EZ-LIGHT® **Traffic** Light

BANNER®
more sensors, more solutions

Datasheet

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: Not To Be Used for Personnel **Protection**

Never use this device as a sensing device for personnel **protection.** Doing so could lead to serious injury or death. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition.

Models

Model[1]	Indicators	LED Color[2]	Input	**Connection**	**Mounting**
SP150GPQ	1	1 Color: Green	PNP /NPN Selectable	4-pin M12/Euro-style Integral QD	Flat or DIN-mount
SP150RPQ		1 Color: Red			
SP150GRYPQ		3 Colors: Green, Red, Yellow	PNP		
SP150GRYNQ			NPN		
SP150GA120		1 Color: Green	85 V ac to 130 V ac	Terminal-wired	
SP150RA120		1 Color: Red			
SP250GRPQ	2	Top indicator: Red Bottom indicator: Green	PNP	4-pin M12/Euro-style Integral QD	Flat-mount
SP250GRNQ			NPN		
SP250GRA120			85 V ac to 130 V ac	Terminal-wired	
SP350GYRPQ	3	Top indicator: Red Middle indicator: Yellow Bottom indicator: Green	PNP	4-pin M12/Euro-style Integral QD	
SP350GYRNQ			NPN		
SP350GYRA120			85 V ac to 130 V ac	Terminal-wired	

EZ-LIGHT **Application** Notes

Push-button models: When power is initially applied to the device, press the button to turn the light on. If power to the device is interrupted the light will turn off and will remain off when power is restored. To turn the light back on, press the button.

Terminal-wired models: Cover screws must be tightened and use water tight compression fitting to meet environmental ratings.

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[1] Integral 4-pin M12/Euro-style quick disconnect models are listed. AC models are terminal-wired only.
- To order a terminal-wired model, omit the suffix Q in the model number. For example, SP150GP.
- To order the 150 mm (6 in) PVC cable model with a 4-pin M12/Euro-style quick disconnect, replace the suffix "Q" with "QP" in the model number. For example, SP15OGPQP.
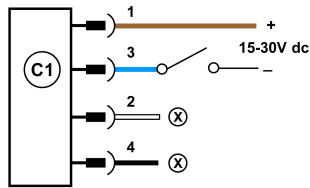- Models with a quick disconnect require a mating cordset.

[2] 1-Color Models: 18 LEDs per color; 3-Color Models: 6 LEDs per color. Contact Banner Engineering for other colors and color combinations.
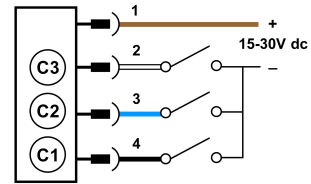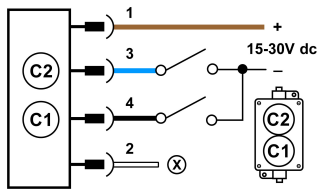
Wiring Diagrams — NPN QD Models

SP150XNQ (1-Color Models)

```
C1    1 ——————— +
      3          15-30V dc
                 —
      2    X
      4    X
```

SP150XXXNQ (3-Color Models)

```
      1 ——————— +
C3    2          15-30V dc
C2    3          —
C1    4
```

SP250XXNQ (2-Color Models)

```
      1 ——————— +
C2    3          15-30V dc
C1    4          —     C2
      2    X           C1
```

Wiring Key:

1 = Brown
2 = White
3 = Blue
4 = Black

Ⓧ indicates Not Used

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

Wiring Diagrams — PNP QD Models

SP150XPQ (1-Color Models)

```
C1    3 ——————— —
      1          15-30V dc
                 +
      2    X
      4    X
```
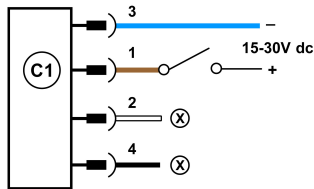
SP150XXXPQ (3-Color Models)

```
      3 ——————— —
C3    2          15-30V dc
C2    1          +
C1    4
```
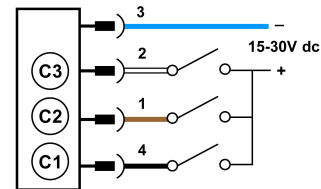
SP250XXPQ (2-Color Models)
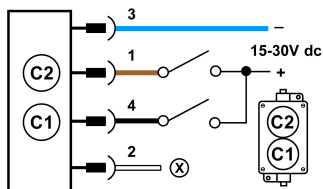
```
      3 ——————— —
C2    1          15-30V dc
C1    4          +     C2
      2    X           C1
```

