The use of connector-type sensors (as opposed to cable connection) has gained in importance over recent years. Ease of handling and high machine uptime are the driving factors here. This requires absolutely reliable products. In line with the various sensor form factors available, Balluff offers a wide range of high-quality connectors.

The comprehensive line of connectors for DC, AC and AC/DC enables use in every area of automation.

The basic line includes not only connectors and connector cables, but also connectors for user-assembly. Balluff cables are ideal for industrial applications in any situation and are dragchain-compatible, halogen-free and high-temperature resistant to meet any requirement.
### DC Connectors

**M5 connection (S 26), M8 connection (S 49)**

<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Application</th>
<th><strong>BKS-B 25</strong></th>
<th><strong>BKS-B 26</strong></th>
<th><strong>BKS-B 48</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Connector</strong></td>
<td><strong>S 26 sensors</strong></td>
<td>straight female</td>
<td>angle female</td>
<td>straight female</td>
</tr>
<tr>
<td><strong>Manufacturer</strong></td>
<td>Balluff</td>
<td>Balluff</td>
<td>Balluff</td>
<td>Balluff</td>
</tr>
<tr>
<td><strong>Supply voltage Uₜ₅</strong></td>
<td>10...30 V DC</td>
<td>10...30 V DC</td>
<td>10...30 V DC</td>
<td>10...30 V DC</td>
</tr>
<tr>
<td><strong>Cable</strong></td>
<td>molded-on PUR</td>
<td>molded-on PUR</td>
<td>molded-on PVC/PUR</td>
<td>molded-on PUR</td>
</tr>
<tr>
<td><strong>No. of wires x cross-section</strong></td>
<td>3×0.14 mm²/4×0.14 mm²</td>
<td>3×0.14 mm²/4×0.14 mm²</td>
<td>3×0.25 mm²</td>
<td>3×0.25 mm²</td>
</tr>
<tr>
<td><strong>Degree of protection per IEC 60529</strong></td>
<td>IP 67</td>
<td>IP 67</td>
<td>IP 67</td>
<td>IP 67</td>
</tr>
<tr>
<td><strong>Ambient temperature range Tₘ</strong></td>
<td>–25...+85 °C</td>
<td>–25...+85 °C</td>
<td>–20...+85 °C</td>
<td>–20...+85 °C</td>
</tr>
</tbody>
</table>

**Please append cable material and length to ordering code!**

- PVC, standard length 3 m or 5 m = 03 or 05
- PUR, standard length 3 m or 5 m = PU-03 or PU-05
- Other cable properties on request.

**Ordering examples**

- PVC, length 3 m = BKS-B 48-1-03
- PUR, length 3 m = BKS-B 48-1-PU-03

**Sensors with connector ordering code endings S 26**

**Connectors with thread M₅x1**
### Sensors with connector ordering code endings S 49

**BKS-B 48**
- **Straight female**
- **S 49 sensors**
- **BKS-B 48-1-PU2-**
  - **Balluff**
  - 10...30 V DC
  - Molded-on PUR
  - IP 67
  - –25...+120 °C
- **BKS-S 48**
  - **Straight female**
  - **S 49 sensors**
  - **BKS-S 48-**
  - **Lumberg**
  - 10...30 V DC
  - Molded-on PVC/PUR
  - IP 67
  - –25...+90 °C

### Connectors with thread M8×1

**BKS-B 49**
- **Angle female**
- **S 49 sensors**
- **BKS-B 49-1-**
  - **Balluff**
  - 10...30 V DC
  - Molded-on PUR
  - IP 67
  - –25...+120 °C
- **BKS-S 49**
  - **Angle female**
  - **S 49 sensors**
  - **BKS-S 49-**
  - **Lumberg**
  - 10...30 V DC
  - Molded-on PVC/PUR
  - IP 67
  - –25...+90 °C

**BKS-S 49E**
- **Angle female**
- **S 49 sensors**
- **BKS-S 49E-4-**
  - **Lumberg**
  - 10...30 V DC
  - Molded-on PUR
  - IP 67
  - –25...+90 °C

### LED function and color

2 LED’s: green = Supply voltage, yellow = Switching output status

[www.balluff.com](http://www.balluff.com)
<table>
<thead>
<tr>
<th>Connector Type</th>
<th>BKS-S 41</th>
<th>BKS-S 40</th>
<th>BKS-S 74</th>
<th>BKS-S 75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>S 49 sensors</td>
<td>S 49 sensors</td>
<td>S 75 sensors</td>
<td>S 75 sensors</td>
</tr>
</tbody>
</table>

