

EZ-SCREEN® Low-Profile (LP) Type 4 Point-of-Operation

- Available in 14 mm resolution for finger, hand and ankle detection or 25 mm resolution for hand and ankle detection
- Features space saving design to fit perfectly into machinery
- Operates in ranges up to 7 m
- Offers reduced resolution (2-beam floating blanking) and fixed blanking to ignore tooling or constant inflow of materials
- Features a 7-segment display for diagnostic information and number of blocked beams
- Identifies clear and blocked beam using zone indicators
- Features user-configurable trip or latch outputs, and Scan Code 1 or 2
- Provides External Device Monitoring (EDM), TEST function and Aux outputs
- Exceeds OSHA/ANSI Control Reliability requirements, certified to cTUVus, and CE certified to Type 4, Cat 4 PLe, and SIL 3
- Resists impact, twisting and abusive environments with a durable aluminum housing and metal endcaps
- Features multi-directional cable for easy integration into machinery
- Available with nickel-plated ESD-safe housing for protection against electrostatic discharges, clear anodized aluminum or with a "safety" yellow powder-coat housing
- Offers optional cascading to create up to a four sensor system that issues a single stop command

- Photoelectrics Sensors
- Fiber Optic Sensors
- Special Purpose Sensors
- Measurement & Inspection Sensors
- Vision
- Wireless
- Lighting & Indicators
- Safety Light Screens**
- Safety Laser Scanners
- Fiber Optic Safety Systems
- Safety Controllers & Modules
- Safety Two-Hand Control Modules
- Safety Interlock Switches
- Emergency Stop & Stop Control

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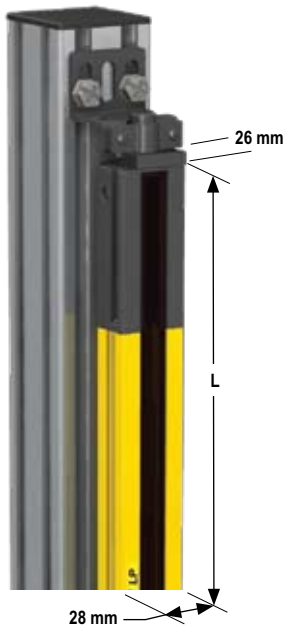
- EZ-SCREEN**
- TYPE 4
14 or 30 mm
- TYPE 4
LOW PROFILE
14 or 25 mm
- TYPE 2
30 mm
- GRIDS & POINTS
- PICO-GUARD



Remote Fixed Blanking

- Simple procedure to allow for frequent configuration of a fixed blanked area, without using receiver DIP switches
- Available in all low-profile cascade receivers when used as a standalone or as an end receiver
- Requires optional EZA-RBK-1 key switch or SPDT (Form C) switch to perform remote programming

See page 488.



EZ-SCREEN LP Systems

Available Finishes



Yellow Painted Aluminum Clear Anodized Aluminum Nickel-Plated ESD



Interface multiple devices with the SC22-3 Safety Controller. See page 526

EZ-SCREEN® Low-Profile Systems, 14 mm Resolution–0.1 to 7 m Range, 24V dc

Defined Area	Connection	Housing Length (L)	Response Time	# of Beams	Output	Models*		
						Emitter	Receiver	Pair†
270 mm	Pigtail QD, 8-pin M12/Euro	270 mm	10.5 ms	27	2 PNP OSSD (Trip/Latch selectable)	SLPE14-270P8	SLPR14-270P8	SLPP14-270P88
	Integral RD					SLPE14-270	SLPR14-270	SLPP14-270
410 mm	Pigtail QD, 8-pin M12/Euro	410 mm	13.5 ms	41		SLPE14-410P8	SLPR14-410P8	SLPP14-410P88
	Integral RD					SLPE14-410	SLPR14-410	SLPP14-410
550 mm	Pigtail QD, 8-pin M12/Euro	549 mm	16.5 ms	55		SLPE14-550P8	SLPR14-550P8	SLPP14-550P88
	Integral RD					SLPE14-550	SLPR14-550	SLPP14-550
690 mm	Pigtail QD, 8-pin M12/Euro	689 mm	19.5 ms	69		SLPE14-690P8	SLPR14-690P8	SLPP14-690P88
	Integral RD					SLPE14-690	SLPR14-690	SLPP14-690
830 mm	Pigtail QD, 8-pin M12/Euro	829 mm	22.5 ms	83		SLPE14-830P8	SLPR14-830P8	SLPP14-830P88
	Integral RD					SLPE14-830	SLPR14-830	SLPP14-830
970 mm	Pigtail QD, 8-pin M12/Euro	969 mm	25.5 ms	97		SLPE14-970P8	SLPR14-970P8	SLPP14-970P88
	Integral RD					SLPE14-970	SLPR14-970	SLPP14-970
1110 mm	Pigtail QD, 8-pin M12/Euro	1108 mm	28.5 ms	111		SLPE14-1110P8	SLPR14-1110P8	SLPP14-1110P88
	Integral RD					SLPE14-1110	SLPR14-1110	SLPP14-1110
1250 mm	Pigtail QD, 8-pin M12/Euro	1248 mm	31.5 ms	125		SLPE14-1250P8	SLPR14-1250P8	SLPP14-1250P88
	Integral RD					SLPE14-1250	SLPR14-1250	SLPP14-1250
1390 mm	Pigtail QD, 8-pin M12/Euro	1388 mm	34.5 ms	139		SLPE14-1390P8	SLPR14-1390P8	SLPP14-1390P88
	Integral RD					SLPE14-1390	SLPR14-1390	SLPP14-1390
1530 mm	Pigtail QD, 8-pin M12/Euro	1528 mm	37.5 ms	153		SLPE14-1530P8	SLPR14-1530P8	SLPP14-1530P88
	Integral RD					SLPE14-1530	SLPR14-1530	SLPP14-1530
1670 mm	Pigtail QD, 8-pin M12/Euro	1667 mm	40.5 ms	167	SLPE14-1670P8	SLPR14-1670P8	SLPP14-1670P88	
	Integral RD				SLPE14-1670	SLPR14-1670	SLPP14-1670	
1810 mm	Pigtail QD, 8-pin M12/Euro	1807 mm	43.5 ms	181	SLPE14-1810P8	SLPR14-1810P8	SLPP14-1810P88	
	Integral RD				SLPE14-1810	SLPR14-1810	SLPP14-1810	

