

## Technical data sheet Bar code positioning system

Part no.: 50125673

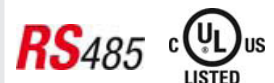
BPS 301i SM 100

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Figure can vary



## Technical data

### Basic data

Series	BPS 300i
Order guide	Bar code tape must be ordered separately Operation only possible in combination with MS 3xx, MK 3xx or KB 30x connection unit

### Optical data

Depth of field	50 ... 170 mm
Light source	Laser, Red
Laser class	2, IEC/EN 60825-1:2007
Light beam exit	Lateral

### Measurement data

Measurement range	0 ... 10,000,000 mm
Resolution	0.01 ... 10 mm
Reproducibility (1 sigma)	0.05 mm
Measurement value output	1 ... 30 ms
Max. traverse rate	10 m/s

### Electrical data

Protective circuit	Polarity reversal protection Short circuit protected
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#### Performance data

Supply voltage $U_B$	18 ... 30 V, DC
Power consumption, max.	3.7 W

#### Inputs/outputs selectable

Output current, max.	60 mA
Number of inputs/outputs selectable	2 Piece(s)
Input current, max.	8 mA

### Interface

Type	RS 485
<b>RS 485</b>	
Function	Process
Transmission speed	4,800 ... 115,200 Bd
Data format	Adjustable
Start bit	1
Data bit	8 data bits
Stop bit	1, 2 stop bits
Parity	Adjustable
Data encoding	Binary

### Service interface

Type	USB
<b>USB</b>	
Function	Configuration/parameterization via integrated web server Service

### Mechanical data

Dimension (W x H x L)	100 mm x 108.7 mm x 48.3 mm
Housing material	Metal
Metal housing	Diecast aluminum
Lens cover material	Glass
Net weight	580 g
Housing color	Red Silver
Type of fastening	Dovetail grooves Fastening on back Via optional mounting device

### Operation and display

Type of display	LED
Type of configuration	Via web browser

### Environmental data

Ambient temperature, operation	-5 ... 50 °C
Ambient temperature, storage	-35 ... 70 °C
Relative humidity (non-condensing)	90 %

