

## 110 ES-S

## 111 ES-S

► **Description**

Exposed, Sensor Activated Sloan® Model Water Closet Flushometer for floor mounted or wall hung top spud bowls.

► **Flush Cycle**

- Model 111 ES-S High Efficiency (1.28 gpf/4.8 Lpf)
- Model 111 ES-S Low Consumption (1.6 gpf/6.0 Lpf)
- Model 110 ES-S (3.5 gpf/13.2 Lpf)

► **Variations**

- TP** Trap Primer
- DFB** Dual Filtered Fixed Bypass Diaphragm
- YO** Bumper on Angle Stop (for open front seat without cover)

► **Specifications**

Quiet, Exposed, Diaphragm Type, Chrome Plated Closet Flushometer for either left or right hand supply with the following features:

- High Chloramine Resistant PERMEX™ Synthetic Rubber Diaphragm with Linear Filtered Bypass and Vortex Cleansing Action™
- OPTIMA® EL-1500-L Self-Adaptive Infrared Sensor with Indicator Light
- User friendly three (3) second Flush Delay
- Courtesy Flush™ Override Button
- Non-Hold-Open Integral Solenoid Operator
- Two (2) Chrome Plated Wall Cover Plates (for 2-gang Electrical Box) with Vandal Resistant Screws
- 1" I.P.S. Screwdriver Bak-Chek® Angle Stop
- Vandal Resistant Stop Cap
- Adjustable Tailpiece
- Vacuum Breaker with Flush Connection
- Spud Coupling and Spud Flange for 1½" Top Spud
- Sweat Solder Adapter with Cover Tube and Cast Wall Flange
- High Copper, Low Zinc Brass Castings for Dezincification Resistance
- No External Volume Adjustment to Ensure Water Conservation
- Low Consumption Flush Accuracy
- 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, ANSI/ASME A112.19.2 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-485-A** Flushometer Electrical Box Positioning and Support Kit

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

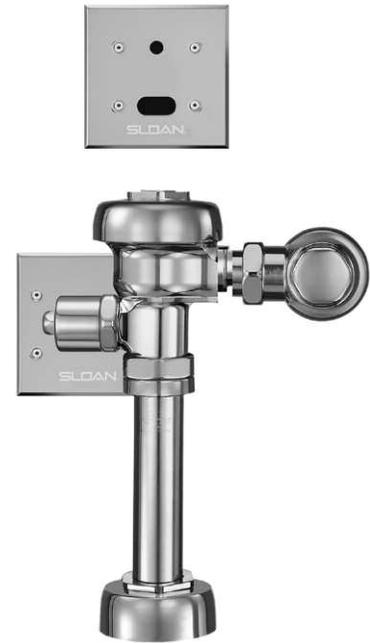
► **Contractor-friendly Packaging**

Installation time is reduced by packaging rough-in components and finishing components separately. In addition, all main valve components and subassemblies are factory assembled requiring less field assembly of the valve on the job site. Components are packaged as follows:

- Stops and Supply Kits, packaged separately — 6 per package
- Fully assembled Valve, packaged with complete Vacuum Breaker Assembly and Flange Kit — 2 per package

► **Fixtures**

Consult Sloan for Sloan brand matching fixture options.



► **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 except to initiate the Override Button when required. 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 operation costs.

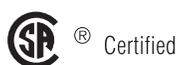
► **Practical**

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

► **Warranty**

3 year (limited)

► **Made in the U.S.A.**



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

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## ELECTRICAL SPECIFICATIONS

### Control Circuit

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

### OPTIMA Sensor Range

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

### Solenoid Operator

24 VAC, 50/60 Hz

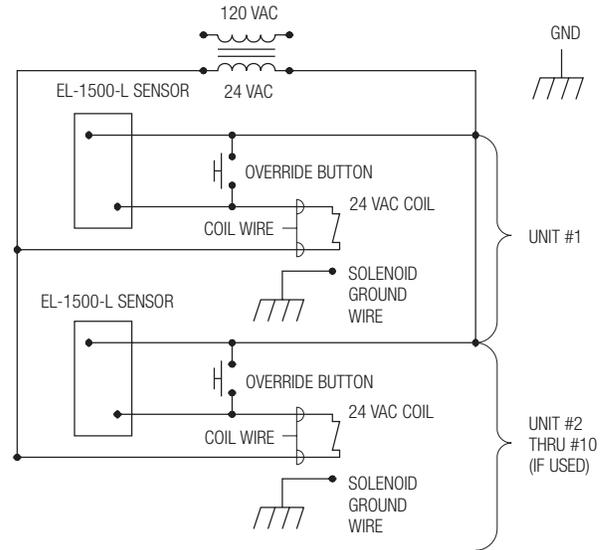
### Transformer

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.

