Royal® Optima® Flushometers
ROYAL 140-1.28 ES-S TMO SWB

▶ Code Number
3451120

▶ Description
Concealed, Sensor Activated Royal® Model Water Closet Flushometer with True Mechanical Override button, enclosed behind a 13½" x 13½" (343 mm x 343 mm) Wall Frame with Stainless Steel Access Panel, for floor mounted back spud bowls with exposed back spud.

▶ Flush Cycle
1.28 gpf/4.8 Lpf

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

- PERMEX® Synthetic Rubber Diaphragm with Dual Filtered Fixed Bypass
- Chrome Plated Exposed Flushometer Parts
- Handle Packing, Main Seat, Stop Seat and Vacuum Breaker Molded from PERMEX® Rubber Compound for Chloramine resistance
- User friendly three (3) second Flush Delay
- 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
- Die Cast Sensor Plate with no visible Fasteners (for 2-gang Electrical Box)
- Non-Hold-Open Integral Solenoid Operator, Fixed Metering Bypass and No External Volume Adjustment to Ensure Water Conservation
- Courtesy Flush® Non-Hold-Open True Mechanical Override
- High Back Pressure Vacuum Breaker Flush Connection, Spud Coupling and Flanges for 1½" Exposed Back Spud
- Wall Box with Stainless Steel Access Panel and Vandal Resistant Screws
- 1" I.P.S. Wheel Handle Bak-Chek® Angle Stop
- 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.

▶ 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 2¾" (70 mm).

▶ Accessories (Sold Separately)
- EL-154 120 VAC/24 VAC, 50/60 Hz (50 VA) - Box Mount (will operate up to 3 faucets)
- Transformer (240 VAC/24 VAC, 50 VA) EL-342

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

▶ ELECTRICAL SPECIFICATIONS
Control Circuit
- Solid State



▶ 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.

▶ 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.

▶ 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, troublefree operation. The operational components of the Flushometer are identical to a handle activated Royal® Flushometer, proven by over 100 years of experience.

▶ Compliance & Certifications
Buy American Act Compliant · HET HIGH-EFFICIENCY TOILET

This space for Architect/Engineer Approval

▶ OPERATION

- 3 Second Flush Delay
- 24 VAC Input
- 24 VAC Output

16 Second Arming Delay

Sensor Range

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

Solenoid Operator

- 24 VAC, 50/60 Hz

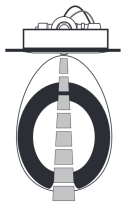
Transformers

- 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.

Wall Plate Specifications

- Sloan Wall Plate Assembly
- Cover (Access Panel): 13½" x 13½" (343 mm x 343 mm), #16 Gauge, #304 Stainless Steel, #4 Finish
- Frame: (4) #8-32 x ¾" Drilled Spanner Flat Head – Spanner Bit Provided
- Frame: 12" x 12" x 4" (305 mm x 305 mm x 102 mm), #16 Gauge

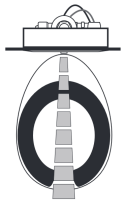
1. A continuous, invisible light beam is emitted from the OPTIMA® sensor.



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 "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.



► WIRING DIAGRAM

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

► ROUGH-IN

