



# TSM-100 Series In-Fixture Dimming Sensor

Stand-alone Line Voltage Control with PIR Occupancy Sensor

Rev 8-14-2017

**Intelligent Device  
ECOSYSTEM**  
classic

## In-Fixture Sensor Electrical Specifications

Input Voltage Range:	120-277Vac @ 50/60Hz
Relay Load Ratings:	Max 800W @ 120-277VAC
AC Relay Inrush Current:	≤ 221A
Standby Time Delay Periods:	10secs, 1min, 5mins (default), 15mins, 30mins, 60mins
Dimming Time Delay Periods:	1min, 30mins, 60mins (default), off (dimming always on)
Dimming Levels:	0%, 10%, 20% (default), 30%
0-10VDC Dimming Current:	Max 100mA (sink)
Photodiode Sensitivity Range:	1-185 fc
Operating Temperature:	-40 - 131 °F
Operating Humidity:	20-90% non-condensing
Weatherproof Rating:	IP66 (if fully installed inside rated fixture)
Weatherproof Rating:	Class 2
Regulatory Code Compliance:	California Title 24

## External Sensor Electrical Specifications

Product Type:	External Photodiode
Sensitivity Range:	1-185 fc
Connector Type:	3-pin
Wire Lead Length:	17.72 inches
Operating Temperature:	-40 - 131 °F
Operating Humidity:	20-90% non-condensing
Weatherproof Rating:	IP66 (if fully installed inside rated fixture)
Weight:	5.38 oz. (152.4 grams) plus lens

- Line voltage on/off control of lighting fixtures
- 0–10V dimming control compatible with dimmable LED drivers and fluorescent ballasts
- Standby time delay duration (10sec to 60min) before activated PIR sensor dims light and motion is no longer detected
- 1 to 60 min and 24 hr dimming time delay for dimmed lighting
- Photodiode accessory measures ambient light and observes threshold set at measured or preset light levels
- Built-in quick installation testing mode
- Non-volatile memory, remembers settings even if AC power to module is removed
- IR remote control allows quick setup, settings adjustment, and manual on/off override
- Multiple lenses available for different coverage areas
- Compact, UV resistant, flame retardant, impact resistant, and recyclable polycarbonate construction
- IP66 rated for use in outdoor/wet locations when fully installed in equivalent rated fixture
- Recommended max. fixture wall thickness <0.125" [3.18mm] for optimal mounting and performance
- TSM mounts inside the bottom of light fixture
- 5 year warranty



**IP66** TITLE 24



TSM-100P-DR

TSM-100-PC

Part	Model	Description
93057510	TSM-100P-DR	In-Fixture, PIR Sensor with 0-10V Dimming

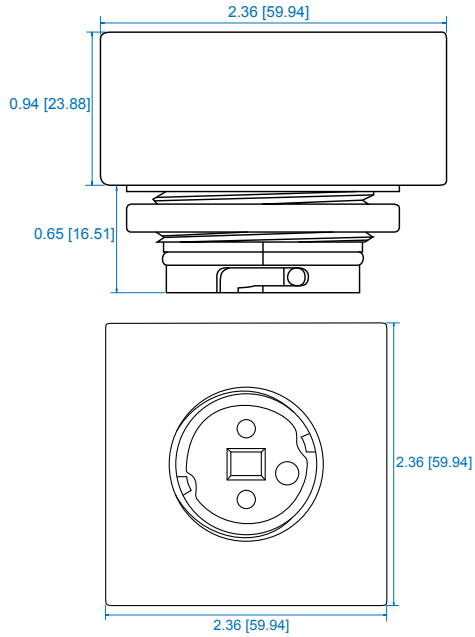
Part	Model	Accessory
93057511	TSM-100-L1	Lens #1, Optimized for 8-12 ft Mount Height, 0.4 oz
93057512	TSM-100-L2	Lens #2, Optimized for 12-40 ft Mount Height, 0.4 oz.
93057513	TSM-100-PC	External Photocell Daylight Sensor, 0.5 oz.
93057514	TSM-100-RC	Handheld IR Remote Control, 2.5 oz.

