



Figure can vary

Part no.: 544015
MLC500T30-450-IP
Safety sensor/transmitter set



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Part no.: 544015 – MLC500T30-450-IP – Safety sensor/transmitter set

Technical data

Basic data	
Series	MLC 500
Device type	Transmitter
Contains	2x BT-IP swivel mount
Application	Hand protection
Functions	
Functions	Transmission channel changeover Range reduction
Characteristic parameters	
Type	4, IEC/EN 61496
SIL	3, IEC 61508
SILCL	3, IEC/EN 62061
Mission time T_M	20 years, EN ISO 13849-1
Protective field data	
Resolution	30 mm
Protective field height	450 mm
Operating range	0 ... 8 m
Optical data	
Synchronization	Optical between transmitter and receiver
Light source	LED, Infrared
LED light wavelength	940 nm
Transmitted-signal shape	Pulsed
LED group	Exempt group in acc. with EN 62471:2008
Electrical data	
Protective circuit	Short circuit protected Overvoltage protection
Performance data	
Supply voltage	24 V, DC, -20 ... 20 %
Current consumption, max.	50 mA
Fuse	2 A semi time-lag
Inputs	
Number of digital switching inputs	1 Piece(s)
Switching inputs	
Type	Digital switching input
Switching voltage high, min.	18 V
Switching voltage low, max.	2.5 V
Switching voltage, typ.	22.5 V
Voltage type	DC
Connection	
Number of connections	1 Piece(s)

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Connection 1

Type of connection	Cable with connector
Function	Machine interface
Cable length	15,000 mm
Sheathing material	PVC
Thread size	M12
Material	Metal
No. of pins	5 -pin

Cable properties

Permissible conductor cross section, typ.	0.25 mm ²
Length of connection cable, max.	100 m
Permissible cable resistance to load, max.	200 Ω

Mechanical data

Dimension	650 mm52.5 mm
Housing material	Metal, Aluminum
Lens cover material	Plastic / PMMA
Material of end caps	Diecast zinc
Net weight	600 g
Housing color	Yellow, RAL 1021
Type of fastening	Swivel mount

Protective tube

Material	PMMA, clear
Material of end caps	V4A stainless steel (1.4404)
Material of clamping cylinder	PA 6
Material of pressure-equalization membrane	PA 6
Cable gland material	PA 6

Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)

Environmental data

Ambient temperature, operation	0 ... 55 °C
Ambient temperature, storage	-30 ... 70 °C
Relative humidity (non-condensing)	0 ... 95 %

Certifications


Degree of protection	IP 66 IP 67 IP 65 IP 69K
Protection class	III
Certifications	TÜV Süd c TÜV NRTL US c CSA US S Mark
Vibration resistance	50 m/s ²
Shock resistance	100 m/s ²
US patents	US 6,418,546 B

