



the sensor people





Part no.: 68602060 MLC520-S-24-600 Safety sensor set









Figure can vary

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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	Automatic start/restart Contactor monitoring (EDM) Start/restart interlock (RES)	
Characteristic parameters	4 150/51 04400	
Type	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	600 mm	
Operating range	0.2 6 m	
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 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 %	



utputs			
lumber of safety-related switching outputs (OSSDs)	2 Piece(s)		
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, typ.	22.5 V		
Voltage type	DC		
Load inductivity	2,000 μΗ		
Load capacity	1 μF		
Residual current, max.	200 mA		
Residual current, typ.	2 mA		
Safety-related switching output 1			
Assignment	Receiver device connection, pin 2		
Switching element	Transistor , PNP		
Safety-related switching output 2			
Assignment	Receiver device connection, pin 4		
Switching element	Transistor , PNP		
ing			
sponse time	9 ms		
nber of connections  Connection 1	2 Piece(s)		
Type of connection	Cable with connector		
Function	Transmitter device connection		
Cable length	160 mm		
Sheathing material	PUR		
Thread size	M12		
Material	Plastic		
No. of pins	5 -pin		
Connection 2			
Type of connection	Cable with connector		
Function	Receiver device connection		
Cable length	160 mm		
Sheathing material	PUR		
Thread size	M12		
Material	Plastic		
No. of pins	5 -pin		
chanical data			
nension (W x H x L)	15.4 mm x 600 mm x 32.6 mm		
using material	Metal , Aluminum		
s cover material	Plastic / PMMA		
	Plastic		
erial of end caps	Plastic		
erial of end caps weight	Plastic 3,050 g		



Type of fastening	C-shaped mounting bracket L-shaped mounting bracket O-shaped mounting bracket
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Environmental data		
Ambient temperature, operation	-10 55 °C	
Ambient temperature, storage	-30 70 °C	
Relative humidity (non-condensing)	15 95 %	

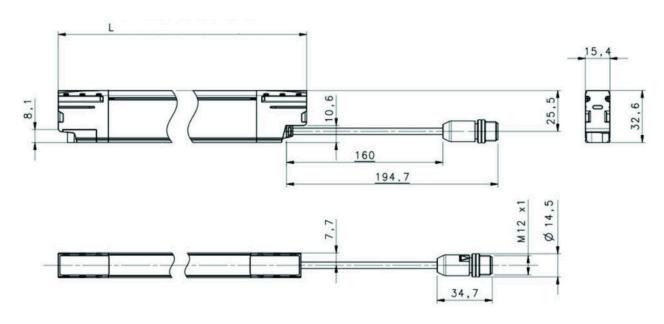
Certifications		
Degree of protection	IP 65	
Protection class	III	
Certifications	TÜV Süd	
Vibration resistance	50 m/s²	
Shock resistance	98.1 m/s²	
US patents	US 6,418,546 B	

Classification	
Customs tariff number	85365019
eCl@ss 8.0	27272704
eCl@ss 9.0	27272704
ETIM 5.0	EC002549
ETIM 6.0	EC002549

### **Dimensioned drawings**

All dimensions in millimeters

#### Dimensions of transmitter and receiver



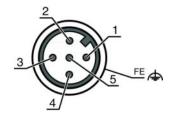
L Length/protective field height



#### **Electrical connection**

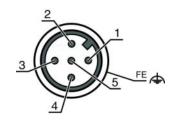
Connection 1	Transmitter	
Type of connection	Cable with connector	
Function	Transmitter device connection	
Cable length	160 mm	
Sheathing material	PUR	
Cable color	Black	
Wire cross section		
Thread size	M12	
Туре	Male	
Material	Plastic	
No. of pins	5 -pin	
Encoding	A-coded	
Connector housing	FE/SHIELD	

Pin	Pin assignment	Conductor color
1	+24 V DC	Brown
2	RESTART SELECTION	White
3	0 V	Blue
4	n.c.	Black
5	RESTART SELECTION	Gray



Connection 2	Receiver	
Type of connection	Cable with connector	
Function	Receiver device connection	
Cable length	160 mm	
Sheathing material	PUR	
Cable color	Black	
Wire cross section		
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

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

#### Note

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

#### **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 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

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