Safety Cert.	Standard
UL/CUL	UL8750 & CAN/CSA C22.2 No. 250.13
EMC Standard	Notes
Withstand Voltage Relay	Input to Output Across Relay Contacts: 700 Vac
Withstand Voltage AC In to Dim Out	Input to DIM: >1750 Vac
Dimming Circuit	UL & cUL Isolated Class 2, Dim+ Purple/Dim- Gray
FCC Part 15	Class B

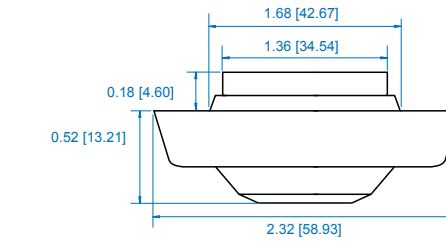


## Dimensions

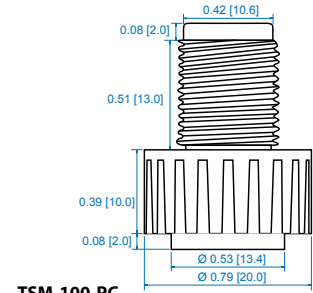
IN [mm]



**TSM-100P-DR**

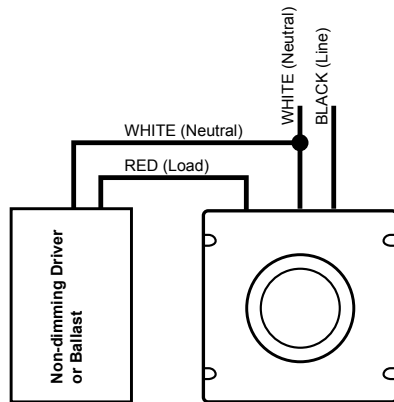


**TSM-100-L1 or TSM-100-L2 Lens**

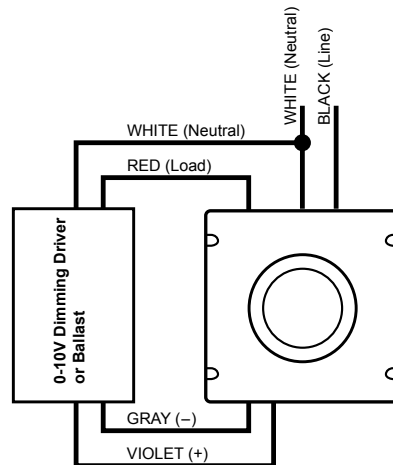


**TSM-100-PC**

## Typical Application Wiring

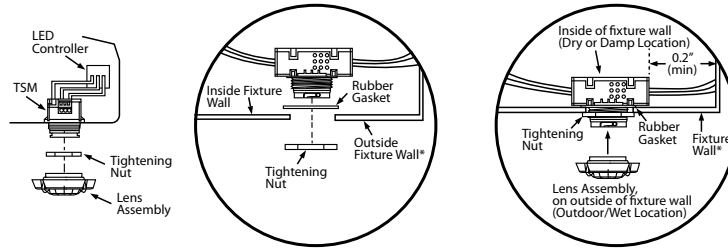


**TSM-100P-DR Non-dimming**



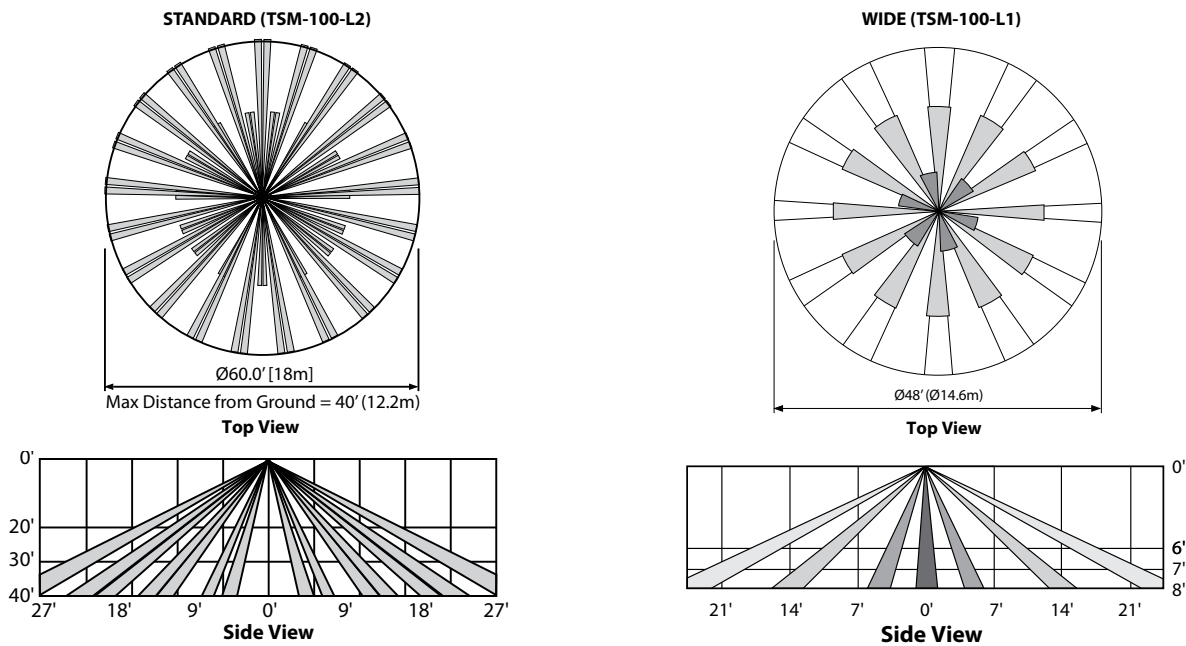
**TSM-100P-DR Dimming**

## TSM-100P-DR Mounting



\* Recommended <math><0.125\text{''}</math> [3.18mm] maximum fixture wall thickness for optimal mounting and performance  
(UL Certified Outdoor Enclosure)

## Coverage Patterns



## Operating the Remote

<p><b>OVERWRITE LIGHT OFF</b> keeps light off (sensor returns to previous state after 20m uninterrupted by motion)</p> <p><b>OVERWRITE LIGHT ON</b> keeps light on (sensor returns to previous state after 20m uninterrupted by motion)</p> <p><b>SET SENSITIVITY LEVEL</b> relative PIR element