



Features

Preassembled Indicators for Signaling Applications



- Intense levels of light output for outdoor applications
- Controlled field of view for signage and narrow lane use
- Rugged, cost-effective, and easy-to-install
- Compact devices are completely self-contained — no controller needed
- Immune to EMI and RFI interference
- NPN or PNP input, and 15 V DC to 30 V DC, or 85 V AC to 130 V AC operation, depending on model
- One, two, or three indicators
- Sun shield included

WARNING:



- **Do not use this device for personnel protection**
- Using this device for personnel protection could result in serious injury or death.
- This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A device failure or malfunction can cause either an energized (on) or de-energized (off) output condition.

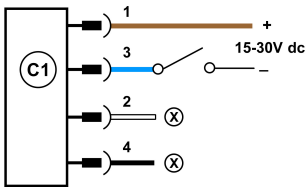
Models

Family	Color 1	Color 2	Color 3	Input ⁽¹⁾	Connector ⁽²⁾
SP150	G	Y	R	P	Q
SP150 ⁽³⁾	G = Green			P = PNP	Q = Integral 4-pin M12 male quick-disconnect connector
SP250	Y = Yellow			N = NPN	QP = 150 mm (6 in) PVC-jacketed cable with a 4-pin M12 male quick-disconnect connector
SP350	R = Red			A120 = 85 V AC to 130 V AC ⁽⁴⁾	Blank = Terminal wired
	B = Blue				
	W = White				
	Blank = Not used				

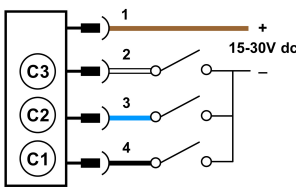
Wiring

Wiring — NPN QD Models

SP150XNQ (1-Color Models)



SP150XXXNQ (3-Color Models)

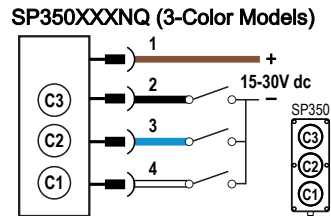
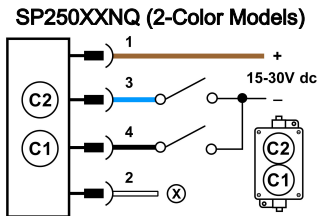


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(1) Input is PNP/NPN selectable, depending on wiring.
(2) Models with a quick-disconnect connector require a mating cordset.
(3) SP150 is only available in 1- or 3-color options. SP150 1-color models are only available as PNP.
(4) A120 models are only available with a terminal-wired connection.



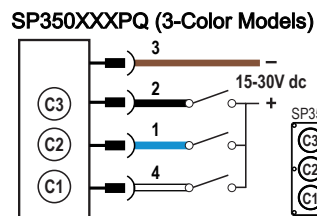
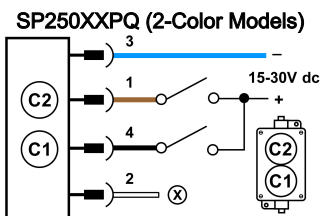
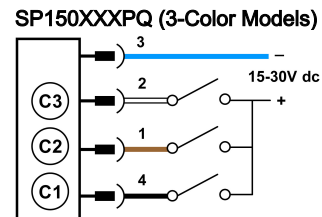
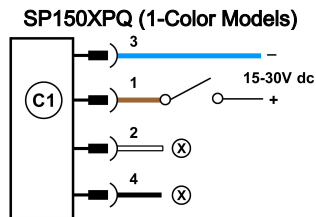
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Wiring Key:
 1 = Brown
 2 = White
 3 = Blue
 4 = Black

ⓧ indicates Not Used
 C1 = Color 1
 C2 = Color 2
 C3 = Color 3

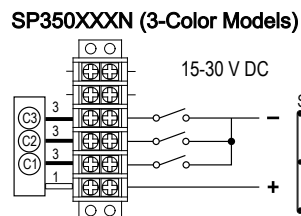
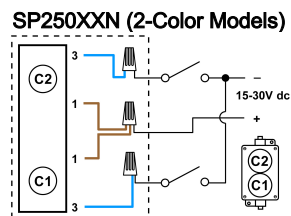
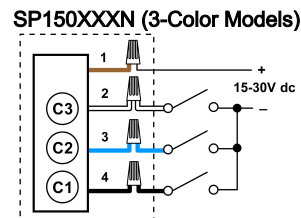
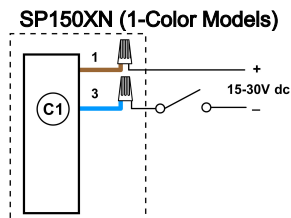
Wiring — PNP QD Models



