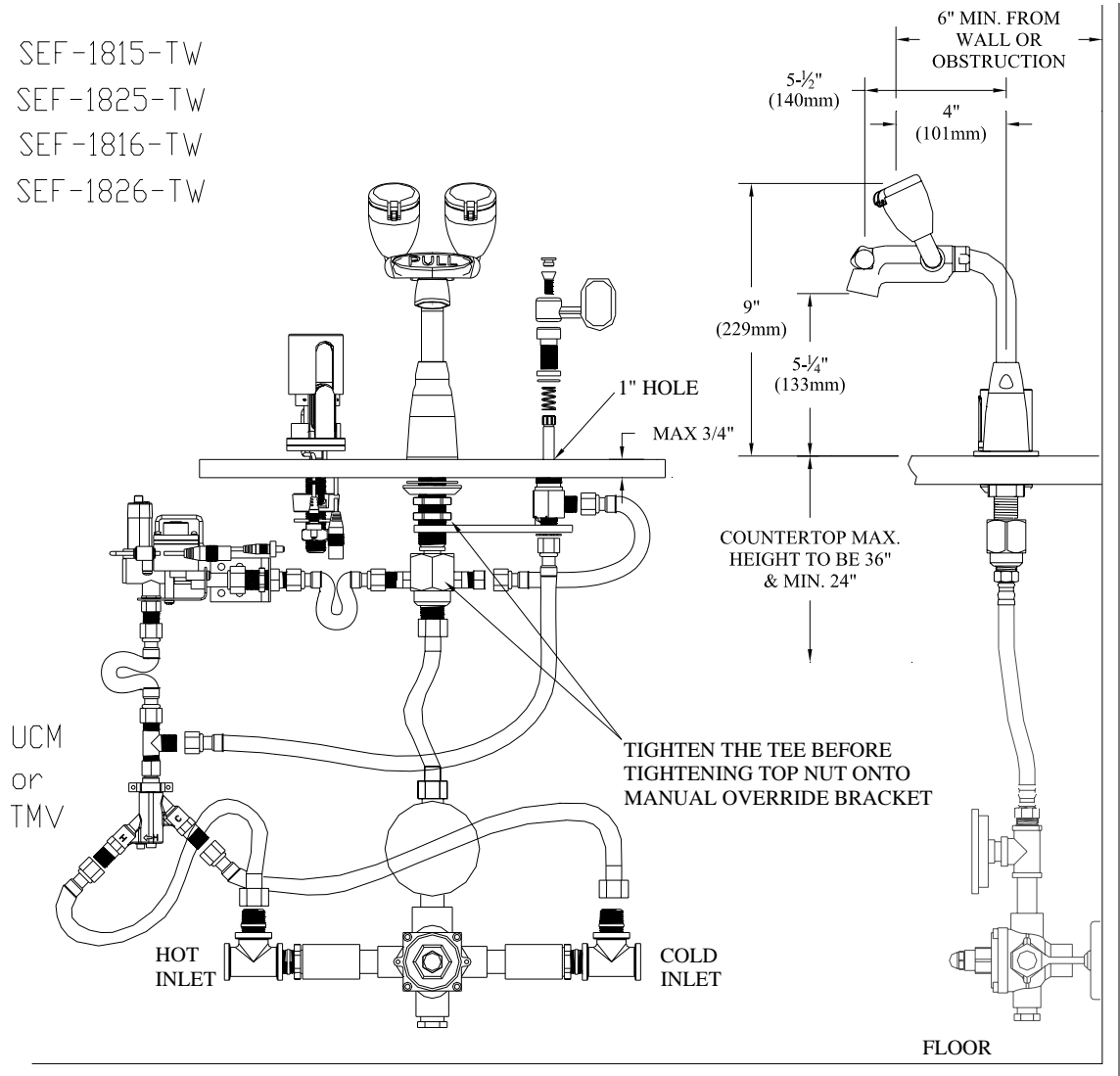
92-2983

|                 |  |
|-----------------|--|
| <b>SEF-1815</b> | -8" Sensorflow, eyewash faucet, UCM, MO, battery |
| <b>SEF-1825</b> | -8" Sensorflow, eyewash faucet, UCM, MO, AC/DC   |

|                 |  |
|-----------------|--|
| <b>SEF-1816</b> | -8" Sensorflow, eyewash faucet, TMV, MO, battery |
| <b>SEF-1826</b> | -8" Sensorflow, eyewash faucet, TMV, MO, AC/DC   |

