

## EZ-ARRAY™

## Two-Piece Measuring Light Screens



- Two-piece light-screen design eliminates the need for a separate controller
- 5 mm beam spacing provides edge resolution of 2.5 mm
- High excess gain option for detecting opaque objects in single and double edge scan mode
- Seven zone LEDs provide instant alignment and beam blockage information
- Remote TEACH capable
- Rugged aluminum housing

## EZ-ARRAY™, 12-30 V DC, 5 mm Beam Spacing

Housing Length (L)	Array Length	Total Beams	Range*	Analog Output	Emitter Model	Receiver Model NPN Outputs	Receiver Model PNP Outputs
227 mm	150 mm	30	0.4 to 4 m	Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E150Q	EA5R150NIXMODQ EA5R150NUXMODQ	EA5R150PIXMODQ EA5R150PUXMODQ
379 mm	300 mm	60		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E300Q	EA5R300NIXMODQ EA5R300NUXMODQ	EA5R300PIXMODQ EA5R300PUXMODQ
529 mm	450 mm	90		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E450Q	EA5R450NIXMODQ EA5R450NUXMODQ	EA5R450PIXMODQ EA5R450PUXMODQ
678 mm	600 mm	120		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E600Q	EA5R600NIXMODQ EA5R600NUXMODQ	EA5R600PIXMODQ EA5R600PUXMODQ
828 mm	750 mm	150		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E750Q	EA5R750NIXMODQ EA5R750NUXMODQ	EA5R750PIXMODQ EA5R750PUXMODQ
978 mm	900 mm	180		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E900Q	EA5R900NIXMODQ EA5R900NUXMODQ	EA5R900PIXMODQ EA5R900PUXMODQ
1128 mm	1050 mm**	210		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E1050Q	EA5R1050NIXMODQ EA5R1050NUXMODQ	EA5R1050PIXMODQ EA5R1050PUXMODQ
1278 mm	1200 mm**	240		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E1200Q	EA5R1200NIXMODQ EA5R1200NUXMODQ	EA5R1200PIXMODQ EA5R1200PUXMODQ
1578 mm	1500 mm**	300		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E1500Q	EA5R1500NIXMODQ EA5R1500NUXMODQ	EA5R1500PIXMODQ EA5R1500PUXMODQ
1878 mm	1800 mm**	360		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E1800Q	EA5R1800NIXMODQ EA5R1800NUXMODQ	EA5R1800PIXMODQ EA5R1800PUXMODQ
2178 mm	2100 mm**	420		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E2100Q	EA5R2100NIXMODQ EA5R2100NUXMODQ	EA5R2100PIXMODQ EA5R2100PUXMODQ
2478 mm	2400 mm**	480		Current (4 to 20 mA) Voltage (0 to 10 V)	EA5E2400Q	EA5R2400NIXMODQ EA5R2400NUXMODQ	EA5R2400PIXMODQ EA5R2400PUXMODQ

For more specifications see page 251.

 QD models: A model with a QD requires a mating cordset (see page 252).


\* Models with a range of 300 mm to 1500 mm models are available upon request. Contact factory at 1-888-373-6767 for more information.

\*\* Models with array lengths 1050 mm and longer ship with a center bracket and two end-cap brackets.

EZ-ARRAY™ IO-Link, 0-10 V DC–5 mm Beam Spacing

Housing Length (L)	Array Length	Total Beams	Range*	Emitter Model	Receiver Model PNP Outputs
227 mm	150 mm	30	0.4 to 4 m	EA5E150Q	EA5R150XKQ
379 mm	300 mm	60		EA5E300Q	EA5R300XKQ
529 mm	450 mm	90		EA5E450Q	EA5R450XKQ
678 mm	600 mm	120		EA5E600Q	EA5R600XKQ
828 mm	750 mm	150		EA5E750Q	EA5R750XKQ
978 mm	900 mm	180		EA5E900Q	EA5R900XKQ
1128 mm	1050 mm**	210		EA5E1050Q	EA5R1050XKQ
1278 mm	1200 mm**	240		EA5E1200Q	EA5R1200XKQ
1578 mm	1500 mm**	300		EA5E1500Q	EA5R1500XKQ
1878 mm	1800 mm**	360		EA5E1800Q	EA5R1800XKQ
2178 mm	2100 mm**	420		EA5E2100Q	EA5R2100XKQ
2478 mm	2400 mm**	480		EA5E2400Q	EA5R2400XKQ

For more specifications see page 251.

 QD models: A model with a QD requires a mating cordset (see page 252).

\* Models with a range of 300 mm to 1500 mm models are available upon request. Contact factory at 1-888-373-6767 for more information.

\*\* Models with array lengths 1050 mm and longer ship with a center bracket and two end-cap brackets.

# MEASUREMENT

## LASER

## ULTRASONIC

## RADAR



**M12/Euro-Style**  
Straight connector models listed; for right-angle, add **RA** to the end of the model number (example, **MAQDC-815RA**)

**8-Pin**  
**MAQDC-815**  
4 m (13')  
**MAQDC-830**  
9 m (30')  
**MAQDC-850**  
15 m (49')

Additional cordset information is available  
See page 758



**Communication Cordsets**  
Straight connector models listed; for right-angle, add **RA** to the end of the model number (example, **MQDMC-506RA**)