EZ-SCREEN® Low-Profile Systems, 25 mm Resolution–0.1 to 7 m Range, 24V dc

Defined Area	Connection	Housing Length (L)	Response Time	# of Beams	Output	Models*		
						Emitter	Receiver	Pair†
270 mm	Pigtail QD, 8-pin M12/Euro	270 mm	8 ms	14	2 PNP OSSD (Trip/Latch selectable)	SLPE25-270P8	SLPR25-270P8	SLPP25-270P88
	Integral RD					SLPE25-270	SLPR25-270	SLPP25-270
410 mm	Pigtail QD, 8-pin M12/Euro	410 mm	9.5 ms	21		SLPE25-410P8	SLPR25-410P8	SLPP25-410P88
	Integral RD					SLPE25-410	SLPR25-410	SLPP25-410
550 mm	Pigtail QD, 8-pin M12/Euro	549 mm	11 ms	28		SLPE25-550P8	SLPR25-550P8	SLPP25-550P88
	Integral RD					SLPE25-550	SLPR25-550	SLPP25-550
690 mm	Pigtail QD, 8-pin M12/Euro	689 mm	12.5 ms	35		SLPE25-690P8	SLPR25-690P8	SLPP25-690P88
	Integral RD					SLPE25-690	SLPR25-690	SLPP25-690
830 mm	Pigtail QD, 8-pin M12/Euro	829 mm	14 ms	42		SLPE25-830P8	SLPR25-830P8	SLPP25-830P88
	Integral RD					SLPE25-830	SLPR25-830	SLPP25-830

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page

Connection options:

QD models: Pigtail QD models require mating cordsets with an 8-pin M12/Euro-style connector (such as QDE-8..D, DEE2R-8..D or CSB-M128..M1281; see page 488).
Integral RD models require mating cordsets with a removable disconnect connector (such as RDLF-8..D or DELPE-8..D; see page 488).

* Only standard yellow housing models are listed. 300 mm Pigtail QD models (example, SLPE14-270P8) have yellow PVC cable and black PVC QD overmold.

For other models:

Anodized aluminum housing: Prior to the connection designation (if any) in the model number, add **A** for a clear (brushed) anodized aluminum finish and black endcaps (example, SLPE14-270AP8).
Pigtail QD models (example, SLPE14-270AP8) have black PVC cable and QD overmold.

ESD-safe models: Prior to the connection designation (if any) in the model number, add **N** for a nickel-plated housing and endcaps (example, SLPE14-270NP8).

† A pair includes an emitter and receiver (example, SLPP25-270P88).

EZ-SCREEN® Low-Profile Systems, 25 mm Resolution–0.1 to 7 m Range, 24V dc (cont'd)

