

## Technical data sheet Safety sensor/transmitter set

Part no.: 544030

MLC500T20-600-IP



For illustration purposes only

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## Technical data

### Basic data

Series	MLC 500
Device type	Transmitter
Contains	2x BT-IP swivel mount
Application	Hand protection

### Functions

### Characteristic parameters

Type	4, IEC/EN IEC 61496
SIL	3, IEC 61508
SIL	3, IEC/EN IEC 62061
Mission time $T_M$	, EN ISO 13849-1

### Protective field data

Resolution	20 mm
Protective field height	600 mm
Operating range	0 ... 4.8 m

### Optical data

Synchronization	Optical between transmitter and receiver
Light source	LED
LED risk group	Exempt group (in acc. with EN 62471:2008)

### Electrical data

#### Performance data

Supply voltage $U_B$	24 V, DC
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#### Inputs

##### Switching inputs

Type	Digital switching input
Voltage type	DC

### Connection

#### Connection 1

Type of connection	Cable with connector
Cable length	10,000 mm
Sheathing material	PVC
Thread size	M12
Material	Metal
No. of pins	5 -pin

#### Cable properties

Length of connection cable, max.	100 m
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### Mechanical data

Dimension ( $\varnothing$ x L)	52.5 mm x 800 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic / PMMA
Net weight	750 g

### 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
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### Environmental data

Ambient temperature, operation	0 ... 55 °C
Ambient temperature, storage	-30 ... 70 °C

### Certifications

Degree of protection	IP 65
	IP 66
	IP 67
	IP 69K
Approvals	c TÜV NRTL US
	c UL US
	TÜV Süd
US patents	US 6,418,546 B

