SLOAN®

SENSOR FAUCET GUIDE

After reading this Sloan Sensor Faucet Guide, you will be able to convert your manual faucets to sensor operated faucets with confidence. In this article, we will review all of the considerations that will impact your faucet selection. Factors such as requirements, use, and site specifications, as well as options such as flow rate, spray type, power supply options, and more will be addressed. Then, we share general faucet recommendations based on use and some common questions you may have.

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Elements of a Sloan Sensor Activated Faucet

1. Sensor Faucet Component Access

Faucets parts are designed to be accessed either above deck or below deck. There are pros and cons to both component locations:

- **Above Deck Access** means you can service the faucets without having to work under the sink deck. All parts and components are above deck. Most faucets with larger and wider spout designs have above deck components.
  (For example, BASYS faucets).
- **Below Deck Access** means that most components are located under the sink deck. Most faucets with thinner and sleeker spout designs have below deck components. Those components can also be mounted behind chases or in walls.

2. Sensor Types

There are two main sensor types found in automatic faucets: infrared sensors and capacitance sensors. Infrared sensors are the most common. Capacitance sensors are also known as proximity sensors.

- **Infrared Sensor:** This is the most common sensor. They are also known as IR sensors. This sensor functions by emitting an infrared light every few milliseconds that is invisible to the human eye. The light searches for a target, and when one is sensed, the faucet will turn on. The pros of infrared sensor faucets are that their range can be adjusted, and they can work in any environment.
- **Capacitance (Proximity) Sensor:** This sensor functions by using electrical fields to sense when a target is in range. This sensor type is a lot less common. (In fact, we don't show any capacitance (proximity) sensor faucets online. You will need to call in to learn more or to order this type of faucet). Like IR faucets, the range can be adjusted for capacitance sensor faucets, but these faucets cannot be used on metal sinks or large metal objects, including enamel coated cast iron.

Component Access Location Examples

Above Deck

Below Deck

Component Access Example: BASYS Faucet with above deck component access shown left. Optima Faucet with below deck component access shown right.

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3. Flow Rate and Spray Type Options and Examples

Sloan faucet models come in a variety of flow rates and spray options. They can range from 0.35 GPM to 2.2 GPM flow rates, and have aerated, laminar, or multi-laminar sprays. This is important because certain flow rates and spray types are required to meet certain criteria. For example:

- For LEED certified facilities, 0.35 GPM is required to meet LEED 4.0 and 4.1 guidelines
- UPC and IPC code for commercial faucets in public locations throughout North America requires a flow rate of 0.5 GPM / 1.9 LPM. *There are exceptions to this code.
- For healthcare applications, more water flow is required to meet surgical scrub requirements.
- Also for healthcare applications, the aerated spray type cannot be used. Although aerated is the most popular spray type used elsewhere because it makes streams feel stronger while using less water, it cannot be used in healthcare applications because introducing air into the faucet stream can potentially introduce airborne pathogens into the water.

Elements of a Sloan Sensor Activated Faucet

4. Site Specifications

Site specific details will impact what sensor faucet you select to replace your manual faucet Knowing your existing mounting type, basin type and surroundings, and temperature mixing requirements will help you choose the right sensor faucet for your application.

- **Mounting Type:** Whatever mounting type you have needs to match the mount of the sensor faucet you plan to install (unless you plan on updating your mounting set up or sink as well). This means that if you have a 4” Centerset deck mount configuration, the faucet you choose should be 4” Centerset, too.
- **Basin Type:** You need to be aware of the type of sink you have when selecting a new sensor faucet. Issues can occur when the wrong sized faucet is installed on a sink that isn’t designed to accommodate that size. For example, installing a large faucet on a small sink can cause issues like water splashing on the wall, the user, or the floor, which can be a safety hazard. Small drop-in sinks should be paired with small faucets, and higher reach or further projecting faucets should be used with larger sinks. A good rule of thumb is that the faucet spout should line up with the drain. Other rules of thumb to keep in mind:
    - Scrub sinks should be paired with surgical bend faucets.
    - Pedestal or shroud sinks often utilize above deck component faucets since there is limited space to put external components.
- **Temperature Mixing Requirements:** Faucet water lines are set up with either a single (tempered) line, or dual (separate hot and cold) lines. All options are available on Sloan faucet models. *Note: Many facilities require ASSE 1070 Compliant faucet set-ups, which eliminate the potential for scalding water to reach users. A MIX135 Below Deck Thermostatic Mixing Valve or an “ITM” Integrated Thermostatic Mixing Valve are ASSE 1070 Compliant temperature mixers.

