



Figure can vary

**Part no.: 50104788**  
**BPS 8 SM 100-03**  
**Bar code positioning system**



## Contents

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## Technical data

<b>Basic data</b>	
Series	BPS 8
Data telegram	Binary protocol 3
Order guide	Bar code tape must be ordered separately
<b>Optical data</b>	
Depth of field	60 ... 120 mm
Light source	Laser , Red
Laser class	2 , IEC/EN 60825-1:2007
Light beam exit	Lateral with deflecting mirror
<b>Measurement data</b>	
Measurement range	0 ... 10,000,000 mm
Resolution	0.001 ... 100 mm
Measurement value output	3.3 ms
Max. traverse rate	4 m/s
<b>Electrical data</b>	
Protective circuit	Short circuit protected
<b>Performance data</b>	
Supply voltage $U_B$	4.75 ... 5.5 V , DC
Current consumption, max.	250 mA
<b>Inputs/outputs selectable</b>	
Output current, max.	100 mA
Number of inputs/outputs selectable	1 Piece(s)
<b>Interface</b>	
Type	RS 232
<b>RS 232</b>	
Function	Process
Transmission speed	1,200 ... 187,500 Bd
Data format	Fixed
Start bit	1
Data bit	8 data bits
Stop bit	1
Parity	Adjustable
Data encoding	Binary
<b>Service interface</b>	
Type	RS 232
<b>RS 232</b>	
Function	Service
<b>Connection</b>	
Number of connections	1 Piece(s)

**Connection 1**

Type of connection	Connector
Function	Connection to device
Thread size	M12
No. of pins	5 -pin

**Mechanical data**

Dimension (W x H x L)	51 mm x 61 mm x 17.4 mm
Housing material	Metal , Diecast zinc
Lens cover material	Glass
Net weight	120 g
Housing color	Red Silver
Type of fastening	Dovetail grooves Mounting thread Through-hole mounting Via optional mounting device

**Operation and display**

Type of display	LED
Number of LEDs	2 Piece(s)

**Environmental data**

Ambient temperature, operation	0 ... 40 °C
Ambient temperature, storage	-20 ... 60 °C
Relative humidity (non-condensing)	0 ... 90 %