**Accessories**

M8 connection (S 49, S 75)

<table>
<thead>
<tr>
<th>No LED, NC or NO</th>
<th>BKS-S 41-1-_</th>
<th>BKS-S 40-1-_</th>
<th>BKS-S 74-3-</th>
<th>BKS-S 75-3-</th>
</tr>
</thead>
<tbody>
<tr>
<td>no LED, complementary</td>
<td>BKS-S 41-1-</td>
<td>BKS-S 40-1-</td>
<td>BKS-S 74-3-</td>
<td>BKS-S 75-3-</td>
</tr>
<tr>
<td>with LED, NC or NO</td>
<td>BKS-S 41-1-</td>
<td>BKS-S 40-1-</td>
<td>BKS-S 74-3-</td>
<td>BKS-S 75-3-</td>
</tr>
<tr>
<td>with LED, complementary shielded</td>
<td>BKS-S 41-1-</td>
<td>BKS-S 40-1-</td>
<td>BKS-S 74-3-</td>
<td>BKS-S 75-3-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Lumberg</th>
<th>Lumberg</th>
<th>Lumberg</th>
<th>Lumberg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage $U_0$</td>
<td>10...30 V DC</td>
<td>10...30 V DC</td>
<td>10...30 V DC</td>
<td>10...30 V DC</td>
</tr>
<tr>
<td>Cable</td>
<td>molded-on PVC/PUR</td>
<td>molded-on PVC/PUR</td>
<td>molded-on PVC/PUR</td>
<td>molded-on PVC/PUR</td>
</tr>
<tr>
<td>No. of wires × cross-section</td>
<td>3×0.34 mm²</td>
<td>3×0.34 mm²</td>
<td>4×0.34 mm²</td>
<td>4×0.34 mm²</td>
</tr>
<tr>
<td>Cable diameter min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of protection per IEC 60529</td>
<td>IP 65</td>
<td>IP 65</td>
<td>IP 67</td>
<td>IP 67</td>
</tr>
<tr>
<td>Ambient temperature range $T_a$</td>
<td>-25...+90 °C</td>
<td>-25...+90 °C</td>
<td>-25...+90 °C</td>
<td>-25...+90 °C</td>
</tr>
</tbody>
</table>

**View of female/male side**

- **BKS-S 41**
  - BKS-S 41
  - BKS-S 41-1-
  - BKS-S 41-1-_
- **BKS-S 40**
  - BKS-S 40
  - BKS-S 40-1-
  - BKS-S 40-1-_
  - BKS-S 40-4-
  - BKS-S 40-4-_
  - BKS-S 40-6-
  - BKS-S 40-6-_
- **BKS-S 74**
  - BKS-S 74
  - BKS-S 74-3-
  - BKS-S 74-3-_
- **BKS-S 75**
  - BKS-S 75
  - BKS-S 75-3-
  - BKS-S 75-3-_
  - BKS-S 75-4-
  - BKS-S 75-4-_
  - BKS-S 75-6-
  - BKS-S 75-6-
  - BKS-S 75-14-
  - BKS-S 75-14-_

Please append cable material and length to ordering code!

- PVC, standard length 3 m or 5 m = 03 or 05
- PUR, standard length 3 m or 5 m = PU-03 or PU-05
- Other cable properties on request.

**Ordering examples**

- PVC, length 3 m = BKS-S 75-3-03
- PUR, length 3 m = BKS-S 75-3-PU-03

**LED function and color**

- 2 LED’s: green = Supply voltage, yellow = Switching output status

---

**Sensors with connector ordering code endings S 49**

**Connectors with thread M8×1**

**Sensors with connector ordering code endings S 75**

**Connectors with thread M8×1**

www.balluff.com
### Accessories

<table>
<thead>
<tr>
<th>BKS-S 81-00</th>
<th>BKS-S146-00</th>
<th>BKS-S 82-00</th>
<th>BKS-S 91-00</th>
</tr>
</thead>
<tbody>
<tr>
<td>straight female</td>
<td>angle female</td>
<td>straight male</td>
<td>angle female</td>
</tr>
<tr>
<td>S 49 sensors</td>
<td>S 49 sensors</td>
<td>S 49 sensors</td>
<td>S 49 sensors</td>
</tr>
</tbody>
</table>

