

Royal Model® OPTIMA® Sensor Operated Flushometers Royal 153-1.6 WB ES-S

▶ Code Number

3451623

► Flush Cycle

1.6 gpf / 6.0 Lpf

▶ Specifications

Quiet, Concealed, Diaphragm Type, Rough Brass Closet Flushometer with the following features:

- PERMEX® Synthetic Rubber Diaphragm with Dual Filtered Fixed Bypass
- 1" I.P.S. Wheel Handle Bak-Chek® Angle Stop
- User friendly three (3) second Flush Delay
- Courtesy Flush® Override Button
- OPTIMA® EL-1500 Self-Adaptive Infrared Sensor with Indicator Light
- 13 1/2" x 13 1/2" Wall Box with Stainless Steel Access Panel and Vandal Resistant Screws
- 13" x 17" EASY ACCESS® Wall Box with Stainless Steel Access Panel and Vandal Resistant Screws
- Adjustable Tailpiece
- 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 to be molded from PERMEX® Rubber Compound for Chloramine Resistance
- High Back Pressure Vacuum Breaker Flush Connection, Spud Coupling and Flanges for 1½" Exposed Top Spud
- Chrome Plated Exposed Flushometer Parts

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 A112.19.2. Installation conforms to ADA requirements.

► Wall Box Specifications

- EASY ACCESS® Wall Box Assembly Part #EL-192-A
- Frame: 13" x 17" x 4" (330 mm x 432 mm x 102 mm) #16 Gauge
 Steel
- Cover (Access Panel): 14½" x 18½" (368 mm x 470 mm) #15
 Gauge #304 Stainless Steel, #4 Finish
- Screws: (6) #8-32 x 3/4" Drilled Spanner Head Spanner Bit Provided

► Control Circuit

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

Solenoid Operator

24 VAC, 50/60 Hz



▶ Economical

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

► 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. Wall Box allows for vandal-proof concealed installation where pipe chase is not available or pipe space is limited.

▶ 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.

▶ 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.

▶ Compliance & Certifications









This space for Architect/Engineer Approval

► ROUGH-IN

† Required Wall Opening



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▶ 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.

► Accessories (Sold Separately)

- See Accessories Section and OPTIMA Accessories Section of the Sloan catalog for details on these and other OPTIMA Flushometer variations
- Transformer (120 VAC/24 VAC, 50 VA) EL-154
- Transformer (240 VAC/24 VAC, 50 VA) EL-342

▶ L Dimension

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

▶ Sensor Range

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

▶ OPERATION



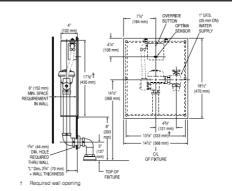
 A continuous, invisible light beam is emitted from the OPTIMA Sensor.

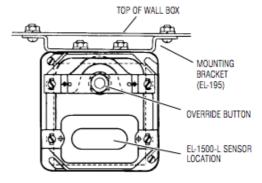


2. As the user enters the beamís effective range (22î to 42î) the beam is reflected into the OPTIMA Scanner Window and transformed into a low voltage electrical circuit. Once activated, the Output Circuit continues in a ìholdî mode for as long as the user remains within the effective range of the Sensor.



3. When the user steps away from the OPTIMA Sensor, the circuit waits 3 seconds (to prevent false flushing) then initiates an electrical ionetimei 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.





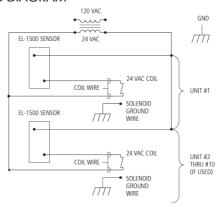
▶ ELECTRICAL BOX INSTALLATION

SENSOR LOCATION AND POSITIONING IS CRITICAL

Adjust the Mounting Bracket so that the Sensor sits flush against the Cover Plate.

Refer to the instructions packaged with the Flushometer for additional installation information.

▶ WIRING DIAGRAM



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