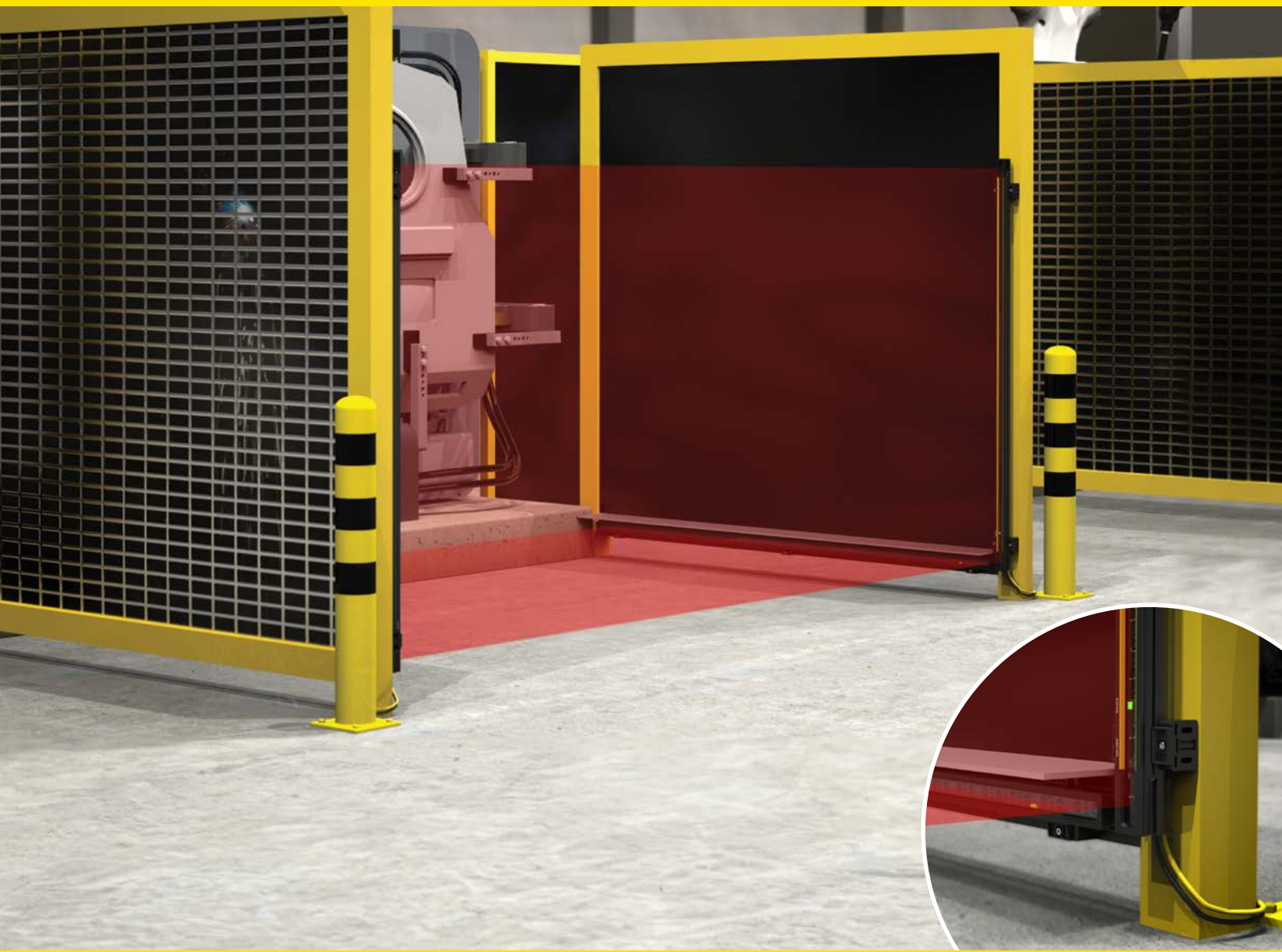


S4B Safety Light Curtains



Simplify Installation and Maximize Uptime

- Optimized auto cascade saves installation and setup time
- Specially designed cordsets simplify installation and maintenance
- 14- and 30-millimeter resolution options offer safety protection for different applications
- Zone indication and weak beam strength indicators reduce commissioning time and help identify maintenance needs
- Muting and fixed blanking accessories refine system design and installation
- Endcap mounting and center mount brackets enable greater installation flexibility



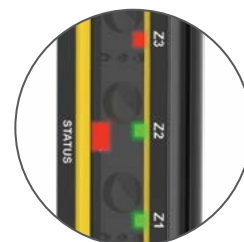
Heavy-Duty Type 4 Light Curtains

Simple installation

The S4B gives you more flexibility when deciding how to mount light curtains on your machine. Choose from either center-mount brackets or end cap brackets, both offering up to 15 degrees of freedom to align the emitter and receiver. Once the light curtains are mounted, alignment is further simplified with the onboard alignment zone indicators as shown below.

