

**Technical data sheet** Safety sensor set Part no.: 68602105 MLC520-S-24-1050



Leuze electronic GmbH + Co. KG

info@leuze.com • www.leuze.com changes 
 The Sensor People
 In der Braike 1, D-73277 Owen/Germany
 Phone: +49 7021 573-0 • Fax: +49 7021 573-199
 eng • 2025-04-08

We reserve the right to make technical

# **Technical data**

### **Basic data**

Series	MLC 520S
Device type	Set (transmitter and receiver)
Contains	4x BT-MLC-S-O mounting brackets
	6x BT-MLC-S-C mounting brackets
Application	Hand protection
Functions	

Functions

## Automatic start/restart 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

24 mm 1,050 mm 0.2 ... 6 m

#### **Protective field data**

Resolution
Protective field height
Operating range

#### **Optical data**

Number of beams	56 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	outputs
Туре		Safety-re

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 output 2	
	Assignment	Receiver device connection, pin 4
	Switching element	Transistor, PNP
_		
Т	ime behavior	
R	esponse time	12 ms
С	onnection	
N	umber of connections	2 Piece(s)
	Connection 1	
	Function	Transmitter device connection
	Type of connection	Cable with connector
	Cable length	160 mm
	Sheathing material	PUR M12
	Thread size	
	Material	Plastic 5. pip
	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
	lechanical data	
D	imension (W x H x L)	15.4 mm x 1,050 mm x 32.6 mm
H	ousing material	Metal
М	etal housing	Aluminum
	ens cover material	Plastic / PMMA
М	aterial of end caps	Plastic
	et weight	5,300 g
	ousing color	Yellow, RAL 1021
Ту	/pe of fastening	C-shaped mounting bracket
		L-shaped mounting bracket
		O-shaped mounting bracket
Е	nvironmental data	
Α	mbient temperature, operation	-10 55 °C
Α	mbient temperature, storage	-30 70 °C
R	elative humidity (non-condensing)	15 95 %
С	ertifications	
D	egree of protection	IP 65
P	rotection class	III
Α	pprovals	TÜV Süd
Vi	bration resistance	50 m/s²
S	hock resistance	98.1 m/s²
U	S patents	US 6,418,546 B

# Leuze

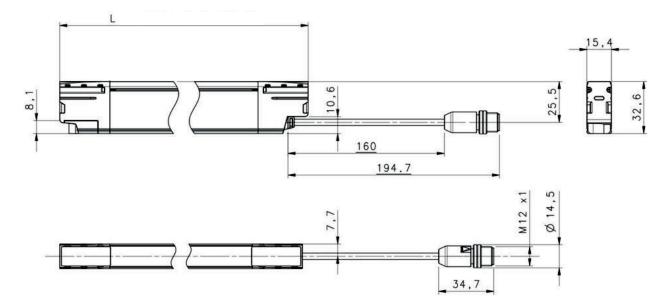
# **Technical data**

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

Leuze

 Leuze electronic GmbH + Co. KG
 info@leuze.com • www.leuze.com
 We reserve the right to make technical changes

 The Sensor People
 In der Braike 1, D-73277 Owen/Germany
 Phone: +49 7021 573-0 • Fax: +49 7021 573-199
 eng • 2025-04-08

# **Electrical connection**

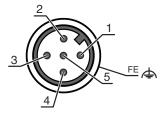
Connection 1	Transmitter
Thread size	M12
Туре	Male
Material	Plastic
No. of pins	5 -pin
Encoding	A-coded
Connector housing	FE/SHIELD

#### Pin Pin assignment 1 +24 V DC 2 RESTART SELE 3 0 V 4 n.c.

+24 V DC	Brown
RESTART SELECTION	White
0 V	Blue
n.c.	Black
RESTART SELECTION	Gray

Receiver

**Conductor color** 



#### **Connection 2**

5

Function	Receiver device connection
Type of connection	Cable with connector
Cable length	160 mm
Sheathing material	PUR
Cable color	Black
Thread size	M12
Туре	Male
Material	Plastic
No. of pins	5 -pin
Encoding	A-coded
Connector housing	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
xxx	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

Leuze electronic GmbH + Co. KG

# Leuze

# 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.
y:	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.

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