Technical data sheet
Throughbeam photoelectric sensor set
Part no.: 50156085
SETLS+LE20-1000/2X-200-M8



For Illustration purposes only

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Operation and display
- Part number code
- Notes

Technical data

Leuze

Basic data

Series	20 slim
Operating principle	Throughbeam principle
Device type	Set (transmitter and receiver)

Optical data

Operating range	0 ... 1 m (guaranteed operating range)
Operating range limit	0 ... 1 m (typical operating range)
Beam path	Divergent
Light source	LED, Red
Wavelength	630 nm
LED group	Exempt group (in acc. with EN 62471)
Type of light spot geometry	square
Minimum detectable object size	typ. 2 mm
Light beam exit	Lateral

Electrical data

Protective circuit	Overload protection
	Polarity reversal protection
Open-circuit current, max. Receiver	10 mA
Open-circuit current, max. Transmitter	15 mA

Performance data

Supply voltage U_B	10 ... 30 V, DC
Residual ripple	0 ... 10 %, From U_B

Outputs

Number of digital switching outputs	1 Piece(s)

Switching outputs

Type	Digital switching output
Switching voltage, type.	30 V
Voltage type	DC
Switching current, max.	50 mA

Switching output 1

Assignment	Connection 2, pin 4
Switching element	Transistor, NPN
Switching principle	Light switching

Time behavior

Switching frequency	1,000 Hz
Response time	0.5 ms
Switch-on delay string	< 100 ms

Connection

Number of connections	2 Piece(s)

Connection 1

Function	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PVC
Cable color	Gray
Wire cross section	0.1 mm²
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin

Connection 2

Function	Signal OUT
	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PVC
Cable color	Black
Wire cross section	0.1 mm²
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin

Mechanical data

Transmitter width	5.2 mm x 19 mm x 10 mm
Receiver width	5.2 mm x 20.5 mm x 10 mm
Housing material	Plastic
Plastic housing	PBT+ABS
Lens cover material	Plastic / PMMA
Transmitter net weight	10 g
Receiver net weight	10 g
Housing color	Red
Type of fastening	Through-hole mounting, 2 x ø 2.2 mm

Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)

Environmental data

Ambient temperature, operation	-25 ... 55 °C
Ambient temperature, storage	-30 ... 70 °C

Certifications

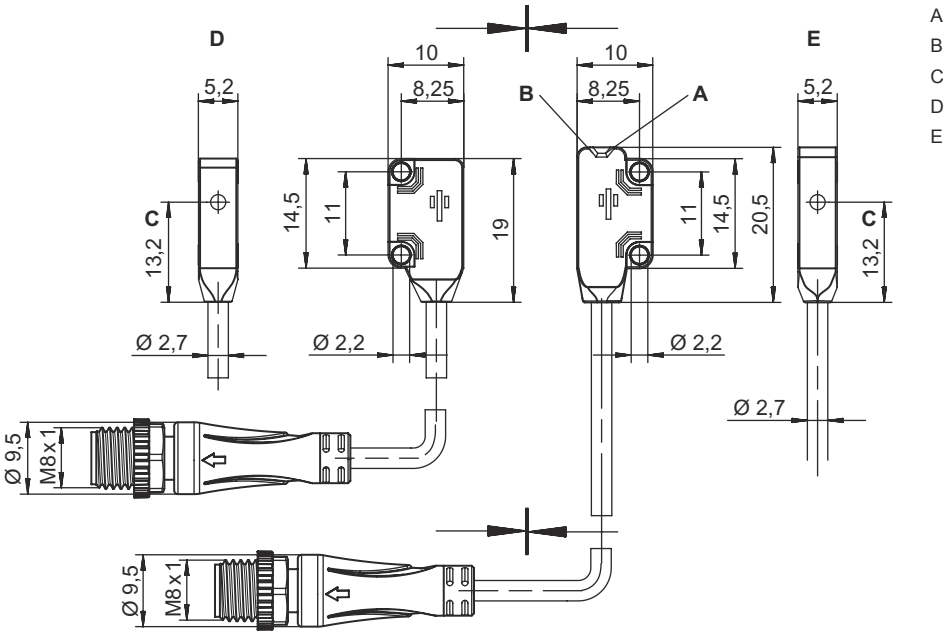
Degree of protection	IP 67
Protection class	III
Approvals	c UL US
	CE
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	85365019
ECLASS 5.1.4	27270901
ECLASS 8.0	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ECLASS 13.0	27270901
ECLASS 14.0	27270901
ECLASS 15.0	27270901
ECLASS 16.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
ETIM 9.0	EC002716
ETIM 10.0	EC002716
UNSPSC 26.08	39121528

Dimensioned drawings

All dimensions in millimeters

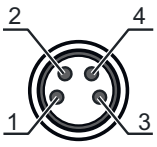


A Green LED
B Yellow LED
C Light emission
D Transmitter
E Receiver

Electrical connection

Connection 1	Transmitter
Function	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PVC
Cable color	Gray
Wire cross section	0.1 mm²
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin

Pin	Pin assignment	Conductor color
1	V+	Brown
2	n.c.	White
3	GND	Blue
4	n.c.	Black

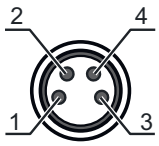


Connection 2	Receiver
Function	Signal OUT
	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PVC

Electrical connection

Connection 2	Receiver
Cable color	Black
Wire cross section	0.1 mm²
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin

Pin	Pin assignment	Conductor color
1	V+	Brown
2	n.c.	White
3	GND	Blue
4	OUT	Black



Operation and display

LED	Display	Meaning
1	Green	Operational readiness / Stability indicator
2	Orange	Switching output function

Part number code

Part designation: **AAA20 D-E/GG.HH-JJ**

AAA20	**Operating principle / construction** SETLS+LE20: Throughbeam photoelectric sensor transmitter + receiver HT20: Diffuse reflection sensor with background suppression
D	**Light type** n/a: red light
E	**Preset range (optional)** 15F: 15 mm 30F: 30 mm 150: operating range 150 mm 500: operating range 500 mm 1000: operating range 1000 mm
GG	**Switching output / Function** 2: NPN transistor output, light switching 4: PNP transistor output, light switching N: NPN transistor output, dark switching P: PNP transistor output, dark switching X: n.c.
HH	**Electrical connection** n/a: Cable, standard length 2000 mm, 2 wire (LS), 3 wire (LE, HT) M8: M8 connector, 4-pin (plug) 200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug)
JJ	**Design detail** n/a: Slim FL: Flat

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:
	↳ For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).