BANNER ®

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

Wiring

Wiring — NPN QD Models

SP150XNQ (1-Color Models)

SP150XXXNQ (3-Color Models)
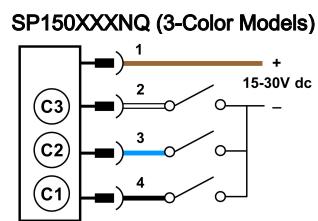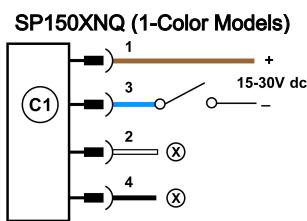
[1] Input is PNP/NPN selectable, depending on wiring.
[2] Models with a quick-disconnect connector require a mating cordset.
[3] SP150 is only available in 1- or 3-color options. SP150 1-color models are only available as PNP.
[4] A120 models are only available with a terminal-wired connection.

148879
p/n: 148879 Rev. F

SP250XXNQ (2-Color Models)
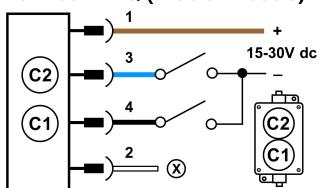
SP350XXXNQ (3-Color Models)
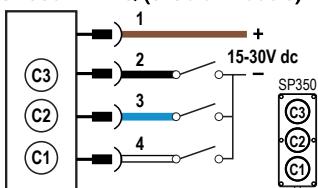
Wiring Key:
1 = Brown
2 = White
3 = Blue
4 = Black

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

Wiring — PNP QD Models

SP150XPQ (1-Color Models)
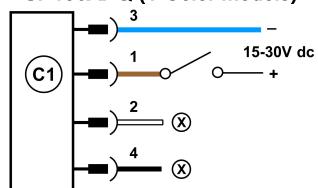
SP150XXXPQ (3-Color Models)
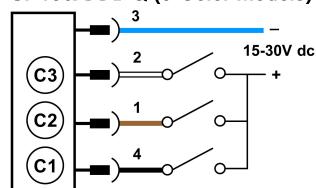
SP250XXPQ (2-Color Models)
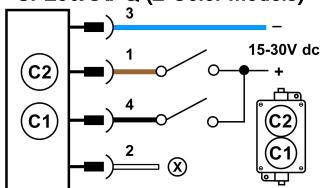
SP350XXXPQ (3-Color Models)

Wiring Key:
1 = Brown
2 = White
3 = Blue
4 = Black
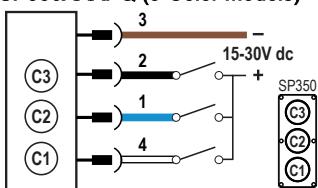
Ⓧ indicates Not Used
C1 = Color 1
C2 = Color 2
C3 = Color 3

Wiring — NPN Terminal-Wired Models

SP150XN (1-Color Models)
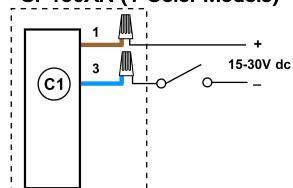
SP150XXXN (3-Color Models)
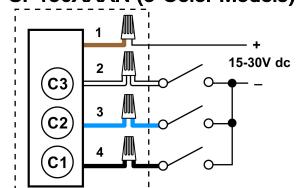
SP250XXN (2-Color Models)
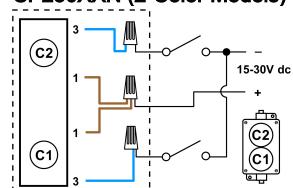
SP350XXXN (3-Color Models)

15-30 V DC
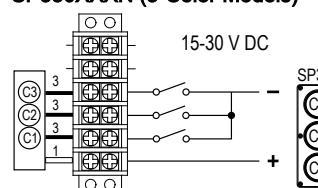
Wiring Key:
1 = Brown
2 = White
3 = Blue
4 = Black

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

Wiring — PNP Terminal-Wired Models

SP150XP (1-Color Models)
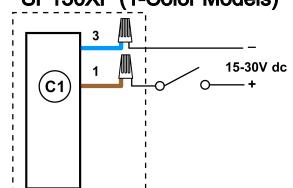
SP150XXXP (3-Color Models)

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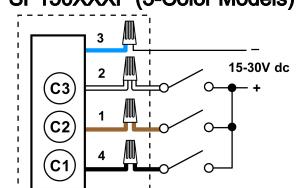
Continued from page 2

SP250XXP (2-Color Models)
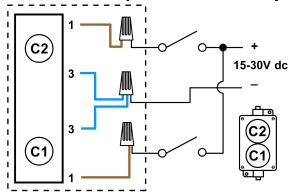
**SP350XXXP (3-Color Models)**

