

**Technical data sheet** Safety sensor set Part no.: 68602060

MLC520-S-24-600



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We reserve the right to make technical changes eng • 2021-02-02

## **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)

Functions

## **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 600 mm 0.2 ... 6 m

#### **Protective field data**

Resolution
Protective field height
Operating range

#### **Optical data**

Number of beams	32 Piece(s)
Synchronization	Optical between transmitter and receiver
Light source	LED, Infrared
LED light 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 o	utputs	
_		

Туре	Safety-related switching output OSSD
Switching voltage high, min.	18 V
Switching voltage low, max.	2.5 V
Switching voltage, typ.	22.5 V
Voltage type	DC
Load inductivity	2,000 µH
Load capacity	1 µF
Residual current, max.	200 mA
Residual current, typ.	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
Timing		
Respo	onse time	9 ms
Conn	ection	
Numb	er of connections	2 Piece(s)
Co	nnection 1	
	oction	Transmitter device connection
	e of connection	Cable with connector
	ble length	160 mm
	eathing material	PUR
	ead size	M12
	erial	Plastic
No.	of pins	5 -pin
Co	nnection 2	
	iction	Receiver device connection
Тур	e of connection	Cable with connector
Cat	ble length	160 mm
She	eathing material	PUR
Thr	ead size	M12
Mat	erial	Plastic
No.	of pins	5 -pin
Mech	anical data	
Dimer	nsion (W x H x L)	15.4 mm x 600 mm x 32.6 mm
Housi	ng material	Metal
Metal	housing	Aluminum
Lens	cover material	Plastic / PMMA
Materi	al of end caps	Plastic
Net we	eight	3,050 g
Housi	ng color	Yellow, RAL 1021
Туре о	of fastening	C-shaped mounting bracket
		L-shaped mounting bracket
		O-shaped mounting bracket
Envir	onmental data	
Ambie	ent temperature, operation	-10 55 °C
Ambie	ent temperature, storage	-30 70 °C
Relati	ve humidity (non-condensing)	15 95 %
Certif	fications	
Degre	e of protection	IP 65
Protec	ction class	III
Certifi	cations	TÜV Süd
Vibrat	ion resistance	50 m/s²
Shock	resistance	98.1 m/s <sup>2</sup>
US pa	tents	US 6,418,546 B



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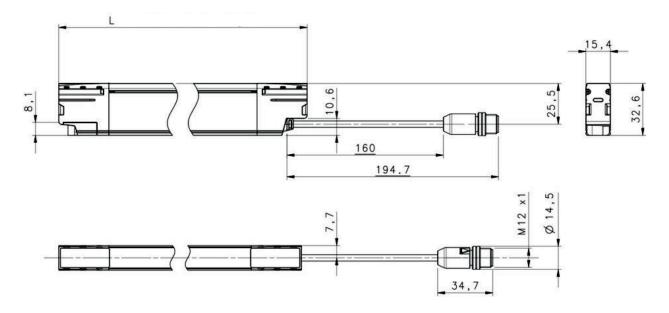
## **Technical data**

Customs tariff number	85365019
eCl@ss 5.1.4	27272704
eCl@ss 8.0	27272704
eCl@ss 9.0	27272704
eCl@ss 10.0	27272704
eCl@ss 11.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	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
Thread size	M12
Туре	Male
Material	Plastic
No. of pins	5 -pin
Encoding	A-coded
Connector housing	FE/SHIELD

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## **Electrical connection**

RESTART SELECTION

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# Pin Pin assignment 1 +24 V DC 2 RESTART SELECTION

0 V

n.c.

Conductor color

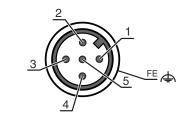
Brown

White

Blue

Black

Gray



#### **Connection 2**

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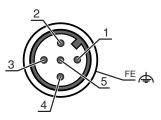
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Receiver

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



## Part number code

MLC	Safety light curtain			
ххх	Series 520: MLC 520S			
aa	Resolution 14: 14 mm 24: 24 mm			
hhhh	Protective field height 150 1200: from 150 mm to 1200 mm			
000	Option S: Slimline version			



### Accessories

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# 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 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 "Safety light barriers"	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. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.
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. Restrictions: Max. 2 h., no mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment.

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