Wiring Key:
 1 = Brown
 2 = White
 3 = Blue
 4 = Black

ⓧ indicates Not Used
 C1 = Color 1
 C2 = Color 2
 C3 = Color 3

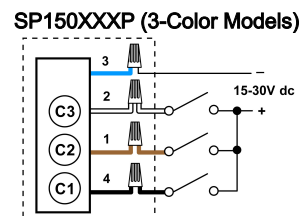
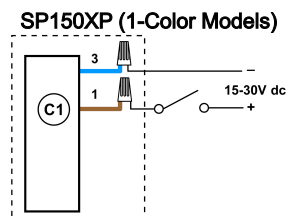
Wiring — NPN Terminal-Wired Models



Wiring Key:
 1 = Brown
 2 = White
 3 = Blue
 4 = Black

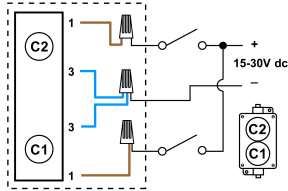
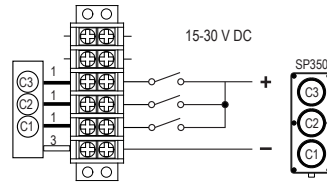
C1 = Color 1
 C2 = Color 2
 C3 = Color 3

Wiring — PNP Terminal-Wired Models



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SP250XXP (2-Color Models)**SP350XXXP (3-Color Models)****Wiring Key:**

1 = Brown

2 = White

3 = Blue

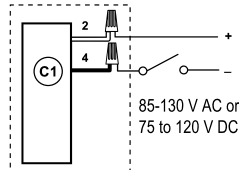
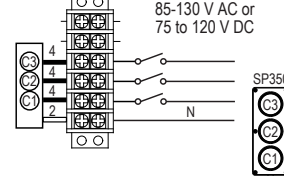
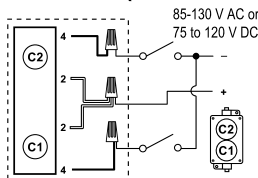
4 = Black

C1 = Color 1

C2 = Color 2

C3 = Color 3

Wiring — AC Models

SP150XA120 (1-Color Models)**SP350XXA120 (3-Color Models)****SP250XXA120 (2-Color Models)****Wiring Key:**

2 = White

4 = Black

C1 = Color 1

C2 = Color 2

C3 = Color 3

N = Neutral

Specifications

Supply Voltage and Current**SP150 DC Models**

1-color: 15 V DC to 30 V DC at 120 mA max. per LED color

3-color: 15 V DC to 30 V DC at 40 mA max. per LED color

NOTE: SP150 3-color available as DC model only**SP250/SP350 DC Models**

15 V DC to 30 V DC at 120 mA max. per LED color

SP150/SP250/SP350 AC Models

85 V AC to 130 V AC, or 75 V DC to 120 V DC, at 16 mA max. per LED color

Indicators

LED colors are independently selected, depending on model

Indicator Response Time

Indicator ON/OFF: 10 ms maximum

Environmental Rating

Fully encapsulated. Terminal-wired models must have cover screws tightened and use a watertight compression fitting to meet environmental ratings.

Electronics: IP67

SP150 Enclosure: IP67

SP250 Enclosure: IP65

SP350 Enclosure: IP65

Indicator Characteristics

Color	Dominant Wavelength (nm) or Color Temperature (CCT)	Lumen Output (Typical at 25 °C)	
		SP150 (1-color), SP250, and SP350 Models	SP150 (3-color) Model
Green	520 nm to 535 nm	57	21
Red	618 nm to 630 nm	20	7
Yellow	584 nm to 594 nm	14	6
Blue	465 nm to 480 nm	12	4.5
White	4600K to 16000K	20	13

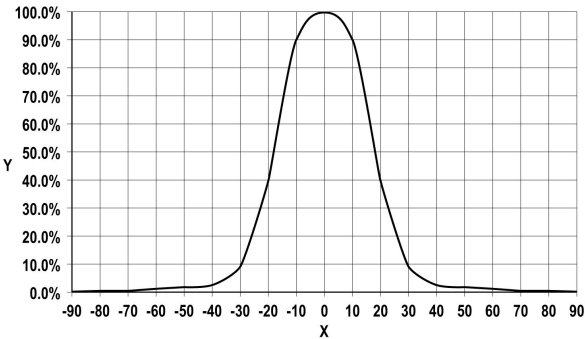
CertificationsBanner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM**Construction**

