**Scanning rate 600 scans/s (M optics)**

- Automatic detection of code type and code quality
- Parameters are stored fail-safe
- Reference code comparison function
- **autoRefAct**
- RS 232 interface
- Switching input or switching output
- M12 turning connector or cable connection (2m)
- Simple mounting and fastening

**Accessories:**
(available separately)
- Cable (KB …)
- Mounting systems (BT …)
- Modular connector units MA …
(see separate data sheet)

**Electrical connection**

<table>
<thead>
<tr>
<th>BCL 8</th>
<th>5V DC+</th>
<th>1</th>
<th>br/BN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RS232</td>
<td>2</td>
<td>ws/WH</td>
</tr>
<tr>
<td></td>
<td>TwO</td>
<td>3</td>
<td>Br/BU</td>
</tr>
<tr>
<td></td>
<td>GND</td>
<td>4</td>
<td>SW/WH</td>
</tr>
<tr>
<td></td>
<td>RS232</td>
<td>5</td>
<td>-</td>
</tr>
</tbody>
</table>

**Dimensioned drawing**

- Turning connector, 90°
- Indicator LEDs (B1: status LED, B2: decode LED)
- Laser beam
- Optical axis

**Certifications:**
- ISO 9001
- IP 67
- CE
- CDRH
- UL Listed
- IEC 60068
- IEC 61326

**Part no.:** 501 04864
Specifications

**Optical data**
- **Light source**: laser diode 650nm
- **Scanning rate**:
  - M optics: 600 scans/s
  - N optics: 500 scans/s
- **Resolution**:
  - M optics: \( m = 0.150 \ldots 0.5 \text{mm} / 6 \ldots 20 \text{mil} \)
  - N optics: \( m = 0.127 \ldots 0.4 \text{mm} / 5 \ldots 16 \text{mil} \)
- **Beam deflection**: by means of rotating polygon wheel
- **Beam exit**: at front, alternatively on the side with deflection mirror (105°)
- **Read distance**: see reading fields
- **Laser**: class 2 acc. to EN 60825-1, class II acc. to 21 CFR 1040.10 with Laser Notice No. 50
- **Code types**: 2/5 Interleaved, Code 39, Code 128, EAN 128, EAN/UPC, EAN Addendum, Codabar, Pharma Code, Code 93
- **Software features**: selectable output format, autoConfig, reference code comparison, multiple read, real time decoding, adjustment mode, control of switching input or switching output, etc.

**Electrical data**
- **Interface type**: RS 232
- **Baud rate**: 4800 ... 57600Bd
- **Data formats**:
  - data bits: 7, 8
  - parity: none, even, odd
  - stop bit: 1, 2
- **Protocols**: framing protocol with/without handshake
- **Service interface**: RS 232 with fixed data format:
  - 9600Bd, 8 data bits, no parity, 1 stop bit
  - STX "Data", CR, LF
- **Ports**:
  - 1 switching input 5VDC or 1 switching output 5 ... 20V, 20mA
  - 1 device status, 1 read status
  - 4.75 ... 5.5VDC (PELV) 1)
  - Current consumption max. 250mA (2W power supply unit recommended)
- **Mechanical data**
  - **Housing**: metal (diecast zinc)
  - **Protection class**: IP 67
  - **Dimensions (WxHxD)**:
    - beam exit at front: 48 x 40.3 x 15mm³
    - beam exit on the side: 48 x 58 x 17.4mm³
  - **Weight**: 70g
  - **Connection type**: M12 connector, 5-pin, turning or fixed cable, 2m long, 5 x 0.25mm²
- **Environmental data**
  - **Ambient temp. (operation/storage)**: 0°C ... +40°C/-20°C ... +60°C
  - **Air humidity**: max. 90% rel. humidity, non-condensing
  - **Vibration**: IEC 60068-2-6, test FC
  - **Shock**: IEC 60068-2-27, test Ea
  - **Electromagnetic compatibility**: EN 55022, IEC 61000-4-2, -3, -4 and -6

1) For UL applications: for use in class 2 circuits according to NEC only

**Order guide**

**Single line scanner with beam exit at the front**
- M optics, with M12 connector: BCL 8 SM 102 500 38949
- M optics, with 2m cable: BCL 8 SM 552 500 38948
- N optics, with M12 connector: BCL 8 SN 102 501 05418
- N optics, with 2m cable: BCL 8 SN 552 501 05420

**Single line scanner with lateral beam exit**
- M optics, with M12 connector: BCL 8 SM 100 500 40229
- M optics, with 2m cable: BCL 8 SM 550 500 40230
- N optics, with M12 connector: BCL 8 SN 100 501 05417
- N optics, with 2m cable: BCL 8 SN 550 501 05419

### Tables

#### Status LED

<table>
<thead>
<tr>
<th>Colour</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green, flashing</td>
<td>Initialisation phase</td>
</tr>
<tr>
<td>Green, continuous light</td>
<td>Ready</td>
</tr>
<tr>
<td>Red flashing (200ms)</td>
<td>Warning</td>
</tr>
<tr>
<td>Red, continuous light</td>
<td>Error, no function</td>
</tr>
<tr>
<td>Orange flashing (200ms)</td>
<td>Service operation</td>
</tr>
</tbody>
</table>

#### Decode LED

<table>
<thead>
<tr>
<th>Colour</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green (200ms)</td>
<td>Reading successful</td>
</tr>
<tr>
<td>Red (200ms)</td>
<td>No reading result</td>
</tr>
<tr>
<td>Orange, continuous light</td>
<td>Reading gate active</td>
</tr>
</tbody>
</table>

### Remarks

1) For USA only
Reading curves

BCL 8 ...M ... with M optics (medium density), 600 scans/s

BCL 8 ...N ... with N optics (high density), 500 scans/s