Defined Area	Connection	Housing Length (L)	Response Time	# of Beams	Output	Models*		
						Emitter	Receiver	Pair†
970 mm	Pigtail QD, 8-pin M12/Euro	969 mm	15.5 ms	49	2 PNP OSSD (Trip/Latch selectable)	SLPE25-970P8	SLPR25-970P8	SLPP25-970P88
	Integral RD					SLPE25-970	SLPR25-970	SLPP25-970
1110 mm	Pigtail QD, 8-pin M12/Euro	1108 mm	17 ms	56		SLPE25-1110P8	SLPR25-1110P8	SLPP25-1110P88
	Integral RD					SLPE25-1110	SLPR25-1110	SLPP25-1110
1250 mm	Pigtail QD, 8-pin M12/Euro	1248 mm	18.5 ms	63		SLPE25-1250P8	SLPR25-1250P8	SLPP25-1250P88
	Integral RD					SLPE25-1250	SLPR25-1250	SLPP25-1250
1390 mm	Pigtail QD, 8-pin M12/Euro	1388 mm	20 ms	70		SLPE25-1390P8	SLPR25-1390P8	SLPP25-1390P88
	Integral RD					SLPE25-1390	SLPR25-1390	SLPP25-1390
1530 mm	Pigtail QD, 8-pin M12/Euro	1528 mm	21 ms	77		SLPE25-1530P8	SLPR25-1530P8	SLPP25-1530P88
	Integral RD					SLPE25-1530	SLPR25-1530	SLPP25-1530
1670 mm	Pigtail QD, 8-pin M12/Euro	1668 mm	22.5 ms	84		SLPE25-1670P8	SLPR25-1670P8	SLPP25-1670P88
	Integral RD					SLPE25-1670	SLPR25-1670	SLPP25-1670
1810 mm	Pigtail QD, 8-pin M12/Euro	1807 mm	24 ms	91		SLPE25-1810P8	SLPR25-1810P8	SLPP25-1810P88
	Integral RD					SLPE25-1810	SLPR25-1810	SLPP25-1810

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EZ-SCREEN® Low-Profile Cascade Systems, 14 mm Resolution–0.1 to 7 m Range, 24V dc

Defined Area	Connection	Housing Length (L)	Response Time	# of Beams	Output	Models*		
						Emitter	Receiver	Pair†
410 mm	Pigtail QD, 8-pin M12/Euro	410 mm	13.5 ms	41	2 PNP OSSD (Trip/Latch selectable)	SLPCE14-410P8	SLPCR14-410P8	SLPCP14-410P88
	Integral RD					SLPCE14-410	SLPCR14-410	SLPCP14-410
550 mm	Pigtail QD, 8-pin M12/Euro	549 mm	16.5 ms	55		SLPCE14-550P8	SLPCR14-550P8	SLPCP14-550P88
	Integral RD					SLPCE14-550	SLPCR14-550	SLPCP14-550
690 mm	Pigtail QD, 8-pin M12/Euro	689 mm	19.5 ms	69		SLPCE14-690P8	SLPCR14-690P8	SLPCP14-690P88
	Integral RD					SLPCE14-690	SLPCR14-690	SLPCP14-690
830 mm	Pigtail QD, 8-pin M12/Euro	829 mm	22.5 ms	83		SLPCE14-830P8	SLPCR14-830P8	SLPCP14-830P88
	Integral RD					SLPCE14-830	SLPCR14-830	SLPCP14-830
970 mm	Pigtail QD, 8-pin M12/Euro	969 mm	25.5 ms	97		SLPCE14-970P8	SLPCR14-970P8	SLPCP14-970P88
	Integral RD					SLPCE14-970	SLPCR14-970	SLPCP14-970
1110 mm	Pigtail QD, 8-pin M12/Euro	1108 mm	28.5 ms	111		SLPCE14-1110P8	SLPCR14-1110P8	SLPCP14-1110P88
	Integral RD					SLPCE14-1110	SLPCR14-1110	SLPCP14-1110
1250 mm	Pigtail QD, 8-pin M12/Euro	1248 mm	31.5 ms	125		SLPCE14-1250P8	SLPCR14-1250P8	SLPCP14-1250P88
	Integral RD					SLPCE14-1250	SLPCR14-1250	SLPCP14-1250
1390 mm	Pigtail QD, 8-pin M12/Euro	1388 mm	34.5 ms	139	SLPCE14-1390P8	SLPCR14-1390P8	SLPCP14-1390P88	
	Integral RD				SLPCE14-1390	SLPCR14-1390	SLPCP14-1390	
1530 mm	Pigtail QD, 8-pin M12/Euro	1528 mm	37.5 ms	153	SLPCE14-1530P8	SLPCR14-1530P8	SLPCP14-1530P88	
	Integral RD				SLPCE14-1530	SLPCR14-1530	SLPCP14-1530	

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- TYPE 4
14 or 30 mm
- TYPE 4
LOW PROFILE
14 or 25 mm
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30 mm
- GRIDS & POINTS
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Connection options:

QD models: Pigtail QD models require mating cordsets with an 8-pin M12/Euro-style connector (such as QDE-8..D, DEE2R-8..D or CSB-M128..M1281; see page 488).
Integral RD models require mating cordsets with a removable disconnect connector (such as RDLP-8..D or DELPE-8..D; see page 488).