Polycarbonate

Operating Conditions

-40 °C to +50 °C (-40 °F to +122 °F)

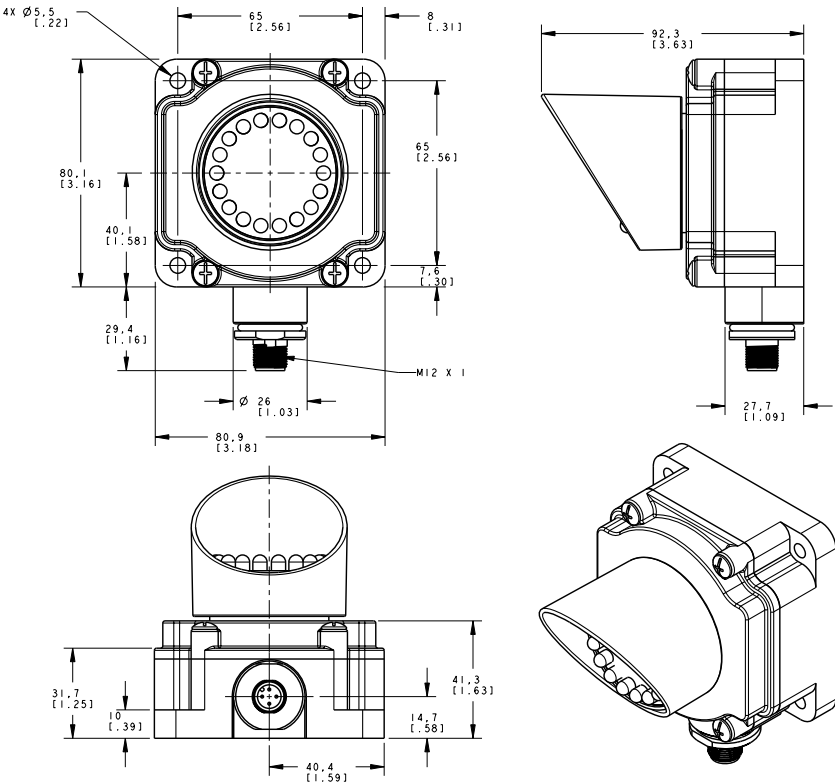
Percent of Maximum Intensity vs Viewing Angle
X: Viewing Angle (Degree)
Y: Intensity (Percent)