Component Access Location Examples

#58114

Temperature Mixer Example: The faucet shown at left has a mixing lever on the side of the faucet. This is an integrated side mixer. This enables users to adjust the faucet temperature to their liking. Facility managers can also set the temperature on these units then remove the mixing lever so no one else can adjust them.

Integrated Side Mixer (ISM)

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5. Power Supply Options

Another factor to consider when selecting your sensor faucet is which power option will work best for your installation. There are 5 power options available for most Sloan faucets: battery, hardwired adapter plug with battery back-up, hardwired wall transformer with battery back-up, solar energy harvesting with battery back-up, and turbine energy harvesting with battery back-up.

- **Battery** - Best for locations that do not have outlets nearby. Recommended for use in low traffic applications.
- **Hardwired - Adapter Plug with Battery Back-Up** - Power outlet is required. This option greatly reduces battery replacement and will be a more cost effective option in terms of energy usage. This power option allows for up to 6 faucets to be daisy-chained or ganged together in close proximity. Recommended for use in low to high traffic applications.
- **Hardwired - Wall Transformer with Battery Back-Up** - This option is utilized when a power outlet is not available, but being hardwired is preferred. This option also greatly reduces battery replacement and will be a more cost effective option in terms of energy usage. This power option allows for 3 to 12 faucets, (dependent on amperage of transformer) to be daisy-chained or ganged together in close proximity. Recommended for use in low to high traffic applications.
- **Solar Energy Harvesting with Battery Back-Up** - Solar energy harvesting reduces battery replacement and costs. It transforms all light types, both natural and artificial, to charge a capacitor within the faucet so the battery is only used when the solar power is depleted. Recommended for use in low to medium traffic applications.
- **Turbine Energy Harvesting with Battery Back-Up** - This functions similarly to the Solar powered faucet, but instead of using light, it utilizes the movement of the water to generate energy, using the battery only when the turbine energy is depleted. The more that the faucet is used, the more turbine generated energy will be produced. Recommended for use in medium to high traffic applications.

Elements of a Sloan Sensor Activated Faucet

6. Additional Considerations: Time and Cost

Building owners want to know how much time and money is required for the installation and ongoing maintenance of the faucets.

- **Installation Time:** Sloan is very sensitive to the installation time needed to install Sloan fixtures. They strive to make installations happen quickly and easily. One way Sloan does this is by standardizing components across many faucet families. This makes components more readily available for a variety of faucets. It also allows installers to easily become familiar with how to install various Sloan faucets. Sloan faucets also utilize quick connect fittings. This makes it easier to connect supply lines to the controls without the need to solder.
- **Post Install Service and Maintenance Time**: Sloan makes post-install maintenance of faucets easier by using twist-off/shut-off solenoids. This enables maintenance personnel to turn off water to the faucet simply by twisting the solenoid a quarter turn to the right. This makes servicing the unit much quicker and easier because you can turn off water to the unit at the unit itself. Sloan's bluetooth faucets use the Connect App to make post-install servicing even easier. The app enables faucet adjustments to be made remotely via a smart device. Learn more about how it works in our Bluetooth Faucet Article.
- **Initial Acquisition Cost**: Sloan faucets can be broken down by model into 'good, better, and best' designations that align with price. Sloan SF faucets are good ($), Optima faucets are better ($$), and BASYS faucets are the best ($$$.)
- **Post-Install Maintenance Costs**: The biggest ongoing maintenance cost of a battery-powered faucet is likely to be battery replacement, considering both the maintenance personnel completing the service, and the cost of the replacement batteries. *Sloan recommends selecting a Turbine or Solar Energy Harvesting faucet to decrease the number of times you will need to replace the batteries.

Elements of a Sloan Sensor Activated Faucet

7. Faucet Recommendations Based on Facility Type

The type of facility you have and how it is used will help you narrow your faucet search to find the right faucet model for your unique situation.

- **Public Use**: Sloan recommends using faucets of low to mid height in public restrooms to reduce splashing and slip and fall liability. Sloan also recommends faucets with an integrated base for resistance to vandalism, as well as 0.5 GPM/1.9 LPM flow rates, and faucets with a 30 second timeout feature.
- **Private Use**: Goosenecks or high-body faucets with higher flow rates and laminar sprays are recommended for private use facilities such as hospitals.
- **Recommendations**: BASYS EFX 177 (best) or Optima EAF 100 (better) for high frequency locations. BASYS EFX 277 (best) or Optima EAF 200 (better) for mid frequency locations. Optima EAF 700 (best) or Optima ETF 700S (better) for gooseneck installations or Optima ETF 700SH (better) for surgical bend gooseneck installations. BASYS EFX 800 (best) or Optima ETF 500 SH (better) for wall mounted faucet installations.