Wiring Key:

1 = Brown
2 = White
3 = Blue
4 = Black

Ⓧ indicates Not Used

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

Wiring Diagrams — NPN Terminal-Wired Models

SP150XN (1-Color Models)

```
C1    1 ——————— +
      3          15-30V dc
                 —
```
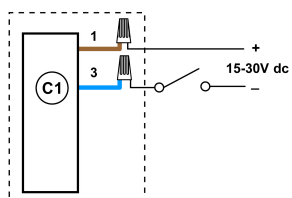
SP150XXXN (3-Color Models)

```
      1 ——————— +
C3    2          15-30V dc
C2    3          —
C1    4
```
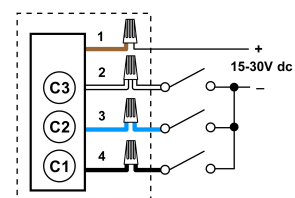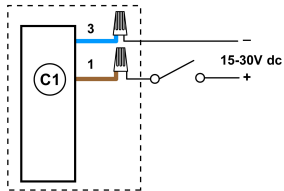
SP250XXN (2-Color Models)

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

C1 = Color 1
C2 = Color 2
C3 = Color 3
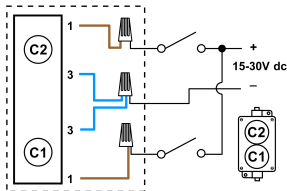
15-30V dc
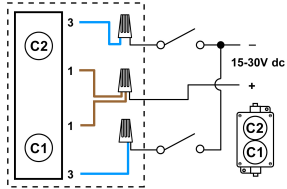
Wiring Diagrams — PNP Terminal-Wired Models

SP150XP (1-Color Models)

15-30V dc

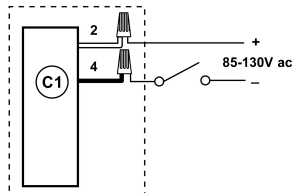SP150XXXP (3-Color Models)

15-30V dc
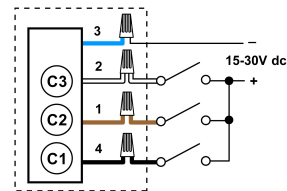
SP250XXP (2-Color Models)
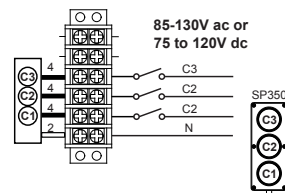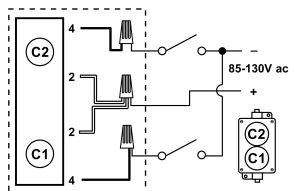
15-30V dc

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

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

Wiring Diagrams — AC Models

SP150XA120 (1-Color Models)

85-130V ac

SP350XXXA120 (3-Color Models)

85-130V ac or
75 to 120V dc

SP350

SP250XXA120 (2-Color Models)

85-130V ac

Wiring Key:
2 = White
4 = Black

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

Specifications

Supply Voltage and Current, 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

Supply Voltage and Current, AC Models
  85 V dc to 130 V dc 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 max.

Construction
  Polycarbonate

Environmental **Rating**
  Fully encapsulated. Terminal-wired models must have cover screws tightened and use watertight compression fitting to meet environmental ratings.
  Electronics: IEC IP67
  SP150 Enclosure: IEC IP67
  SP250 Enclosure: IEC IP65
  SP350 Enclosure: IEC IP65