### Certifications

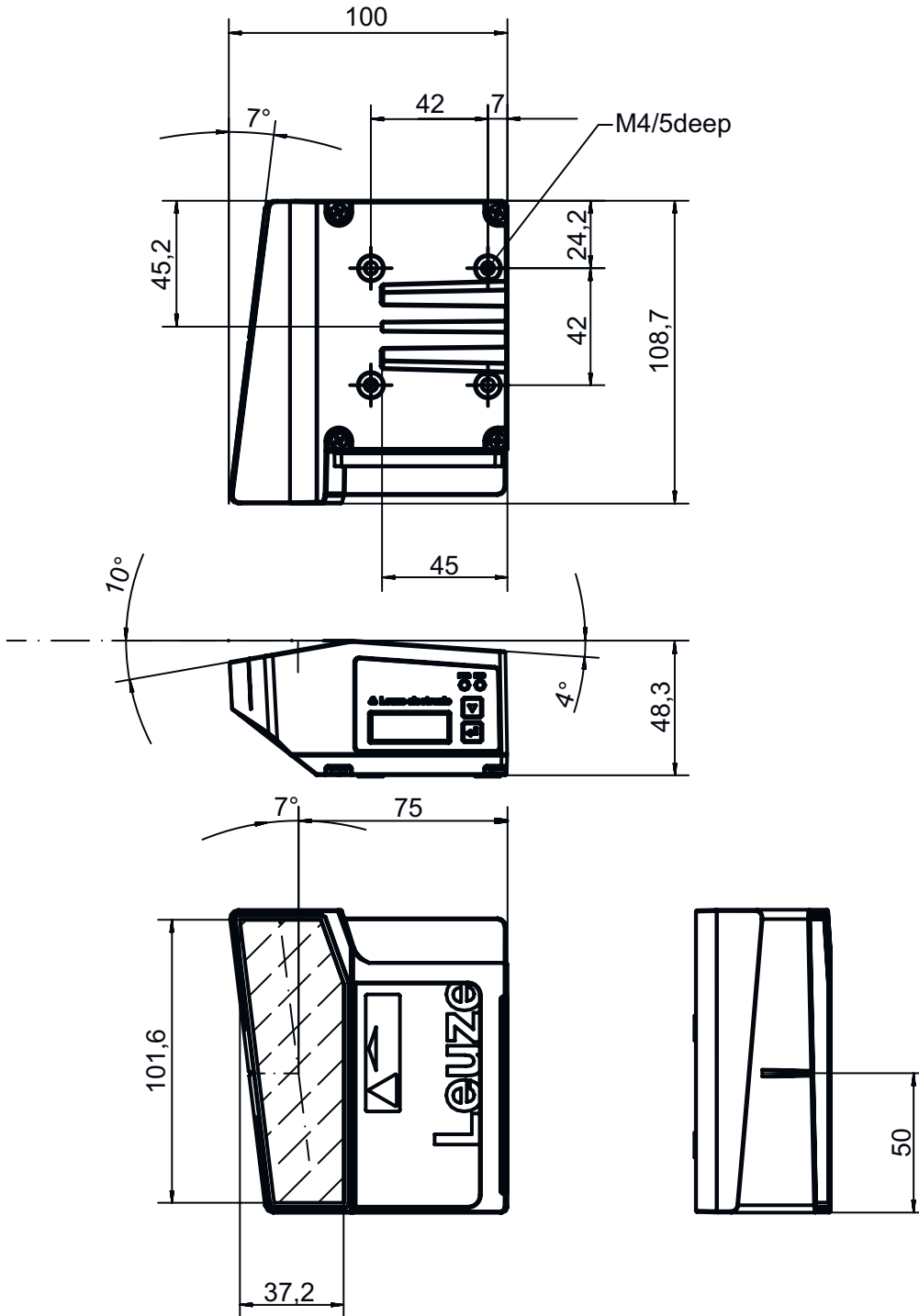
Degree of protection	IP 65, EN 60529 with various connectors or screwed-on caps
Protection class	III
Certifications	c UL US

### Classification

Customs tariff number	84719000
eCl@ss 5.1.4	27280190
eCl@ss 8.0	27280190
eCl@ss 9.0	27280190
eCl@ss 10.0	27280190
eCl@ss 11.0	27280190
ETIM 5.0	EC001825
ETIM 6.0	EC001825
ETIM 7.0	EC001825

