



**Part no.: 50038008**  
**BPS 34 S M 100 H**  
**Bar code positioning system**



Figure can vary

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- Dimensioned drawings
- Electrical connection
- Diagrams
- Part number code
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## Technical data

| <b>Basic data</b>                   |  |
|-------------------------------------|--|
| Series                              | BPS 30                                   |
| Order guide                         | Bar code tape must be ordered separately |
| <b>Functions</b>                    |  |
| Functions                           | Heating                                  |
| <b>Optical data</b>                 |  |
| Depth of field                      | 90 ... 170 mm                            |
| Light source                        | Laser, Red                               |
| Laser class                         | 2, IEC/EN 60825-1:2007                   |
| Light beam exit                     | Lateral at angle less than 100°          |
| <b>Measurement data</b>             |  |
| Measurement range                   | 0 ... 10,000,000 mm                      |
| Resolution                          | 0.01 ... 1,000 mm                        |
| Reproducibility (3 sigma)           | 1 mm                                     |
| Measurement value output            | 2 ms                                     |
| Max. traverse rate                  | 10 m/s                                   |
| <b>Electrical data</b>              |  |
| Protective circuit                  | Polarity reversal protection             |
| <b>Performance data</b>             |  |
| Supply voltage $U_B$                | 22 ... 26 V, DC                          |
| Current consumption, max.           | 1,360 mA                                 |
| <b>Inputs</b>                       |  |
| Number of digital switching inputs  | 1 Piece(s)                               |
| <b>Outputs</b>                      |  |
| Number of digital switching outputs | 1 Piece(s)                               |
| <b>Interface</b>                    |  |
| Type                                | PROFIBUS DP                              |
| <b>PROFIBUS DP</b>                  |  |
| Function                            | Process                                  |
| Classification                      | V0                                       |
| Transmission speed                  | 0.0096 ... 12 Mbit/s                     |
| <b>Service interface</b>            |  |
| Type                                | RS 232                                   |
| <b>RS 232</b>                       |  |
| Function                            | Configuration via software<br>Service    |
| <b>Connection</b>                   |  |
| Number of connections               | 1 Piece(s)                               |
| <b>Connection 1</b>                 |  |
| Type of connection                  | Sub-D                                    |
| Function                            | Connection to device                     |

#### Mechanical data

|                       |   |
|-----------------------|---|
| Dimension (W x H x L) | 90 mm x 120 mm x 52 mm  |
| Housing material      | Metal, Diecast aluminum   |
| Lens cover material   | Glass   |
| Net weight            | 400 g   |
| Housing color         | Black<br>Red  |
| Type of fastening     | Dovetail grooves<br>Mounting thread<br>Via optional mounting device |

#### Environmental data

|                                    |               |
|------------------------------------|---------------|
| Ambient temperature, operation     | -30 ... 40 °C |
| Ambient temperature, storage       | -30 ... 60 °C |
| Relative humidity (non-condensing) | 0 ... 90 %    |

#### Certifications

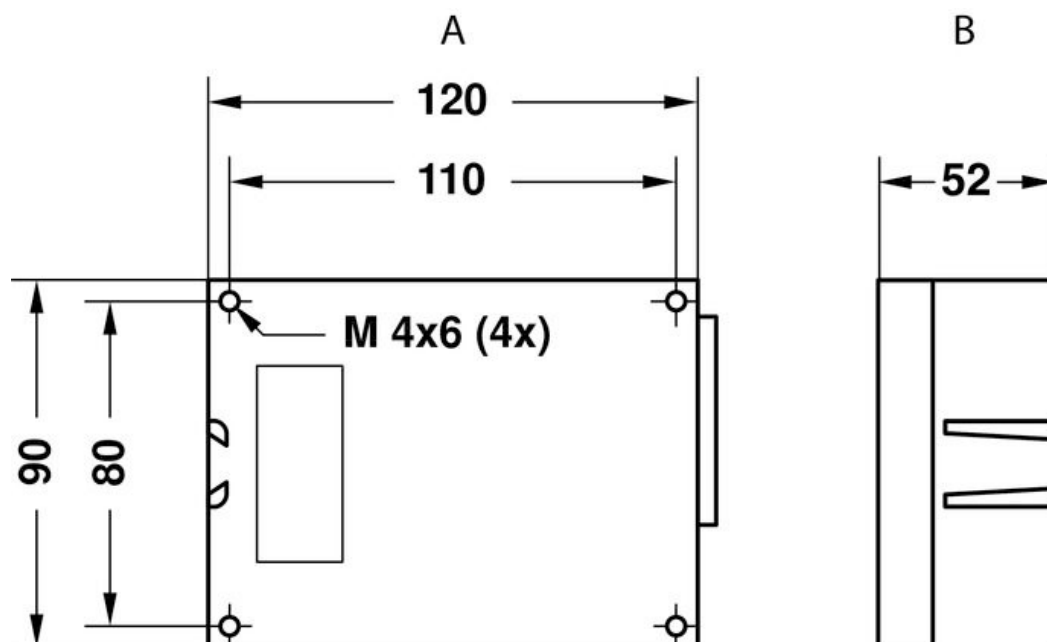
|                      |  |
|----------------------|--|
| Degree of protection | IP 65, EN 60529 with various connectors or screwed-on caps |
| Protection class     | III  |

#### Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 84719000 |
| eCl@ss 8.0            | 27280190 |
| eCl@ss 9.0            | 27280190 |
| ETIM 5.0              | EC001825 |
| ETIM 6.0              | EC001825 |

## Dimensioned drawings

All dimensions in millimeters

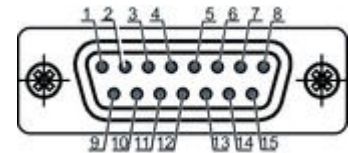


A Rear side  
B Top view

## Electrical connection

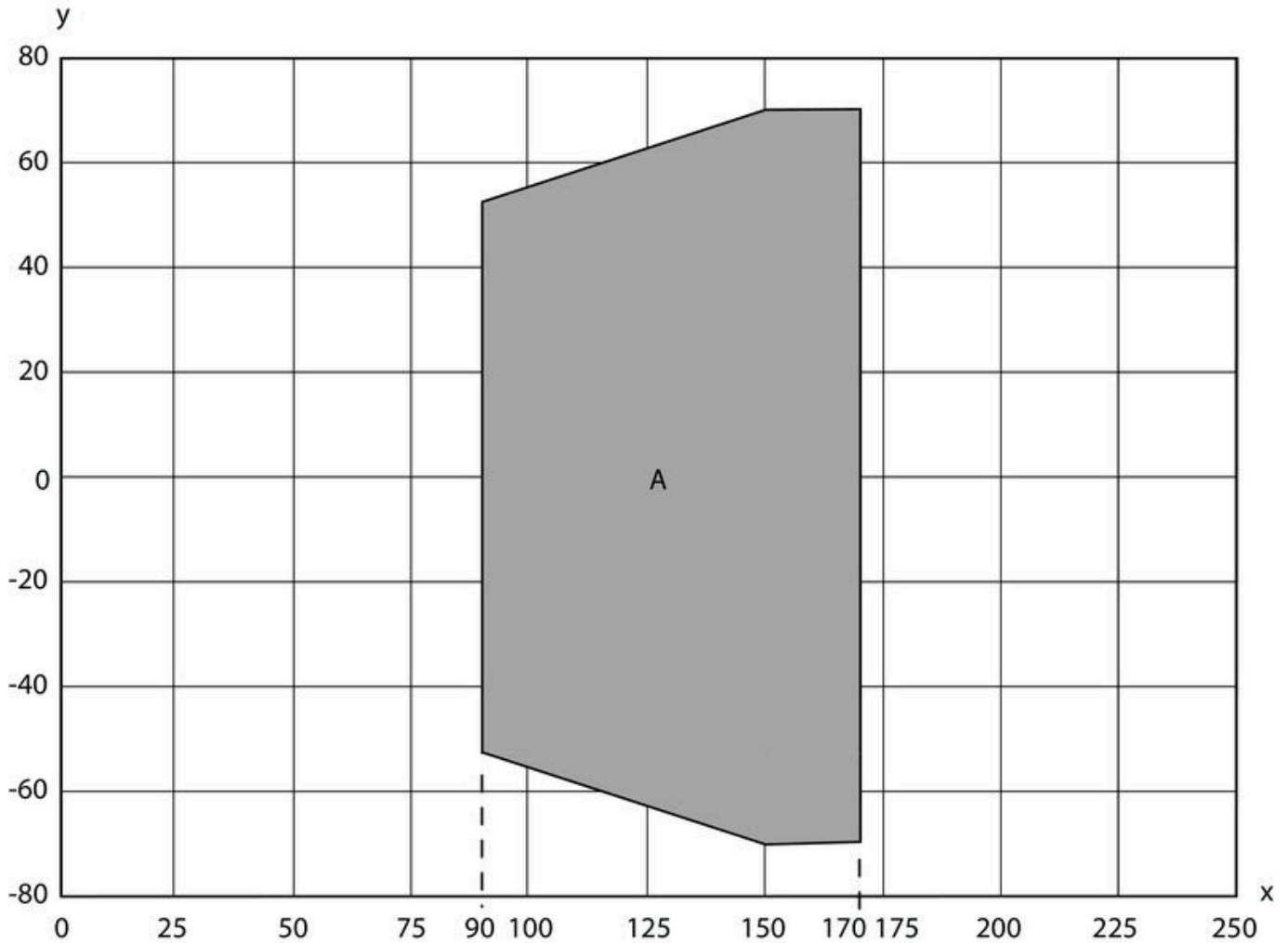
| Connection 1       |                      |
|--------------------|----------------------|
| Type of connection | Sub-D                |
| Function           | Connection to device |
| Type               | Male                 |
| No. of pins        | 15 -pin              |

