

# Light Curtain for Measuring Tasks

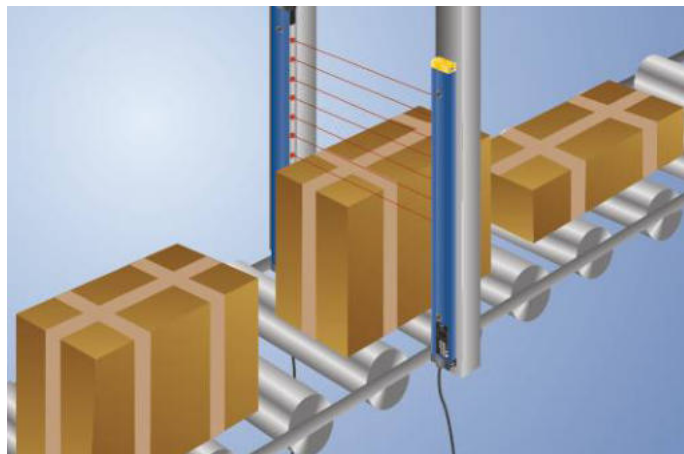
## OEEB103U0135

Part Number



- 360° visible switching status display
- Graphical display for easy operation
- Integrated evaluation unit
- Object detection and measurement

As these light curtains for measurement tasks are equipped with an integrated evaluation unit, external connection units are not needed. Objects are both recognized (via the digital output) and measured (via the analog output). The light curtains can be set up easily using the menu-controlled graphic display. Convenient parametrization and quick diagnosis is possible via the IO-Link interface.



### Technical Data

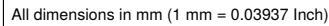
| Optical Data                                |                    |
|---------------------------------------------|--------------------|
| Range                                       | 3000 mm            |
| Measurement Field Height (MFH)              | 1050 mm            |
| Beam Distance                               | 30 mm              |
| Light Source                                | Infrared Light     |
| Service Life (T = +25 °C)                   | 100000 h           |
| Max. Ambient Light                          | 10000 Lux          |
| Opening Angle                               | 10 °               |
| Electrical Data                             |                    |
| Sensor Type                                 | Receiver           |
| Supply Voltage                              | 18...30 V DC       |
| Current Consumption (U <sub>b</sub> = 24 V) | < 50 mA            |
| Switching Frequency                         | 13 Hz              |
| Response Time                               | 37 ms              |
| On-/Off-Delay                               | 0...10 s           |
| Temperature Drift                           | < 10 %             |
| Temperature Range                           | -25...60 °C        |
| Number of Switching Outputs                 | 2                  |
| Switching Output Voltage Drop               | < 2,5 V            |
| Switching Output/Switching Current          | 100 mA             |
| Residual Current Switching Output           | < 50 µA            |
| Analog Output                               | 0...10 V/4...20 mA |
| Short Circuit and Overload Protection       | yes                |
| Reverse Polarity Protection                 | yes                |
| Lockable                                    | yes                |
| Interface                                   | IO-Link V1.0       |
| Protection Class                            | III                |
| Mechanical Data                             |                    |
| Setting Method                              | Menu (OLED)        |
| Housing Material                            | Aluminum           |
| Degree of Protection                        | IP65               |
| Connection                                  | M12 × 1; 4/5-pin   |
| Switchable to NC/NO                         | ●                  |
| Configurable as PNP/Push-Pull               | ●                  |
| Error Output                                | ●                  |
| IO-Link                                     | ●                  |
| Connection Diagram No.                      | 188                |
| Control Panel No.                           | EB3                |
| Suitable Connection Equipment No.           | 2 35               |

### Suitable Emitter

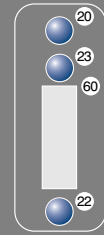
|                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
| OSEB103Z0103                                                                                             |
| Display brightness may decrease with age. This does not result in any impairment of the sensor function. |

### Complementary Products

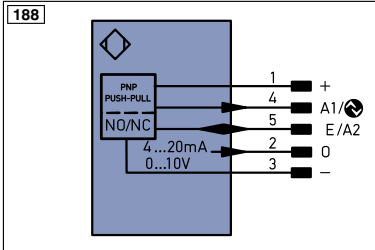
|                             |
|-----------------------------|
| Analog Evaluation Unit AW02 |
| IO-Link Master              |
| Software                    |