**92-2983**

SEF-1815-TW  
 SEF-1825-TW  
 SEF-1816-TW  
 SEF-1826-TW

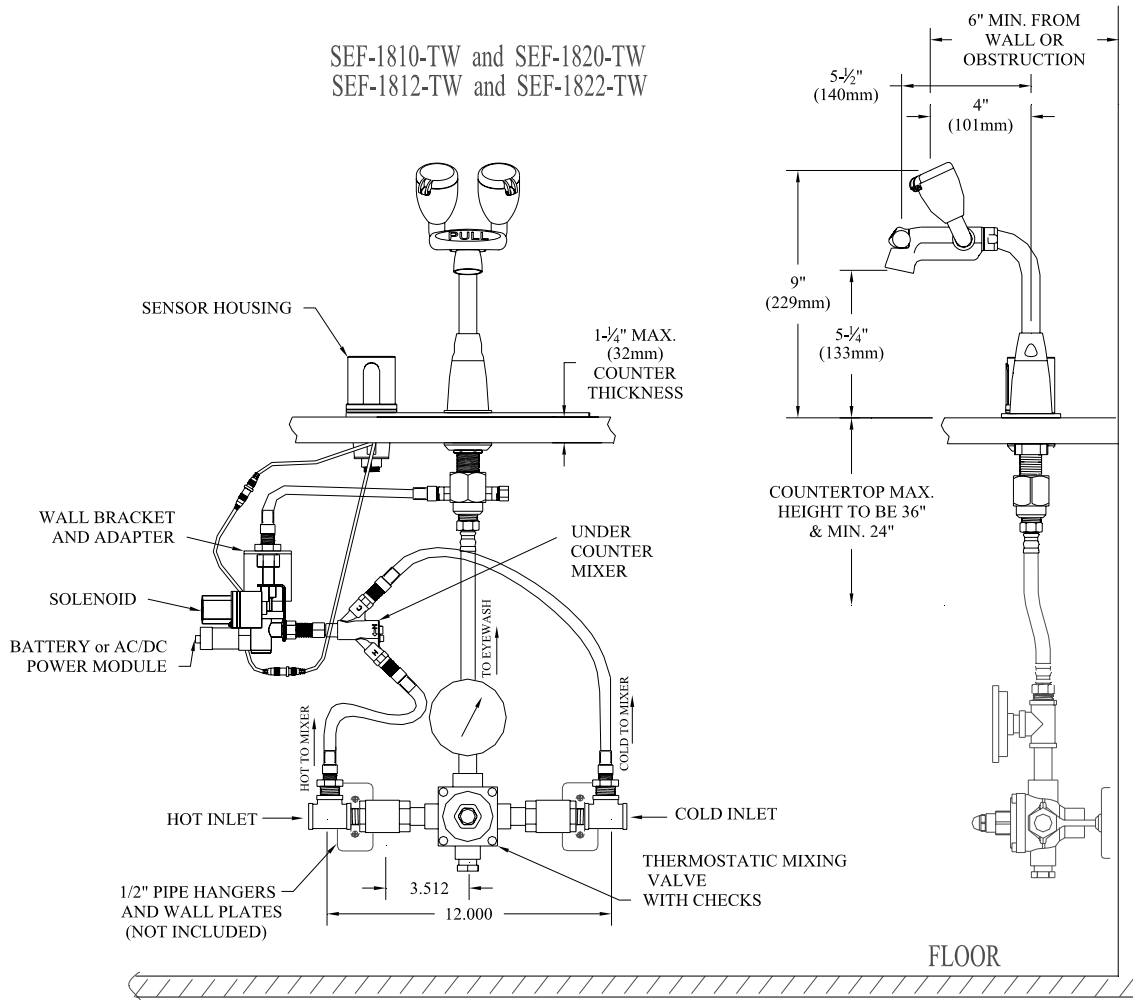


92-2984

**SEF-1815-TW** -8" Sensorflow, eyewash faucet, UCM, MO, battery and Thermostatic Valve for Eyewash  
**SEF-1825-TW** -8" Sensorflow, eyewash faucet, UCM, MO, AC/DC and Thermostatic Valve for Eyewash  
**SEF-1816-TW** -8" Sensorflow, eyewash faucet, TMV, MO, battery and Thermostatic Valve for Eyewash  
**SEF-1826-TW** -8" Sensorflow, eyewash faucet, TMV, MO, AC/DC and Thermostatic Valve for Eyewash