**DC connectors for user assembly M8 connection (S 49)**

- **BKS-S 81-00**
  - **Binder**: 10...30 V DC for user assembly
  - **Solder**: max. 0.25 mm²
  - **Solder**: max. Ø 5 mm
  - **Solder**: IP 67
  - **Temperature**: -40...+85 °C

- **BKS-S146-00**
  - **Binder**: 10...30 V DC for user assembly
  - **Solder**: max. 0.25 mm²
  - **Solder**: max. Ø 5 mm
  - **Solder**: IP 67
  - **Temperature**: -25...+100 °C**

- **BKS-S 82-00**
  - **Binder**: 10...30 V DC for user assembly
  - **Solder**: max. 0.25 mm²
  - **Solder**: max. Ø 5 mm
  - **Solder**: IP 67
  - **Temperature**: -40...+85 °C

- **BKS-S 91-00**
  - **Binder**: 10...30 V DC for user assembly
  - **Solder**: max. 0.25 mm²
  - **Solder**: max. Ø 5 mm
  - **Solder**: IP 67
  - **Temperature**: -40...+85 °C

**Sensors with connector ordering code endings S 49**

**Connector for user assembly with thread M8×1**
## Accessories

### DC connectors for user assembly

#### M8 connection (S 49, S 75)

<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Application</th>
<th>Connector Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>straight male</td>
<td>S 75 sensors</td>
<td>BKS-S150-00</td>
<td>straight male</td>
</tr>
<tr>
<td>S 75 female</td>
<td>S 75 sensors</td>
<td>BKS-S149-00</td>
<td>straight female</td>
</tr>
<tr>
<td>straight male</td>
<td>S 49 sensors</td>
<td>BKS-S142-00</td>
<td>straight female</td>
</tr>
<tr>
<td>S 49 female</td>
<td>S 49 sensors</td>
<td>BKS-S141-00</td>
<td>straight female</td>
</tr>
</tbody>
</table>

### Specifications

- **Manufacturer**: Binder
- **Supply voltage** $U_{B}$: 10...30 V DC
- **Cable**: for user assembly
- **No. of wires × cross-section**: 3×0.14...0.5 mm²
- **Cable diameter min.**: max. Ø 5 mm
- **Connection**: Screw terminal
- **Degree of protection per IEC 60529**: IP 67
- **Ambient temperature range $T_a$**: –40...+85 °C

### View of female/male side

- **Accessories**: DC connectors for user assembly
- **Connectors for user assembly with thread M8×1**

### Diagrams

- **Sensors with connector ordering code endings S 49**
- **Connectors for user assembly with thread M8×1**
- **Sensors with connector ordering code endings S 75**
- **Connectors for user assembly with thread M8×1**
### Accessories

#### M8

DC connectors for user assembly

**M8 connection (S 49)**

<table>
<thead>
<tr>
<th>BKS-S111-RT03</th>
<th>BKS-S113-RT03</th>
</tr>
</thead>
<tbody>
<tr>
<td>straight female</td>
<td>straight male</td>
</tr>
<tr>
<td>S 49 sensors</td>
<td>S 49 female</td>
</tr>
</tbody>
</table>

**System Harax**

- 10...30 V DC for user assembly
- 3x0.14...0.34 mm²
- Ø 3.2...5.4 mm
- cut/clamp
- IP 67
- -25...+85 °C*

![Quick-connect system](image)

```
6.1.7
```

**Sensors with connector ordering code endings S 49**

**Connectors for user assembly with thread M8×1**

- **BKS-S111-RT03**
- **BKS-S113-RT03**

* Temperature range for installing the cable on the connector -5...+50 °C
DC connection cables
M8 connection (S 49)