Classification

Part no.: 544015 – MLC500T30-450-IP – Safety sensor/transmitter set

eCl@ss 8.0	27272704
eCl@ss 9.0	27272704
ETIM 5.0	EC002549

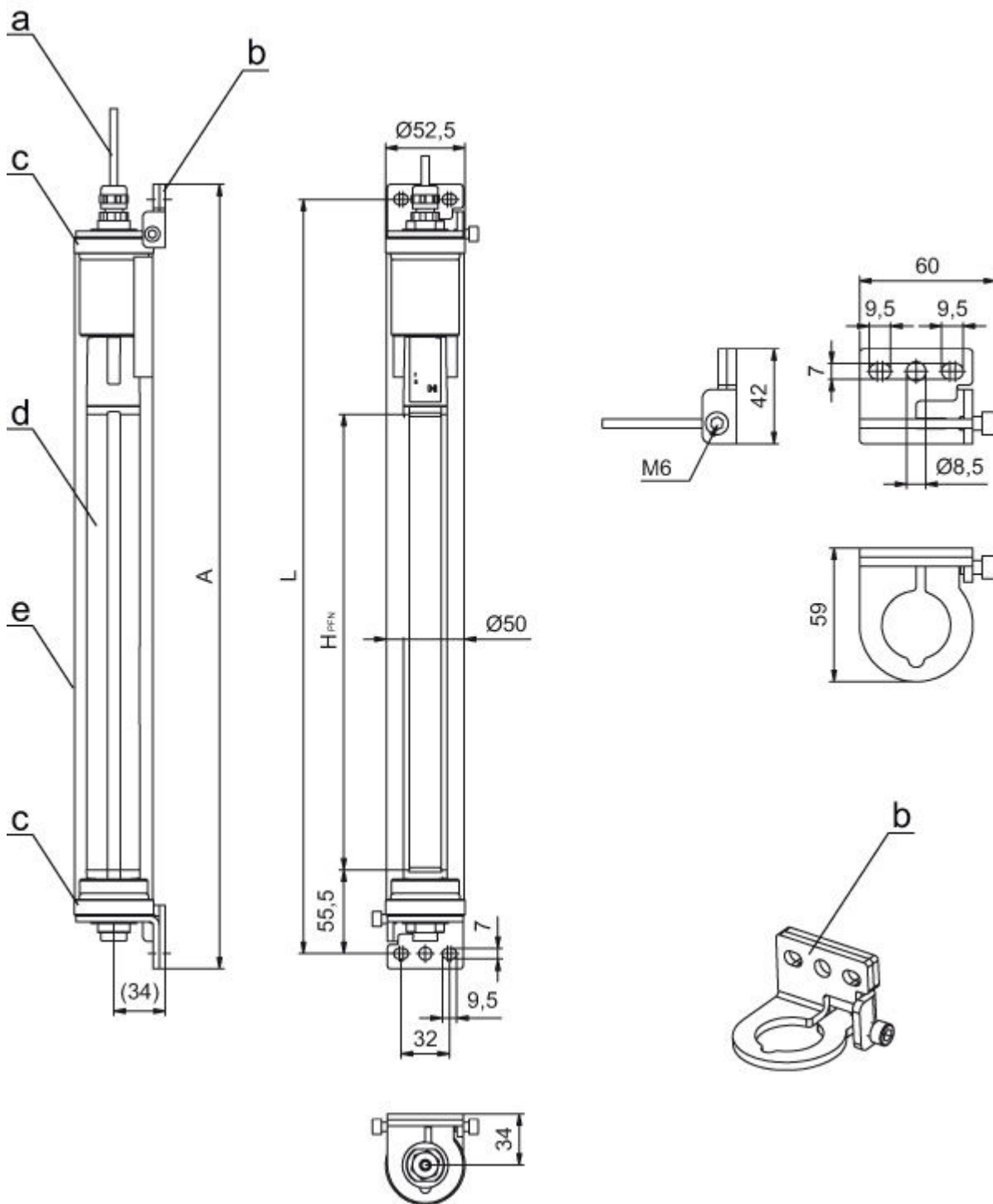
Suitable receivers

	Part no.	Designation	Article	Description
	544022	MLC510R30-450-IP	Safety sensor/ receiver set	Resolution: 30 mm Protective field height: 450 mm Response time: 5 ms Connection: Cable with connector, M12, Metal, 5 -pin, 15,000 mm, PVC Function package: Basic

Dimensioned drawings

All dimensions in millimeters

MLC safety light curtains pre-mounted in the IP protective tube

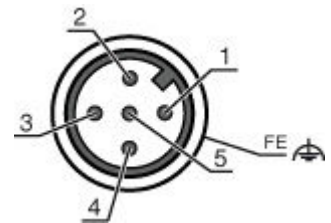


- a Connection cable
- b Mounting brackets for mounting
- c End caps, stainless steel V4A
- d MLC transmitter
- e IP protective tube
- A Total height incl. mounting brackets = 670 mm
- L Spacing of drilled holes for mounting brackets = 650 mm
- H_{PFN} Effective protective field height = 450 mm