* Only standard yellow housing models are listed. Pigtail QD models (example, SLPE25-830P8) have yellow PVC cable and black PVC QD overmold.
For other models:
Anodized aluminum housing: Prior to the connection designation (if any) in the model number, add **A** for a clear (brushed) anodized aluminum finish and black endcaps (example, SLPE25-830AP8).
Pigtail QD models (example, SLPE25-830AP8) have black PVC cable and QD overmold.
ESD-safe models: Prior to the connection designation (if any) in the model number, add **N** for a nickel-plated housing and endcaps (example, SLPE25-380NP8).
† A pair includes an emitter and receiver (example, SLPP25-270P88).

EZ-SCREEN® Low-Profile Cascade Systems, 14 mm Resolution—0.1 to 7 m Range, 24V dc (cont'd)

Defined Area	Connection	Housing Length (L)	Response Time	# of Beams	Output	Models*		
						Emitter	Receiver	Pair†
1670 mm	Pigtail QD, 8-pin M12/Euro	1667 mm	40.5 ms	167	2 PNP OSSD (Trip/Latch selectable)	SLPCE14-1670P8	SLPCR14-1670P8	SLPCP14-1670P88
	Integral RD					SLPCE14-1670	SLPCR14-1670	SLPCP14-1670
1810 mm	Pigtail QD, 8-pin M12/Euro	1807 mm	43.5 ms	181		SLPCE14-1810P8	SLPCR14-1810P8	SLPCP14-1810P88
	Integral RD					SLPCE14-1810	SLPCR14-1810	SLPCP14-1810

EZ-SCREEN® Low-Profile Cascade Systems, 25 mm Resolution—0.1 to 7 m Range, 24V dc

Defined Area	Connection	Housing Length (L)	Response Time	# of Beams	Output	Models*		
						Emitter	Receiver	Pair†
410 mm	Pigtail QD, 8-pin M12/Euro	410 mm	9.5 ms	21	2 PNP OSSD (Trip/Latch selectable)	SLPCE25-410P8	SLPCR25-410P8	SLPCP25-410P88
	Integral RD					SLPCE25-410	SLPCR25-410	SLPCP25-410
550 mm	Pigtail QD, 8-pin M12/Euro	549 mm	11 ms	28		SLPCE25-550P8	SLPCR25-550P8	SLPCP25-550P88
	Integral RD					SLPCE25-550	SLPCR25-550	SLPCP25-550
690 mm	Pigtail QD, 8-pin M12/Euro	689 mm	12.5 ms	35		SLPCE25-690P8	SLPCR25-690P8	SLPCP25-690P88
	Integral RD					SLPCE25-690	SLPCR25-690	SLPCP25-690
830 mm	Pigtail QD, 8-pin M12/Euro	829 mm	14 ms	42		SLPCE25-830P8	SLPCR25-830P8	SLPCP25-830P88
	Integral RD					SLPCE25-830	SLPCR25-830	SLPCP25-830
970 mm	Pigtail QD, 8-pin M12/Euro	969 mm	15.5 ms	49		SLPCE25-970P8	SLPCR25-970P8	SLPCP25-970P88
	Integral RD					SLPCE25-970	SLPCR25-970	SLPCP25-970
1110 mm	Pigtail QD, 8-pin M12/Euro	1108 mm	17 ms	56		SLPCE25-1110P8	SLPCR25-1110P8	SLPCP25-1110P88
	Integral RD					SLPCE25-1110	SLPCR25-1110	SLPCP25-1110
1250 mm	Pigtail QD, 8-pin M12/Euro	1248 mm	18.5 ms	63		SLPCE25-1250P8	SLPCR25-1250P8	SLPCP25-1250P88
	Integral RD					SLPCE25-1250	SLPCR25-1250	SLPCP25-1250
1390 mm	Pigtail QD, 8-pin M12/Euro	1388 mm	20 ms	70		SLPCE25-1390P8	SLPCR25-1390P8	SLPCP25-1390P88
	Integral RD					SLPCE25-1390	SLPCR25-1390	SLPCP25-1390
1530 mm	Pigtail QD, 8-pin M12/Euro	1528 mm	21 ms	77		SLPCE25-1530P8	SLPCR25-1530P8	SLPCP25-1530P88
	Integral RD					SLPCE25-1530	SLPCR25-1530	SLPCP25-1530
1670 mm	Pigtail QD, 8-pin M12/Euro	1668 mm	22.5 ms	84		SLPCE25-1670P8	SLPCR25-1670P8	SLPCP25-1670P88
	Integral RD					SLPCE25-1670	SLPCR25-1670	SLPCP25-1670
1810 mm	Pigtail QD, 8-pin M12/Euro	1807 mm	24 ms	91		SLPCE25-1810P8	SLPCR25-1810P8	SLPCP25-1810P88
	Integral RD					SLPCE25-1810	SLPCR25-1810	SLPCP25-1810

 Connection options:

QD models: Pigtail QD models require mating cordsets with an 8-pin M12/Euro-style connector (such as QDE-8..D, DEE2R-8..D or CSB-M128..M1281; see page 488).
Integral RD models require mating cordsets with a removable disconnect connector (such as RDLPE-8..D or DELPE-8..D; see page 488).