## EB3



20 = Enter Button  
22 = UP Button  
23 = Down Button  
60 = Display



|                                                                                     |                                            |
|-------------------------------------------------------------------------------------|--------------------------------------------|
| +                                                                                   | Supply Voltage +                           |
| -                                                                                   | Supply Voltage 0 V                         |
| ~                                                                                   | Supply Voltage (AC Voltage)                |
| A                                                                                   | Switching Output (NO)                      |
| $\bar{A}$                                                                           | Switching Output (NC)                      |
| V                                                                                   | Contamination/Error Output (NO)            |
| $\bar{V}$                                                                           | Contamination/Error Output (NC)            |
| E                                                                                   | Input (analog or digital)                  |
| T                                                                                   | Teach Input                                |
| Z                                                                                   | Time Delay (activation)                    |
| S                                                                                   | Shielding                                  |
| RxD                                                                                 | Interface Receive Path                     |
| TxD                                                                                 | Interface Send Path                        |
| RDY                                                                                 | Ready                                      |
| GND                                                                                 | Ground                                     |
| CL                                                                                  | Clock                                      |
| E/A                                                                                 | Output/Input programmable                  |
|  | <b>IO-Link</b>                             |
| PoE                                                                                 | Power over Ethernet                        |
| IN                                                                                  | Safety Input                               |
| QSSD                                                                                | Safety Output                              |
| Signal                                                                              | Signal Output                              |
| Bl-D <sup>+/</sup>                                                                  | Ethernet Gigabit bidirect. data line (A-D) |
| EN0 <sup>EN242</sup>                                                                | Encoder 0-pulse 0-0 (TTL)                  |

|                             |                                |
|-----------------------------|--------------------------------|
| <b>PT</b>                   | Platinum measuring resistor    |
| <b>nc</b>                   | not connected                  |
| <b>U</b>                    | Test Input                     |
| <b><math>\bar{U}</math></b> | Test Input inverted            |
| <b>W</b>                    | Trigger Input                  |
| <b>W –</b>                  | Ground for the Trigger Input   |
| <b>O</b>                    | Analog Output                  |
| <b>O –</b>                  | Ground for the Analog Output   |
| <b>BZ</b>                   | Block Discharge                |
| <b>AWV</b>                  | Valve Output                   |
| <b>a</b>                    | Valve Control Output +         |
| <b>b</b>                    | Valve Control Output 0 V       |
| <b>SY</b>                   | Synchronization                |
| <b>SY –</b>                 | Ground for the Synchronization |
| <b>E+</b>                   | Receiver-Line                  |
| <b>S+</b>                   | Emitter-Line                   |
| $\pm$                       | Grounding                      |
| <b>S<sub>N</sub>R</b>       | Switching Distance Reduction   |
| <b>Rx+/–</b>                | Ethernet Receive Path          |
| <b>Tx+/–</b>                | Ethernet Send Path             |
| <b>Bus</b>                  | Interfaces-Bus A(+)/B(–)       |
| <b>La</b>                   | Emitted Light disengageable    |
| <b>Mag</b>                  | Magnet activation              |
| <b>RES</b>                  | Input confirmation             |
| <b>EDM</b>                  | Contactors Monitoring          |

|                                    |                            |
|------------------------------------|----------------------------|
| ENAR542Z                           | Encoder A/ $\bar{A}$ (TTL) |
| ENBR542Z                           | Encoder B/B (TTL)          |
| ENA                                | Encoder A                  |
| ENB                                | Encoder B                  |
| AMIN                               | Digital output MIN         |
| AMAX                               | Digital output MAX         |
| AOK                                | Digital output OK          |
| SY In                              | Synchronization In         |
| SY OUT                             | Synchronization OUT        |
| OLT                                | Brightness output          |
| M                                  | Maintenance                |
| rsy                                | reserved                   |
| Wire Colors according to IEC 60757 |                            |
| BK                                 | Black                      |
| BN                                 | Brown                      |
| RD                                 | Red                        |
| OG                                 | Orange                     |
| YE                                 | Yellow                     |
| GN                                 | Green                      |
| BU                                 | Blue                       |
| VT                                 | Violet                     |
| GY                                 | Grey                       |
| WH                                 | White                      |
| PK                                 | Pink                       |
| GNYE                               | Green/Yellow               |

### Wire Colors according to IEC 60757

|      |              |
|------|--------------|
| BK   | Black        |
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