**5-Pin**  
**MQDMC-506**  
2 m (13')  
**MQDMC-515**  
4 m (13')  
**MQDMC-530**  
9 m (30')



**Double-Ended Euro-Style**  
Male/female straight Euro QD connectors

8-Pin	
<b>DEE2R-81D</b>	<b>DEE2R-825D</b>
0.31 m (1.0')	7.62 m (25.0')
<b>DEE2R-83D</b>	<b>DEE2R-850D</b>
0.91 m (3.0')	15.3 m (50.0')
<b>DEE2R-88D</b>	<b>DEE2R-875D</b>
2.44 m (8.0')	22.9 m (75.0')
<b>DEE2R-815D</b>	<b>DEE2R-8100D</b>
4.57 m (15.0')	30.5 m (100.0')

For IO-Link splitters see datasheet

### Serial Adapters



**EZA-MBK-20**      **SMBLBCZB**

Additional bracket information is available  
See page 725



**EZA-USB485-01**      **INTUSB485-1**

Additional adapter information is available  
See page 819

### Stands



Additional information is available  
See page 802

### Enclosures



Additional information is available  
See page 808

### Lens Shields



Additional information is available  
See page 812



#### EZ-ARRAY Light Screen

W = 36.0 mm      D = 45.2 mm  
L = Length (see model chart page 255)

## EZ-ARRAY™ Specification

Supply Voltage (Limit Values)	<b>Emitter:</b> 12 to 30 V dc <b>Receiver Analog Current Models:</b> 12 to 30 V dc <b>Receiver Analog Voltage Models:</b> 15 to 30 V dc <b>IO-Link receiver:</b> 18 to 30 V dc
Supply Power Requirements	<b>Emitter/Receiver Pair (Exclusive of discrete load):</b> Less than 9 watts <b>Power-up delay:</b> 2 seconds
Emitter/Receiver Range	400 mm to 4 m
Field of View	Nominally ± 3°
Beam Spacing	5 mm
Light Source	Infrared LED
Minimum Object Detection Size	<b>Straight Scan, Low-Contrast:</b> 5 mm <b>Straight Scan, High-Excess-Gain:</b> 10 mm
Sensor Positional Resolution	<b>Straight Scan:</b> 5 mm <b>Double-Edge Scan:</b> 2.5 mm <b>Single-Edge Scan:</b> 2.5 mm
Teach Input (Receiver Gray Wire)	<b>Low:</b> 0 to 2 volts <b>High:</b> 6 to 30 volts or open (input impedance 22 kΩ)
Two Discrete Outputs	Solid-State NPN or PNP (current sinking or sourcing) <b>Rating:</b> 100 mA max. each output <b>OFF-State Leakage Current:</b> <b>NPN:</b> less than 200 uA @ 30 V dc <b>PNP:</b> less than 10 uA @ 30 V dc <b>ON-State Saturation Voltage:</b> <b>NPN:</b> less than 1.6 V @ 100 mA <b>PNP:</b> less than 2.0 V @ 100 mA Protected against false pulse on power-up and continuous overload or short circuit.  <b>IO-Link Model:</b> Discrete Output 1 (SIO Mode) <b>Type:</b> Solid-State Push-Pull <b>Rating:</b> 100 mA maximum (sourcing or sinking) <b>ON-State Saturation Voltage:</b> less than 3V @100mA (sourcing or sinking)
Two Analog Outputs	<b>Voltage Sourcing:</b> 0 to 10 V (maximum current load of 5 mA) <b>Current Sourcing:</b> 4 to 20 mA (maximum resistance load = (Vsupply-3)/0.020)
Serial Communication Interface	EIA-485 Modbus RTU (up to 15 nodes per communication ring) RTU binary format <b>Baud Rate:</b> 9600, 19.2K or 38.4K    IO-Link Baud Rate: 38,400 bps (COM2) 8 Data Bits, 1 Stop Bit, and Even, Odd, or 2 Stop Bits and No Parity <b>Process data width:</b> 16 bits
Scan Time	Scan times depend on scan mode and sensor length. Straight scan times range from 2.8 to 26.5 milliseconds.
Status Indicators	<b>Emitter:</b> Red Status LED ON Steady—Status Flashing at 1 hz—Error <b>IO-Link:</b> <b>Green:</b> IO-Link OK <b>Yellow flashing:</b> IO-Link Comm <b>Solid Red:</b> IO-Link error <b>Receiver:</b> 7 Zone Indicators Red—Blocked channels within zone    Green—All channels clear within zone 3-digit 7-segment indicators for measurement mode/diagnostic information Sensor Status Bicolor Indicator LED Red—Hardware Error or Marginal Alignment    Green—OK <b>Modbus Activity Indicator LED:</b> Yellow <b>Modbus Error Indicator LED:</b> Red
System Configuration (Receiver Interface)	<b>6-position DIP switch:</b> Used to set scanning type, measurement modes, analog slope and discrete output 2 function. Alternate software GUI interface provides additional options; see full manual. <b>Push Buttons:</b> Two momentary push buttons for alignment and gain level selection <b>IO-Link models:</b> Supplied IODD files provide all configuration options (see manual)
Connections	<b>Serial communication:</b> The receiver uses a PVC-jacketed, 5-conductor 22-gauge quick-disconnect cable, 5.4 mm diameter. QD cordsets are ordered separately. <b>Other Sensor connections:</b> 8-conductor quick-disconnect cordsets (one each for emitter and receiver), ordered separately (may not exceed 75 m long), PVC-jacketed cordsets measure 5.8 mm diameter, have shield wire; 22-gauge conductors.
Construction	Aluminum housing with clear-anodized finish; acrylic lens cover
Environmental Rating	IEC IP65
Operating Conditions	<b>Temperature:</b> -40 to +70 °C <b>Relative humidity:</b> 95% at 50 °C (non-condensing)
Certification	