

## Technical data sheet

### Bar code positioning system

Part no.: 50037188

BPS 37 S M 100

#### Contents

- Technical data
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Figure can vary



## Technical data

### Basic data

Series	BPS 30
Order guide	Bar code tape must be ordered separately

### Characteristic parameters

MTTF	104 years
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### Optical data

Depth of field	90 ... 170 mm
Light source	Laser, Red
Wavelength	655 nm
Laser class	2, in accordance with IEC 60825-1:2014 (EN 60825-1:2014)
Max. laser power	0.0018 W
Transmitted-signal shape	Continuous
Pulse duration	120 µs
Light beam exit	Lateral at angle less than 100°

### Measurement data

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

### Electrical data

Protective circuit	Polarity reversal protection
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#### Performance data

Supply voltage U <sub>B</sub>	10 ... 30 V, DC
Current consumption, max.	500 mA

#### Inputs

Number of digital switching inputs	1 Piece(s)
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#### Switching inputs

Type	Digital switching input
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#### Outputs

Number of digital switching outputs	1 Piece(s)
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#### Switching outputs

Type	Digital switching output
Switching current, max.	100 mA

#### Switching output 1

Switching element	Transistor, PNP
Switching principle	VIN

### Interface

Type	SSI
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#### SSI

Function	Process
Clock frequency	80 ... 800 kHz
Data bit	Adjustable

### Service interface

Type	RS 232
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### RS 232

Function	Configuration via software
	Service

### Connection

Number of connections	1 Piece(s)
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#### Connection 1

Function	Connection to device
Type of connection	Sub-D

### Mechanical data

Design	Cubic
Dimension (W x H x L)	90 mm x 120 mm x 43 mm
Housing material	Metal
Metal housing	Diecast aluminum
Lens cover material	Glass
Net weight	400 g
Housing color	Black
	Red
Type of fastening	Dovetail grooves
	Mounting thread
	Via optional mounting device

### Environmental data

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

### Certifications

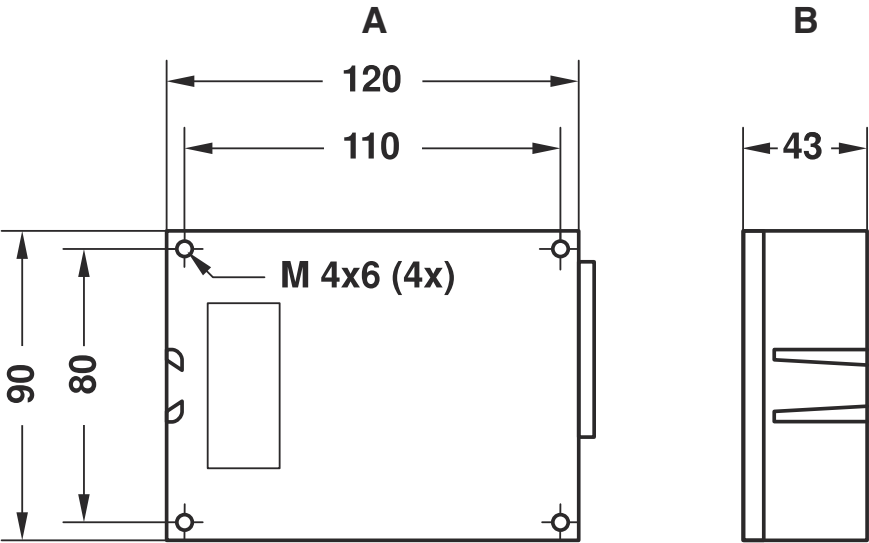
Degree of protection	IP 65, EN 60529 with various connectors or screwed-on caps
Protection class	III
Certifications	c UL US
Test procedure for EMC in accordance with standard	EN 55022
	EN 55024
	EN 61000-4-2, -3, -4, -6
	EN 61000-6-2, -3
Test procedure for shock in accordance with standard	IEC 60068-2-27, test Ea
Test procedure for continuous shock in accordance with standard	IEC 60068-2-29, test Eb
Test procedure for vibration in accordance with standard	IEC 60068-2-6, test Fc

### Classification

Customs tariff number	84719000
ECLASS 5.1.4	27280190
ECLASS 8.0	27280190
ECLASS 9.0	27280190
ECLASS 10.0	27280190
ECLASS 11.0	27280190
ECLASS 12.0	27280106
ETIM 5.0	EC001825
ETIM 6.0	EC001825
ETIM 7.0	EC001825
ETIM 8.0	EC001825