<table>
<thead>
<tr>
<th>Connection cable type</th>
<th>BKS-B 48-/GS49</th>
<th>BKS-S 48-/GS49</th>
<th>BKS-S 48-/GS4</th>
<th>BKS-B 49-/GS49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>straight female/straight male</td>
<td>straight female/straight male</td>
<td>straight female/straight male</td>
<td>angle female/straight male</td>
</tr>
<tr>
<td>no LED, NO</td>
<td>BKS-B 48-1/GS49-PU-</td>
<td>BKS-S 48-1/GS49-PU-</td>
<td>BKS-S 48-1/GS4-PU-</td>
<td>BKS-B 49-1/GS49-PU-</td>
</tr>
<tr>
<td>no LED, NC or NO</td>
<td>Balluff</td>
<td>Lumberg</td>
<td>Lumberg</td>
<td>Balluff</td>
</tr>
<tr>
<td>with LED, NO PNP</td>
<td>10...30 V DC</td>
<td>10...30 V DC</td>
<td>10...30 V DC</td>
<td>10...30 V DC</td>
</tr>
<tr>
<td>no LED, 3 pins</td>
<td>molded-on PUR</td>
<td>molded-on PUR</td>
<td>molded-on PUR</td>
<td>molded-on PUR</td>
</tr>
<tr>
<td>no LED, 4 pins</td>
<td>3×0.25 mm²</td>
<td>3×0.34 mm²</td>
<td>3×0.34 mm²</td>
<td>3×0.25 mm²</td>
</tr>
<tr>
<td>View of female/male side</td>
<td>IP 67</td>
<td>IP 67</td>
<td>IP 67</td>
<td>IP 67</td>
</tr>
<tr>
<td>Degree of protection per IEC 60529</td>
<td>–25...+85 °C</td>
<td>–25...+80 °C</td>
<td>–25...+90 °C</td>
<td>–40...+85 °C</td>
</tr>
</tbody>
</table>

Manufacturer
- Balluff
- Lumberg

Supply voltage $U_{B}$
- 10...30 V DC

Cable
- molded-on PUR

No. of wires x cross-section
- 3×0.25 mm²

Ambient temperature range $T_a$
- –25...+85 °C

Please append cable length to ordering code!
PUR, standard lengths 0.6 m, 1 m, 2 m = 00.6, 01, 02
Connection cable with extended ratings on request.

Ordering examples
- PUR, length 1 m = BKS-S 48-1/GS49-PU-01
- PUR, length 2 m = BKS-S 48-1/GS49-PU-02

Sensors with connector ordering code endings S 49

Connection cable with thread M8×1/M8×1 or M8×1/M12×
6.1.9

**DC connection cables**

M8 connection (S 49, S 75)

---

**Table:**

<table>
<thead>
<tr>
<th>Model</th>
<th>Connection Type</th>
<th>S 49 Sensors</th>
<th>S 75 Sensors</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S 49-4/GS49</td>
<td>angle female/straight male</td>
<td>S 49</td>
<td>S 75</td>
</tr>
<tr>
<td>BKS-S 75-1/GS49</td>
<td>angle female/straight male</td>
<td>S 75</td>
<td>S 75</td>
</tr>
</tbody>
</table>

**Specifications:**
- BKS-S 49-4/GS49: 3×0.34 mm², IP 67, –25...+80 °C
- BKS-S 75-1/GS49: 3×0.34 mm², IP 67, –25...+80 °C

**LED function and color:**
- 2 LED's: green = Supply voltage, yellow = Switching output status

**Sensors with connector ordering code endings S 75**

---

[Image of LED function and color diagram]

www.balluff.com
## DC connectors

### M12 connection (S 4)

<table>
<thead>
<tr>
<th>Connector type</th>
<th>Application</th>
<th>Sensor configurations</th>
<th>Manufacturer</th>
<th>Supply voltage</th>
<th>Cable properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BKS-B 19</strong> straight female</td>
<td>S 4 sensors</td>
<td>no LED, NO</td>
<td>Balluff</td>
<td>10...30 V DC</td>
<td>molded-on PVC/PUR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no LED, NC</td>
<td></td>
<td></td>
<td>3×0.34 mm²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no LED, complementary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, NO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, NC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, complementary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 3 LED's, complementary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>no LED, NO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>no LED, NC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>no LED, complementary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BKS-S 19</strong> straight female</td>
<td>S 4 sensors</td>
<td>no LED, NO 2 pins, non-polarized</td>
<td>Lumberg</td>
<td>10...30 V DC</td>
<td>molded-on PUR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no LED, NO 2 pins, polarized</td>
<td></td>
<td></td>
<td>3×0.34 mm²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no LED, NC 2 pins, polarized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>no LED, complementary shielded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, NO PNP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, NC PNP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, NO NPN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, NC NPN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, complementary PNP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, complementary NPN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 3 LED's, complementary PNP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BKS-B 19</strong> straight female</td>
<td>S 4 sensors</td>
<td>with 2 LED's, NO PNP</td>
<td>Balluff</td>
<td>10...55 V DC</td>
<td>molded-on PUR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, NC PNP</td>
<td></td>
<td></td>
<td>3×0.34 mm²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, NO NPN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, NC NPN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, complementary PNP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 2 LED's, complementary NPN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with 3 LED's, complementary PNP</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Manufacturer**
- **Balluff**
- **Lumberg**