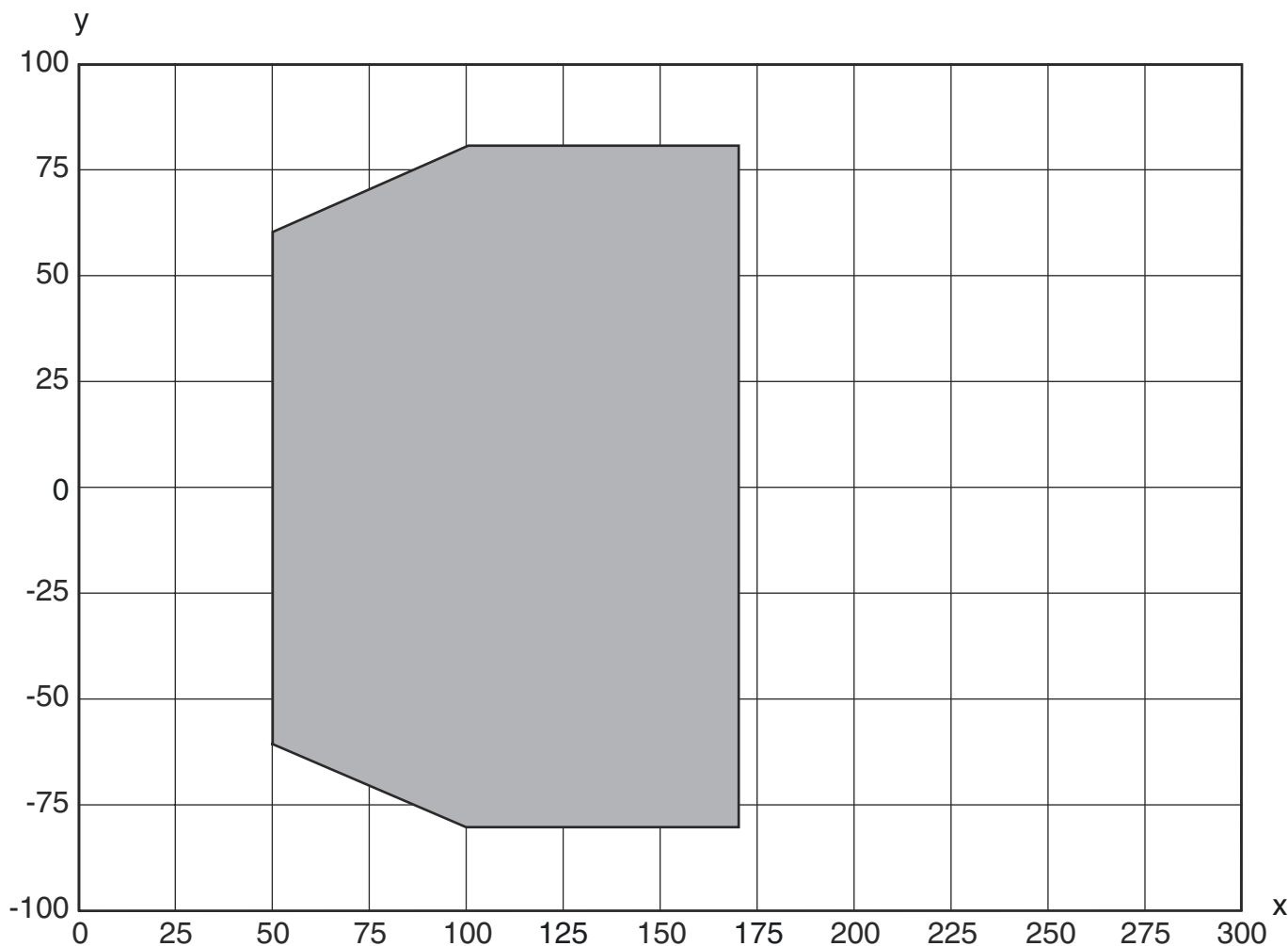
## Dimensioned drawings

All dimensions in millimeters



## Diagrams

### Reading field curve



x Reading field distance [mm]

y Reading field width [mm]

## Part number code

Part designation: **BPS 3XXi SM 100 Y Z**

<b>BPS</b>	<b>Operating principle</b> BPS: bar code positioning system
<b>3XXi</b>	<b>Series/interface (integrated fieldbus technology)</b> 300i: RS 232 / RS 422 (stand-alone) 301i: RS 485 304i: PROFIBUS DP 307i: SSI 348i: PROFINET RT
<b>SM</b>	<b>Scanning principle / optics</b> S: line scanner (single line) M: Medium Density (medium distance)
<b>100</b>	<b>Beam exit</b> 100: lateral

## Part number code

YZ	<b>Special equipment</b> n/a: no special equipment D: with display H: with heating D H: optionally with display and heating
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### Note



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

## Notes

### Observe intended use!



- ☞ This product is not a safety sensor and is not intended as personnel protection.
- ☞ The product may only be put into operation by competent persons.
- ☞ Only use the product in accordance with its intended use.

