

Technical data sheet Safety sensor set Part no.: 68602090

MLC520-S-24-900



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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

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

Automatic start/restart

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 _D	2,64E-09 per hour
Mission time T _M	20 years, EN ISO 13849-1
Category	4, EN ISO 13849

Protective field data

Resolution	24 mm
Protective field height	900 mm
Operating range	0.2 6 m

Optical data

Number of beams	48 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_B

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 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		
Time behavior			
Response time	11 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 900 mm x 32.6 mm		
Housing material	Metal		
Metal housing	Aluminum		
Lens cover material	Plastic / PMMA		
Material of end caps	Plastic		
Net weight	4,550 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, operation	-30 70 °C		
Relative humidity (non-condensing)	-50 70 °C		
Certifications			
Degree of protection	IP 65		
Protection class	III		
Approvals	TÜV Süd		
Vibration resistance	50 m/s²		
Shock resistance	98.1 m/s²		
US patents	US 6,418,546 B		

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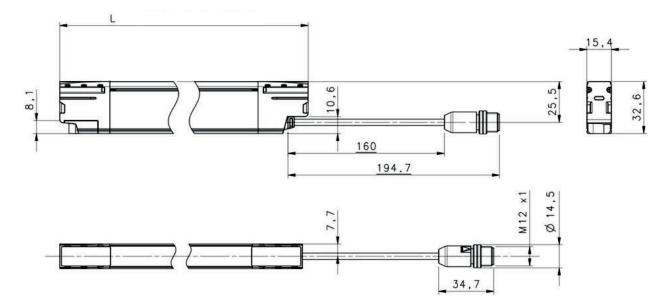
Technical data

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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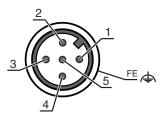
Electrical connection

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

Conductor color

+24 V DCBrownRESTART SELECTIONWhite0 VBluen.c.BlackRESTART SELECTIONGray		
0 V Blue n.c. Black	+24 V DC	Brown
n.c. Black	RESTART SELECTION	White
	0 V	Blue
RESTART SELECTION Gray	n.c.	Black
	RESTART SELECTION	Gray



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 FE
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	Resolution 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.

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.