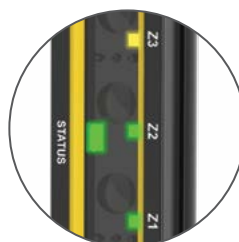


Alignment Zone Indicators



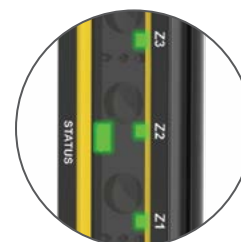
Misaligned

Red indicates a loss of signal due to a blocked beam or significant misalignment



Weak

Yellow indicates a weak signal due to a slight misalignment



Aligned

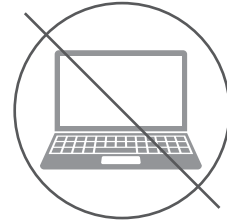
Green indicates a strong signal, proper alignment, and clear of obstruction





Predict and Prevent Downtime

Don't let a challenging environment with dust or dirt stop your machine from operating. The S4B detects when the beam strength is low and will send this signal via pin 5 on the connector to your PLC or HMI to notify maintenance teams that the lens needs to be cleaned.



Intuitive Setup and Swap-out

Select and save scan code setting without a PC for easy setup and swap-out



Reliable Finger Detection

The S4B is available with 14-millimeter resolution for reliable finger detection



Reliable Hand Detection

The S4B is available with 30-millimeter resolution for reliable hand detection

Cascading and Muting Options

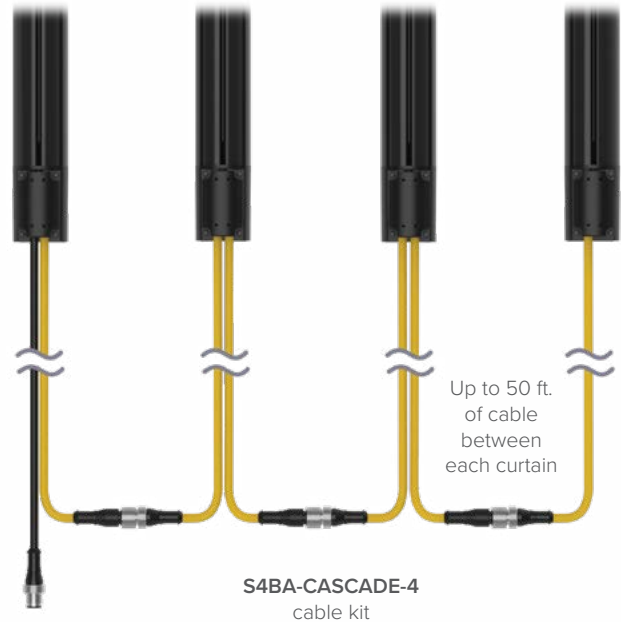
Save Installation and Setup Time with Auto Cascading

Auto cascading in the S4B speeds setup and installation, automatically recognizing the next light curtain as it is connected. The minimal response time impact when cascaded allows the S4B to be installed closer to the equipment being guarded, making more efficient use of valuable floor space.

Simplify Installation and Maintenance with Specially Designed Cordsets

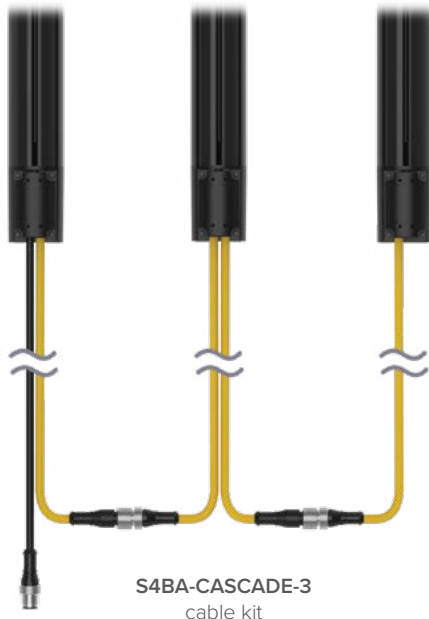
Cordsets determine if the light curtain is used as a standalone pair or as part of a cascade. Specific connection genders and color-coded cordsets simplify and error-proof installation, using yellow for connecting multiple light curtain sticks while black runs back to the controller. Up to four pairs can be connected, including pairs of different resolutions or lengths.

