

Technical data sheet

Safety radar sensor

Part no.: 50147249

LBK SBV-01

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For illustration purposes only



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 |
| Operating range | 0 ... 5 m |
| Angle of radiation, horizontal | 10° - 100° Adjustable in 10° increments |
| Angle of radiation, vertical | 20° |
| Emitted power | ≤ 16 dBm |
| Frequency range | 60,600 ... 62,800 MHz |
| Shape of the detection fields | conical |

Functions

| | |
|-----------|---|
| Functions | Detection of movement Detection of persons |
|-----------|---|

Characteristic parameters

| | |
|------------------------|--------------------------|
| SIL | 2, IEC 61508 |
| SILCL | 2, IEC/EN 62061 |
| Performance Level (PL) | d, EN ISO 13849-1 |
| Mission time T_M | 20 years, EN ISO 13849-1 |
| Category | 3, EN ISO 13849 |

Electrical data

| | |
|-------------------------|--|
| Performance data | |
| Supply voltage U_B | 12 V, DC, -20 ... 20 %, Via controller |
| Power consumption, max. | 3.25 W |

Time behavior

| | |
|--------------------------------------|----------|
| 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 |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 5 -pin |

Cable properties

| | |
|--|----------------------|
| Permissible conductor cross section, type. | 0.34 mm ² |
|--|----------------------|

Mechanical data

| | |
|---------------------------|-------------------------------|
| Dimension (W x H x L) | 158 mm x 135 mm x 71 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 |
| Approvals | TÜV Süd Italia UL |

Classification

| | |
|-----------------------|----------|
| Customs tariff number | 85261000 |
| ECLASS 5.1.4 | 27280801 |
| ECLASS 8.0 | 27280890 |
| ECLASS 9.0 | 27280890 |
| ECLASS 10.0 | 27280890 |
| ECLASS 11.0 | 27280890 |
| ECLASS 12.0 | 27274501 |
| ECLASS 13.0 | 27274501 |
| ECLASS 14.0 | 27274501 |
| ECLASS 15.0 | 27274501 |
| ECLASS 16.0 | 27274501 |
| ETIM 5.0 | EC001825 |
| ETIM 6.0 | EC001825 |
| ETIM 7.0 | EC001825 |
| ETIM 8.0 | EC001825 |
| ETIM 9.0 | EC001825 |
| ETIM 10.0 | EC001825 |
| UNSPSC 26.08 | 43211710 |

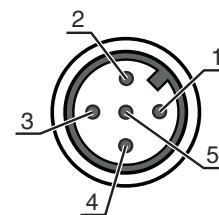
Electrical connection

Connection 1

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

| Pin | Pin assignment |
|-----|----------------|
|-----|----------------|

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

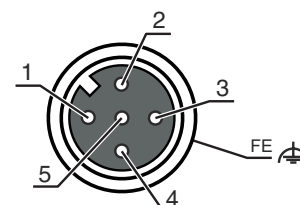


Connection 2

| | |
|--------------------|-----------|
| Function | BUS OUT |
| Type of connection | Connector |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | A-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"> ⌘ The product may only be put into operation by competent persons. ⌘ Only use the product in accordance with its intended use. |
|--|---|

Accessories

Connection technology - Connection cables

| | Part no. | Designation | Article | Description |
|--|----------|---------------------|------------------|--|
| | 50143389 | KD DN-M12-5W-P1-150 | Connection cable | Application: Oil and lubricant resistant Connection 1: Connector, M12, Angled, Female, A-coded, 5 -pin Connector, LED: No 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 | Application: Oil and lubricant resistant 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 | Application: Oil and lubricant resistant 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 | Application: Oil and lubricant resistant 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-P3-050 | Interconnection cable | Application: Oil and lubricant resistant 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 |

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

| | Part no. | Designation | Article | Description |
|--|----------|-------------|-----------------|--|
|  | 50150219 | BTP0710M | Loop guard | Suitable for: LBK SBV |
|  | 50150141 | BTU0700P | Mounting system | Design of mounting device: Angle, U-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Material: Plastic Shock absorber: No |

Note

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