**Supply voltage**
- Balluff: 10...30 V DC
- Lumberg: 10...30 V DC

**Cable**
- Molded-on PVC/PUR
- 3×0.34 mm²

**Degree of protection**
- Balluff: IP 67
- Lumberg: IP 68 per BWN Pr. 20

**Ambient temperature range**
- Balluff: -25...+120 °C
- Lumberg: -25...+70 °C

---

### Ordering examples

**PVC**
- Length 3 m = BKS-S 19-4-03
- Length 5 m = BKS-S 19-4-PU-03

**PUR**
- Length 3 m = BKS-S 19-4-PU-03

**Accessories**
- DC connectors
- M12 connection (S 4)
- Sensors with connector
- Endings S 4

**Connectors with thread M12×1**
- BKS-B 19
- BKS-B 20
- BKS-S 20E

Please append cable material and length to ordering code! PVC, standard length 3 m or 5 m = 03 or 05
PUR, standard length 3 m or 5 m = PU-03 or PU-05
Other cable properties on request.
### Accessories

#### DC connectors

**M12 connection (S 4)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Angle</th>
<th>Sensors</th>
<th>Part Numbers</th>
<th>Connector Type</th>
<th>Voltage</th>
<th>Electrical Insulation</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-B 20</td>
<td>angle female</td>
<td>S 4</td>
<td></td>
<td>BKS-B 20-1- PU2- _ _</td>
<td>M12x1</td>
<td>10...55 V DC</td>
<td>molded-on PUR</td>
<td>–25...+120 °C</td>
</tr>
<tr>
<td>BKS-S 20E</td>
<td>angle female</td>
<td>S 4</td>
<td></td>
<td>BKS-S 20E-4- _ _</td>
<td>M12x1</td>
<td>10...30 V DC</td>
<td>molded-on PVC/PUR</td>
<td>–25...+90 °C</td>
</tr>
</tbody>
</table>

**LED function and color**

- 2 LED’s: green = Supply voltage, yellow = Switching output status
- 3 LED’s: green = Supply voltage, 2× yellow = Switching output status (1× NC, 1× NO)
### DC connectors

**M12 connection (S 4)**

<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Application</th>
<th>View of female side</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S 23</td>
<td>S 4 sensors</td>
<td>□□□□□□□□□□□□□□□□□□</td>
</tr>
<tr>
<td>BKS-S 24</td>
<td>S 4 sensors</td>
<td>□□□□□□□□□□□□□□□□□□</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Accessory</th>
<th>Manufacturer</th>
<th>Supply Voltage $U_{b}$</th>
<th>Cable</th>
<th>Degree of Protection per IEC 60529</th>
<th>Ambient Temperature Range $T_a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S 23</td>
<td>DC connectors</td>
<td>Brad Harrison</td>
<td>10...30 V DC</td>
<td>molded-on PVC</td>
<td>IP 67</td>
<td>–40...+105 °C</td>
</tr>
<tr>
<td>BKS-S 24</td>
<td>M12 connection (S 4)</td>
<td>Brad Harrison</td>
<td>10...30 V DC</td>
<td>molded-on PVC</td>
<td>IP 67</td>
<td>–40...+105 °C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S 23</td>
<td>S 4-1-__</td>
<td>straight female</td>
</tr>
<tr>
<td>BKS-S 23</td>
<td>S 4-3-__</td>
<td>straight female</td>
</tr>
<tr>
<td>BKS-S 24</td>
<td>S 4-1-__</td>
<td>angle female</td>
</tr>
<tr>
<td>BKS-S 24</td>
<td>S 4-3-__</td>
<td>angle female</td>
</tr>
</tbody>
</table>

Please append cable material and length to ordering code!

- PVC, standard length 3 m or 5 m = 03 or 05
- PUR, standard length 3 m or 5 m = PU-03 or PU-05
- Other cable properties on request.