15-30 V DC
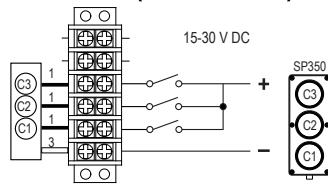
Wiring Key:

1 = Brown

2 = White

3 = Blue

4 = Black

C1 = Color 1

C2 = Color 2

C3 = Color 3

Wiring — AC Models

SP150XA120 (1-Color Models)

85-130 V AC or
75 to 120 V DC
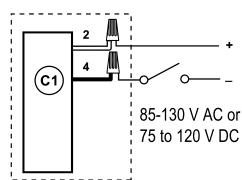
SP350XXXA120 (3-Color Models)

85-130 V AC or
75 to 120 V DC
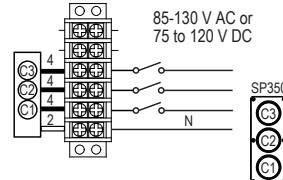
SP250XXA120 (2-Color Models)

85-130 V AC or
75 to 120 V DC
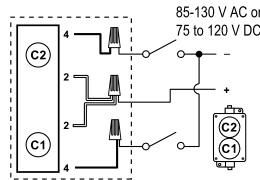
Wiring Key:

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

Certifications

CE

Banner 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)
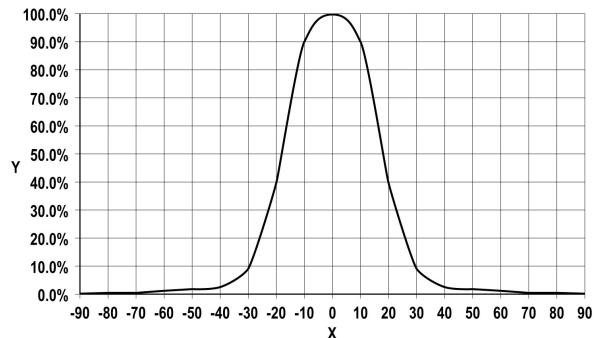
Dimensions

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.