Dimensioned drawings

All dimensions in millimeters



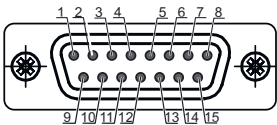
A Rear side  
B Top view

Electrical connection

Connection 1

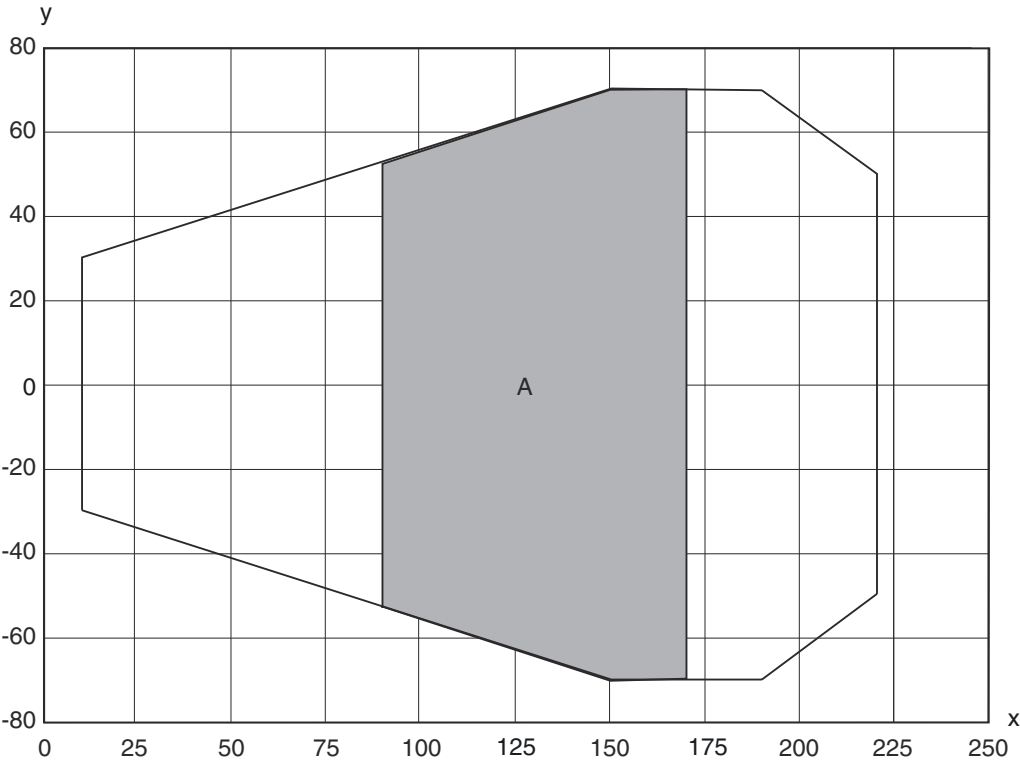
Function	Connection to device
Type of connection	Sub-D
Type	Male
No. of pins	15 -pin

Pin	Pin assignment
1	GND
2	SWIN 1
3	SSI DATA+
4	SSI DATA-
5	Reserved
6	SSI CLK+
7	/Serv
8	VIN
9	SSI CLK-
10	SWO 1
11	RxD
12	TxD
13	SCL
14	SDA
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> BPS: bar code positioning system
3X	<b>Series</b> 34: 34 series with PROFIBUS DB 37: 37 series with SSI interface
SM	<b>Scanning principle / optics</b> S: line scanner (single line) M: Medium Density (medium distance)
100	<b>Beam exit</b> 100: lateral
Y Z	<b>Special equipment</b> n/a: no special equipment H: With heating HT: extended temperature range

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.



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



#### Do not stare into beam!

The device satisfies the requirements of IEC/EN 60825-1:2014 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. 56 from May 08, 2019.

- ⚠ 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 unit


	Part no.	Designation	Article	Description
	50037324	MA 4.7	Connection unit	Supply voltage: 10 ... 30 V Connections: 2 Piece(s) Degree of protection: IP 54

## Accessories


### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50104172	KB SSI/IBS-2000-BA	Connection cable	Suitable for interface: SSI, Interbus-S Connection 1: Connector, M12, Axial, Female, B-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 2.000 mm Sheathing material: PUR
	50132077	KD U-M12-5A-V1-020	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 2.000 mm Sheathing material: PVC


### Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50035355	KB 031-3000	Interconnection cable	Suitable for interface: RS 232, RS 485 Connection 1: Sub-D, Axial, Female, 15 -pin Connector, LED: No Connection 2: JST ZHR Shielded: Yes Cable length: 3.000 mm


### Connection technology - Connection boxes

	Part no.	Designation	Article	Description
	50107684	MS 37 103	Connection unit	Suitable for: BPS 37 Supply voltage: DC Interface: SSI Number of connections: 3 Piece(s) Connection: Connector, M12 Type of fastening: Dovetail grooves

### 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


### Bar code tape

	Part no.	Designation	Article	Description
	50144190	BCB G40 H25 L010	Bar code tape	Dimensions: 25 mm x 10,000 mm Grid dimension: 40 mm

Accessories

	Part no.	Designation	Article	Description
	50040041	BCB G40 H47 L010	Bar code tape	Dimensions: 47 mm x 10,000 mm Grid dimension: 40 mm

Note

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