* Only standard yellow housing models are listed. Pigtail QD models (example, SLPCE25-1670P8) have yellow PVC cable and black PVC QD overmold.

For other models:

Anodized aluminum housing: Prior to the connection designation (if any) in the model number, add **A** for a clear (brushed) anodized aluminum finish and black endcaps (example, SLPCE25-1670AP8).

Pigtail QD models (example, SLPCE25-1670AP8) have black PVC cable and QD overmold.

ESD-safe models: Prior to the connection designation (if any) in the model number, add **N** for a nickel-plated housing and endcaps (example, SLPCE25-1670NP8).

Pigtail QD models (example, SLPCE25-1670NP8) have black PVC cable and QD overmold.

† A pair includes an emitter and receiver (example, SLPCP25-410P88).

EZ-SCREEN® Low-Profile 14 & 25 mm Resolution Kits



You can purchase a kit that contains an emitter and receiver of equal length and resolution; brackets; and optional interfacing solution and quick-disconnect cordsets. Detailed information about individual kit components is as follows.

• Emitter and Receivers	Page 481
• Interfacing Options	501
• Cordsets	488
• Brackets	488

To Order:

1. Choose model, resolution and defined area.
2. Yellow housing is standard. To choose an optional housing, add an **A** or **N** prior to the connection designation:
A for anodized aluminum (clear) finish with black endcaps (example, **SLPK25-270A**). †
N for ESD-safe models with a nickel-plated housing and endcaps (example, **SLPK25-270N**). †
3. Choose the connection: 300 mm M12/Euro-Style Pigtail QD or integral Removable Disconnect (RD).
4. Choose an optional interfacing solution, such as an **IM-T-9A** or **-11** interfacing model.

5. Choose one cordset for each sensor or two cordsets for a pair.

M12/Euro Pigtail QD models (example, **SLPK25-270P88**) require mating 8-pin M12/Euro QD cordsets, such as:

- QDE cordset with flying leads
- DEE2R double-ended cordset
- CSB series splitter cordset

Integral RD models (example, **SLPK25-270**) require mating cordsets, such as:

- RDLP cordset with flying leads
- DELPE double-ended cordset with M12/Euro QD (requires additional mating 8-pin M12/Euro QD cordsets)
- DELP cordset in cascade application for connection of 2nd, 3rd and 4th sensors

See www.bannerengineering.com for complete information and a current listing of accessories and options for kitting components. Call factory with questions regarding accessories.

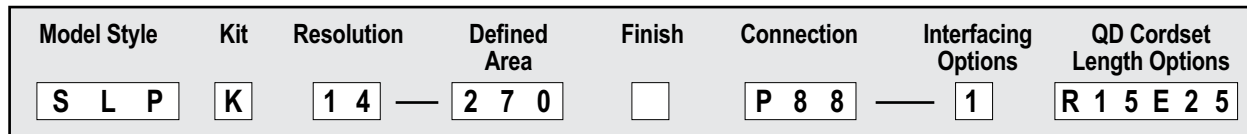
† Optional housings with Pigtail QD models have a black 300 mm PVC cable and QD overmold.

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- Safety Interlock Switches
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- EZ-SCREEN**
- TYPE 4 14 or 30 mm
- TYPE 4 LOW PROFILE 14 or 25 mm
- TYPE 2 30 mm
- GRIDS & POINTS
- PICO-GUARD

Kit Model Key



Model Style

SLP = Standard
SLPC = Cascade

Kit

K = Kit

SLS Resolution

14 = 14 mm
25 = 25 mm

Sensor Finish

Blank = Yellow powder coat
A = Clear anodized Aluminum
N = Nickel plated (ESD)

Defined Area

270 mm *
410 mm
550 mm
690 mm
830 mm
970 mm
1110 mm
1250 mm
1390 mm
1530 mm
1670 mm
1810 mm

Connection Options

P88 = Two 300 mm pigtail with 8-pin M12/Euro QD connector. Used with QDE-8xxD, DEE2R-8xxD or CSB-M1281M128xx. Cordsets ordered separately.
R88 = Two RDLP-8xxD Removable Disconnect cordsets with flying lead wires
D88 = Two DELPE-8xxD with 8-pin M12/Euro QD connector. Used with QDE-8xxD, DEE2R-8xxD or CSB-M1281M128xx. Cordsets ordered separately.
D1111 = Two DELP-11xxxE cordsets for 2 nd , 3 rd or 4 th SLPC cascade sensors.