| Pin | Pin assignment |
|-----|----------------|
| 1   | GND            |
| 2   | SWIN 1         |
| 3   | RS 485 A       |
| 4   | RS 485 B       |
| 5   | /INT_MA        |
| 6   | VP             |
| 7   | /Serv          |
| 8   | VIN            |
| 9   | RTS485         |
| 10  | SWO 1          |
| 11  | RxD            |
| 12  | TXD            |
| 13  | SCL_MA         |
| 14  | SDA_MA         |
| 15  | GNDIN          |



## Diagrams

### Reading field curve



x Reading distance [mm]  
y Reading field width [mm]  
A Working range

## Part number code

Part designation: **BPS 3X SM 100 YZ**









|     |   |
|-----|---|
| BPS | <b>Operating principle:</b><br>BPS: bar code positioning system   |
| 3X  | <b>Series:</b><br>34: 34 series with PROFIBUS DB<br>37: 37 series with SSI interface                        |
| SM  | <b>Scanning principle / optics:</b><br>S: line scanner (single line)<br>M: Medium Density (medium distance) |
| 100 | <b>Beam exit:</b><br>100: lateral   |
| YZ  | <b>Special equipment:</b><br>n/a: no special equipment<br>H: with heating<br>HT: extended temperature range |

**Note**

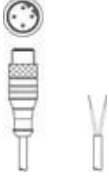
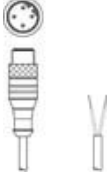
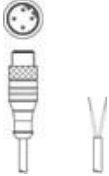
A list with all available device types can be found on the Leuze electronic website at [www.leuze.com](http://www.leuze.com).

**Accessories**

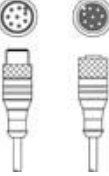
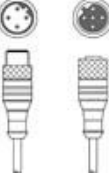
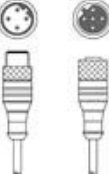
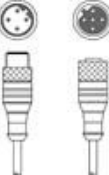
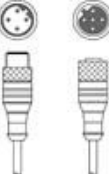
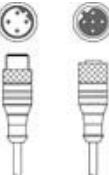
**Connection technology - Connection cables**

|   | Part no. | Designation         | Article          | Description  |
|---|----------|---------------------|------------------|--|
|    | 50135243 | KD PB-M12-4A-P3-050 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR  |
|    | 50135244 | KD PB-M12-4A-P3-100 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 10,000 mm<br>Sheathing material: PUR |
|    | 50135245 | KD PB-M12-4A-P3-150 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 15,000 mm<br>Sheathing material: PUR |
|  | 50135246 | KD PB-M12-4A-P3-300 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 30,000 mm<br>Sheathing material: PUR |
|  | 50132079 | KD U-M12-5A-V1-050  | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC  |
|  | 50132080 | KD U-M12-5A-V1-100  | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 10,000 mm<br>Sheathing material: PVC   |
|  | 50135247 | KS PB-M12-4A-P3-020 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 2,000 mm<br>Sheathing material: PUR    |
|  | 50135248 | KS PB-M12-4A-P3-050 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR    |