### WARNING! LASER RADIATION – CLASS 2 LASER PRODUCT



- Do not stare into beam!**  
 The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of laser class 2 as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to "Laser Notice No. 50" from June 24, 2007.
- ☞ Never look directly into the laser beam or in the direction of reflected laser beams! If you look into the beam path over a longer time period, there is a risk of injury to the retina.
  - ☞ Do not point the laser beam of the device at persons!
  - ☞ Interrupt the laser beam using a non-transparent, non-reflective object if the laser beam is accidentally directed towards a person.
  - ☞ When mounting and aligning the device, avoid reflections of the laser beam off reflective surfaces!
  - ☞ CAUTION! Use of controls or adjustments or performance of procedures other than specified herein may result in hazardous light exposure.
  - ☞ Observe the applicable statutory and local laser protection regulations.
  - ☞ The device must not be tampered with and must not be changed in any way.  
 There are no user-serviceable parts inside the device.  
 Repairs must only be performed by Leuze electronic GmbH + Co. KG.




### NOTE




- Affix laser information and warning signs!**  
 Laser information and warning signs are affixed to the device. In addition, self-adhesive laser information and warning signs (stick-on labels) are supplied in several languages.
- ☞ Affix the laser information sheet to the device in the language appropriate for the place of use. When using the device in the US, use the stick-on label with the "Complies with 21 CFR 1040.10" note.
  - ☞ Affix the laser information and warning signs near the device if no signs are attached to the device (e.g. because the device is too small) or if the attached laser information and warning signs are concealed due to the installation position.
  - ☞ Affix the laser information and warning signs so that they are legible without exposing the reader to the laser radiation of the device or other optical radiation.

## Accessories


### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135243	KD PB-M12-4A-P3-050	Connection cable	Suitable for interface: PROFIBUS DP Connection 1: Connector, M12, Axial, Female, B-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50132079	KD U-M12-5A-V1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50135248	KS PB-M12-4A-P3-050	Connection cable	Suitable for interface: PROFIBUS DP Connection 1: Connector, M12, Axial, Male, B-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR


### Connection technology - Connectors

	Part no.	Designation	Article	Description
	50020501	KD 095-5A	Connector	Connection: Connector with screw terminals, M12, Axial, Female, 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 Connection 1: Connector, M12, Axial, Male, B-coded, 4 -pin Function: Bus termination

### Connection technology - Connection boxes

	Part no.	Designation	Article	Description
	50116464 *	MK 301	Connection unit	Suitable for: BCL 301i, BPS 301i Suitable for interface: MultiNet Plus Number of connections: 4 Piece(s) Connection: Terminal

## Accessories

	Part no.	Designation	Article	Description
	50116469 *	MS 301	Connection unit	Suitable for: BCL 301i, BPS 301i Suitable for interface: MultiNet Plus Number of connections: 5 Piece(s) Connection: Connector, M12

\* Necessary accessories, please order separately

## Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50027375	BT 56	Mounting device	Functions: Static applications Design of mounting device: Mounting system Fastening, at system: For 16 mm rod, For 18 mm rod, For 20 mm rod Mounting bracket, at device: Clampable Material: Metal Tightening torque of the clamping jaws: 8 N·m

## Mounting technology - Other

	Part no.	Designation	Article	Description
	50124941	BTU 0300M-W	Mounting device	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable, Groove mounting, Suited for M4 screws Material: Metal


## Bar code tape

	Part no.	Designation	Article	Description
	50040041	BCB 010	Bar code tape	Dimensions: 47 mm x 10,000 mm Grid dimension: 40 mm
	50037489	BCB 020	Bar code tape	Dimensions: 47 mm x 20,000 mm Grid dimension: 40 mm

## Services

	Part no.	Designation	Article	Description
	S981001	CS10-S-110	Start-up support	Details: Performed at location of customer's choosing, duration: max. 10 hours. Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses. Restrictions: No mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment.

## Accessories

	Part no.	Designation	Article	Description
	S981005	CS10-T-110	Product training	<p>Details: Location and content to be agreed upon, duration: max. 10 hours.</p> <p>Conditions: Price not including travel costs and, if applicable, accommodation expenses.</p> <p>Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.</p>

### Note



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