Operating Conditions
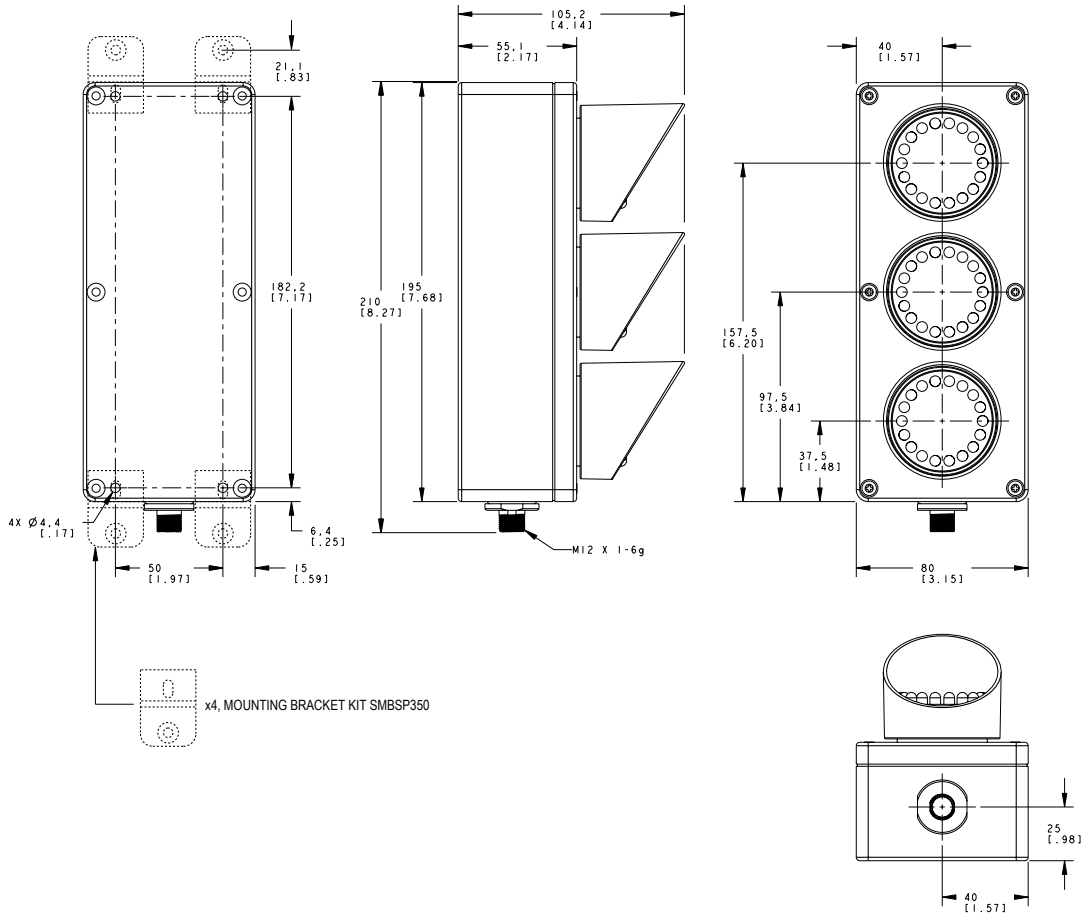 -40° to +50° C (-40° to +122° F)

Dimensions — SP150 Models
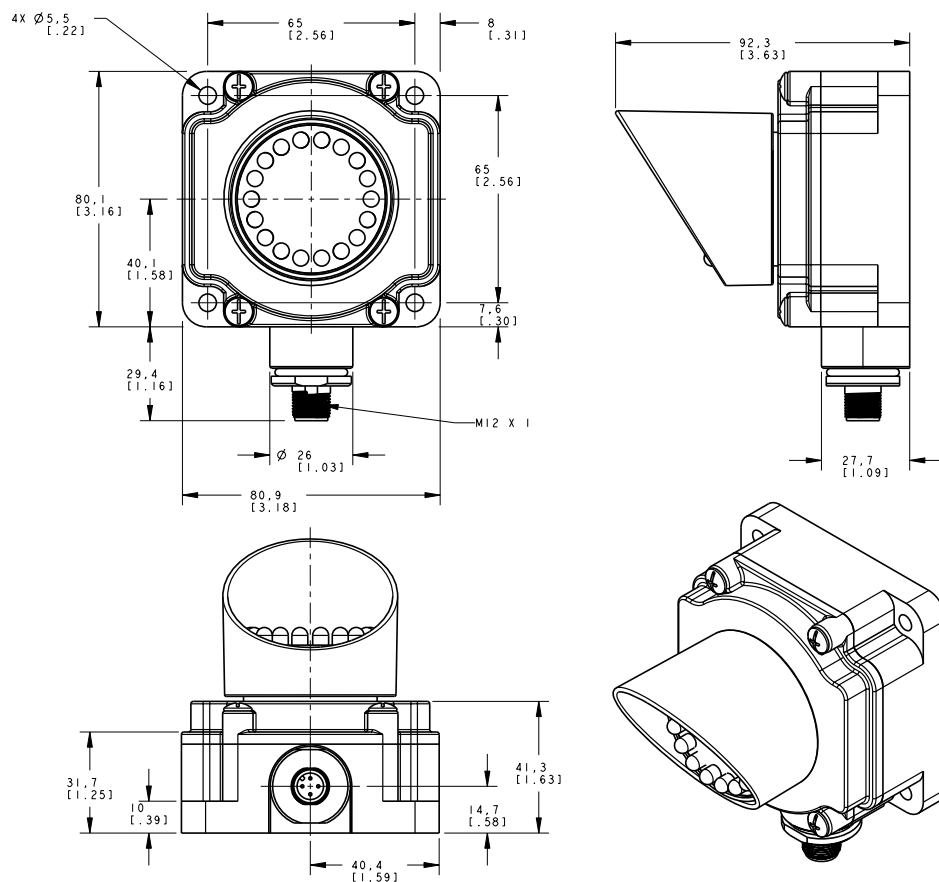
All measurements are listed in millimeters [inches], unless noted otherwise.

