

### Royal® OPTIMA Model

Sensor Activated Flushometers

#### Description

Concealed, Sensor Activated Royal® Model Urinal Flushometer — 3/4" I.P.S. Outlet, for urinals and flushing rim floor drains.

#### Flush Cycle

- ☐ Model 194-0.5 ES-S (0.5 gpf/1.9 Lpf)
- ☐ Model 194-1.0 ES-S Low Consumption (1.0 gpf/3.8 Lpf)
- ☐ Model 194 ES-S Water Saver (1.5 gpf/5.7 Lpf)

#### **Specifications**

Quiet, Concealed, Diaphragm Type, Rough Brass Urinal Flushometer with Override Button with the following features:

- PERMEX™ Synthetic Rubber Diaphragm with Dual Filtered Fixed Bypass
- OPTIMA® EL-1500 Self-Adaptive Infrared Sensor with Indicator Light
- Non-Hold-Open Integral Solenoid Operator
- · Die Cast Sensor Cover Plate with no visible Fasteners (for 2-gang Electrical Box)
- 3/4" I.P.S. Wheel Handle Bak-Chek® Angle Stop
- Adjustable Tailpiece
- High Back Pressure Vacuum Breaker
- 3/4" Female I.P.S. Union Outlet (no flush connection)
- Sweat Solder Adapter
- High Copper, Low Zinc Brass Castings for Dezincification Resistance
- Non-Hold-Open Integral Solenoid Operator, Fixed Metering Bypass and No External Volume Adjustment to Ensure Water Conservation
- Flush Accuracy Controlled by CID™ Technology
   Diaphragm, Stop Seat and Vacuum Breaker molded from PERMEX™ Rubber Compound for Chloramine Resistance

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 A112.19.2. Installation conforms to ADA requirements.

#### Accessories

☐ EL-154 Transformer (120 VAC/24 VAC 50 VA) ☐ EL-342 Transformer (240 VAC/24 VAC 50 VA)

See Accessories Section and OPTIMA Accessories Section of the Sloan catalog for details on these and other OPTIMA Flushometer variations.

Sloan Electronics are:





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This space for Architect/Engineer approval			
Job Name	Date		
Model Specified	Quantity		
Variations Specified			
Customer/Wholesaler			
Contractor			
Architect			





#### Automatic

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. Once the user enters the sensor's effective range and then steps away, the Flushometer Solenoid initiates the flushing cycle to flush the fixture.

#### Hygienic

User makes no physical contact with the Flushometer surface. Helps control the spread of infectious diseases. 24-Hour Sentinel Flush keeps fixture fresh during periods of nonuse

#### **Economical**

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

#### Practical

Solid state electronic circuitry assures years of dependable, trouble-free operation. The operational components of the Flushometer are identical to a handle activated Royal® Flushometer, proven by 90 years of experience.

#### Warrantv

3 year (limited)

Made in the U.S.A.

# 194 ES-S

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#### **ELECTRICAL SPECIFICATIONS**

#### Control Circuit

Solid State 24 VAC Input 24 VAC Output 8 Second Arming Delay 24-Hour Sentinel Flush

#### ▶ OPTIMA Sensor Range

Nominal 15" - 30" (381 mm - 762 mm) Self-adaptive Window  $\pm$  8" (203 mm)

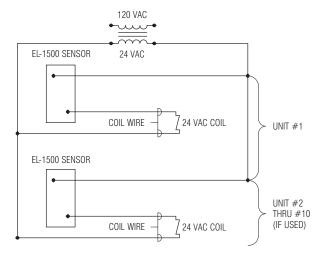
### Solenoid Operator 24 VAC, 50/60 Hz

#### Transformer

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.

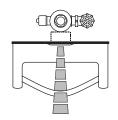
#### WIRING DIAGRAM



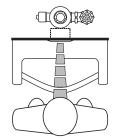
One Transformer serves up to ten (10) OPTIMA Closet/Urinal Flushometers. Specify number of transformers required accordingly.

#### **OPERATION**

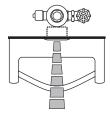
 A continuous, invisible light beam is emitted from the OPTIMA Sensor.



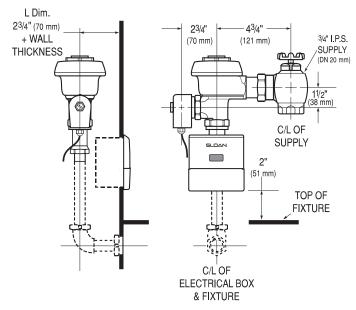
2. As the user enters the beam's effective range (15" to 30") the beam is reflected into the OPTIMA Scanner Window and transformed into a low voltage electrical circuit. Once activated, the Output Circuit continues in a "hold" mode for as long as the user remains within the effective range of the Sensor.



3. When the user steps away from the OPTIMA Sensor, the circuit immediately initiates an electrical "one-time" 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.



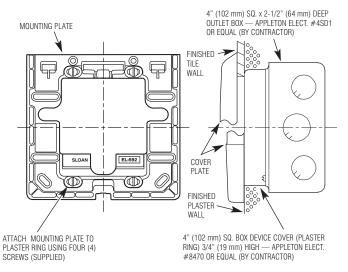
#### **ROUGH-IN**



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

## ELECTRICAL BOX INSTALLATION SENSOR LOCATION AND POSITIONING IS CRITICAL

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.



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