# SMART SENSOR BUSINESS

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Figure can vary

### Part no.: 50139692 LS25C/8X-200-M8 Throughbeam photoelectric sensor transmitter



# Contents

- Technical data
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## Part no.: 50139692 – LS25C/8X-200-M8 – Throughbeam photoelectric sensor

### **Technical data**

| Basic data                                |   |
|---|---|
| Series                                    | 25C   |
| Operating principle                       | Throughbeam principle                                   |
| Device type                               | Transmitter   |
|   | mansmitter  |
| Special design                            |   |
| Special design                            | Activation input  |
|   |   |
| Optical data                              |   |
| Operating range                           | Guaranteed operating range                              |
| Operating range                           | 0 25 m  |
| Operating range limit                     | Typical operating range                                 |
| Operating range limit                     | 0 30 m  |
| Light source                              | LED, Red  |
| Transmitted-signal shape                  | Pulsed  |
| LED group                                 | Exempt group (in acc. with EN 62471)                    |
| 5   | - F. <b>G</b> F.(                                       |
| Electrical data                           |   |
| Protective circuit                        | Polarity reversal protection<br>Short circuit protected |
| Performance data                          |   |
| Supply voltage UB                         | 10 30 V , DC , Incl. residual ripple                    |
| Residual ripple                           | 0 15 % , From U <sub>B</sub>                            |
| Open-circuit current                      | 0 20 mA   |
| Inputs                                    |   |
| Number of activation inputs               | 1 Piece(s)  |
| Activation inputs                         |   |
| Voltage type                              | DC  |
| Activation input 1                        |   |
| Assignment                                | Connection 1, pin 4                                     |
|   |   |
| Timing                                    |   |
| Readiness delay                           | 300 ms  |
|   |   |
| Connection                                |   |
| Connection 1                              |   |
| Function                                  | Signal IN<br>Voltage supply                             |
| Type of connection                        | Cable with connector                                    |
| Cable length                              | 200 mm  |
| Sheathing material                        | PUR   |
| Cable color                               | Black   |
| Wire cross section                        | 0.2 mm <sup>2</sup>                                     |
| Thread size                               | M8  |
| Туре                                      | Male  |
| Material                                  | PUR   |
|   |   |
| Wire cross section<br>Thread size<br>Type | 0.2 mm²<br>M8<br>Male                                   |

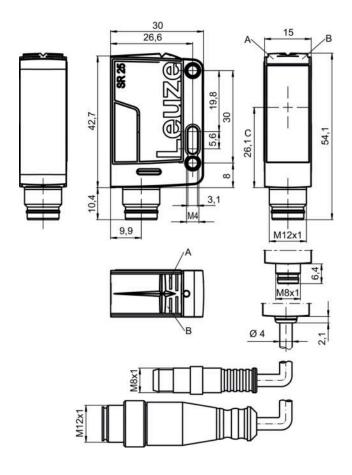
### Part no.: 50139692 – LS25C/8X-200-M8 – Throughbeam photoelectric sensor

| Mechanical data                |  |
|--------------------------------|--|
| Dimension (W x H x L)          | 15 mm x 42.7 mm x 30 mm  |
| Housing material               | Plastic , ABS  |
| Lens cover material            | Plastic  |
| Net weight                     | 33 g   |
| Housing color                  | Red  |
| Type of fastening              | Through-hole mounting with M4 thread<br>Via optional mounting device |
| Compatibility of materials     | ECOLAB   |
| Environmental data             |  |
| Ambient temperature, operation | -40 60 °C  |
| Ambient temperature, storage   | -40 70 °C  |
| Certifications                 |  |
| Degree of protection           | IP 67<br>IP 69K  |
| Protection class               | III  |
| Certifications                 | c UL US  |
| Standards applied              | IEC 60947-5-2  |
| Classification                 |  |
| Customs tariff number          | 85365019   |
| eCl@ss 8.0                     | 27270901   |
| eCl@ss 9.0                     | 27270901   |
| ETIM 5.0                       | EC002716   |
| ETIM 6.0                       | EC002716   |
|                                |  |

### **Dimensioned drawings**

All dimensions in millimeters

Part no.: 50139692 – LS25C/8X-200-M8 – Throughbeam photoelectric sensor



A Green LED

B Yellow LED

C Optical axis

### **Electrical connection**

| Connection 1       |                             |
|--------------------|-----------------------------|
| Function           | Signal IN<br>Voltage supply |
| Type of connection | Cable with connector        |
| Cable length       | 200 mm                      |
| Sheathing material | PUR                         |
| Cable color        | Black                       |
| Wire cross section | 0.2 mm <sup>2</sup>         |
| Thread size        | M8                          |
| Туре               | Male                        |
| Material           | PUR                         |
| No. of pins        | 4 -pin                      |

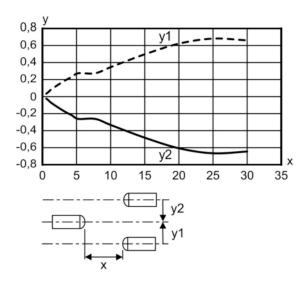
| Pin | Pin assignment |
|-----|----------------|
| 1   | V+             |
| 2   | n.c.           |
| 3   | GND            |
| 4   | IN 1           |