Dimensions

Dimensions — SP150 Models

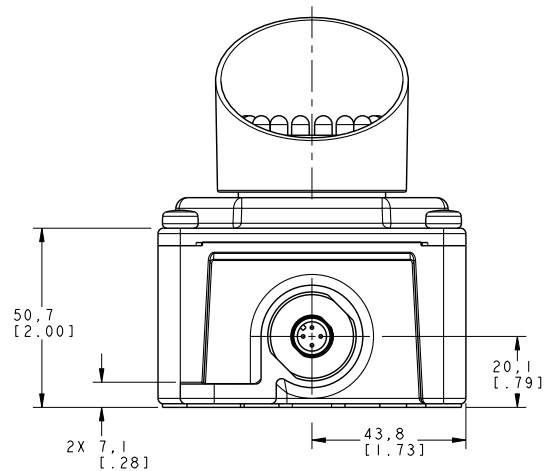
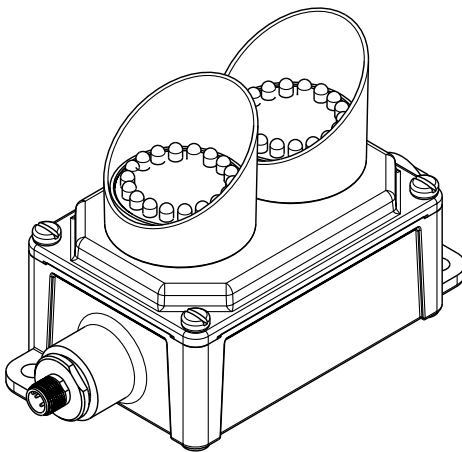
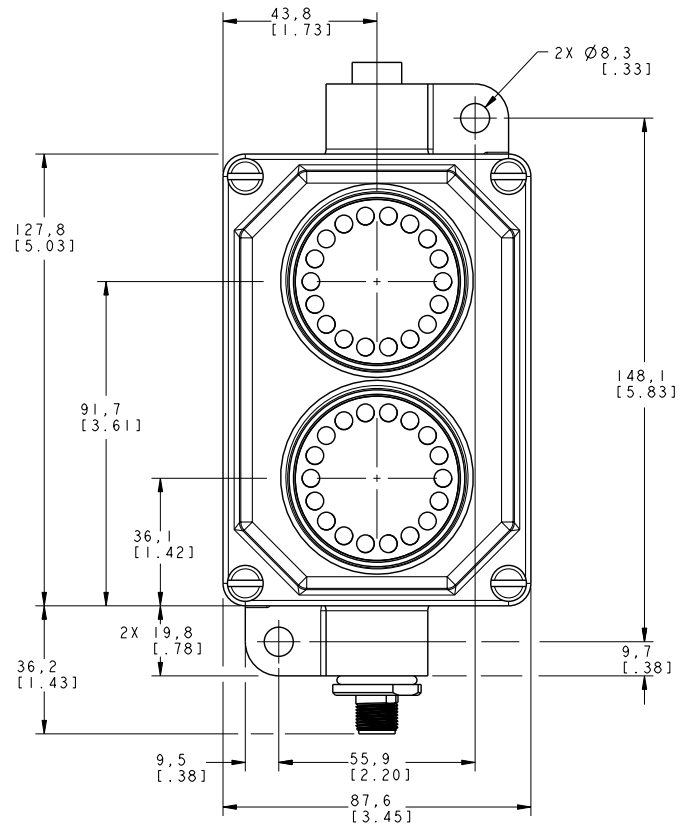
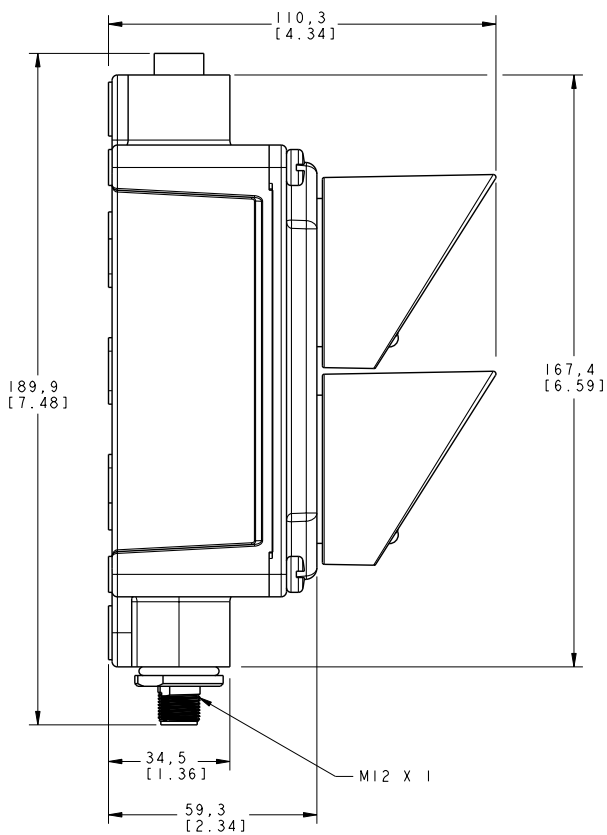
All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.



NOTE: Terminal-wired models have ½ inch NPT port in place of an M12 connector.

