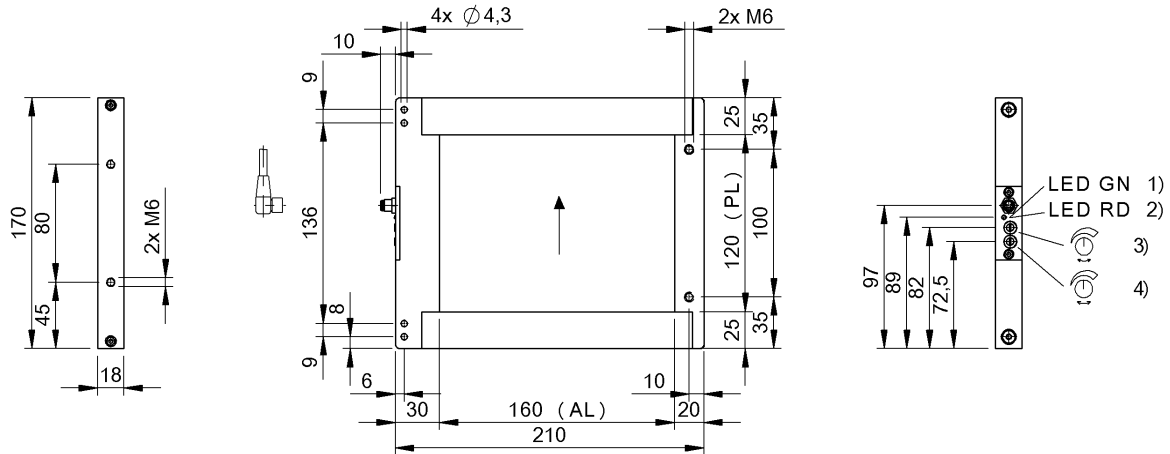


Photoelectric Sensors  
**BOW A-1216-DS-C-S75**  
**Order Code: BOW004J**

**BALLUFF**

&[Date]

&[Date]



1) Power, 2) Output function, 3) Delay time, 4) Sensitivity



**Basic features**

|                               |   |
|-------------------------------|---|
| <b>Additional features</b>    | Dynamic function principle, ideal as eject monitoring under harsh operating conditions, particularly rugged design, protected optics, adjustable object resolution. |
| <b>Approval/Conformity</b>    | CE<br>UKCA<br>WEEE  |
| <b>Basic standard</b>         | IEC 60947-5-2   |
| <b>Principle of operation</b> | Optical window sensor   |
| <b>Series</b>                 | A   |
| <b>Style</b>                  | Frame   |

**Display/Operation**

|                 |   |
|-----------------|---|
| <b>Adjuster</b> | Potentiometer 270° (2x)                       |
| <b>Display</b>  | Output function - LED red<br>LED green: Power |
| <b>Setting</b>  | Sensitivity<br>Delay time                     |

**Electrical connection**

|                                    |                             |
|------------------------------------|-----------------------------|
| <b>Connection</b>                  | Connector, M8x1-Male, 4-pin |
| <b>Contact, surface protection</b> | Gold plated                 |
| <b>Polarity reversal protected</b> | yes                         |
| <b>Short-circuit protection</b>    | yes                         |

**Electrical data**

|   |             |
|---|-------------|
| <b>Load capacitance max. at Ue</b>                      | 0.1 µF      |
| <b>No-load current I<sub>o</sub> max. at Ue</b>         | 90 mA       |
| <b>Operating voltage U<sub>b</sub></b>                  | 10...30 VDC |
| <b>Rated insulation voltage U<sub>i</sub></b>           | 75 V DC     |
| <b>Rated operating current I<sub>e</sub></b>            | 200 mA      |
| <b>Rated operating voltage U<sub>e</sub> DC</b>         | 24 V        |
| <b>Ready delay t<sub>v</sub> max.</b>                   | 100 ms      |
| <b>Residual current I<sub>r</sub> max.</b>              | 50 µA       |
| <b>Ripple max. (% of U<sub>e</sub>)</b>                 | 15 %        |
| <b>Switching frequency</b>                              | 100 Hz      |
| <b>Turn-off delay t<sub>off</sub> max.</b>              | 0.4 ms dyn. |
| <b>Turn-on delay t<sub>on</sub> max.</b>                | 0.4 ms      |
| <b>Voltage drop U<sub>d</sub> max. at I<sub>e</sub></b> | 2.5 V       |

**Environmental conditions**

|                            |             |
|----------------------------|-------------|
| <b>Ambient temperature</b> | -10...55 °C |
| <b>IP rating</b>           | IP67        |

**Interface**

|                                  |  |
|----------------------------------|--|
| <b>Duration of time function</b> | T = 5...300 ms   |
| <b>Switching output</b>          | NPN dynamic normally open (NO)<br>PNP dynamic normally open (NO) |
| <b>Time function</b>             | Turn-off delay dynamic   |

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### Material

|                          |                            |
|--------------------------|----------------------------|
| Housing material         | Aluminium, anodized, black |
| Material sensing surface | PMMA                       |
| Surface protection       | anodized, black            |

### Mechanical data

|                         |                                  |
|-------------------------|----------------------------------|
| Active window (PL x AL) | 120 × 160 mm                     |
| Dimension               | 18 x 170 x 220 mm                |
| Mounting part           | Screw M6<br>Screw M4<br>Screw M5 |

### Optical features

|                                |                     |
|--------------------------------|---------------------|
| Ambient light max.             | 2000 Lux            |
| Beam characteristic            | Divergent           |
| Light type                     | Infrared            |
| Principle of optical operation | Through-beam sensor |
| Smallest part typ.             | 1.20 mm             |
| Switching function, optical    | dark-on             |

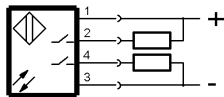
### Remarks

Order accessories separately.  
For additional information, refer to user's guide.  
Do not route connection cable parallel to high voltage lines.  
The sensor is functional again after the overload has been eliminated.  
Reference object (target): Steel ball, diameter 2.0 mm, lateral approach.

### Connector Drawings



### Wiring Diagrams



### Opto Symbols