detector sensitivity</p> <p><b>SET STANDBY TIME DELAY</b> duration before activated sensor dims light once motion is no longer detected</p> <p><b>SET AMBIENT LIGHT THRESHOLD</b> detection cut-off point when light is kept off: disabled (sun icon), 1, 3, or 5 footcandles</p> <p><b>SET DIMMING TIME DELAY</b> duration in which light is dimmed before being turned off completely</p>	<p><b>Light Control</b></p>	<p><b>ENABLE AUTO MODE</b> Sensitivity = 100%, Standby Time Delay = 5m, Dimming Time Delay = 24h (none), Dimming Level = 20%, Ambient Light Threshold = 5 footcandles</p> <p><b>RESET SENSOR TO FACTORY SETTINGS</b> Sensitivity = 100%, Standby Time Delay = 5m, Dimming Time Delay = 60m, Dimming Level = 20%, Ambient Light Threshold = disabled</p> <p><b>TEST SENSOR</b> turns off light if already on, turns on light for 5 secs if motion is detected, turns off light (process repeats for 2m)</p> <p><b>RECORD AMBIENT LIGHT THRESHOLD</b> set detected light level as threshold to turn on light (sensor will not turn on light if amount of ambient light equals or exceeds recorded level)</p> <p><b>SET DIMMING LEVEL</b> light dimming level after time delay has passed (sensor dims light to save energy)</p>
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