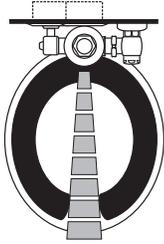
## WIRING DIAGRAM



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

## OPERATION

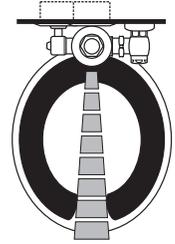
1. A continuous, invisible light beam is emitted from the OPTIMA Sensor.



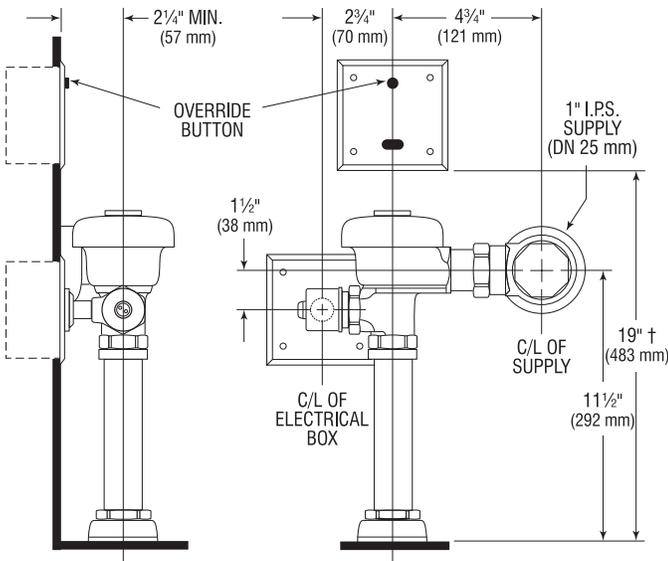
2. As the user enters the beam's effective range (22" to 42") the beam is reflected into the OPTIMA Scanner Window and transformed into a low voltage electrical circuit. Once activated, the Output Circuit continues in a "hold" mode for as long as the user remains within the effective range of the Sensor.



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.



## VALVE ROUGH-IN



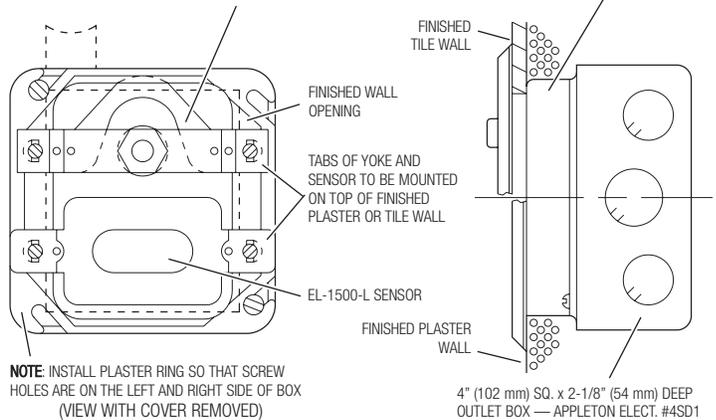
† Position of Sensor Box can be raised or lowered 1" (25 mm) if in conflict with Handicap Grab Bars.

## 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.

EL-141-A YOKE ASSEMBLY (INSTALL WITH OFFSET PORTION IN DEVICE COVER)



To ensure a perfect rough-in, Sloan recommends the use of the EL-485-A Flushometer Electrical Box Positioning and Support Kit. Specify and order the EL 485-A Kit separately. Consult factory for installation details.

**SLOAN VALVE COMPANY • 10500 SEYMOUR AVENUE • FRANKLIN PARK, IL 60131**

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