Cascading Four Pairs

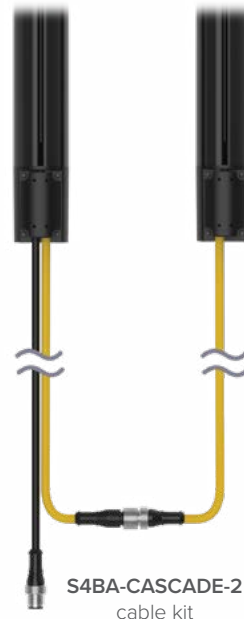


Up to 30 m cable length to controller, depending on current load and devices

Cascading Three Pairs



Cascading Two Pairs



Refine System Design and Installation with Muting Accessories

Muting allows objects to pass through operational light curtains by temporarily suspending their safety function, then resuming after the object has passed through the light curtain's beams. Mute arms protect sensors from damage and misalignment. Flexible mounting options for photoelectric sensors accommodate a wide range of object sizes passing through. The S4B muting junction box consolidates wiring by combining the S4B light curtains and non-safety sensors into one block.



R95-6M125-M128-S4BM
S4B Muting Junction Box

L-Configuration



S4BA-ML-LPQ20

Includes: 2 mute arms,
2 Q20-2 sensors, and
2 retroreflectors

T-Configuration



S4BA-MT-LPQ20

Includes: 2 mute arms,
4 Q20-2 sensors, and
4 retroreflectors

X-Configuration



S4BA-MX-LPQ20

Includes: 2 mute arms,
2 Q20-2 sensors, and
2 retroreflectors

| Mute Arm Kit | Box or Pallet Muting | | |
|------------------|----------------------|---------------|----------------------|
| | Enter/Exit Direction | Width & Shape | Position on Conveyor |
| L-Configuration | One-way (exit) | Varying | Varying |
| X- Configuration | Bi-Directional | Consistent | Consistent |
| T-Configuration | Bi-Directional | Varying | Varying |

Quickly Adapt Coverage with Remote Fixed Blanking



With the turn of a key, Remote Fixed Blanking allows users to quickly configure portions of the S4B light curtain's sensing field to ignore fixed objects such as brackets, tooling, or part supports—enabling fast teaching or reteaching to adapt to changes in fixture configuration or layout without accessing concealed DIP switches or cycling power. When changes have to happen, this keeps them short, simple, and controlled—so the line can recover fast. If a defined object is moved or removed, the system halts operation to maintain safety—and with another quick key turn, coverage is updated. Enable the built-in beam tolerance feature to prevent false trips caused by minor movement of fixed objects in high-vibration environments. When using the S4BA-RFB Remote Fixed Blanking Configuration Tool with a standalone emitter/ receiver pair, a cascade cable is required—even if no additional light curtain segments are connected.



S4BA-RFB
Includes: Configuration
tool, keys, and
termination plug



DES4-M51-F51-D
Cable required for
standalone S4B pair

S4B Safety Light Curtain - Build Your Bundle

Step 1A and 1B: Select your emitter and receiver _____

| Length | 14 mm Emitter | 14 mm Receiver | 30 mm Emitter | 30 mm Receiver |
|---------|---------------|----------------|---------------|----------------|
| 300 mm | S4BE14-300-S | S4BR14-300-S | S4BE30-300-S | S4BR30-300-S |
| 450 mm | S4BE14-450-S | S4BR14-450-S | S4BE30-450-S | S4BR30-450-S |
| 600 mm | S4BE14-600-S | S4BR14-600-S | S4BE30-600-S | S4BR30-600-S |
| 750 mm | S4BE14-750-S | S4BR14-750-S | S4BE30-750-S | S4BR30-750-S |
| 900 mm | S4BE14-900-S | S4BR14-900-S | S4BE30-900-S | S4BR30-900-S |
| 1050 mm | S4BE14-1050-S | S4BR14-1050-S | S4BE30-1050-S | S4BR30-1050-S |
| 1200 mm | S4BE14-1200-S | S4BR14-1200-S | S4BE30-1200-S | S4BR30-1200-S |
| 1350 mm | — | — | S4BE30-1350-S | S4BR30-1350-S |
| 1500 mm | — | — | S4BE30-1500-S | S4BR30-1500-S |
| 1650 mm | — | — | S4BE30-1650-S | S4BR30-1650-S |
| 1800 mm | — | — | S4BE30-1800-S | S4BR30-1800-S |

Note: One emitter and one receiver of the same length and resolution is required per system.