**Ordering examples**

- PVC, length 3 m = BKS-S134-17-05
- PUR, length 3 m = BKS-S134-17-PU-05
### DC Connectors M12 Connection

#### Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Connector</th>
<th>Dimensions</th>
<th>Electrical Specifications</th>
<th>Temperature Range</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S134</td>
<td>Angle Female</td>
<td>BOD 66M-...-S92</td>
<td>Ø14.5 mm²</td>
<td>IP 67</td>
<td>-25...+85 °C</td>
<td>*halogen-free</td>
</tr>
<tr>
<td>BKS-S137</td>
<td>Straight Female</td>
<td>BOD 66M-...-S92</td>
<td>Ø14.5 mm²</td>
<td>IP 67</td>
<td>-25...+85 °C</td>
<td><strong>Shield through knurled coupling ring!</strong></td>
</tr>
<tr>
<td>BKS-S139</td>
<td>Straight Female</td>
<td>BOD 66M-...-S92</td>
<td>Ø14.5 mm²</td>
<td>IP 67</td>
<td>-25...+90 °C</td>
<td><em><strong>Run shield up to cable-connector body interface!</strong></em></td>
</tr>
<tr>
<td>BKS-S138</td>
<td>Angle Female</td>
<td>BOD 66M-...-S92</td>
<td>Ø14.5 mm²</td>
<td>IP 67</td>
<td>-25...+90 °C</td>
<td></td>
</tr>
</tbody>
</table>

- *Binder* 10...30 V DC molded-on PVC/PUR 5x0.25 mm² IP 67 -25...+85 °C
- *Lumberg* 10...30 V DC molded-on PUR 5x0.25 mm² IP 67 -25...+90 °C
- *Lumberg* 10...30 V DC molded-on PUR 8x0.25 mm² IP 67 -25...+90 °C
- *Lumberg* 30 V AC/36 V DC molded-on PUR 8x0.25 mm² IP 67 -25...+80 °C

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* www.balluff.com
### Accessories

#### DC connection cables

<table>
<thead>
<tr>
<th>Connector/connection cable type</th>
<th>Application</th>
<th>Manufacturer</th>
<th>Supply voltage UB</th>
<th>No. of wires × cross-section</th>
<th>Degree of protection per IEC 60529</th>
<th>Ambient temperature range Ta</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-B 19- /GS4</td>
<td>straight female/straight male</td>
<td>Lumberg</td>
<td>10...30 V DC</td>
<td>3×0.34 mm²/4×0.25 mm²</td>
<td>IP 67</td>
<td>–25...+85 °C</td>
</tr>
<tr>
<td>BKS-S 20- /GS4</td>
<td>angle female/straight male</td>
<td>Balluff</td>
<td>10...30 V DC</td>
<td>3×0.34 mm²/4×0.25 mm²</td>
<td>IP 67</td>
<td>–25...+90 °C</td>
</tr>
<tr>
<td>BKS-S 19- /GS4</td>
<td>straight female/straight male</td>
<td>Balluff</td>
<td>10...30 V DC</td>
<td>3×0.34 mm²/4×0.25 mm²</td>
<td>IP 68 per BWN Pr. 20</td>
<td>–25...+90 °C</td>
</tr>
<tr>
<td>BKS-S 20- /GS4</td>
<td>angle female/straight male</td>
<td>Lumberg</td>
<td>10...30 V DC</td>
<td>3×0.34 mm²/4×0.25 mm²</td>
<td>IP 68 per BWN Pr. 20</td>
<td>–25...+90 °C</td>
</tr>
</tbody>
</table>

#### View of female/male side

Please append cable material and length to ordering code!

- PUR, standard lengths 0.6 m, 1 m, 2 m = 00.6, 01, 02
- Connection cable with extended ratings on request.

#### Ordering examples

**PUR, length 1 m = BKS-S 20-1/GS4-PU-01**

**Connection cable with thread M12×1**

**Sensors with connector ordering code endings S 4**
### DC connection cables

**M12 connection (S 4)**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S 19-_/GS49</td>
<td>straight female/straight male</td>
<td>S 4 sensors</td>
</tr>
<tr>
<td></td>
<td><strong>Lumberg</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10...30 V DC</td>
<td>molded-on PUR</td>
</tr>
<tr>
<td></td>
<td>3×0.34 mm²</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IP 67</td>
<td>–25...+80 °C</td>
</tr>
</tbody>
</table>

**LED function and color**
2 LED’s: green = Supply voltage, yellow = Switching output status
### DC connectors for user assembly M12 connection (S 4)

<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Application</th>
<th>BKS-S 10</th>
<th>BKS-S144-00</th>
<th>BKS-S 8</th>
<th>RSC 4/7</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S 10-3</td>
<td>S 4 sensors</td>
<td>BKS-S144-00</td>
<td>BKS-S 8-3</td>
<td>RSC 4/7</td>
<td></td>
</tr>
<tr>
<td>BKS-S 10-4</td>
<td>S 4 sensors</td>
<td>BKS-S 8-4</td>
<td>BKS-S 8-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BKS-S 10-6</td>
<td>S 4 sensors</td>
<td>BKS-S 8-4</td>
<td>BKS-S 8-6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **BKS-S 10**
  - Type: Straight female
  - Supply voltage $U_{\text{B}}$: 10...30 V DC
  - No. of wires × cross-section: 3/4× max. 0.75 mm²
  - Cable diameter min.: Ø 4...6 mm
  - Connection: Screw terminals
  - Degree of protection per IEC 60529: IP 67
  - Ambient temperature range $T_a$: –25...+85 °C

