

# Technical data sheet Safety sensor set

Part no.: 68601060 MLC520-S-14-600



# **Technical data**

## **Basic data**

MLC 520S
Set (transmitter and receiver)
4x BT-MLC-S-O mounting brackets
6x BT-MLC-S-C mounting brackets
Finger protection

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

14 mm 600 mm 0.2 ... 6 m

#### **Protective field data**

Resolution	
Protective field height	
Operating range	

#### **Optical data**

Number of beams	60 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
Type	_	Safoty

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 Receiver device co

Switching element

Receiver device connection, pin 2 Transistor, PNP

	Safety-related switching output 2		
	Assignment	Receiver device connection, pin 4	
	Switching element	Transistor, PNP	
Ti	Time behavior		
R	esponse time	11 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	
	Thread size	M12	
	Material	Plastic	
	No. of pins	5 -pin	
	Connection 2 Function	Receiver device connection	
	Type of connection	Cable with connector 160 mm	
	Cable length Sheathing material	PUR	
	Thread size	M12	
	Material	Plastic	
	No. of pins	5 -pin	
М	lechanical data		
Di	imension (W x H x L)	15.4 mm x 600 mm x 32.6 mm	
	ousing material	Metal	
М	etal housing	Aluminum	
Le	ens cover material	Plastic / PMMA	
М	aterial of end caps	Plastic	
Ne	et weight	3,050 g	
H	ousing color	Yellow, RAL 1021	
Ту	/pe of fastening	C-shaped mounting bracket	
		L-shaped mounting bracket	
		O-shaped mounting bracket	
E	nvironmental data		
A	mbient temperature, operation	-10 55 °C	
A	mbient temperature, storage	-30 70 °C	
R	elative humidity (non-condensing)	15 95 %	
С	ertifications		
D	egree of protection	IP 65	
Pr	rotection class	III	
A	pprovals	TÜV Süd	
Vi	bration resistance	50 m/s²	
	hock resistance	98.1 m/s²	
U	S patents	US 6,418,546 B	

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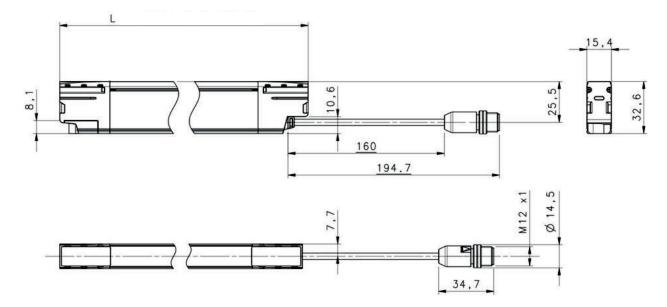
# **Technical data**

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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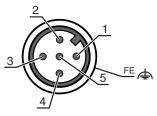
# **Electrical connection**

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

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

Receiver



## **Connection 2**

4 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	3 1 FF +
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
١	Note



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

## **Conductor color**

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