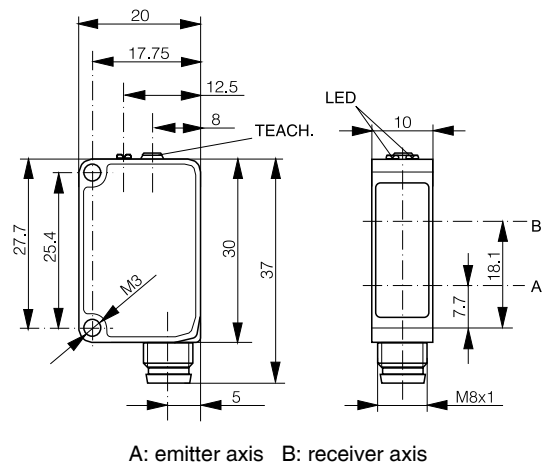
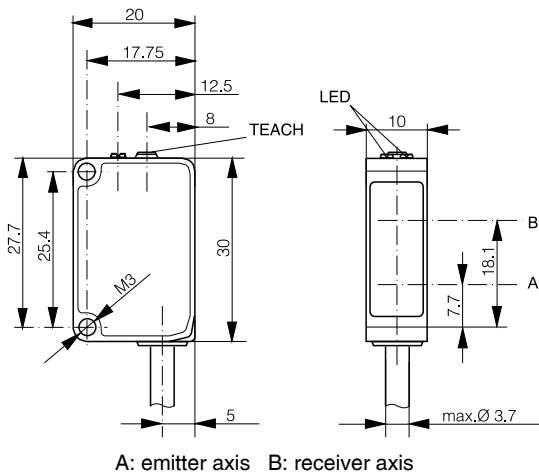
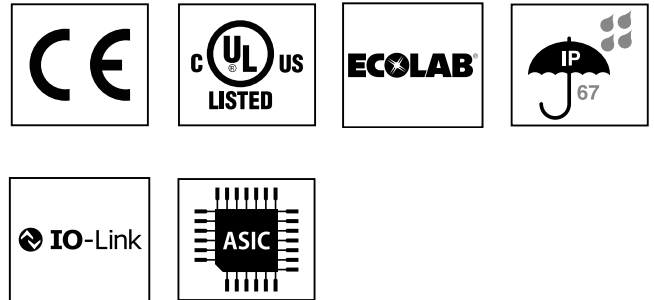


300 mm

- ✓ Miniature housing
- ✓ Sensitivity adjustment via teach button or IO-Link
- ✓ IO-Link
- ✓ Excellent black/white behavior
- ✓ Immunity to mutual interferences



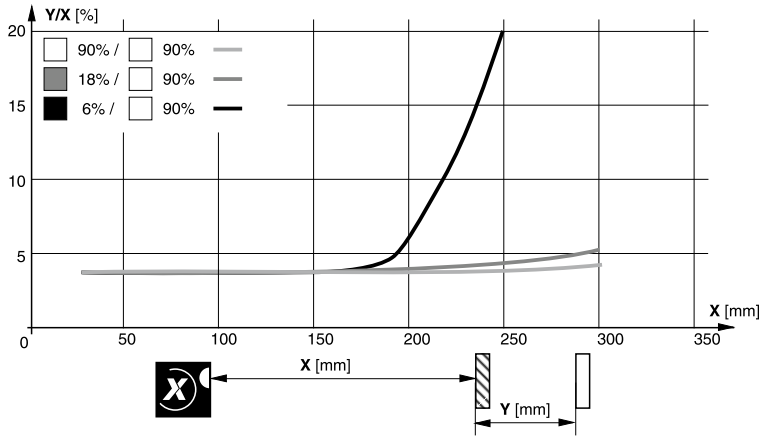
| OPTICAL DATA               |                                  | INTERFACE              |                               |
|----------------------------|----------------------------------|------------------------|-------------------------------|
| Sensing range typ. max.    | 10...300 mm <sup>1</sup>         | Sensitivity adjustment | 30...300 mm, teach or IO-Link |
| Operating range            | 15...250 mm <sup>1</sup>         | Indicator LED, green   | Excess gain                   |
| Light source               | Pinpoint LED, red 640 nm         | Indicator LED, yellow  | Sensing state                 |
| Light spot size (distance) | Ø 6 mm (100 mm)/Ø 10 mm (300 mm) | IO-Link                | ✓                             |

<sup>1</sup>Object with 90% reflectance (standard white paper)

| ELECTRICAL DATA                        |                                       | MECHANICAL DATA               |                             |
|--|---------------------------------------|-------------------------------|-----------------------------|
| Supply voltage range (U <sub>b</sub> ) | 10...30 VDC                           | Enclosure rating              | IP67                        |
| Residual ripple                        | ≤ 10% V <sub>pp</sub>                 | Ambient temperature operation | -25...+65°C                 |
| Output current                         | ≤ 100 mA                              | Shock and vibration           | IEC 60947-5-2               |
| Signal PNP high/low                    | ≤ (U <sub>b</sub> -2.0 V)/approx. 0 V | Weight (connector version)    | 6 g (M8)/16 g (cable + M12) |
| Signal NPN high/low                    | Approx. U <sub>b</sub> /≤ 2.0 V       | Weight (cable version)        | 36 g (3-wire)/42 g (4-wire) |
| Power consumption (no load)            | ≤ 30 mA                               | Housing material              | ABS                         |
| Response time <sup>1</sup>             | ≤ 500 μs (normal)/≤ 1 ms/≤ 340 μs     | Window material               | PMMA                        |
| Switching frequency <sup>1</sup>       | ≤ 1 kHz (normal)/≤ 500 Hz/≤ 1.5 kHz   | Connection cable              | PVC, 2 m, 3-wire or 4-wire  |
| Short circuit protection               | ✓                                     | Connector type                | M8 3-pin or 4-pin           |
| Voltage reversal protection            | ✓                                     | Cable with connector          | PVC, 0.2 m + M12 4-pin      |

<sup>1</sup>By default, "Normal" mode. "Fine" and "Fast" modes selectable via IO-Link.