Electrical connection

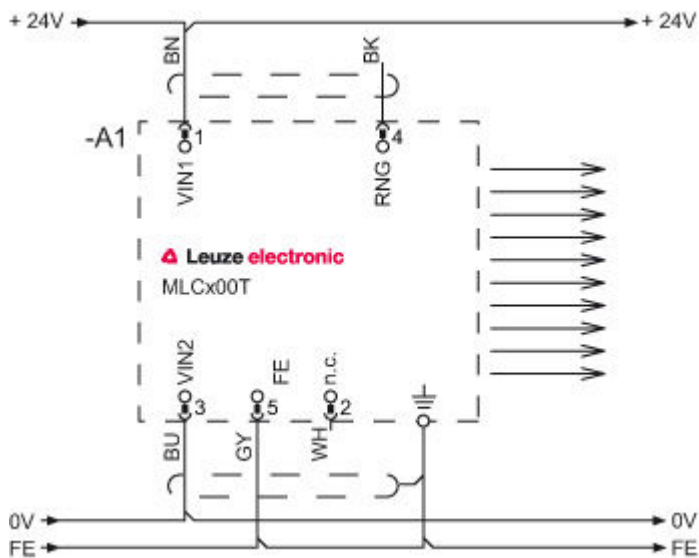
Connection 1	
Type of connection	Cable with connector
Function	Machine interface
Cable length	15,000 mm
Sheathing material	PVC
Cable color	Black
Wire cross section	
Thread size	M12
Type	Male
Material	Metal
No. of pins	5 -pin
Encoding	A-coded
Connector housing	FE/SHIELD

Pin	Pin assignment	Conductor color
1	VIN1	Brown
2	n.c.	White
3	VIN2	Blue
4	RNG	Black
5	FE/SHIELD	Gray



