

# **Technical data sheet** Safety sensor set Part no.: 68602030

MLC520-S-24-300



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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	300 mm
Operating range	0.2 6 m

### **Optical data**

Number of beams	16 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-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

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	Safety-related switching output 2			
Assignment		Receiver device connection, pin 4		
	Switching element	Transistor, PNP		
Ti	me behavior			
Re	esponse time	8 ms		
C	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		
	Thread size	M12		
	Material	Plastic		
	No. of pins	5 -pin		
	Connection 2			
	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		
Μ	echanical data			
Di	mension (W x H x L)	15.4 mm x 300 mm x 32.6 mm		
	ousing material	Metal		
	etal housing	Aluminum		
	ens cover material	Plastic / PMMA		
	aterial of end caps	Plastic		
	et weight	1,550 g		
	ousing color	Yellow, RAL 1021		
Ty	pe of fastening	C-shaped mounting bracket		
		L-shaped mounting bracket		
		O-shaped mounting bracket		
E	nvironmental data			
A	nbient temperature, operation	-10 55 °C		
A	nbient temperature, storage	-30 70 °C		
Re	elative humidity (non-condensing)	15 95 %		
C	ertifications			
De	egree of protection	IP 65		
Pr	otection class	III		
A	oprovals	TÜV Süd		
Vi	bration resistance	50 m/s²		
Shock resistance		98.1 m/s²		
U	S patents	US 6,418,546 B		

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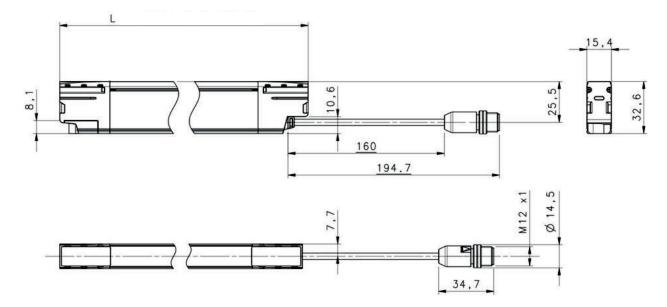
# **Technical data**

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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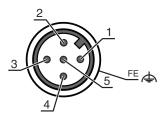
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# **Electrical connection**

#### **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 2 3 4

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



### **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	3 FF
4	OSSD2	Black	5
5	EDM FBK/SELECTION	Gray	

## Part number code

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

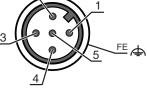
MLC	Safety light curtain
xxx	Series 520: MLC 520S
aa	<b>Resolution</b> 14: 14 mm 24: 24 mm
hhhh	Protective field height 150 1200: from 150 mm to 1200 mm
000	Option S: Slimline version
Ν	Note



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

## **Conductor color**

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.

	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.