### Part no.: 50139692 – LS25C/8X-200-M8 – Throughbeam photoelectric sensor

#### Diagrams

Typ. response behavior



- Distance [m] Misalignment [m] х
- y

#### Suitable receivers

| Part no. | Designation         | Article   | Description  |
|----------|---------------------|---|--|
| 50139704 | LE25C/<br>4X-200-M8 | Throughbeam<br>photoelectric<br>sensor receiver | Operating range limit: 0 30 m<br>Supply voltage: DC<br>Digital switching outputs: 1 Piece(s)<br>Switching output 1: Transistor, PNP, Light switching<br>Switching frequency: 1,500 Hz<br>Connection: Cable with connector, 200 mm, M8, PUR, 4 -pin |

#### Part number code

Part designation: AAA25C d EE-f.GGH/iJ-K

| AAA25C | Operating principle / construction:<br>HT25C: diffuse reflection sensor with background suppression<br>PRK25C: retro-reflective photoelectric sensor with polarization filter<br>LS25C: throughbeam photoelectric sensor transmitter<br>LE25C: throughbeam photoelectric sensor receiver<br>DRT25C: Dynamic reference diffuse sensor |
|--------|--|
| d      | Light type:<br>n/a: red light<br>I: infrared light   |
| EE     | Light source:<br>n/a: LED<br>L1: laser class 1<br>L2: laser class 2  |
| f      | Preset range (optional):<br>n/a: operating range acc. to data sheet<br>xxxF: preset range [mm]   |

### Part no.: 50139692 – LS25C/8X-200-M8 – Throughbeam photoelectric sensor

| GG | Equipment:<br>A: autocollimation principle (single lens)<br>S: small light spot<br>D: detection of stretch-wrapped objects<br>X: extended model<br>HF: suppression of HF illumination (LED)<br>XL: extra long light spot<br>T: autocollimation principle (single lens) for highly transparent bottles without tracking<br>TT: autocollimation principle (single lens) for highly transparent bottles with tracking |
|----|--|
| Н  | Operating range adjustment:<br>1: 270° potentiometer<br>2: multiturn potentiometer<br>3: teach-in via button   |
| i  | Switching output/function OUT 1/IN: Pin 4 or black conductor:<br>2: NPN transistor output, light switching<br>N: NPN transistor output, dark switching<br>4: PNP transistor output, light switching<br>P: PNP transistor output, dark switching<br>X: pin not used<br>8: activation input (activation with high signal)<br>L: IO-Link interface (SIO mode: PNP light switching, NPN dark switching)                |
| L  | Switching output / function OUT 2/IN: pin 2 or white conductor:<br>2: NPN transistor output, light switching<br>N: NPN transistor output, dark switching<br>4: PNP transistor output, light switching<br>P: PNP transistor output, dark switching<br>W: warning output<br>X: pin not used<br>6: push-pull switching output, PNP light switching, NPN dark switching<br>T: teach-in via cable                       |
| К  | Electrical connection:<br>n/a: cable, standard length 2000 mm, 4-wire<br>200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug)<br>M8: M8 connector, 4-pin (plug)<br>M12: M12 connector, 4-pin (plug)<br>200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug)  |

| Note   |  |
|--|--|
| A list with all available device types can be found on the Leuze website at 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.

#### For UL applications:

• Only for use in "class 2" circuits

 These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)

Light source: Average life expectancy 100,000 h at an ambient temperature of 25 °C

### Accessories

Connection technology - Connection cables

| Part no. | Designation           | Article          | Description  |
|----------|-----------------------|------------------|--|
| 50130850 | KD U-M8-4A-<br>V1-050 | Connection cable | Connection 1: Connector, M8, Axial, Female, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC  |
| 50130871 | KD U-M8-4W-<br>V1-050 | Connection cable | Connection 1: Connector, M8, Angled, Female, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC |

# Mounting technology - Mounting brackets

| Part no. | Designation | Article          | Description   |
|----------|-------------|------------------|---|
| 50118543 | BT 300M.5   | Mounting bracket | Design of mounting device: Angle, L-shape<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type, Suited for M4 screws<br>Type of mounting device: Adjustable<br>Material: Stainless steel |

## Mounting technology - Rod mounts

|     | Part no. | Designation  | Article         | Description  |
|-----|----------|--------------|-----------------|--|
| a a | 50117829 | BTP 200M-D12 | Mounting system | Design of mounting device: Protection hood<br>Fastening, at system: For 12 mm rod<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Clampable, Adjustable, Turning, 360°<br>Material: Metal   |
| f:  | 50117252 | BTU 300M-D12 | Mounting system | Design of mounting device: Mounting system<br>Fastening, at system: For 12 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type, Suited for M4 screws<br>Type of mounting device: Clampable, Adjustable, Turning, 360°<br>Material: Metal |

Note

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