- **BKS-S144-00**
  - Type: Straight female
  - Supply voltage $U_{\text{B}}$: 10...30 V DC
  - No. of wires × cross-section: 3/4× max. 0.75 mm²
  - Cable diameter min.: Ø 4...6 mm
  - Connection: Screw terminals
  - Degree of protection per IEC 60529: IP 67, 1 m, 30 days
  - Ambient temperature range $T_a$: –25...+100 °C

- **BKS-S 8**
  - Type: Angle female
  - Supply voltage $U_{\text{B}}$: 10...30 V DC
  - No. of wires × cross-section: 3/4× max. 0.75 mm²
  - Cable diameter min.: Ø 4...6 mm
  - Connection: Screw terminals
  - Degree of protection per IEC 60529: IP 67
  - Ambient temperature range $T_a$: –25...+90 °C

- **RSC 4/7**
  - Type: Angle female
  - Supply voltage $U_{\text{B}}$: 10...30 V DC
  - No. of wires × cross-section: 3/4× max. 0.75 mm²
  - Cable diameter min.: Ø 4...6 mm
  - Connection: Screw terminals
  - Degree of protection per IEC 60529: IP 67
  - Ambient temperature range $T_a$: –25...+90 °C

---

### Sensors with connector

**Ordering code endings S 4 or sensors with cable**

- **BKS-S 10**
  - Connector for user assembly with thread M12×1

- **BKS-S 8**
  - Connector for user assembly with thread M12×1

- **RSC 4/7**
  - Connector for user assembly with thread M12×1

---

**Accessories**

- DC connectors for user assembly M12 connection (S 4)
- Sensors with connector ordering code endings S 4 or sensors with cable
### Accessories

#### DC connectors for user assembly

<table>
<thead>
<tr>
<th>Connector</th>
<th>Type</th>
<th>Voltage Range</th>
<th>For User Assembly</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S107-RT04</td>
<td>Straight female</td>
<td>10...30 V DC</td>
<td>for user assembly</td>
<td>-25...+85 °C</td>
</tr>
<tr>
<td>BKS-S109-RT04</td>
<td>Straight male</td>
<td>10...30 V DC</td>
<td>for user assembly</td>
<td>-25...+85 °C</td>
</tr>
<tr>
<td>BKS-S 7-1</td>
<td>Angle female</td>
<td>10...30 V DC</td>
<td>for user assembly</td>
<td>-25...+85 °C</td>
</tr>
<tr>
<td>BKS-S 1</td>
<td>Angle female</td>
<td>10...30 V DC</td>
<td>for user assembly</td>
<td>-25...+85 °C</td>
</tr>
</tbody>
</table>

#### Sensors with connector ordering code endings S 4

- **BKS-S107-RT04**
  - Lumberg: 10...30 V DC for user assembly
  - Screw terminals: IP 67
  - Temperature range: -25...+90 °C

- **BKS-S109-RT04**
  - System Harax: 10...30 V DC for user assembly
  - Screw terminals: IP 67
  - Temperature range: -25...+90 °C

- **BKS-S 7-1**
  - Binder: 10...30 V DC for user assembly
  - Screw terminals: IP 67
  - Temperature range: -40...+85 °C

- **BKS-S 1**
  - Amphenol-Tuchel: 10...55 V DC, 20...250 V AC/DC for user assembly
  - Crimp connection: IP 65
  - Temperature range: -40...+125 °C

#### LED function and color

2 LED’s: green = Supply voltage, yellow = Switching output status
## Accessories
### AC/DC connectors
for Multiple and Single Position Switches