QD Cordset Length Examples

RE15 = 4.6 m, 2 each
RE25 = 8 m, 2 each
R15E25 = 4.6 m (Receiver) & 8 m (Emitter)
R25E15 = 8 m (Receiver) & 4.6 m (Emitter)
DD1 = 0.3 m, 2 each, DEE2R-8xxD, DELPE-8xxD or DELP-11xxxE, depending on QD option
C1D15 = CSB-M1281M1281 (Receiver) DEE2R-815D (Emitter)
C8D25 = CSB-M1288M1281 (Receiver) DEE2R-850D (Emitter)
CU25D25 = CSB-UNT825M1281 (Receiver) DEE2R-825D (Emitter)

Interfacing Options

1 = IM-T-9A Interface Module, 1 each (3 NO)
2 = IM-T-11A Interface Module, 1 each (2 NO/1 NC)
3 = 11-BG00-31-D-024 Contactors (10A), 2 each
4 = BF1801L-024 Contactors (18A), 2 each
5 = EZAC-R9-QE8 = AC Interface Box (3 NO), 1 each
6 = EZAC-R11-QE8 = AC Interface Box (2 NO/1 NC), 1 each

* 270 mm not available in cascade models

NOTE: See notes under model number tables. Not all combinations are listed. Contact Banner Engineering Corp. for additional information and/or verification of valid kit model numbers.

EZ-SCREEN® Low-Profile 14 & 25 mm Resolution Specifications

Supply Voltage at the Device	24V dc $\pm 15\%$ (use a SELV-rated supply according to EN IEC 60950) (The external voltage supply must be capable of buffering brief mains interruptions of 20 milliseconds, as specified in EN/IEC 60204-1.)										
Residual Ripple	$\pm 10\%$ maximum										
Supply Current	Emitter: 60 mA max., exclusive of fault load Receiver: 150 mA max., exclusive of OSSD1 and OSSD2 loads (up to an additional 0.5A each) and Aux Output load (up to an additional 0.25A)										
Response Time	8 to 43.5 milliseconds (see model number tables) Cascade safety stop interface (CSSI): 40 milliseconds max. (contacts must be open for 60 milliseconds min.)										
Remote Test Input	Test mode is activated either by applying a low signal (less than 3V dc) to emitter Test/Reset terminal for a minimum of 50 milliseconds, or by opening a switch connected between Test/Reset and 24V dc for a minimum of 50 milliseconds. Beam scanning stops to simulate a blocked condition. A high signal at Test/Reset deactivates Test Mode. High Signal: 10 to 30V dc Low Signal: 0 to 3V dc Input Current: 35 mA inrush, 10 mA max.										
Wavelength of Emitter Elements	Infrared LEDs, 850 nm at peak emission										
Recovery Time—Blocked to clear (OSSDs turn ON; varies with total number of sensing beams and whether Sync beam is blocked)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%;">Beam 1 (Sync Beam)</th> <th style="width: 35%;">All Other Beams</th> </tr> </thead> <tbody> <tr> <td>14 mm Models</td> <td>109 to 800 ms</td> <td>33 to 220 ms</td> </tr> <tr> <td>25 mm Models</td> <td>81 to 495 ms</td> <td>25 to 152 ms</td> </tr> </tbody> </table>			Beam 1 (Sync Beam)	All Other Beams	14 mm Models	109 to 800 ms	33 to 220 ms	25 mm Models	81 to 495 ms	25 to 152 ms
	Beam 1 (Sync Beam)	All Other Beams									
14 mm Models	109 to 800 ms	33 to 220 ms									
25 mm Models	81 to 495 ms	25 to 152 ms									
EDM Input	+24V dc signals from external device contacts can be monitored (one-channel, two-channel or no monitoring) via EDM1 and EDM2 terminals in the receiver. High Signal: 10 to 30V dc at 30 mA typical Low Signal: 0 to 3V dc										
Reset Input	The Reset input must be high for 0.25 to 2 seconds and then low to reset the receiver. High Signal: 10 to 30V dc at 30 mA typical Low Signal: 0 to 3V dc Closed Switch Time: 0.25 to 2 seconds										
Safety Outputs (OSSDs)	Two redundant solid-state 24V dc, 0.5 A max. sourcing OSSD (Output Signal Switching Device) safety outputs. (Use optional interface modules for ac or larger dc loads.) Capable of the Banner "Safety Handshake". ON-State voltage: $\geq V_{in} - 1.5V$ dc OFF-State voltage: 1.2V dc max. (0-1.2V dc) Max. load capacitance: 1.0 μF Max. load inductance: 10 H Leakage Current: 0.50 mA maximum Cable Resistance: 10 Ω maximum OSSD test pulse width: 100 to 300 microseconds OSSD test pulse period: 10 to 22 milliseconds (varies with number of beams) Switching Current: 0-0.5 A										
Auxiliary (Aux.) /Fault Output Switching Capacity	Current-sourcing (PNP) Solid-state output, 24V dc at 250 mA max. that follow safety outputs or lock out status (configurable)										
Controls and Adjustments	Emitter: Scan Code selection: 2-position switch (code 1 or 2). Factory default position is code 1. Test/Reset: 2-position switch. Factory default position is Reset. Invert Display: 2-position switch. Factory default position is OFF (Standard display). Fault: 2-position switch. Factory default position is OFF. Receiver: Scan Code selection: 2-position switch (code 1 or 2). Factory default position is code 1. Trip/Latch Output selection: Redundant switches. Factory default position is T (trip). EDM/MPCE monitor selection: 2-position switch selects between 1- or 2-channel monitoring. Factory default position is 2-channel monitoring. Reduced Resolution: Redundant switches. Factory default position is OFF. Aux/Fault: 2-position switch. Factory default position is Aux. Invert Display: 2-position switch. Factory default position is OFF.										
Short Circuit Protection	All inputs and outputs are protected from short circuits to +24V dc or dc common.										
Electrical Safety Class (IEC 61140)	III										

