







#### Description

Exposed, Sensor Operated Royal® Model Urinal Flushometer, for 3/4" top spud

## Flush Cycle

☐ Model 186 ES-S Water Saver (1.5 gpf/5.7 Lpf) ☐ Model 186-1.0 ES-S Low Consumption (1.0 gpf/3.8 Lpf) ☐ Model 186-0.5 ES-S (0.5 gpf/1.9 Lpf)

Quiet, Exposed, Diaphragm Type, Chrome Plated Urinal Flushometer for either left or right hand supply 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
   Chrome Plated Wall Cover Plate (for 2-gang Electrical Box) with Vandal Resistant Screws
- 3/4" I.P.S. Screwdriver Bak-Chek™ Angle Stop
- Free Spinning Vandal Resistant Stop Cap
- Adjustable Tailpiece
- High Back Pressure Vacuum Breaker Flush Connection with One-Piece Bottom Hex Coupling Nut, Spud Coupling and Flange for %" Top Spud

  Sweat Solder Adapter with Cover Tube and Cast Set Screw Wall Flange
- 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 to be 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, ANSI/ASME A112.19.6 and Military Specification V-29193. Installation conforms to ADA requirements.

# Accessories

□ EL-154 Transformer (120 VAC/24 VAC, 50 VA)

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

□ EL-518-A Flushometer Electrical Box Positioning and Support Kit







Listed by I.A.P.M.O.





## **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 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.

# Hygienic

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

## **Economical**

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

## Practical

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

## Warranty 3 year (limited)

Made in the U.S.A.







WIRING DIAGRAM





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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 ± 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 SecondaryClass II, UL Listed, 50 VA.

## 120 VAC GND EL-1500 SENSOR 24 VAC 24 VAC COIL COIL WIRE UNIT #1 SOLENOID GROUND EL-1500 SENSOR 1777 WIRE 24 VAC COIL UNIT #2 COIL WIRE THRU #10 (IF USED) SOLENOID GROUND

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

# **OPERATION**

1. 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.



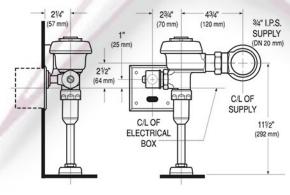
3. When the user steps away from the OPTIMA Sensor, the circuit immediately initiates electrical "one-time" signal that operates the Solenoid. This initiates the flushing cycle to flush the fixture. The Circuit then automatically resets and is ready for the next user.

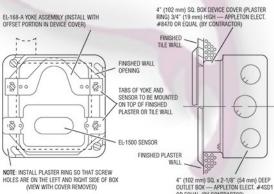


# **ELECTRICAL BOX INSTALLATION**

# 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.





To ensure a perfect rough-in, Sloan recommends the use of the EL-518-A Flushometer Electrical Box Positioning and Support Kit. Specify and order the EL-518-A Kit separately. Consult factory for installation details.