## BACKGROUND SHIFT

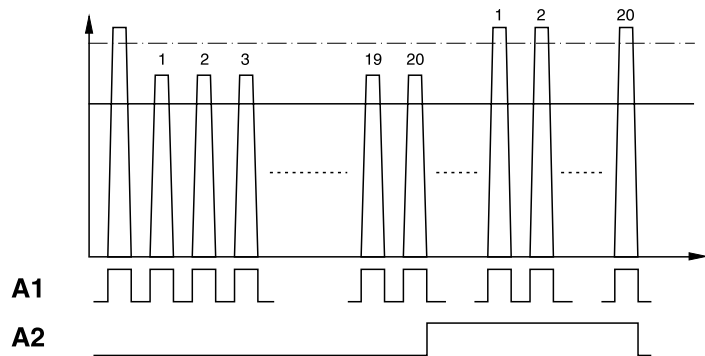


## IO-LINK FUNCTIONALITIES

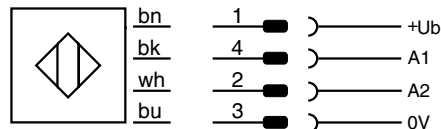
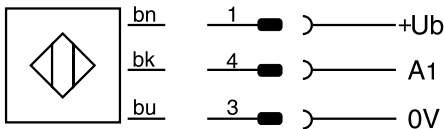
|                   |  |
|-------------------|--|
| IO-Link version   | 1.0  |
| SIO mode          | Supported  |
| Process data      | Detection state & stability alarm  |
| Baudrate          | COM2 (38.4 kBaud)  |
| Special functions | Output configuration, output timing, sensitivity, sensor mode, detection counter, event flags, maximum and actual sensor temperature |

IO-Link specifications and IODD files may be downloaded from [www.contrinex.com](http://www.contrinex.com) (Download section)

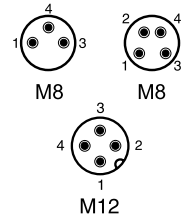
## STABILITY ALARM OUTPUT (A2)



## WIRING DIAGRAM



## PIN ASSIGNMENT



## AVAILABLE TYPES

| Part number | Part reference        | Polarity | Connection             | Output (A1)      | Output (A2)     |
|-------------|-----------------------|----------|------------------------|------------------|-----------------|
| 620 600 156 | LHR-C23PA-TMK-403     | PNP      | PVC, 2 m, 3-wire       | Light-on/IO-Link | -               |
| 620 600 157 | LHR-C23PA-TMK-603     | PNP      | PVC, 2 m, 4-wire       | Light-on/IO-Link | Dark-on         |
| 620 600 158 | LHR-C23PA-TMK-60C     | PNP      | PVC, 2 m, 4-wire       | Light-on/IO-Link | Stability alarm |
| 620 600 159 | LHR-C23PA-TMK-301     | NPN      | PVC, 2 m, 3-wire       | Light-on         | -               |
| 620 600 160 | LHR-C23PA-TMK-101     | NPN      | PVC, 2 m, 4-wire       | Light-on         | Dark-on         |
| 620 600 161 | LHR-C23PA-TMK-10A     | NPN      | PVC, 2 m, 4-wire       | Light-on         | Stability alarm |
| 620 600 162 | LHR-C23PA-TMS-403     | PNP      | Connector M8 3-pin     | Light-on/IO-Link | -               |
| 620 600 163 | LHR-C23PA-TMS-603     | PNP      | Connector M8 4-pin     | Light-on/IO-Link | Dark-on         |
| 620 600 164 | LHR-C23PA-TMS-60C     | PNP      | Connector M8 4-pin     | Light-on/IO-Link | Stability alarm |
| 620 600 165 | LHR-C23PA-TMS-301     | NPN      | Connector M8 3-pin     | Light-on         | -               |
| 620 600 166 | LHR-C23PA-TMS-101     | NPN      | Connector M8 4-pin     | Light-on         | Dark-on         |
| 620 600 167 | LHR-C23PA-TMS-10A     | NPN      | Connector M8 4-pin     | Light-on         | Stability alarm |
| 620 600 331 | LHR-C23PA-TMV-603-324 | PNP      | PVC, 0.2 m + M12 4-pin | Light-on/IO-Link | Dark-on         |
| 620 600 332 | LHR-C23PA-TMV-101-324 | NPN      | PVC, 0.2 m + M12 4-pin | Light-on         | Dark-on         |
| 620 600 427 | LHR-C23PA-TMV-403-326 | PNP      | PUR, 0.2 m + M8 3-pin  | Light-on/IO-Link | -               |

Note: additional suffix can appear to indicate a revision version or a special version.

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