EZ-SCREEN® Low-Profile 14 & 25 mm Resolution Specifications (cont'd)

Operating Range	0.1 to 7 m Range decreases with use of mirrors and/or lens shields: Lens shields – approximately 10% less range per shield. Glass-surface mirrors – approximately 8% less range per mirror. See the Accessory section for more information on a specific mirror page 726, for further information.
Ambient Light Immunity	> 10,000 lux at 5° angle of incidence
Strobe Light immunity	Totally immune to one Federal Signal Corp. "Fireball" model FB2PST strobe
Effective Aperture Angle (EAA)	Meets Type 4 requirements per IEC 61496-2, ± 2.5° @ 3 m
Enclosure	Materials: Extruded aluminum housing with yellow polyester powder finish standard (optional clear anodized aluminum or nickel-plated silver finish) and well-sealed, rugged die-cast zinc end caps, acrylic lens cover, copolyester access cover. End caps on silver models are also nickel-plated. ESD-safe models have static-dissipative acrylic lens cover. Rating: IP65
Operating Conditions	Temperature: 0° to +55° C Max. Relative Humidity: 95% maximum relative humidity (non-condensing)
Status Indicators	Emitter: One Bi-color (Red/Green) status indicator – indicates operating mode, lockout or power OFF condition 7-segment Diagnostic Indicator (1 digit) – indicates proper operation, scan code or error code Receiver: Yellow Reset indicator – indicates whether system is ready for operation or requires a reset Bi-color (Red/Green) Status indicator – indicates general system and output status Bi-color (Red/Green) Zone Status indicators – indicate condition (clear or blocked beam) of a defined group of beams 7-Segment Diagnostic indicator (1 digit) – indicates proper operation, scan code, or error code, total number of blocked beams
Mounting Hardware	Emitter and receiver each are supplied with a pair of swivel end-mounting brackets and two swivel side-mounting brackets. Models longer than 690 mm also include one or more additional side-mount brackets for center support.
Shock and Vibration	EZ-SCREEN LP components have passed vibration and shock tests according to IEC 61496-1. This includes vibration (10 cycles) of 10-55 Hz at 0.35 mm single amplitude (0.70 mm peak-to-peak) and shock of 10 g for 16 milliseconds (6,000 cycles).
Design Standards	Designed to comply with Type 4 per IEC 61496-1/-2; Category 4 PLe per EN ISO 13849-1; SIL 3 per IEC 61508, SIL CL3 per IEC 62061
Certifications	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> </div> <div style="text-align: center;"> </div> <div> <p>TUV Rheinland of North America, a Nationally Recognized Test Laboratory (NRTL) in the United States according to OSHA 29 CFR 1910.7, and accredited by the Standards Council of Canada to test and certify products to Canadian National Standards, has certified the EZ-SCREEN Low Profile to all applicable U.S. and Canadian National Standards. The cTUVus mark is recognized throughout the United States and Canada by OSHA and the SCC.</p> </div> </div>
Wiring Diagrams	WD002, WD003, WD004, WD005, WD006, WD007, WD013, WD014, WD015, WD016, WD017, WD018, WD019 (pp. 776-786)

- Photoelectrics Sensors
- Fiber Optic Sensors
- Special Purpose Sensors
- Measurement & Inspection Sensors
- Vision
- Wireless
- Lighting & Indicators
- Safety Light Screens**
- Safety Laser Scanners
- Fiber Optic Safety Systems
- Safety Controllers & Modules
- Safety Two-Hand Control Modules
- Safety Interlock Switches
- Emergency Stop & Stop Control

- EZ-SCREEN**
- TYPE 4
14 or 30 mm
- TYPE 4
LOW PROFILE
14 or 25 mm
- TYPE 2
30 mm
- GRIDS & POINTS
- PICO-GUARD

Cordsets

For use with models with integral RD connections. All standard cordsets are yellow PVC with black overmold. For black PVC cable and overmold, add suffix **B** to model number (example, **RDLP-815DB**).

