## SMART SENSOR BUSINESS

## Leuze electronic

the sensor people



Part no.: 68602105 MLC520-S-24-1050 Safety sensor set



Figure can vary

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## Part no.: 68602105 – MLC520-S-24-1050 – Safety sensor set

#### **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	
Туре	4 , IEC/EN 61496
SIL	3, IEC 61508
SILCL	3 , IEC/EN 62061
Performance Level (PL)	e , EN ISO 13849-1
PFHD	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	1,050 mm
Operating range	0.2 6 m
Optical data	
Number of beams	56 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 %

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utputs	
umber 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 µH
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	
ponse time	12 ms
nection	
nber of connections	2 Piece(s)
Connection 1	
ype of connection	Cable with connector
unction	Transmitter device connection
Cable length	160 mm
heathing material	PUR
hread size	M12
laterial	Plastic
lo. of pins	5 -pin
Connection 2	
ype of connection	
	Cable with connector
Function	Receiver device connection
Function Cable length	Receiver device connection 160 mm
Function Cable length Sheathing material	Receiver device connection 160 mm PUR
Function Cable length Sheathing material Fhread size	Receiver device connection 160 mm PUR M12
Function Cable length Sheathing material Fhread size Material	Receiver device connection 160 mm PUR
Function Cable length Sheathing material Thread size Material	Receiver device connection 160 mm PUR M12
Function Cable length Sheathing material Thread size Material No. of pins	Receiver device connection 160 mm PUR M12 Plastic
Function Cable length Sheathing material Thread size Material No. of pins <b>chanical data</b>	Receiver device connection 160 mm PUR M12 Plastic
Function Cable length Sheathing material Thread size Material No. of pins Chanical data mension (W x H x L)	Receiver device connection         160 mm         PUR         M12         Plastic         5 -pin
Function Cable length Sheathing material Thread size Material No. of pins <b>chanical data</b> nension (W x H x L) using material	Receiver device connection         160 mm         PUR         M12         Plastic         5 -pin         15.4 mm x 1,050 mm x 32.6 mm
Function Cable length Sheathing material Fhread size Material No. of pins Chanical data nension (W x H x L) using material ss cover material	Receiver device connection         160 mm         PUR         M12         Plastic         5 -pin         15.4 mm x 1,050 mm x 32.6 mm         Metal , Aluminum
Function Function Cable length Sheathing material Thread size Material No. of pins chanical data nension (W x H x L) using material ns cover material terial of end caps t weight	Receiver device connection         160 mm         PUR         M12         Plastic         5 -pin

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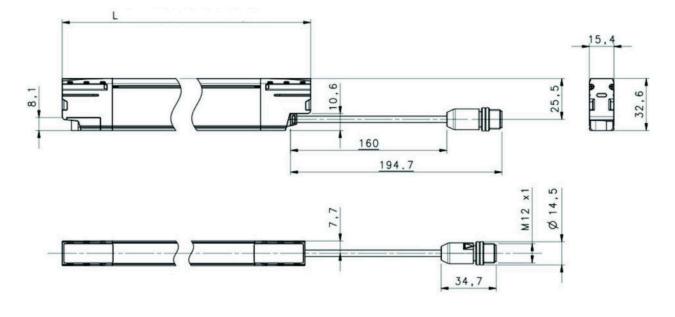
## Part no.: 68602105 – MLC520-S-24-1050 – Safety sensor set

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, 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	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	EC002549		

### **Dimensioned drawings**

All dimensions in millimeters

#### Dimensions of transmitter and receiver



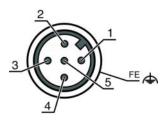
L Length/protective field height

### Part no.: 68602105 – MLC520-S-24-1050 – Safety sensor set

#### **Electrical connection**

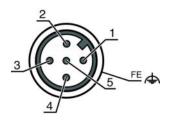
Connection 1	Transmitter	
Type of connection	Cable with connector	
Function	Transmitter device connection	
Cable length	160 mm	
Sheathing material	PUR	
Cable color	Black	
Wire cross section		
Thread size	M12	
Туре	Male	
Material	Plastic	
No. of pins	5 -pin	
Encoding	A-coded	
Connector housing	FE/SHIELD	

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

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## Part no.: 68602105 – MLC520-S-24-1050 – Safety sensor set

MLC	Safety light curtain		
XXX	Series: 520: MLC 520S		
аа	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.