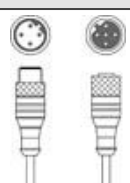
**Part no.: 50038008 – BPS 34 S M 100 H – Bar code positioning system**

|   | Part no. | Designation         | Article          | Description  |
|---|----------|---------------------|------------------|--|
|  | 50135249 | KS PB-M12-4A-P3-100 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 10,000 mm<br>Sheathing material: PUR |
|  | 50135250 | KS PB-M12-4A-P3-150 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 15,000 mm<br>Sheathing material: PUR |
|  | 50135251 | KS PB-M12-4A-P3-300 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 30,000 mm<br>Sheathing material: PUR |




**Connection technology - Interconnection cables**

|   | Part no. | Designation                 | Article               | Description  |
|---|----------|-----------------------------|-----------------------|--|
|   | 429278   | CB-M12-2000E-8TP            | Interconnection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin<br>Connection 2: Connector, M12, Axial, Male, A-coded, 8 -pin<br>Shielded: Yes<br>Cable length: 2,000 mm<br>Sheathing material: PUR   |
|  | 50135252 | KDS PB-M12-4A-M12-4A-P3-010 | Interconnection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 2 -pin<br>Connection 2: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Shielded: Yes<br>Cable length: 1,000 mm<br>Sheathing material: PUR  |
|  | 50135253 | KDS PB-M12-4A-M12-4A-P3-020 | Interconnection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 2 -pin<br>Connection 2: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Shielded: Yes<br>Cable length: 2,000 mm<br>Sheathing material: PUR  |
|  | 50135254 | KDS PB-M12-4A-M12-4A-P3-050 | Interconnection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 2 -pin<br>Connection 2: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR  |
|  | 50135255 | KDS PB-M12-4A-M12-4A-P3-100 | Interconnection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 2 -pin<br>Connection 2: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Shielded: Yes<br>Cable length: 10,000 mm<br>Sheathing material: PUR |
|  | 50135256 | KDS PB-M12-4A-M12-4A-P3-150 | Interconnection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 2 -pin<br>Connection 2: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Shielded: Yes<br>Cable length: 15,000 mm<br>Sheathing material: PUR |


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|   | Part no. | Designation                 | Article               | Description  |
|---|----------|-----------------------------|-----------------------|--|
|  | 50135257 | KDS PB-M12-4A-M12-4A-P3-300 | Interconnection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 2 -pin<br>Connection 2: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Shielded: Yes<br>Cable length: 30,000 mm<br>Sheathing material: PUR |



### Connection technology - Connectors

|  | Part no. | Designation | Article   | Description   |
|--|----------|-------------|-----------|---|
|   | 50040097 | KD 01-5-BA  | Connector | Connection: Connector with screw terminals, M12, Axial, Female, A-coded, 5 -pin |
|   | 50040098 | KD 01-5-SA  | Connector | Connection: Connector, M12, Axial, Male, A-coded, 5 -pin                        |
|  | 50101943 | KD 01-5-SR  | Connector | Connection: Connector, M12, Angled, Male, A-coded, 5 -pin                       |

### Connection technology - Terminating resistors

|   | Part no. | Designation | Article         | Description   |
|---|----------|-------------|-----------------|---|
|  | 50038539 | TS 02-4-SA  | Terminator plug | Suitable for: MultiNet Plus, PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Function: Bus termination |




### Connection technology - Connection boxes

|   | Part no. | Designation | Article         | Description  |
|---|----------|-------------|-----------------|--|
|  | 50037230 | MS 34 103   | Connection unit | Suitable for: BCL 34, BPS 34<br>Suitable for interface: PROFIBUS DP<br>Number of connections: 3 Piece(s)<br>Connection: Connector, M12 |
|  | 50037231 | MS 34 105   | Connection unit | Suitable for: BCL 34, BPS 34<br>Suitable for interface: PROFIBUS DP<br>Number of connections: 5 Piece(s)<br>Connection: Connector, M12 |