**Certifications**

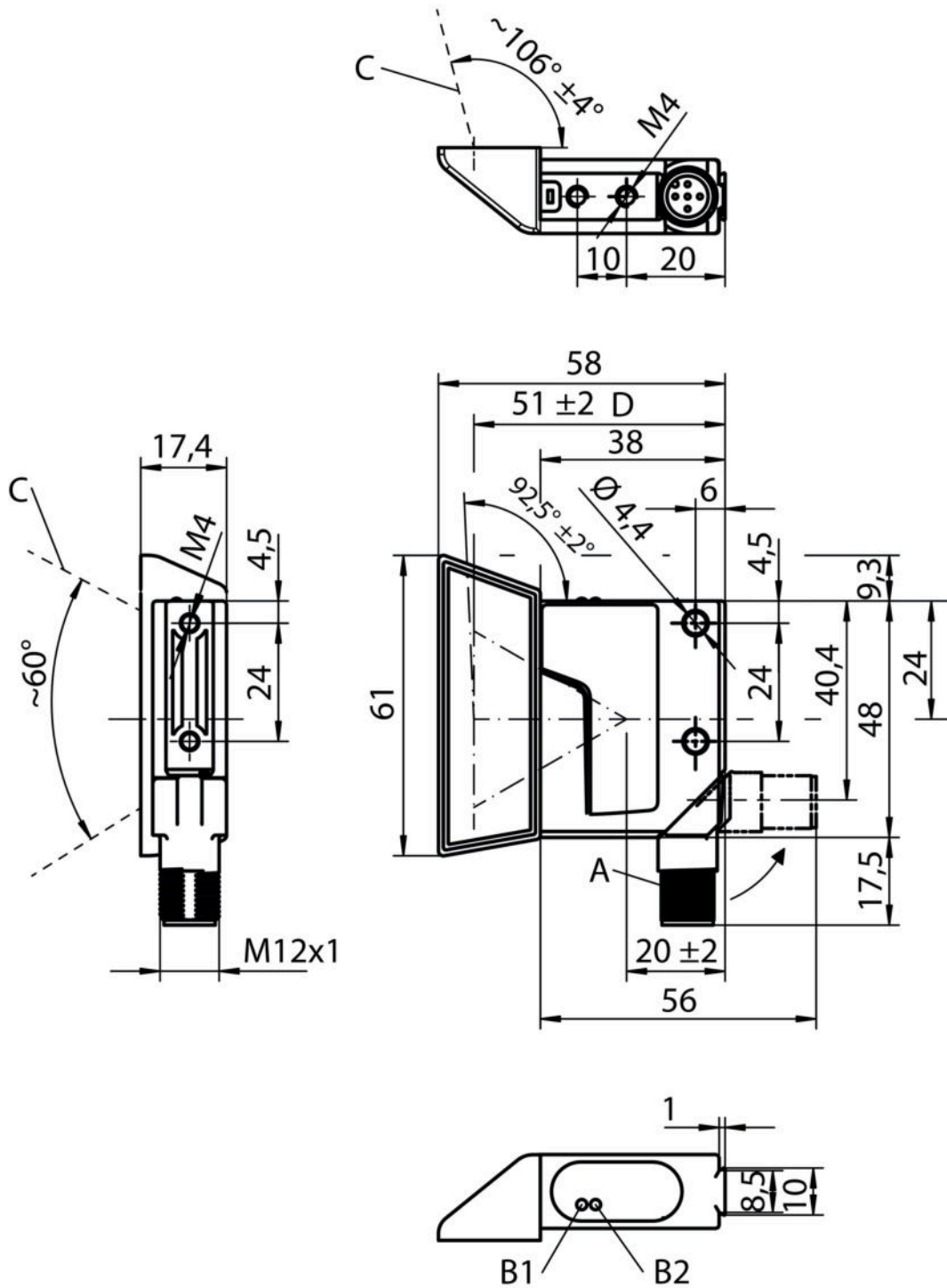
Degree of protection	IP 67 , EN 60529 with various connectors or screwed-on caps
Protection class	III
Certifications	c UL US
US patents	US 6,822,774 B

**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 Turning connector, turnable by 90°
- B Indicator diodes (B1: status LED, B2: decode LED)
- C Scanning beam, divergence max. 5 mm at 150 mm reading distance
- D Optical axis