Dimensions — SP250 Models

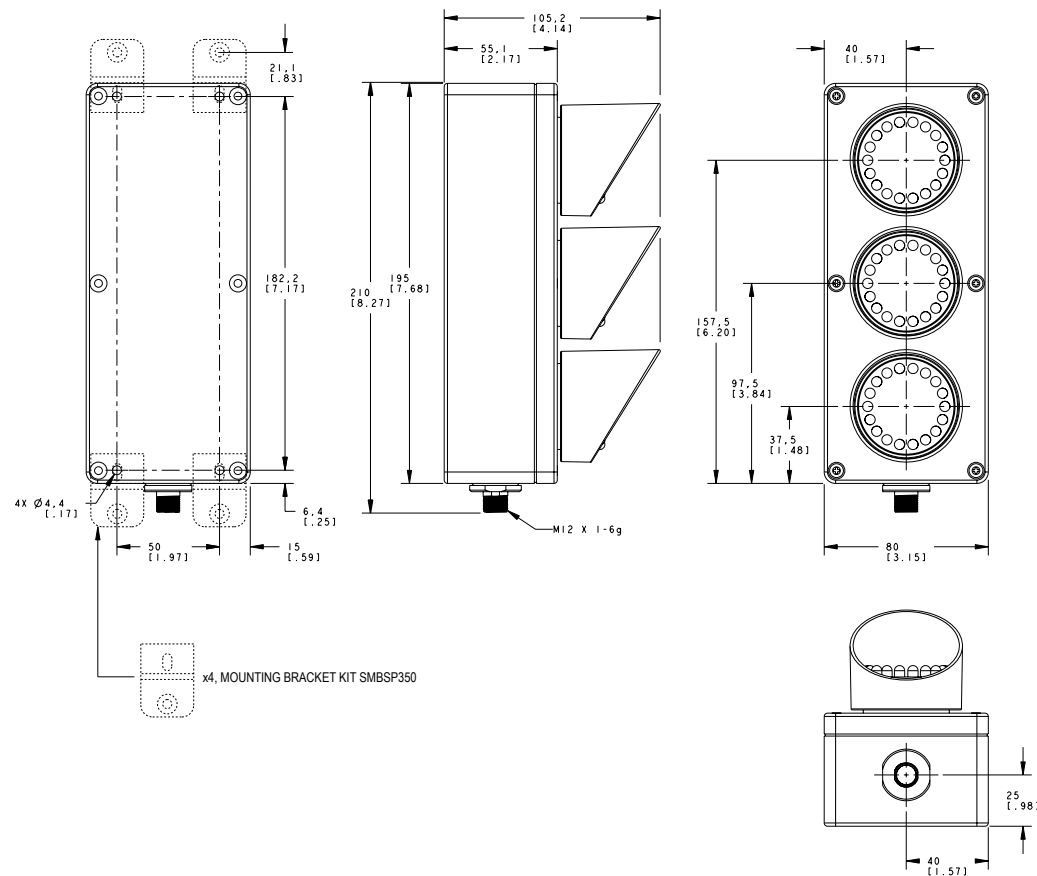
All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.



NOTE: Terminal-wired models have ½ inch NPT port in place of an M12 connector.

Dimensions — SP350 Models

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.



NOTE: Terminal-wired models have an access hole for ½ inch conduit fitting in place of an M12 connector. Mounting kit SMBSP350 included.

Accessories

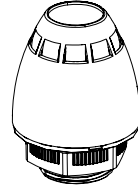
Elevated Mount System

Pipes

Black Anodized Aluminum, ½ in. NPT Pipe Models	Clear Anodized Aluminum, ½ in. NPT Pipe Models	Description
SOP-E12-150A, 150 mm (6 in) long	SOP-E12-150AC, 150 mm (6 in) long	- Elevated-use stand-off pipe - Threaded at both ends - Compatible with most industrial environments - CAD Files: - SOP-E12-150A: DXF, PDF, IGS, STP - SOP-E12-300A: DXF, PDF, IGS, STP - SOP-E12-600A: DXF, PDF, IGS, STP - SOP-E12-900A: DXF, PDF, IGS, STP
SOP-E12-300A, 300 mm (12 in) long	SOP-E12-300AC, 300 mm (12 in) long	
SOP-E12-600A, 600 mm (24 in) long	-	
SOP-E12-900A, 900 mm (36 in) long	SOP-E12-900AC, 900 mm (36 in) long	
Black Anodized Aluminum, ¾ in. NPT Pipe Models		Description
SOP-E34-150A, 150 mm (6 in) long	- Elevated-use stand-off pipe - Threaded at both ends - Compatible with most industrial environments - CAD Files: - SOP-E34-150x: DXF, PDF, IGS, STP - SOP-E34-300x: DXF, PDF, IGS, STP - SOP-E34-600x: DXF, PDF, IGS, STP - SOP-E34-900x: DXF, PDF, IGS, STP	
SOP-E34-300A, 300 mm (12 in) long		
SOP-E34-600A, 600 mm (24 in) long		
SOP-E34-900A, 900 mm (36 in) long		

304 Stainless Steel, ½ in. NPT Pipe Models	Description
SOP-E12-150SS, 150 mm (6 in) long	- Elevated-use stand-off pipe - Threaded at both ends - Compatible with most industrial environments - CAD Files: - SOP-E12-150x: DXF, PDF, IGS, STP - SOP-E12-300x: DXF, PDF, IGS, STP - SOP-E12-600x: DXF, PDF, IGS, STP - SOP-E12-900x: DXF, PDF, IGS, STP
SOP-E12-300SS, 300 mm (12 in) long	
SOP-E12-600SS, 600 mm (24 in) long	
SOP-E12-900SS, 900 mm (36 in) long	

Bottom Covers

Mounting Base Model	Description	
SA-E12M30 - Black acetal	- Streamlined black acetal or white UHMW mounting base adapter/cover - Adapter from ½ in. NPSM/DN15 pipe to 30 mm (1-3/16 in) drilled hole - Mounting hardware included - CAD files: DXF, PDF, IGS, STP	
SA-E12M30C - White UHMW		

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