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## Mounting technology - Rod mounts

|   | Part no. | Designation | Article         | Description   |
|---|----------|-------------|-----------------|---|
|  | 50027375 | BT 56       | Mounting device | Functions: Static applications<br>Design of mounting device: Mounting system<br>Fastening, at system: For 16 mm rod, For 18 mm rod, For 20 mm rod<br>Mounting bracket, at device: Clampable<br>Material: Metal<br>Tightening torque of the clamping jaws: 8 N·m |
|  | 50121435 | BT 56 - 1   | Mounting device | Functions: Static applications<br>Design of mounting device: Mounting system<br>Fastening, at system: For 12 mm rod, For 14 mm rod, For 16 mm rod<br>Mounting bracket, at device: Clampable<br>Material: Metal<br>Tightening torque of the clamping jaws: 8 N·m |
|  | 50026204 | UMS 96      | Mounting system | Design of mounting device: Mounting system<br>Fastening, at system: For 10 mm rod, For 12 mm rod, For 14 mm rod, For 16 mm rod<br>Mounting bracket, at device: Clampable<br>Type of mounting device: Turning, 360°, Adjustable<br>Material: Metal               |





## Bar code tape

|   | Part no. | Designation | Article       | Description  |
|---|----------|-------------|---------------|--|
|  | 50038895 | BCB 005     | Bar code tape | Dimensions: 47 mm x 5,000 mm<br>Grid dimension: 40 mm  |
|  | 50040041 | BCB 010     | Bar code tape | Dimensions: 47 mm x 10,000 mm<br>Grid dimension: 40 mm |
|  | 50037489 | BCB 020     | Bar code tape | Dimensions: 47 mm x 20,000 mm<br>Grid dimension: 40 mm |
|  | 50037491 | BCB 030     | Bar code tape | Dimensions: 47 mm x 30,000 mm<br>Grid dimension: 40 mm |
|  | 50037492 | BCB 040     | Bar code tape | Dimensions: 47 mm x 40,000 mm<br>Grid dimension: 40 mm |

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|   | Part no. | Designation | Article       | Description   |
|---|----------|-------------|---------------|---|
|    | 50038894 | BCB 050     | Bar code tape | Dimensions: 47 mm x 50,000 mm<br>Grid dimension: 40 mm  |
|    | 50038893 | BCB 060     | Bar code tape | Dimensions: 47 mm x 60,000 mm<br>Grid dimension: 40 mm  |
|    | 50038892 | BCB 070     | Bar code tape | Dimensions: 47 mm x 70,000 mm<br>Grid dimension: 40 mm  |
|    | 50038891 | BCB 080     | Bar code tape | Dimensions: 47 mm x 80,000 mm<br>Grid dimension: 40 mm  |
|   | 50038890 | BCB 090     | Bar code tape | Dimensions: 47 mm x 90,000 mm<br>Grid dimension: 40 mm  |
|  | 50037493 | BCB 100     | Bar code tape | Dimensions: 47 mm x 100,000 mm<br>Grid dimension: 40 mm |
|  | 50040042 | BCB 110     | Bar code tape | Dimensions: 47 mm x 110,000 mm<br>Grid dimension: 40 mm |
|  | 50040043 | BCB 120     | Bar code tape | Dimensions: 47 mm x 120,000 mm<br>Grid dimension: 40 mm |
|  | 50040044 | BCB 130     | Bar code tape | Dimensions: 47 mm x 130,000 mm<br>Grid dimension: 40 mm |
|  | 50040045 | BCB 140     | Bar code tape | Dimensions: 47 mm x 140,000 mm<br>Grid dimension: 40 mm |

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|   | Part no. | Designation                    | Article       | Description   |
|---|----------|--------------------------------|---------------|---|
|  | 50040046 | BCB 150                        | Bar code tape | Dimensions: 47 mm x 150,000 mm<br>Grid dimension: 40 mm |
|  | 50037494 | BCB 200                        | Bar code tape | Dimensions: 47 mm x 200,000 mm<br>Grid dimension: 40 mm |
|  | 50102600 | BCB special length 25mm height | Bar code tape | Dimensions: 25 mm                                       |
|  | 50037495 | BCB special length 47mm height | Bar code tape | Dimensions: 47 mm<br>Grid dimension: 40 mm              |