Note: Terminal-wired models have ½ inch NPT port in place of M12/Euro-style connector.

Dimensions — SP250 Models
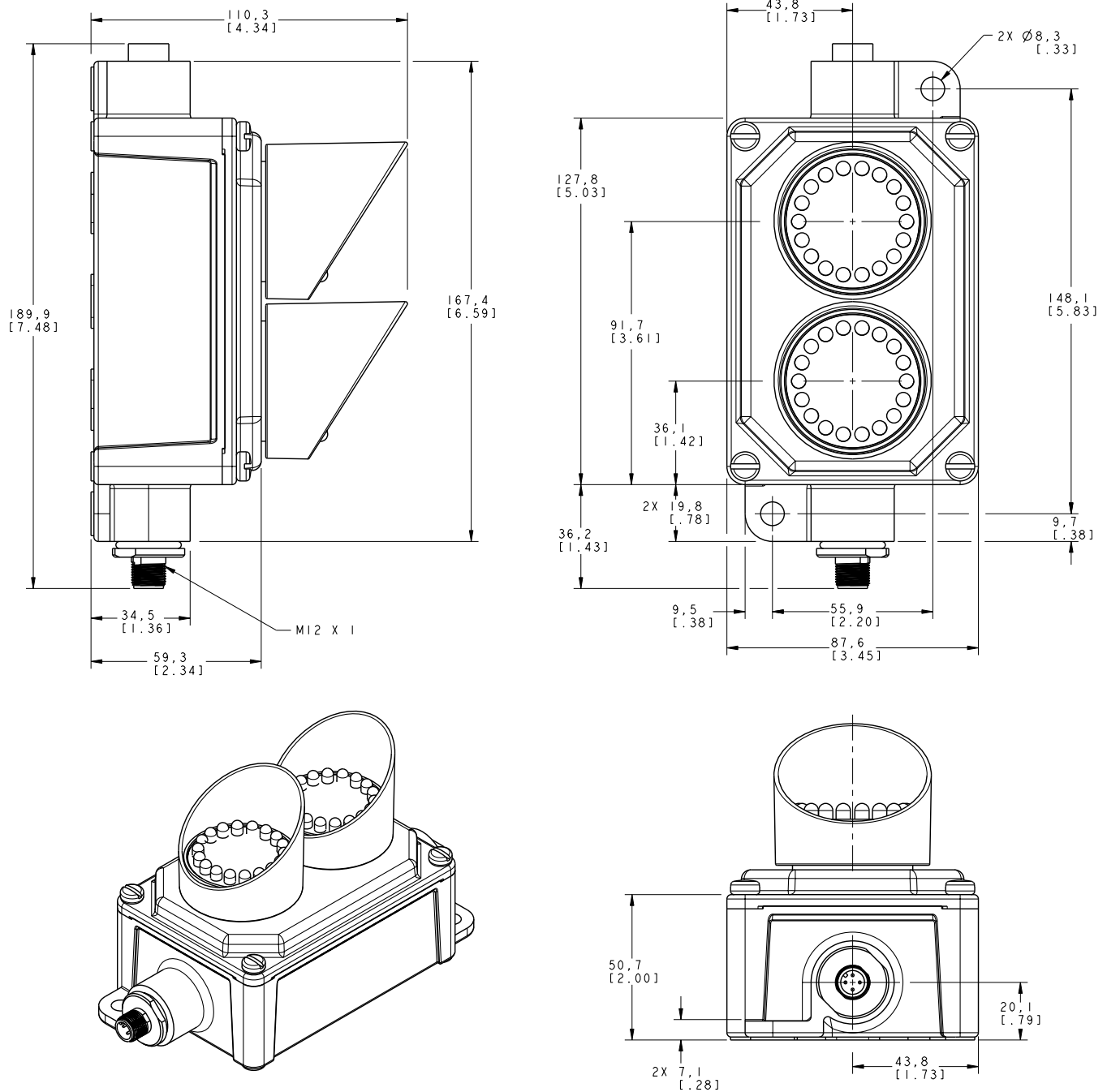
All measurements are listed in millimeters [inches], unless noted otherwise.