RD	
See page 695	
Length	8-Wire*
4.57 m	RDLP-815D
7.62 m	RDLP-825D
15.2 m	RDLP-850D
22.9 m	RDLP-875D
30.5 m	RDLP-8100D

RD to Euro QD*			
See page 694			
Length	8-Pin Male	8-Pin Female	
0.31 m	DELPE-81D	DELPEF-81D	
0.91 m	DELPE-83D	DELPEF-83D	
2.44 m	DELPE-88D	DELPEF-88D	
4.57 m	DELPE-815D	DELPEF-815D	
7.62 m	DELPE-825D	—	
15.2 m	DELPE-850D	—	
22.9 m	DELPE-875D	—	
30.5 m	DELPE-8100D	—	

RD to RD	
See page 695	
Length	Cascade
0.05 m	DELP-110E
0.30 m	DELP-111E
0.91 m	DELP-113E
2.44 m	DELP-118E
4.57 m	DELP-1115E
7.62 m	DELP-1125E
15.2 m	DELP-1150E
22.9 m	DELP-1175E
30.5 m	DELP-11100E


For use with models with Pigtail QD and **DELPE-8xxD** connections.

Euro QD—Double-Ended	
See page 691	
Length	8-Pin*
0.31 m	DEE2R-81D
0.91 m	DEE2R-83D
2.44 m	DEE2R-88D
4.57 m	DEE2R-815D
7.62 m	DEE2R-825D
15.2 m	DEE2R-850D
22.9 m	DEE2R-875D
30.5 m	DEE2R-8100D

Euro QD	
See page 690	
Length	8-Pin
4.57 m	QDE-815D
7.62 m	QDE-825D
15.3 m	QDE-850D
22.9 m	QDE-875D
30.5 m	QDE-8100D

* For connection of E-Stop or other hard/relay contacts see page 695.

* For connection to safety BUS gateway/node a "smart" self-monitored safety module, safety controller or safety PLC see page 691.




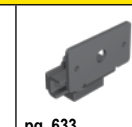
 Additional cordsets and information available. See page 679.






* Requires mating 8-pin M12/Euro cordset. 8-pin Male used for Machine Interface connection (indicator end of sensor). 8-pin Female used for cascade connection when using M12/Euro QDs.


NOTE: See page 501 for interfacing solutions. Additional accessories are listed on page 619.

Euro QD Splitter	
See page 693	
Length	8-Pin
0 m	CSB-M1280M1280
0.30 m	CSB-M1281M1281
2.50 m	CSB-M1288M1281
4.60 m	CSB-M12815M1281
7.60 m	CSB-M12825M1281
7.60 m	CSB-UNT825M1281


Brackets

Low-Profile 14 & 25 mm			
			
pg. 631	pg. 631	pg. 631	pg. 633
LPA-MBK-11*	LPA-MBK-12*	LPA-MBK-20	LPA-MBK-22

Low-Profile 14 & 25 mm—Cascade				
				
pg. 632	pg. 633	pg. 631	pg. 632	pg. 632
LPA-MBK-21	LPA-MBK-90	LPA-MBK-120	LPA-MBK-135	LPA-MBK-180

 Additional brackets and information available. See page 620.

* Standard brackets included with emitter/receiver.

Remote Fixed Blanking Switch	
	Allows frequent configuration of a fixed blanked area, without using the receiver DIP switches.
EZA-RBK-1	


Replacement Parts

Model	Description
STP-13	14 mm test piece (for 14 mm resolution systems)
STP-17	34 mm test piece (for 14 mm resolution systems with 2-beam reduced resolution enabled)
STP-16	25 mm test piece (for 25 mm resolution systems)
STP-18	65 mm test piece (for 25 mm resolution systems with 2-beam reduced resolution enabled)
LPA-TP-1	Terminator plug, for SLPC... emitter/receiver (included with sensor)
EZA-RR-1	External normally open reset switch with 8-pin M12/Euro-style QD
MGA-KSO-1	Panel-mount keyed normally open reset switch
MGA-K-1	Replacement key for switch MGA-HSO-1
DELPE-81D	Replacement for M12-terminated pigtail QD, as shipped with standard pigtail QD models; 8-conductor cable, 22 AWG; 0.3 m long
LPA-MBK-11	End-cap bracket kit (includes 2 end brackets and hardware to mount one sensor to MSA series stands; 360° sensor rotation; 14 ga (1.9 mm) steel, black zinc plated; die-cast zinc end-cap plate)
LPA-MBK-12	Side-mount bracket kit (includes 1 bracket and hardware to mount to MSA Series stands; +10°/-30° sensor rotation; 14 ga (1.9 mm) steel, black zinc plated; die-cast zinc clamp)

Note: See Installation manual p/n 112852 for complete list of replacement parts and accessories.

STANDS

PAGE 722

MIRRORS

PAGE 726

LENS SHIELDS

PAGE 732

INTERFACE

PAGE 501