Step 2: Select your brackets _____

| Description | Models |
|--|-------------|
| Side mount brackets with 15° of rotation (includes two brackets). Maximum of 900 mm of length between brackets. | S4BA-MBK-16 |
| End cap mounting bracket with 15° rotation (includes two brackets and adapters). For lengths 1050 mm and longer. | S4BA-MBK-11 |

Note: Minimum of two per light curtain.

Step 3A or 3B: Select your S4B connection cables _____

| 3A: Standalone Pair | Models |
|-------------------------------------|------------|
| 5-Pin male cable standalone | DES4-M51-D |
| 8-Pin male cable standalone for EDM | DES4-M81-D |

Note: One required for each emitter and receiver.

| 3B: Cascade | Models |
|---|----------------|
| Cable kit for 2 S4B pairs Includes: 2-host cordsets, 5-pin to safety side, and 2-terminal cordsets | S4BA-CASCADE-2 |
| Cable kit for 3 S4B pairs Includes: 2-host cordsets, 5-pin to safety side, 2-guest cordsets, and 2-terminal cordsets | S4BA-CASCADE-3 |
| Cable kit for 4 S4B pairs Includes: 2-host cordsets, 5-pin to safety side, 4-guest cordsets, and 2-terminal cordsets | S4BA-CASCADE-4 |

Note: 8-Pin cascade cordset kits are also available. Check website for information.

Step 4: Select your extension cables (optional) _____

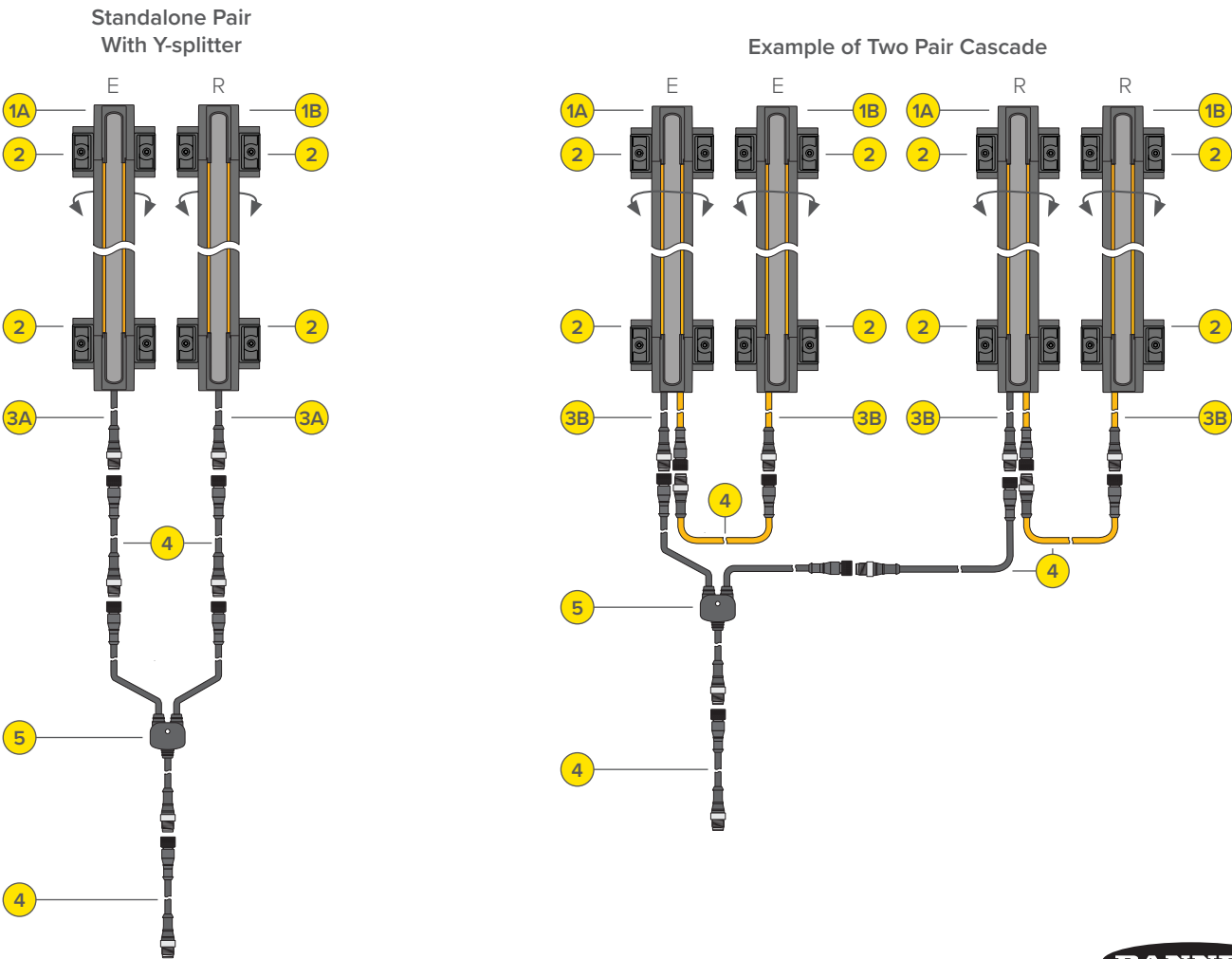
| Length | 5-Pin M12 Double-Ended (Yellow) | 5-Pin M12 Double-Ended | 5-Pin M12 with Flying Leads |
|--------|---------------------------------|------------------------|-----------------------------|
| 0.3 m | DEE2R-51D | MQDEC-501SS | — |
| 1.0 m | DEE2R-53D | MQDEC-503SS | — |
| 5.0 m | DEE2R-515D | — | MQDC1-515 |
| 7.6 m | DEE2R-525D | MQDEC-525SS | — |
| 9 m | — | — | MQDC1-530 |
| 18 m | — | — | MQDC1-560 |