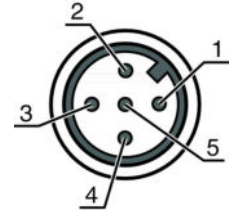
## Electrical connection

<b>Connection 1</b>	
Type of connection	Connector
Function	Connection to device

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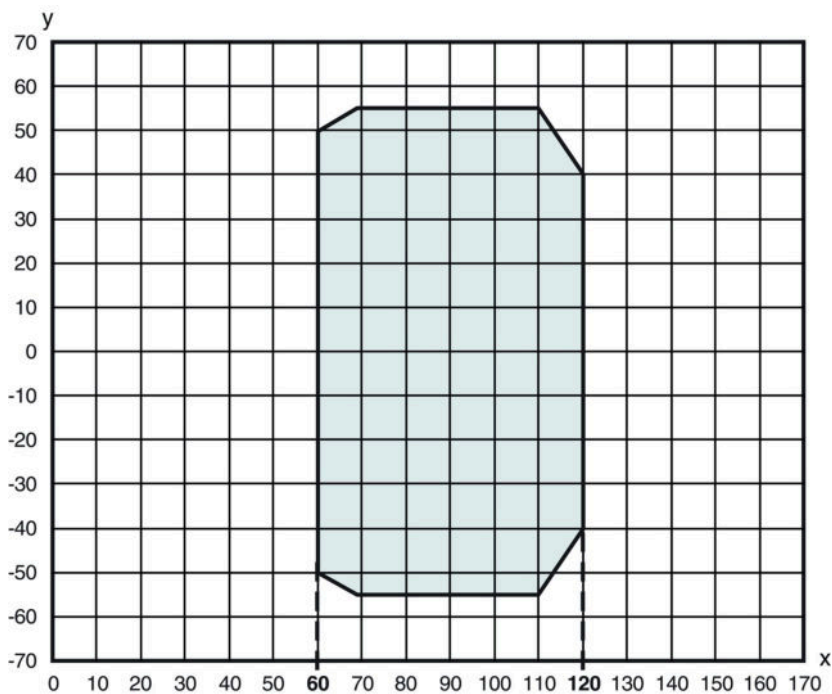
Connection 1	
Thread size	M12
Type	Male
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment
1	V+
2	RS 232 TxD
3	GND
4	RS 232 RxD
5	SW IN/OUT



## Diagrams

### Reading field curve



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

## Operation and display

### LEDs

LED	Display	Meaning
1	Off	No supply voltage
	Green, flashing	Device ok, initialization phase
	Green, continuous light	Operational readiness
	Red, flashing	Device OK, warning set
	Red, continuous light	Device error
	Orange, flashing	Service operation active
2	Off	Positioning deactivated
	Green, continuous light	Positioning running (position value valid)
	Red, continuous light	Positioning running (position value invalid)
	Orange, continuous light	Positioning running (marker label detected)

## Part number code

Part designation: **BPS 8 XX YYY - ZZ**



XX	<b>Scanning principle / optics:</b> S: line scanner (single line) M: Medium Density (medium distance)
YYY	<b>Beam exit:</b> 100: lateral 102: front
ZZ	<b>Presetting:</b> 01 / 05: Binary protocol 1 02: Binary protocol 2 03: Binary protocol 3 04: Binary protocol 4 10: Binary protocol 6

### 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 unit


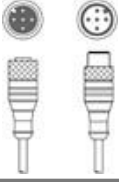
	Part no.	Designation	Article	Description
	50112891	MA 248i Profinet Gateway	Modular connection unit	Supply voltage: 18 ... 30 V Current consumption, max.: 300 mA Interface: PROFINET, RS 232 Connections: 6 Piece(s) Degree of protection: IP 65
	50104790	MA 8-01	Modular connection unit	Supply voltage: 10 ... 30 V Current consumption, max.: 50 mA Interface: RS 485 Connections: 3 Piece(s) Degree of protection: IP 67

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## Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50040757	KB 008-3000 A	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: Yes Cable length: 3,000 mm Sheathing material: PUR


## Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50113467	KB JST-M12A-5P-3000	Connection cable	Suitable for interface: RS 232 Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: JST ZHR, 12 -pin Shielded: Yes Cable length: 3,000 mm Sheathing material: PUR
	50133890	KDS S-M12-5A-M12-5A-P1-020	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR

## Mounting technology - Rod mounts


	Part no.	Designation	Article	Description
	50127177	BTU 008M-D10	Mounting system	Design of mounting device: Mounting system Fastening, at system: Sheet-metal mounting, For 10 mm rod Mounting bracket, at device: Screw type Type of mounting device: Turning, 360°, Adjustable, Clampable Material: Metal

## Mounting technology - Other

	Part no.	Designation	Article	Description
	50104791	BT 8-01	Mounting device	Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Material: Metal

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## Bar code tape

	Part no.	Designation	Article	Description
	50104792	BCB 8 010	Bar code tape	Dimensions: 47 mm x 10,000 mm Grid dimension: 30 mm

### Note

A list with all available accessories can be found on the Leuze electronic website in the Download tab of the article detailed page.