SMART SENSOR BUSINESS

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the sensor people



Part no.: 68602051 MLC520-S-24-510 Safety sensor set



Figure can vary

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Part no.: 68602051 – MLC520-S-24-510 – Safety sensor set

Technical data

Basic data		
Series	MLC 520S	
Device type	Set (transmitter and receiver)	
Contains	4x BT-MLC-S-C mounting brackets 4x BT-MLC-S-O 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 _M	20 years , EN ISO 13849-1	
Category	4 , EN ISO 13849	
Protective field data		
Resolution	24 mm	
Protective field height 510 mm		
Operating range	0.2 6 m	
Ordinal data		
Optical data Number of beams	27 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 _B	24 V , DC , -20 20 %	

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Outputs	
Number of safety-related switching outputs (OSSDs)	2 Piece(s)
Safety-related switching outputs	Opfet websted weitsbing autout 0000
Type	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
ïming	
Response time	9 ms
onnection	
umber of connections	2 Piece(s)
Connection 1	
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	
Connection 2 Type of connection	Cable with connector
	Cable with connector Receiver device connection
Type of connection	
Type of connection Function	Receiver device connection
Type of connection Function Cable length	Receiver device connection 160 mm
Type of connection Function Cable length Sheathing material	Receiver device connection 160 mm PUR
Type of connection Function Cable length Sheathing material Thread size	Receiver device connection 160 mm PUR M12
Type of connection Function Cable length Sheathing material Thread size Material	Receiver device connection 160 mm PUR M12 Plastic
Type of connection Function Cable length Sheathing material Thread size Material No. of pins	Receiver device connection 160 mm PUR M12 Plastic
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Type of connection Function Cable length Sheathing material Thread size Material No. of pins Iechanical data imension (W x H x L)	Receiver device connection 160 mm PUR M12 Plastic 5 -pin
Type of connection Function Cable length Sheathing material Thread size Material No. of pins	Receiver device connection 160 mm PUR M12 Plastic 5 -pin 15.4 mm x 510 mm x 32.6 mm
Type of connection Function Cable length Sheathing material Thread size Material No. of pins	Receiver device connection 160 mm PUR M12 Plastic 5 -pin 15.4 mm x 510 mm x 32.6 mm Metal , Aluminum
Type of connection Function Cable length Sheathing material Thread size Material	Receiver device connection 160 mm PUR M12 Plastic 5 -pin 15.4 mm x 510 mm x 32.6 mm Metal , Aluminum Plastic / PMMA

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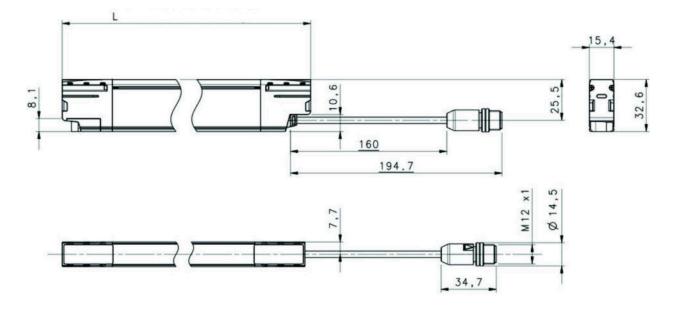
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Type of fastening	C-shaped mounting bracket L-shaped mounting bracket O-shaped mounting bracket			
Environmental data				
Ambient temperature, operation	-10 55 °C			
Ambient temperature, storage	-30 70 °C			
Relative humidity (non-condensing)	15 95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



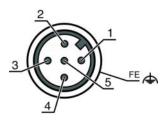
L Length/protective field height

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Electrical connection

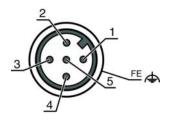
Connection 1	Transmitter	
Type of connection	Cable with connector	
Function	Transmitter device connection	
Cable length	160 mm	
Sheathing material	PUR	
Cable color	Black	
Wire cross section		
Thread size	M12	
Туре	Male	
Material	Plastic	
No. of pins	5 -pin	
Encoding	A-coded	
Connector housing	FE/SHIELD	

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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MLC	Safety light curtain		
ХХХ	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
\bigcirc	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.