<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Application</th>
<th>Manufacturer</th>
<th>Supply voltage UB</th>
<th>Cable</th>
<th>No. of wires × cross-section</th>
<th>Degree of protection per IEC 60529</th>
<th>Ambient temperature range Ta</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S 72</td>
<td>straight female</td>
<td>BNS ...-S 78 for multiple position switches</td>
<td>Lumberg</td>
<td>36 V AC/30 V DC</td>
<td>5 m molded-on PUR</td>
<td>IP 68 per BWN Pr. 20</td>
<td>–25...+90 °C</td>
</tr>
<tr>
<td>BKS-S 73</td>
<td>angle female</td>
<td>BNS ...-S 78 for multiple position switches</td>
<td>Lumberg</td>
<td>36 V AC/30 V DC</td>
<td>5 m molded-on PUR</td>
<td>IP 68 per BWN Pr. 20</td>
<td>–25...+90 °C</td>
</tr>
<tr>
<td>BKS-S 80</td>
<td>straight female</td>
<td>BNS ...-S 80 for multiple and single position switches</td>
<td>Lumberg</td>
<td>300 V AC/10...60 V DC</td>
<td>5 m molded-on PUR</td>
<td>IP 68 per BWN Pr. 20</td>
<td>–25...+90 °C</td>
</tr>
<tr>
<td>BKS-S 80</td>
<td>angle female</td>
<td>BNS ...-S 80 for multiple and single position switches</td>
<td>Lumberg</td>
<td>300 V AC/10...60 V DC</td>
<td>5 m molded-on PUR</td>
<td>IP 68 per BWN Pr. 20</td>
<td>–25...+90 °C</td>
</tr>
</tbody>
</table>

### Ordering code

<table>
<thead>
<tr>
<th>Connector on housing</th>
<th>Connector</th>
<th>Application</th>
<th>Supply voltage UB</th>
</tr>
</thead>
<tbody>
<tr>
<td>S 72</td>
<td>BNS ...-S 78</td>
<td>36 V AC/30 V DC</td>
<td></td>
</tr>
<tr>
<td>S 73</td>
<td>BNS ...-S 78</td>
<td>36 V AC/30 V DC</td>
<td></td>
</tr>
<tr>
<td>S 80</td>
<td>BNS ...-S 80</td>
<td>300 V AC/10...60 V DC</td>
<td></td>
</tr>
</tbody>
</table>

Note!
Standard configuration is NO.
Other pin configurations on request.

Other cable properties on request.
AC/DC connectors for Multiple Position Switches

BKS-S 90
straight female
BNS ...-S 90
for multiple position switches

Brad Harrison
300 V AC/DC (max. 2 A)
6 m/15 m molded-on PUR
12×0.5 mm²
IP 67
-25...+90 °C
Please append cable length in ordering code!
6 m = 06/15 m = 15
### AC/DC connectors

**M12 connection (S 27)**

<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Application</th>
<th>Supplier</th>
<th>Supply Voltage $U_B$</th>
<th>Cable</th>
<th>No. of Wires × Cross-section</th>
<th>Degree of Protection per IEC 60529</th>
<th>Ambient Temperature Range $T_a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S 27</td>
<td>S 27 sensors</td>
<td>Lumberg</td>
<td>20...250 V AC/DC</td>
<td>molded-on PVC</td>
<td>3×0.5 mm²</td>
<td>IP 68 per BWN Pr. 20</td>
<td>–25...+90 °C</td>
</tr>
<tr>
<td>BKS-S 28</td>
<td>S 27 sensors</td>
<td>Lumberg</td>
<td>300 V AC</td>
<td>molded-on PVC</td>
<td>3×0.5 mm²</td>
<td>IP 68 per BWN Pr. 20</td>
<td>–25...+90 °C</td>
</tr>
<tr>
<td>BKS-S 28E</td>
<td>S 27 sensors</td>
<td>Lumberg</td>
<td>300 V AC</td>
<td>molded-on PVC</td>
<td>3×0.5 mm²</td>
<td>IP 68 per BWN Pr. 20</td>
<td>–25...+90 °C</td>
</tr>
</tbody>
</table>

Please append cable material and length to ordering code!

| PVC, standard length 3 m or 5 m = 03 or 05 |
| Other cable properties on request. |

**Ordering example**

PVC, length 3 m = BKS-S 27-03

---

**Accessories**

**Connector**

<table>
<thead>
<tr>
<th>Type</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKS-S 27</td>
<td>S 27 sensors</td>
</tr>
<tr>
<td>BKS-S 28</td>
<td>S 27 sensors</td>
</tr>
<tr>
<td>BKS-S 28E</td>
<td>S 27 sensors</td>
</tr>
</tbody>
</table>

**Stainless steel nut**

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**AC/DC M12**

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**Sensors with connector ordering code endings S 27**

**Connectors with thread M12×1**

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