



## EZ-SCREEN Type 2

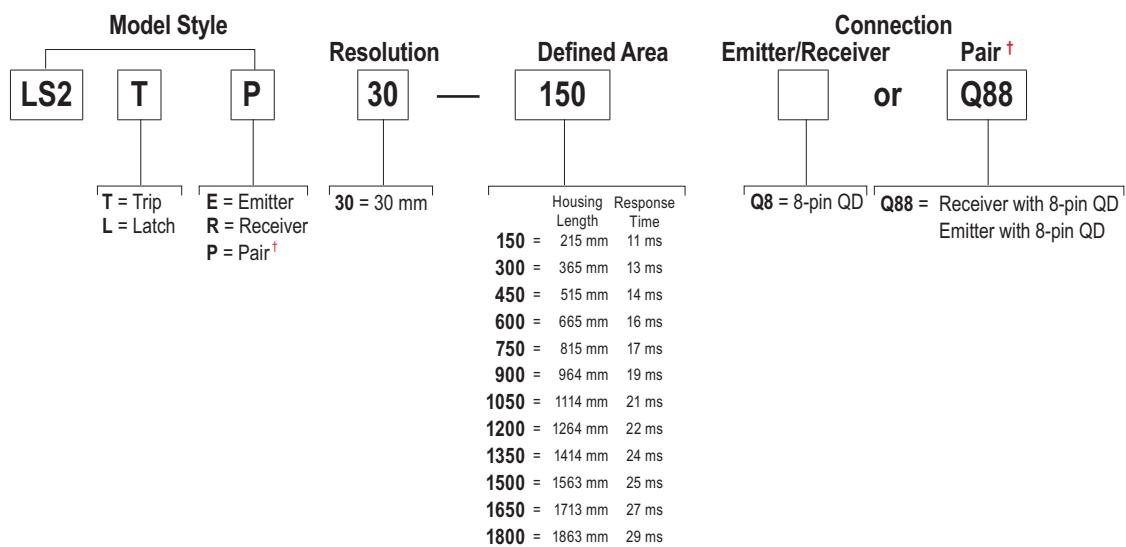
### Type 2 Safety Light Screens

A low-cost solution is suited to lower risk applications where the result is only a slight injury.

- Operating range up to 15 m
- Simple, two-piece system requires no control box
- System meets all requirements for Type 2 devices per IEC 61496 and Cat 2 PL d per EN ISO 13849-1 (CE certified) and cULus NIPF
- Fast response times of 11 to 29 milliseconds shutdown machinery quickly
- Dedicated models eliminate selectable functions, DIP switches and programming

#### EZ-SCREEN® Type 2 Systems, 30 mm Resolution Model Key, 24 V DC

Example Model Number LS2TP30-150Q88



For more specifications see page 709.

 A model with a QD requires a mating cordset (see page 707).

<sup>†</sup> A pair includes an emitter and receiver (example, LS2TP30-150Q88)

Contact Banner Engineering Corp. for additional information and/or verification of valid kit model numbers.

## Cordsets

### Euro QD

See page 916

Length	8-Pin QD	5-Pin QD
	Straight	Straight
4.57 m	QDE-815D	QDE-515D
7.62 m	QDE-825D	QDE-525D
15.3 m	QDE-850D	QDE-550D
22.9 m	QDE-875D	QDE-575D
30.5 m	QDE-8100D	QDE-5100D

 Additional cordset information available.  
See page 904.

NOTE: See page 693 for interfacing solutions.  
Additional accessories are listed on page 844.

### Euro QD—Double-Ended

See page 917

Length	8-Pin QD
	Straight
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
15.3 m	DEE2R-850D
22.9 m	DEE2R-875D
30.5 m	DEE2R-8100D

### Euro QD Splitter

919

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

### 30 mm—Type 2

See page 900

See page 901

See page 901

See page 901

USCMB-\*\*

USMB-1\*

USMB-6

USMB-8


 Additional brackets and information available.  
See page 846.

NOTE: See page 706 for interfacing solutions.