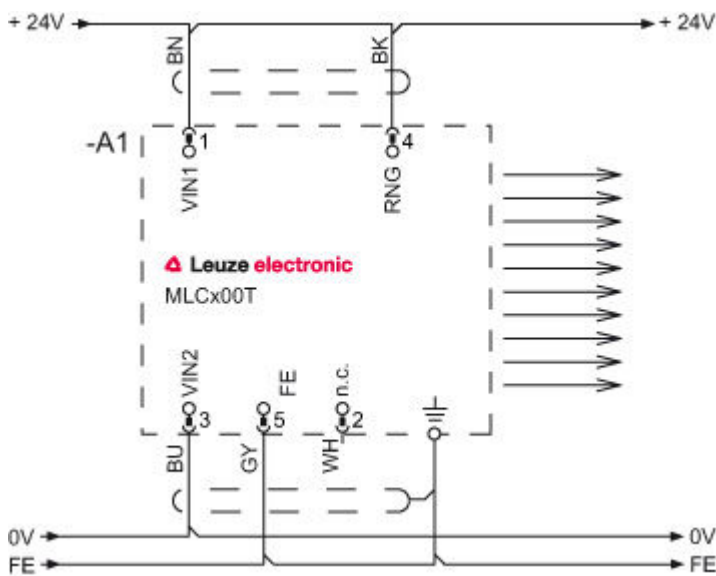
Circuit diagrams

Transmission channel C1, reduced range



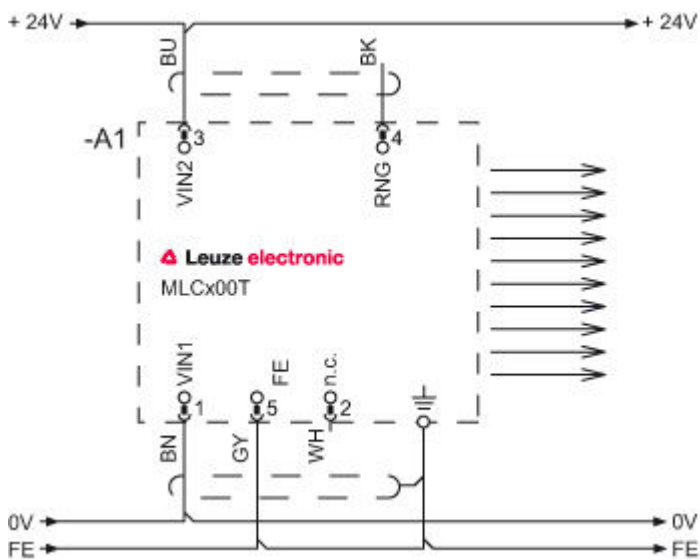
- 1 VIN1 = +24 V
- 3 VIN2 = 0 V
- 4 RNG = 0 V or open

Transmission channel C1, standard range



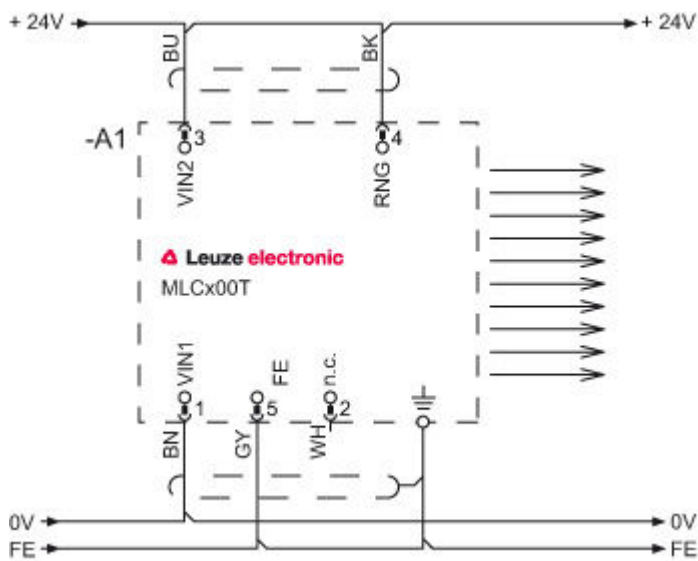
- 1 VIN1 = +24 V
- 3 VIN2 = 0 V
- 4 RNG = +24 V

Transmission channel C2, reduced range



- 1 VIN1 = 0 V
- 3 VIN2 = +24 V
- 4 RNG = 0 V or open

Transmission channel C2, standard range



- 1 VIN1 = 0 V
- 3 VIN2 = +24 V
- 4 RNG = +24 V

Operation and display

LEDs

LED	Display	Meaning
1	Off	Device switched off
	Red, continuous light	Device error
	Green, continuous light	Normal operation
2	Green, flashing, 10 s long after switching on	Reduced range selected by the wiring of pin 4
	Off	Transmission channel C1
	Green, continuous light	Transmission channel C2

Part number code

Part designation: MLCxyy-za-hhhhei-ooo

MLC	Safety light curtain
x	Series: 3: MLC 300 5: MLC 500
yy	Function classes: 00: Transmitter 01: transmitter (AIDA) 02: Transmitter with test input 10: Basic receiver - automatic restart 11: basic receiver - automatic restart (AIDA) 20: Standard receiver - EDM/RES selectable 30: Extended receiver - blanking/muting
z	Device type: T: transmitter R: receiver

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MLC	Safety light curtain
a	Resolution: 14: 14 mm 20: 20 mm 30: 30 mm 40: 40 mm 90: 90 mm
hhh	Protective field height: 150 ... 3000: from 150 mm to 3000 mm
e	Host/Guest (optional): H: Host MG: Middle Guest G: Guest
i	Interface (optional): /A: AS-i
ooo	Option: /V: high Vibration-proof EX2: explosion protection (zones 2 + 22) SPG: Smart Process Gating

Note

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

Notes**Observe intended use!**

- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.