**92-2984**

SEF-1810-TW and SEF-1820-TW  
SEF-1812-TW and SEF-1822-TW

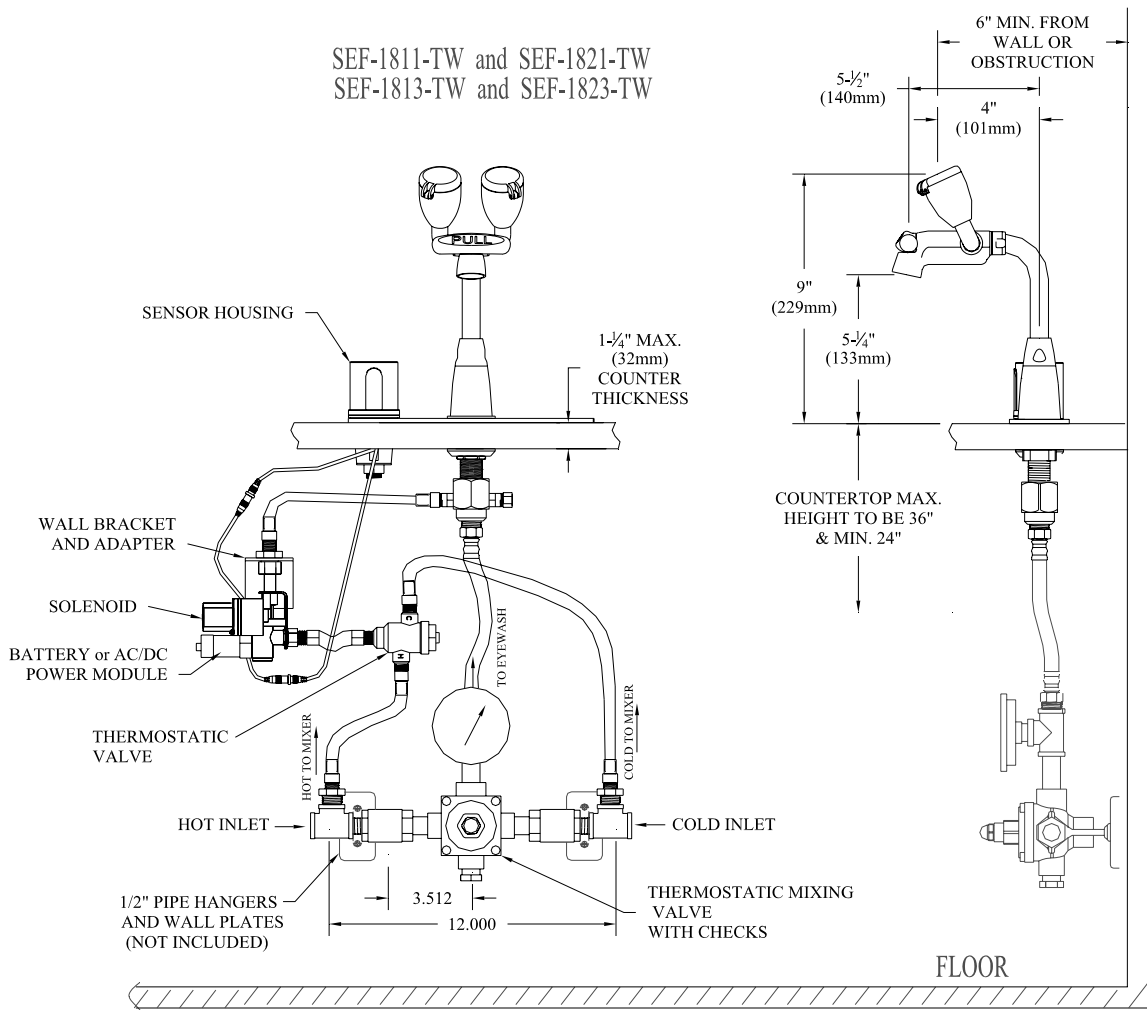


92-2985

|                    |   |
|--------------------|---|
| <b>SEF-1810-TW</b> | -4" Sensorflow, eyewash faucet, UCM, battery and Thermostatic Valve for Eyewash |
| <b>SEF-1820-TW</b> | -4" Sensorflow, eyewash faucet, UCM, AC/DC and Thermostatic Valve for Eyewash   |
| <b>SEF-1812-TW</b> | -8" Sensorflow, eyewash faucet, UCM, battery and Thermostatic Valve for Eyewash |
| <b>SEF-1822-TW</b> | -8" Sensorflow, eyewash faucet, UCM, AC/DC and Thermostatic Valve for Eyewash   |