Note: Sold individually.

Step 5: Add your y-splitter (optional) _____

| Description | Models |
|--|-----------------|
| 5-Pin male M12 to dual 5-pin female M12 splitter | CSB-M1251M1251B |

Note: Using a splitter helps reduce wiring (see graphic below).



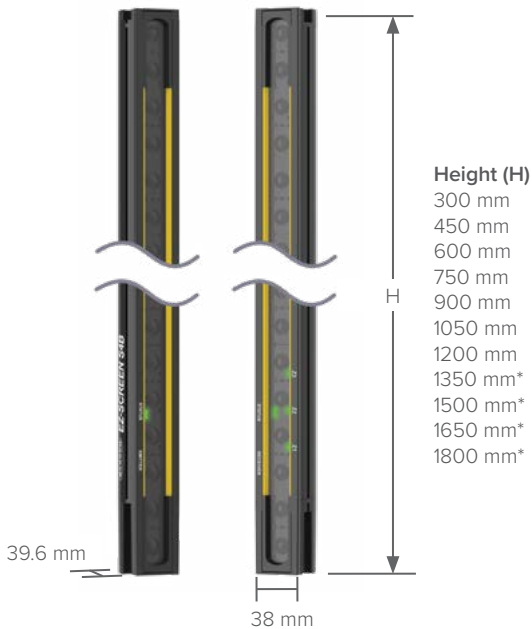
S4B Series Safety Light Curtains

| Series | Device Type | Resolution | Defined Area | | Termination |
|---|-------------|--|--|---|---|
| S4B | E | 30 | — | 900 | — S |
| E = Emitter only R = Receiver only | | 14 = 14 mm 30 = 30 mm | 300 = 300 mm 450 = 450 mm 600 = 600 mm 750 = 750 mm 900 = 900 mm 1050 = 1050 mm | 1200 = 1200 mm 1350 = 1350 mm* 1500 = 1500 mm* 1650 = 1650 mm* 1800 = 1800 mm* | S = Single Emitter or Receiver (S4B Bracket(s) and S4B Cordset(s) sold separately) |



*Only available in 30 mm resolution

Note: S4B brackets and S4B cordset are required for both emitter and receiver. Sold separately (see back page).

Specifications



*Only available in 30 mm resolution

| | |
|---------------------------------|--|
| Supply Voltage | 24 V DC \pm 15% |
| Resolution | 14 or 30 mm |
| Output | Two 500 mA current sourcing (PNP) solid-state outputs (OSSD) |
| Operating Range | 0.1 to 12 m |
| Selectable Scan Codes | Two user-selectable scan codes to avoid crosstalk among S4B pairs in close proximity |
| Construction | Robust aluminium housing with recessed window and die-cast end caps |
| Operating Conditions | –20 to +55 °C 95% maximum relative humidity (non-condensing) |
| Short Circuit Protection | All inputs and outputs are protected from short circuits to +24 V DC or DC common |
| Electrical Safety | Class III (per IEC 61140) |
| Safety Rating | Type 4 per IEC 61496-1, -2 Category 4 PL e per EN ISO13849-1 SIL3 per IEC 61508 |
| Environmental Rating | IP65 |
| Certifications |   |

Accessories



Banner Engineering Corp.

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