

# Royal Model® OPTIMA® Sensor Operated Flushometers 150 ES-S

#### ▶ Code Number

3911536

## ▶ Description

Concealed, Sensor Activated Royal® Model Water Closet Flushometer -1" I.P.S. Outlet, for bowls and flushing rim floor drains.

#### ► Flush Cycle

☐ 1.6 gpf/6.0Lpf

# Specifications

- PERMEX® Synthetic Rubber Diaphragm with Dual Filtered Fixed Bypass
- Vacuum Breaker
- User friendly three (3) second Flush Delay
- OPTIMA® EL-1500 Self-Adaptive Infrared Sensor with Indicator Light
- Die Cast Sensor Plate with no visible Fasteners (for 2-gang Flectrical Box)
- Non-Hold-Open Integral Solenoid Operator, Fixed Metering Bypass and No External Volume Adjustment to Ensure Water Conservation
- Quiet, Concealed, Diaphragm Type, Rough Brass Closet Flushometer with the following features:
- Stop Seat and Vacuum Breaker molded from PERMEX® Rubber Compound for Chloramine Resistance
- 1" Female I.P.S. Union Outlet
- 1" I.P.S. Wheel Handle Bak-Chek® Angle Stop
- Courtesy Flush® Override Button
- Flush accuracy controlled by CID® technology
- Valve Body, Cover, Tailpiece and Control Stop shall be in conformance with ASTM Alloy Classification for Semi-Red Brass.
  Valve shall be in compliance with the applicable sections of ASSE 1037 and ANSI/ASME 112.19.2.



# ► Automatic Operation

Sloan OPTIMA® equipped Flushometers provide the ultimate in sanitary protection and automatic operation. There are no handles to trip or buttons to push. The Flushometer operates by means of an infrared sensor that adapts to its surrounding. Once the user enters the sensor's effective range and then steps away, the Flushometer Solenoid initiates the flushing cycle to flush the fixture.

## **▶** Economical

Automatic operation provides water usage savings over other flushing devices. Reduces maintenance and operation costs.

# ▶ Hygienic

User makes no physical contact with the Flushometer surface except to initiate the Override Button when required. Helps control the spread of infectious diseases . 24-Hour Sentinel Flush keeps fixture fresh during periods of nonuse.

### ► Compliance & Certifications

Made In The





This space for Architect/Engineer Approval

# ► Control Circuit

- Solid State
- 3 Second Flush Delay
- 24 VAC Input



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#### 24 VAC Output

16 Second Arming Delay

## ▶ Solenoid Operator

24 VAC, 50/60 Hz

## ▶ Sensor Range

Nominal 22" - 42" (559 mm - 1067 mm) Self-adaptive Window:  $\pm$  10" (254 mm)

#### ▶ Transformers

- Sloan Part #EL-154 120 VAC, 50/60 Hz Primary 24 VAC, 50/60 Hz Secondary Class II, UL Listed, 50 VA.
- Sloan Part #EL-342 240 VAC, 50/60 Hz Primary 24 VAC, 50/60 Hz Secondary Class II, UL Listed, 50 VA.

#### ▶ L Dimension

Specify the "L" Dimension for the proper length of the Handle Assembly and Flush Connection. The "L" Dimension is equal to the Wall Thickness (to the nearest whole inch) plus 23/4" (70 mm).

#### ▶ Practical

Solid state electronic circuitry assures years of dependable, troublefree operation. Proven by more than 100 years of experience.

Solid state electronic circuitry assures years of dependable, troublefree operation. The operational components of the Flushometer are identical to a handle activated Royal® Flushometer, proven by over 100 years of experience.

## ▶ OPERATION



 A continuous, invisible light beam is emitted from the OPTIMA Sensor.

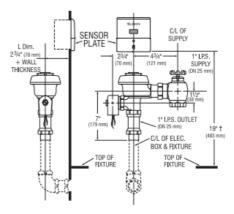


2. As the user enters the beam's effective range (22" to 42") the beam is reflected into the OPTIMA Scanner Window and transformed into a low voltage electrical circuit. Once activated, the Output Circuit continues in a "hold" mode for as long as the user remains within the effective range of the Sensor



3. When the user steps away from the OPTIMA Sensor, the circuit waits 3 seconds (to prevent false flushing) then initiates an electrical "onetime" signal that operates the Solenoid. This initiates the flushing cycle to flush the fixture. The Circuit then automatically resets and is ready for the next user.

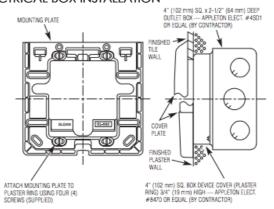
## ► ROUGH-IN



† Position of Sensor Box can be raised or lowered 1" (25 mm) if in conflict with Handicap Grab Bars.

NOTE: Flush Connection shown with dotted lines is not included.

# ► ELECTRICAL BOX INSTALLATION



Failure to properly position the electrical boxes to the plumbing rough-in will result in improper installation and impair product performance. All tradesmen (plumbers, electricians, tile setters, etc.) involved with the installation of this product must coordinate their work to assure proper product installation. Installation Template furnished with Flushometer.

#### **▶ WIRING DIAGRAM**

One Transformer serves up to ten (10) OPTIMA Closet/ Urinal Flushometers. Specify number of transformers required accordingly.