

# **Technical data sheet** Safety sensor set

Part no.: 68602033 MLC520-S-24-330



Leuze electronic GmbH + Co. KG 
 The Sensor People
 In der Braike 1, D-73277 Owen/Germany
 Phone: +49 7021 573-0 • Fax: +49 7021 573-199
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# **Technical data**

### **Basic data**

Series	MLC 520S
Device type	Set (transmitter and receiver)
Contains	4x BT-MLC-S-C mounting brackets
	4x BT-MLC-S-O mounting brackets
Application	Hand protection
Functions	
Functions	Automatic start/restart

Functions

## Contactor monitoring (EDM) Start/restart interlock (RES)

### **Characteristic parameters**

Туре	4, IEC/EN 61496
SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Performance Level (PL)	e, EN ISO 13849-1
PFH <sub>D</sub>	2,64E-09 per hour
Mission time T <sub>M</sub>	20 years, EN ISO 13849-1
Category	4, EN ISO 13849

#### **Protective field data**

Resolution	24 mm
Protective field height	330 mm
Operating range	0.2 6 m

#### **Optical data**

Number of beams	17 Piece(s)
Synchronization	Optical between transmitter and receiver
Light source	LED, Infrared
Wavelength	850 nm
Transmitted-signal shape	Pulsed
LED risk group	Exempt group (in acc. with EN 62471:2008)

#### **Electrical data**

Protective circuit Overvoltage protection Short circuit protected

Performance data Supply voltage U<sub>B</sub>

24 V, DC, -20 ... 20 %

#### Outputs

Number of safety-related switching 2 Piece(s) outputs (OSSDs)

Safety-related switching ou	utputs
Туре	Safety-related switching output OSSD

Switching voltage high, min.	18 V
Switching voltage low, max.	2.5 V
Switching voltage, type.	22.5 V
Voltage type	DC
Load inductivity	2,000 µH
Load capacity	1 µF
Residual current, max.	200 mA
Residual current, type.	2 mA

#### Safety-related switching output 1 Assignment

Switching element

Receiver device connection, pin 2 Transistor, PNP

Safety-related switching ou	itnut 2
Assignment	Receiver device connection, pin 4
Switching element	Transistor, PNP
<b>3 1 1 1</b>	,
Time behavior	
Response time	8 ms
Connection	
Number of connections	2 Piece(s)
Connection 1	
Function	Transmitter device connection
Type of connection	Cable with connector
Cable length	160 mm
Sheathing material	PUR
Thread size	M12
Material	Plastic
No. of pins	5 -pin
Connection 2	
Function	Receiver device connection
Type of connection	Cable with connector
Cable length	160 mm
Sheathing material	PUR
Thread size	M12
Material	Plastic
No. of pins	5 -pin
Mechanical data	
Dimension (W x H x L)	15.4 mm x 330 mm x 32.6 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic / PMMA
Material of end caps	Plastic
Net weight	1,700 g
Housing color	Yellow, RAL 1021
Type of fastening	C-shaped mounting bracket
	L-shaped mounting bracket
	O-shaped mounting bracket
Environmental data	
Ambient temperature, operation	-10 55 °C
Ambient temperature, storage	-30 70 °C
Relative humidity (non-condensing)	15 95 %
Certifications	
Degree of protection	IP 65
Protection class	111
Approvals	TÜV Süd
Vibration resistance	50 m/s <sup>2</sup>
Shock resistance	98.1 m/s <sup>2</sup>
US patents	US 6,418,546 B

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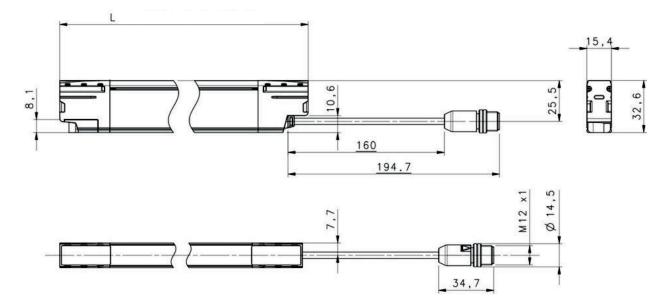
# **Technical data**

Customs tariff number	85365019
ECLASS 5.1.4	27272704
ECLASS 8.0	27272704
ECLASS 9.0	27272704
ECLASS 10.0	27272704
ECLASS 11.0	27272704
ECLASS 12.0	27272704
ECLASS 13.0	27272704
ECLASS 14.0	27272704
ECLASS 15.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549
ETIM 10.0	EC002549

# **Dimensioned drawings**

All dimensions in millimeters

## Dimensions of transmitter and receiver



L Length/protective field height

# **Electrical connection**

Connection 1	Transmitter	
Function	Transmitter device connection	
Type of connection	Cable with connector	
Cable length	160 mm	
Sheathing material	PUR	
Cable color	Black	

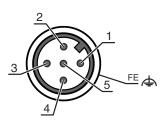
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# **Electrical connection**

RESTART SELECTION

#### **Connection 1** Transmitter Thread size M12 Туре Male Material Plastic No. of pins 5 -pin Encoding A-coded **Connector housing** FE/SHIELD

#### Pin **Pin assignment Conductor color** 1 +24 V DC Brown 2 RESTART SELECTION White 3 0 V Blue 4 Black n.c.



### **Connection 2**

5

Receiver device connection
Cable with connector
160 mm
PUR
Black
M12
Male
Plastic
5 -pin
A-coded
FE/SHIELD

Pin	Pin assignment	Conductor color	2
1	EDM	Brown	
2	OSSD1	White	
3	0 V	Blue	
4	OSSD2	Black	
5	EDM FBK/SELECTION	Gray	4

# Part number code

### Part designation: MLCxxx-ooo-aa-hhhh

MLC	Safety light curtain
ххх	Series 520: MLC 520S
aa	<b>Resolution</b> 14: 14 mm 24: 24 mm
hhhh	Protective field height 150 … 1200: from 150 mm to 1200 mm
000	Option S: Slimline version
N	lote



♣ A list with all available device types can be found on the Leuze website at www.leuze.com.

Gray

Receiver

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## Accessories



# Connection technology - Connection cables

 Part no.	Designation	Article	Description
50133841	KD U-M12-5A-P1- 050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PUR

## Services

	Part no.	Designation	Article	Description
()	S981050	CS40-I-140	Safety inspection	Details: Checking of a safety light barrier application in accordance with current standards and guidelines. Inclusion of the device and machine data in a database, production of a test log per application. Conditions: It must be possible to stop the machine, support provided by customer's employees and access to the machine for Leuze employees must be ensured.
с. С	S981046	CS40-S-140	Start-up support	Details: For safety devices including stopping time measurement and initial inspection. Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses.

on the Leuze website in the Download tab of the article detailed page.

	Note
6	A list with all available accessories can be found