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Dimensions — SP250 Models

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.
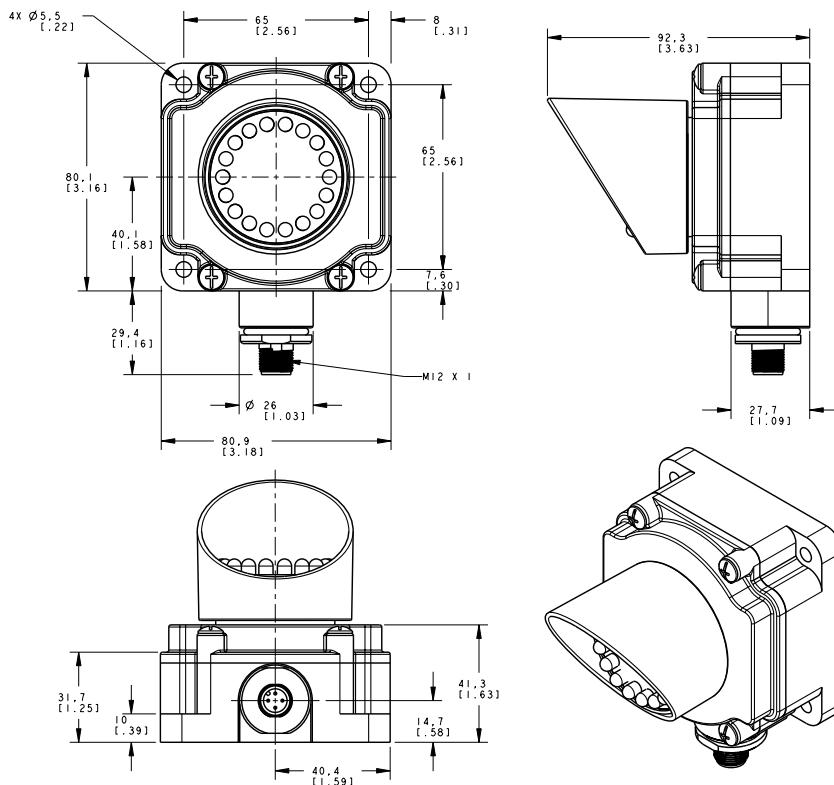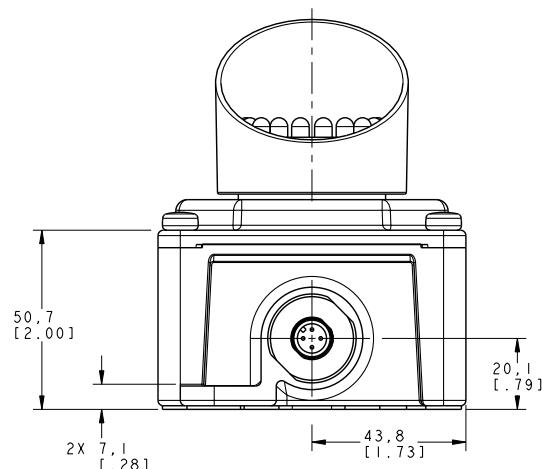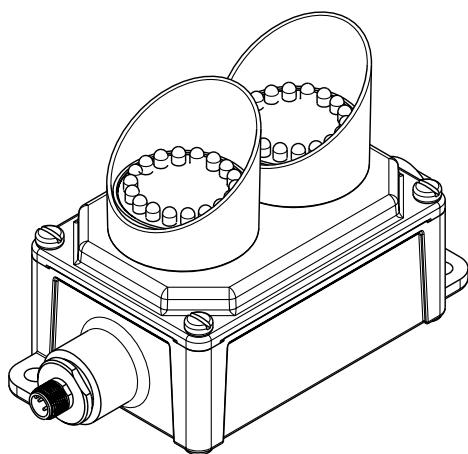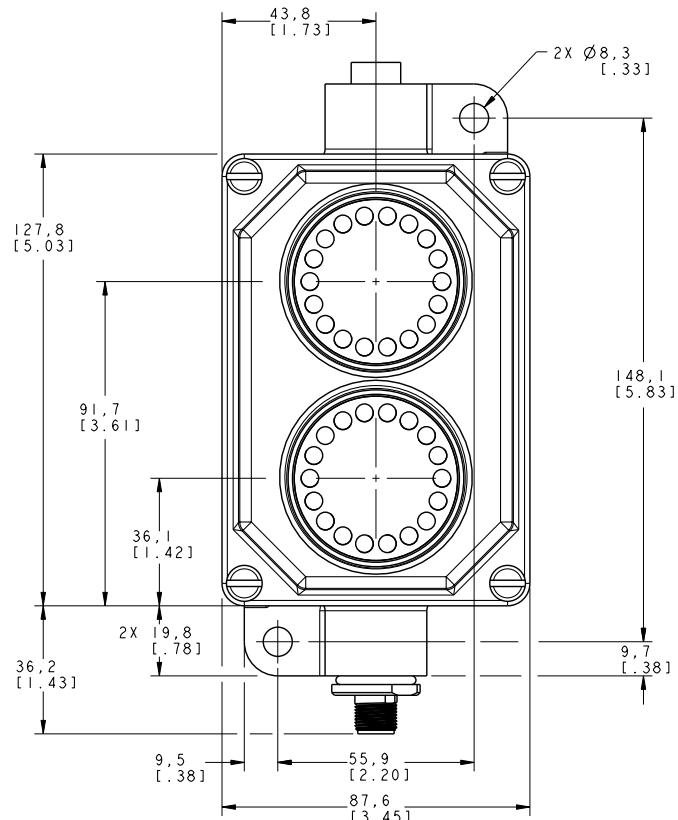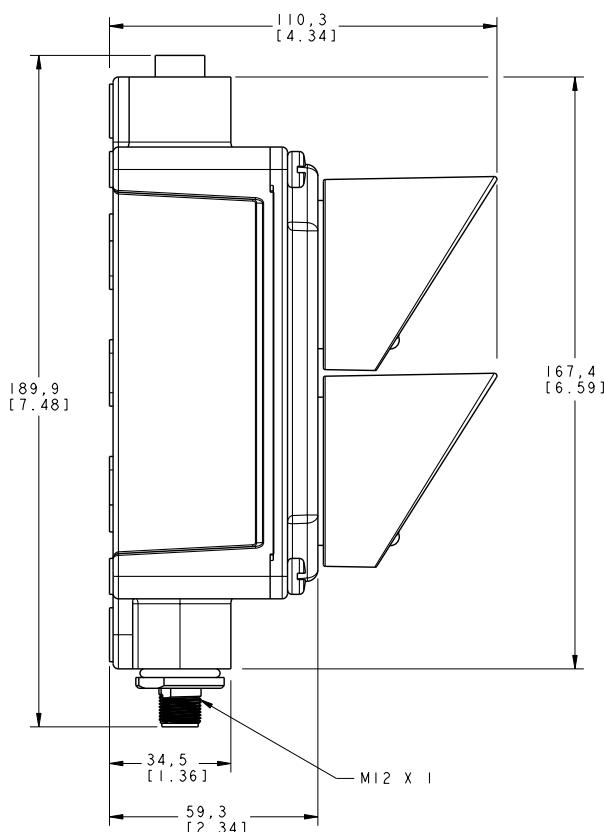
NOTE: Terminal-wired models have ½ inch NPT port in place of an M12 connector.