Frequency of Use:

High Frequency Use facilities consistently have 250+ activations per day. Think airports, stadiums, arenas, schools, universities, etc.

Recommendations: Models BASYS EFX 100/150 (best), Optima EAF 100/150 (better) or SF 2400/2450 (good).

- Low to mid height to prevent slip and fall accident liability
- Hardwired or hybrid energy harvesting to reduce battery usage
- Integrated base units for vandal resistance

Low Frequency Use facilities consistently have low user counts of 250 or less activations per day. Think retail stores, food service buildings, churches, office buildings.

Recommendations: Models BASYS EFX 600/650 (best), Optima ETF 600/650 (better) or SF 2100/2150 (good).

- Line flush to avoid stagnant water in supply lines
- Best application of very low flow rates

Elements of a Sloan Sensor Activated Faucet

7. Faucet Recommendations Based on Facility Type (Cont.)

Intermittent Use facilities have large changes in usage ranging from high to low, with occasional inactive periods that can be prolonged. Think convention centers and other seasonal facilities.

- Line flush to avoid stagnant water in supply lines
- Dry p-traps to stop sewer gas release
- Low to mid height to prevent slip and fall accident liability

Keep in mind that no matter what faucet setup you currently have with your manual faucets, there is a sensor faucet style that can replace it and upgrade it. Sloan makes over 19 different faucet styles in 5 different finishes that can be powered in a variety of ways. Combined with Sloan's selection of flow rates, spray types, mounting options, and mixer specifications, these options ensure that you can find a sensor faucet that meets all of your requirements.

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8. Sloan Bluetooth Faucet Models

Many of Sloan's most popular models, Optima faucets, are now available as Bluetooth faucets. They look the same as older versions, but now come with Bluetooth functionality that enable them to be monitored and even serviced remotely. They feature updates that reduce installation time, and also a new control box with fewer cords and hoses and new mounting slots that eliminate the need for mounting plates and hardware. Learn more about them in our Sloan Bluetooth Optima Faucets article

EBF-85
ETF-80

EBF-187
ETF-880

EBF-615
ETF-610

EBF-650
ETF-600

EBF-665
ETF-660

EBF-750
ETF-700

EBF-750-S
ETF-700-S

EBF-775
ETF-770

EBF-550
ETF-500

EBF-850
ETF-800

Sloan Sensor Faucet FAQs

Q: Why Replace Manual Faucets with Touch-Free Sensor Faucets?

A: Manual faucets are considered a high-touch surface, and high-touch surfaces can be a conduit for viruses, bacteria, and other germs. A manual faucet handle gets contaminated by dirty hands when the faucet is turned on. Then, that same contaminated handle must be touched by clean hands to turn the faucet off, thereby risking reinfection of your hands. We recommend replacing manual faucets with hands-free faucets in order to prevent spreading germs in this way.

Q: Which faucet models have the twist-off/shut-off solenoids?

A: All Optima EBF and ETF faucet families made after 2018, and all BASYS EFX faucets made after 2012.

Q: Do Solar faucets have a minimum illumination requirement?

A: Yes, they require at least 200 lumens.

Q: Which faucets does the Sloan Connect App work with?

A: The Connect App only works with Bluetooth faucets. All bluetooth faucets have ‘BT’ at the end of the Sloan model number. This includes Optima EBF and ETF faucet families. These are Sloan’s most popular faucet models.

Q: Is there a kit or adapter to retrofit existing manual faucets into touch-free faucets?

A: No. Sloan does not manufacture manual faucets, therefore Sloan does not make kits to convert other manufacturer’s manual faucet models. There are devices sold elsewhere online to screw devices in place of the spray head, but we advise against installing these as they are not robust or durable enough for commercial applications.

Q: Why choose solar powered over turbine powered?

A: According to Sloan technicians, “The difference between the two is that solar cells are a passive technology with no moving parts to come into contact with the water supply. Turbines are an active technology that does have a moving part and does come into contact with the water supply. If a customer has water supplies with high levels of sediment, turbidity, iron, hardness, or other conditions without adequate pretreatment, they may want to select solar to be conservative.” In addition, solar powered faucets convert light into power, so they will ‘charge’ as long as lights are on and use that energy every time they are used, making them best for low to medium frequency use. Turbine powered faucets ‘charge’ from movement of the water, so the more the faucet is used, the more of a ‘charge’ they will have. This makes turbine faucets better suited for medium to high frequency use.

Need something you haven’t seen? Call us at 800-442-6622. Our phone hours are 8AM-4PM EST from Monday through Friday.