

## Technical data sheet

### Safety radar sensor

Part no.: 50147249

LBK Sensor SBV-01

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Figure can vary



## Technical data

### Basic data

Series	LBK SBV
Type	Radar sensor
Application	Stationary access guarding Stationary danger zone guarding

### Radar technical data

Operating principle	Detection of movement Detection of persons FMCW
Detection range	0 ... 5 m
Angle of radiation, horizontal	10° - 100°
Angle of radiation, vertical	20°
Emitted power	≤ 16 dBm
Frequency range	60,600 ... 62,800 MHz

### Characteristic parameters

SIL	2, IEC 61508
SILCL	2, IEC/EN 62061
Performance Level (PL)	d, EN ISO 13849-1
PFH <sub>D</sub>	4,34E-08 per hour
Mission time T <sub>M</sub>	20 years, EN ISO 13849-1
Category	3, EN ISO 13849

### Electrical data

Performance data	
Supply voltage U <sub>B</sub>	12 V, DC, -20 ... 20 %
Power consumption, max.	3.25 W

### Timing

Response time	100 ms
Restart delay time (automatic start)	4,000 ms

### Connection

Number of connections	2 Piece(s)
Connection 1	
Function	BUS IN Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	5 -pin

### Connection 2

Function	BUS OUT
Type of connection	Connector

### Cable properties

Length of connection cable, max.	30 m
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### Mechanical data

Dimension (W x H x L)	107 mm x 135 mm x 158 mm
Housing material	Aluminum Plastic
Plastic housing	PA 66
Mounting bracket material	PA 66, glass fiber reinforced
Net weight	355 g
Housing color	Yellow, RAL 1023

### Operation and display

Type of display	LED
Number of LEDs	1 Piece(s)

### Environmental data

Ambient temperature, operation	-30 ... 60 °C
Ambient temperature, storage	-40 ... 80 °C
Relative humidity (non-condensing)	0 ... 95 %

### Certifications

Degree of protection	IP 67
Certifications	TÜV Süd Italia

### Classification

Customs tariff number	85261000
ECLASS 5.1.4	27280801
ECLASS 8.0	27280890
ECLASS 9.0	27280800
ECLASS 10.0	27280890
ECLASS 11.0	27280890
ECLASS 12.0	27280890
ETIM 5.0	EC001825
ETIM 6.0	EC001825
ETIM 7.0	EC001825

## Electrical connection

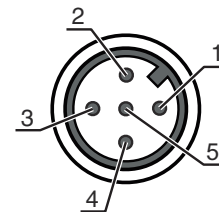
### Connection 1

Function	BUS IN Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	5 -pin
Encoding	D-coded
Connector housing	FE/SHIELD

# Electrical connection

## Pin Pin assignment

1	PE
2	+12 V DC
3	GND
4	CAN H
5	CAN L

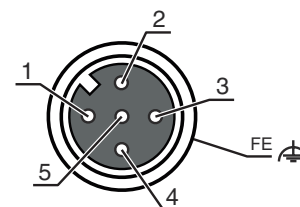


## Connection 2

Function	BUS OUT
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	D-coded
Connector housing	FE/SHIELD

## Pin Pin assignment

1	PE
2	+12 V DC
3	GND
4	CAN H
5	CAN L



# Operation and display

LED	Display	Meaning
1	Blue, continuous light	Normal operation, no movement detected
	Blue, quickly flashing	Normal operation, movement detected
	Blue, slowly flashing	Error

# Notes

**Observe intended use!**

	<ul style="list-style-type: none"> <li> The product may only be put into operation by competent persons.</li> <li> Only use the product in accordance with its intended use.</li> </ul>
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## Accessories

### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50143389	KD DN-M12-5W-P1-150	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 5 -pin Connection 2: Open end Shielded: Yes Cable length: 15,000 mm Sheathing material: PUR

### Connection technology - Interconnection cables



	Part no.	Designation	Article	Description
	50143385	KDS DN-M12-5W-M12-5W-P3-030	Interconnection cable	Suitable for interface: DeviceNet, CANopen Connection 1: Connector, M12, Angled, Male, A-coded, 5 -pin Connection 2: Connector, M12, Angled, Female, A-coded, 5 -pin Shielded: Yes Cable length: 3,000 mm Sheathing material: PUR
	50143386	KDS DN-M12-5W-M12-5W-P3-050	Interconnection cable	Suitable for interface: DeviceNet, CANopen Connection 1: Connector, M12, Angled, Male, A-coded, 5 -pin Connection 2: Connector, M12, Angled, Female, A-coded, 5 -pin Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50143387	KDS DN-M12-5W-M12-5W-P3-100	Interconnection cable	Suitable for interface: DeviceNet, CANopen Connection 1: Connector, M12, Angled, Male, A-coded, 5 -pin Connection 2: Connector, M12, Angled, Female, A-coded, 5 -pin Shielded: Yes Cable length: 10,000 mm Sheathing material: PUR
	50143388	KDS DN-M12-5W-M12-5W-P3-150	Interconnection cable	Suitable for interface: CANopen, DeviceNet Connection 1: Connector, M12, Angled, Male, A-coded, 5 -pin Connection 2: Connector, M12, Angled, Female, A-coded, 5 -pin Shielded: Yes Cable length: 15,000 mm Sheathing material: PUR
	50143459	KSS US-USB2-A-mic-B-V0-018	Interconnection cable	Suitable for interface: USB Connection 1: USB Connection 2: USB Cable length: 1,800 mm

### Connection technology - Terminating resistors

	Part no.	Designation	Article	Description
	50040099	TS 01-5-SA	Terminator plug	Suitable for: DeviceNet, CANopen Function: Bus termination Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin

## Accessories

### Mounting technology - Other

	Part no.	Designation	Article	Description
	50143342	LBK Controller	Safety relay	
	50143346	LBK Sensor Protector	Shielding	Dimensions: 54.5 mm x 90 mm x 192 mm Color: Black Type of fastening, at system: Through-hole mounting Type of fastening, at device: Screw type Material: Metal

#### Note



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