Dimensions — SP350 Models

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

x4, MOUNTING BRACKET KIT SMBSP350
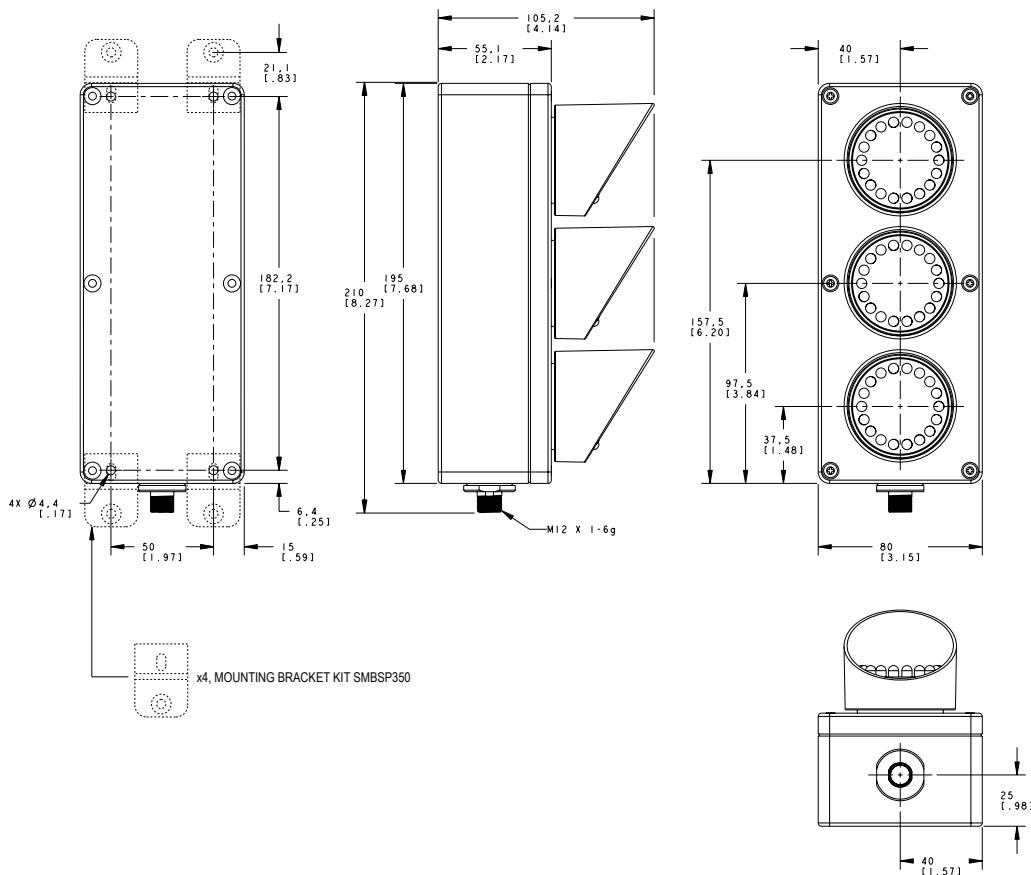
NOTE: Terminal-wired models have an access hole for ½ inch conduit fitting in place of an M12 connector. Mounting kit SMBSP350 included.

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-E12-300A, 300 mm (12 in) long	SOP-E12-300AC, 300 mm (12 in) long	◦ SOP-E12-150A: DXF, PDF, IGS, STP
SOP-E12-600A, 600 mm (24 in) long	-	◦ SOP-E12-300A: DXF, PDF, IGS, STP ◦ SOP-E12-600A: DXF, PDF, IGS, STP
SOP-E12-900A, 900 mm (36 in) long	SOP-E12-900AC, 900 mm (36 in) long	◦ SOP-E12-900A: DXF, PDF, IGS, STP

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-E34-300A, 300 mm (12 in) long	◦ SOP-E34-150x: DXF, PDF, IGS, STP
SOP-E34-600A, 600 mm (24 in) long	◦ SOP-E34-300x: DXF, PDF, IGS, STP ◦ SOP-E34-600x: DXF, PDF, IGS, STP
SOP-E34-900A, 900 mm (36 in) long	◦ SOP-E34-900x: DXF, PDF, IGS, STP

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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		
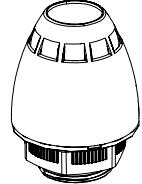
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