**92-2985**

SEF-1811-TW and SEF-1821-TW  
SEF-1813-TW and SEF-1823-TW



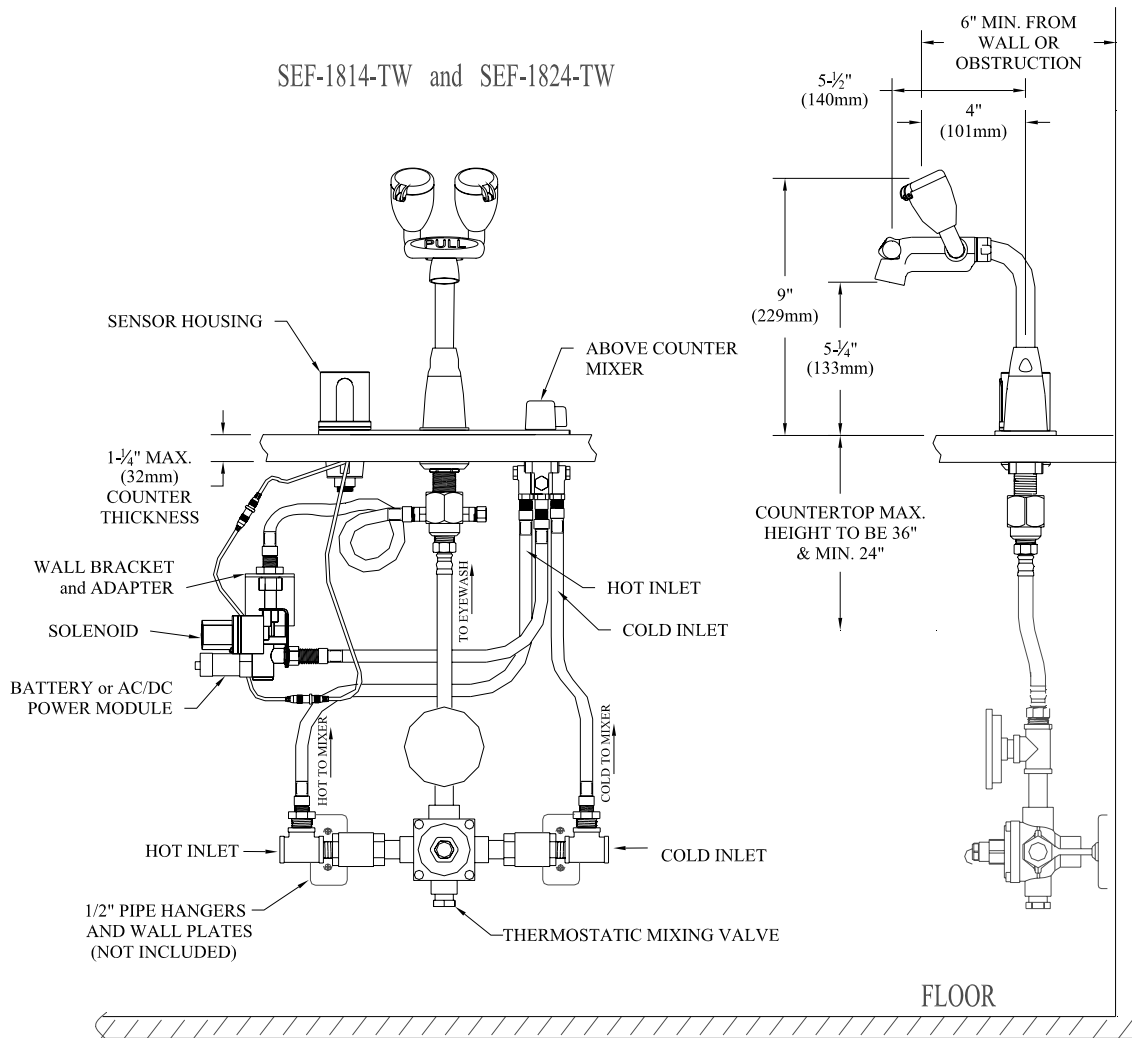
92-2987

|                    |   |
|--------------------|---|
| <b>SEF-1811-TW</b> | -4" Sensorflow, eyewash faucet, TMV, battery and Thermostatic Valve for Eyewash |
| <b>SEF-1821-TW</b> | -4" Sensorflow, eyewash faucet, TMV, AC/DC and Thermostatic Valve for Eyewash   |
| <b>SEF-1813-TW</b> | -8" Sensorflow, eyewash faucet, TMV, battery and Thermostatic Valve for Eyewash |
| <b>SEF-1823-TW</b> | -8" Sensorflow, eyewash faucet, TMV, AC/DC and Thermostatic Valve for Eyewash   |

**92-2987**



SEF-1814-TW and SEF-1824-TW



92-2986

**SEF-1814-TW** -8" Sensorflow, eyewash faucet, ACM, battery and Thermostatic Valve for Eyewash  
**SEF-1824-TW** -8" Sensorflow, eyewash faucet, ACM, AC/DC and Thermostatic Valve for Eyewash

**92-2986**