



**Model number**

**WCS3B-LS311**

Reading head, SSI interface, Gray code

**Features**

- SSI interface
- Non-contact, absolute position encoder
- Automatic detection of dirt accumulation

**Accessories**

**WCS3B-PL2**

Transparent protective case and seal for WCS3B reader

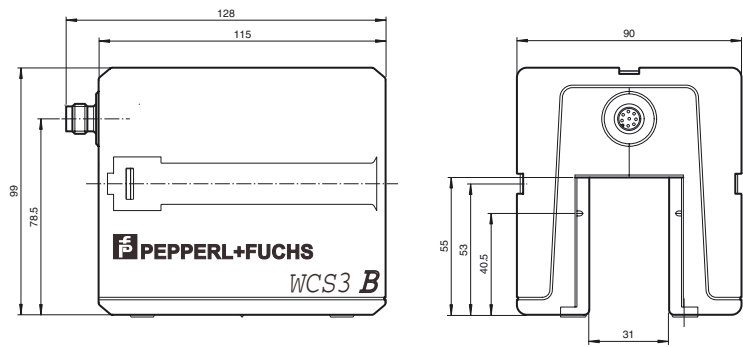
**WCS-MP1**

Mounting plate for reading heads WCS2 and WCS3

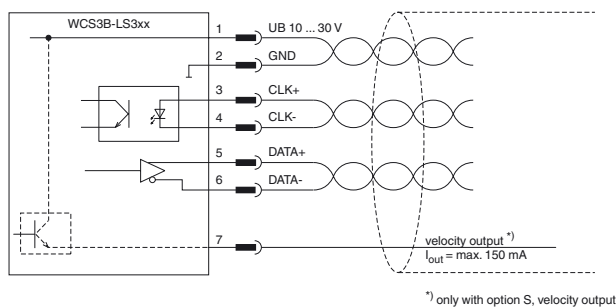
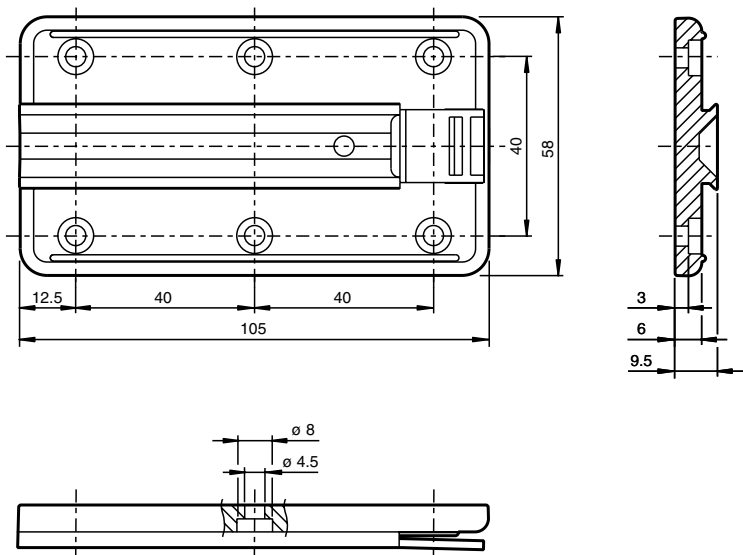
**Note**

with SSI interface

**Dimensions**



**Mounting plate**



**Technical data**

**General specifications**

|                              |   |  |
|------------------------------|---|--|
| Passage speed                | v | ≤ 12.5 m/s   |
| Measuring range              |   | max. 314.5 m   |
| Free tolerances to code rail |   | horizontal: 31 mm (± 15.5 mm)<br>vertical: 28 mm (± 14 mm) |
| Resolution                   |   | ± 0.4 mm (1,250 positions/m)                               |

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| Functional safety related parameters |                |  |
|--------------------------------------|----------------|--|
| MTTF <sub>d</sub>                    |                | 170 a  |
| Mission Time (T <sub>M</sub> )       |                | 20 a   |
| Diagnostic Coverage (DC)             |                | 0 %  |
| Indicators/operating means           |                |  |
| Operation indicator                  |                | LED green: power on  |
| Data flow indicator                  |                | LED yellow: data communication active  |
| Error indicator                      |                | LED red<br>flashing: read head outside of code rail<br>solid on: internal diagnostic test failed |
| Electrical specifications            |                |  |
| Operating voltage                    | U <sub>B</sub> | 10 ... 30 V DC   |
| Power consumption                    | P <sub>0</sub> | 2 VA   |
| Interface                            |                |  |
| Interface type                       |                | SSI interface  |
| Data output code                     |                | Gray code , 25 bit   |
| Clock frequency                      |                | 100 ... 1000 kHz   |
| Pause time                           | t <sub>p</sub> | ≥ 20 μs<br>double request possible, if t <sub>p</sub> ≤ 10 μs                                    |
| Standard conformity                  |                |  |
| Emitted interference                 |                | DIN EN 61000-6-4   |
| Noise immunity                       |                | DIN EN 61000-6-2   |
| Shock resistance                     |                | DIN EN 60068-2-27, half sine 30 g, 18 ms   |
| Vibration resistance                 |                | DIN EN 60068-2-6, sine, 5 g, 10 - 2000 Hz, 10 cycles   |
| Ambient conditions                   |                |  |
| Operating temperature                |                | 0 ... 60 °C (32 ... 140 °F)  |
| Storage temperature                  |                | -40 ... 85 °C (-40 ... 185 °F)   |
| Relative humidity                    |                | 90 % , noncondensing   |
| Mechanical specifications            |                |  |
| Connection type                      |                | 8-pin, M12 x 1 connector   |
| Degree of protection                 |                | IP54   |
| Material                             |                |  |
| Housing                              |                | ABS , PC (Polycarbonate)   |
| Mass                                 |                | 500 g  |
| General information                  |                |  |
| Ordering information                 |                | Mounting plate included with delivery  |