Note: Terminal-wired models have ½ inch NPT port in place of M12/Euro-style connector.
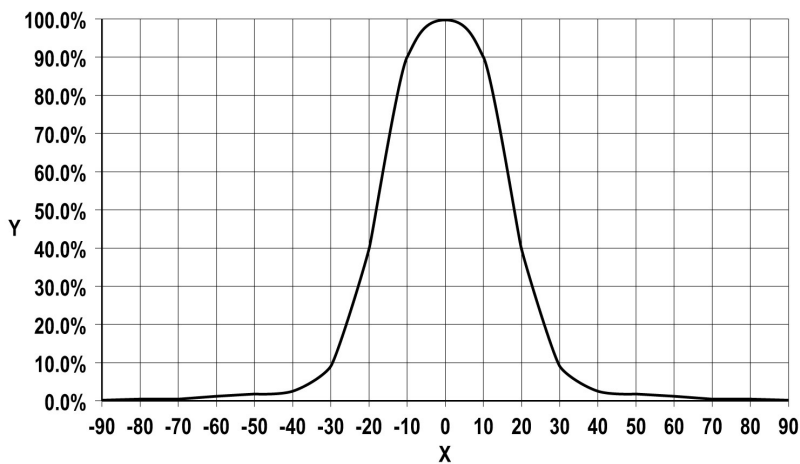
Dimensions — SP350 Models

21,1 [.83]

105,2 [4.14]

55,1 [2.17]

40 [1.57]

182,2 [7.17]

210 [8.27]

195 [7.68]

157,5 [6.20]

97,5 [3.84]

37,5 [1.48]

4X Ø 4,4 [.17]

6,4 [.25]

M12 X 1-6g

50 [1.97]

15 [.59]

80 [3.15]

x4, MOUNTING BRACKET KIT SMBSP350

25 [.98]

40 [1.57]

All measurements are listed in millimeters [inches], unless noted otherwise.

Note: Terminal-wired models have access hole for ½ inch conduit fitting in place of M12/Euro-style connector. Mounting kit SMBSP350 included.

Percent of Maximum Intensity vs Viewing Angle

X: Viewing Angle (Deg)
Y: Intensity (Percent)

Accessories

Brackets

Model			Features	Components
Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum	• Elevated-use stand-off pipe (½ in. NPSM/DN15) • Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface • ½ in. NPT thread at both ends • Compatible with most industrial environments	
SOP-E12-150SS 150 mm (6 in) long	SOP-E12-150A 150 mm (6 in) long	SOP-E12-150AC 150 mm (6 in) long		
SOP-E12-300SS 300 mm (12 in) long	SOP-E12-300A 300 mm (12 in) long	SOP-E12-300AC 300 mm (12 in) long		
SOP-E12-900SS 900 mm (36 in) long	SOP-E12-900A 900 mm (36 in) long	SOP-E12-900AC 900 mm (36 in) long		
SA-E12M30 - Black Acetal SA-E12M30C - White UHMW			• Streamlined black acetal or white UHMW mounting base adapter/cover • Connects between ½ in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole • Mounting hardware included	

Banner Engineering Corp. Limited Warranty