\*\* USCMB-1/-2 are dependent on length

\* USMB-1 brackets are supplied

## Other Accessories

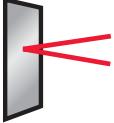
### Stands

See page 952



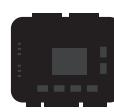
### Mirrors

See page 956



### Interface

See page 705



## Replacement Parts

### Description

### Model

Replacement key for switch MGA-KS0-1

MGA-K-1

Panel-mount keyed normally open reset switch

MGA-KS0-1

30 mm test piece

STP-14

Standard end brackets with hardware to mount to MSA series stands

USMB-1

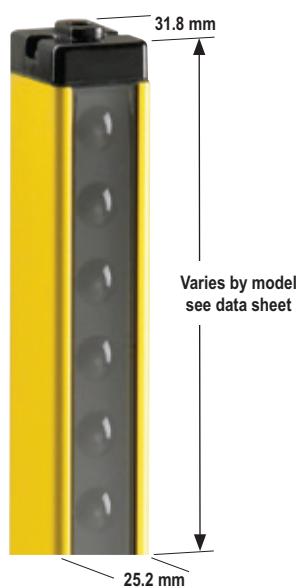
Center bracket kit and standard end brackets with hardware to mount to MSA series stands (1 bracket, for 600 to 900 mm long sensors)

USCMB-1

Center bracket kit and standard end brackets with hardware to mount to MSA series stands (2 brackets, for 1050 to 1500 mm long sensors)

USCMB-2

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



**EZ-SCREEN**  
Type 2 Systems

## EZ-SCREEN® Type 2 Specifications

Supply Voltage at the Device	24 V dc $\pm 20\%$ (PELV) (The external voltage supply must be capable of buffering brief mains interruptions of 20 milliseconds as specified in EN/IEC 60204-1.)
Supply Current	<b>Emitter:</b> 50 mA max. <b>Receiver:</b> 90 mA max., exclusive of OSSD1 and OSSD2 loads (up to an additional 0.5A each)
Wavelength of Emitter Elements	Infrared LEDs, 950 nm at peak emission
Short Circuit Protection	All inputs and outputs are protected from short circuits to +24 V dc or dc common
Electrical Safety Class (IEC 61140)	III
Operating Range	0.2 m to 15 m Range decreases with use of mirrors and/or lens shields: <b>Lens shields</b> – approximately 10% less range per shield <b>Glass-surface mirrors</b> – approximately 8% less range per mirror See Accessory section for more information on a specific mirror, page 956
Effective Aperture Angle (EAA)	Meets Type 2 requirements per IEC 61496-2; $\pm 5^\circ$ @ 3 m
Ambient Light Immunity	> 10,000 lux at $5^\circ$ angle of incidence
Strobe Light Immunity	Immune as per IEC 61496-2
Response Time	Dependent on number of beams; see Models key on page 706
EDM Input	"Power Monitoring" accomplished via Reset/Remote Test input
Reset Input / Remote Test Input	Connect to +24 V dc via a normally closed (NC) reset switch <b>Auto Rest (Trip Output) Models:</b> Test/Reset <b>Manual Rest (Latch Output) Models:</b> Test/Restart/Reset
Safety Outputs	Two redundant solid-state 24 V dc, 0.5 A max. sourcing OSSD (Output Signal Switching Device) safety outputs. (Use optional interface modules for ac or larger dc loads.) Not compatible with the Banner "Safety Handshake" <b>ON-State voltage:</b> > Vin-1.5 V dc <b>OFF-State voltage:</b> 0.2 V dc max. <b>Max. load capacitance:</b> 0.1 $\mu$ F <b>Min. load resistance:</b> 48 $\Omega$ <b>Open ground leakage current:</b> 0.65 mA max. <b>OSSD test pulse width:</b> 0.2 - 0.25 milliseconds <b>OSSD test pulse period:</b> 260 milliseconds typical
Enclosure	<b>Materials:</b> Extruded aluminum housing with yellow polyester powder finish and well-sealed, rugged die-cast zinc end caps, acrylic lens cover <b>Rating:</b> IP65
Operating Conditions	<b>Temperature:</b> 0° to +55° C <b>Relative humidity:</b> 95% maximum (non-condensing)
Shock and Vibration	EZ-SCREEN Type 2 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 2 per IEC 61496-1/-2; Category 2 PI d per EN ISO 13849-1; SIL 2 per IEC 61 508; Type 2 per UL 61496-1/-2
Certifications	 
Wiring Diagrams	<b>Emitter:</b> WD008 (p. 1011) <b>Receiver with 2 Solid-State OSSDs, 2 FSDs and Power Monitoring:</b> WD009 (p. 1012) <b>Power Monitoring of IM-T-9A Interface Module:</b> WD010 (p. 1012)