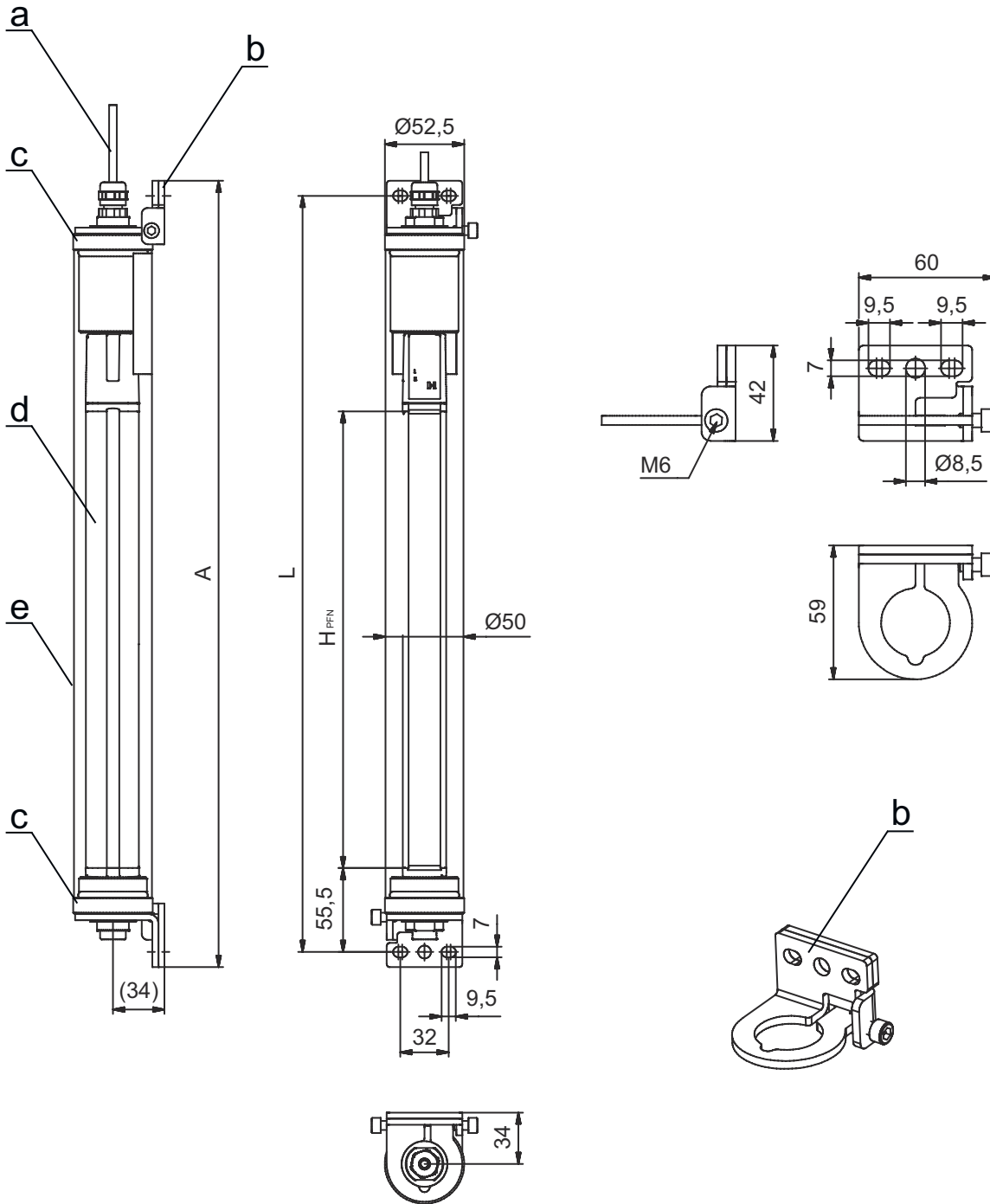
### Classification

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
ECLASS 16.0	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
UNSPSC 26.08	46171620

## 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

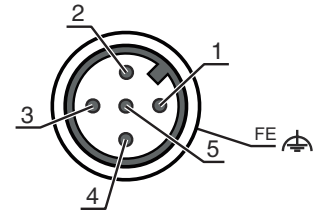
- A Total height incl. mounting brackets = 820 mm
- L Spacing of drilled holes for mounting brackets = 800 mm
- H<sub>PFN</sub> Effective protective field height = 600 mm

# Electrical connection

## Connection 1

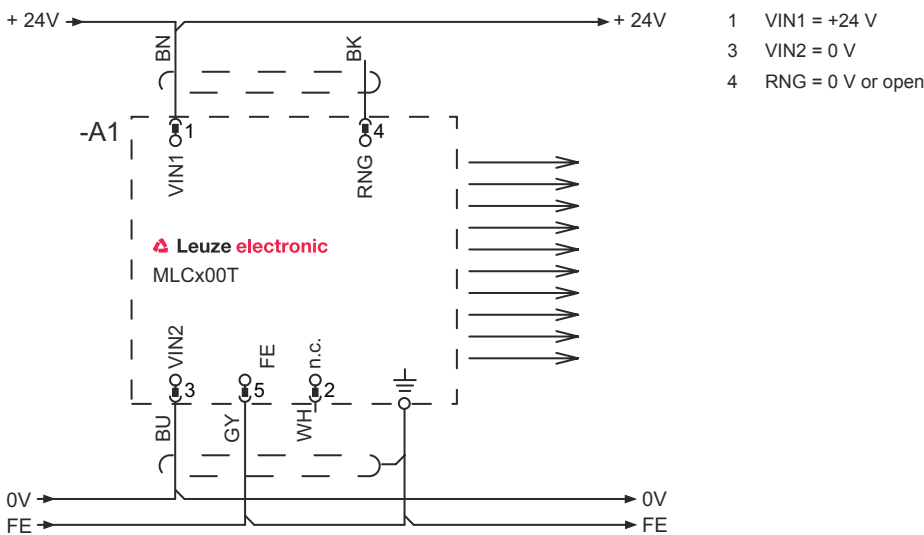
Type of connection	Cable with connector
Cable length	10,000 mm
Sheathing material	PVC
Thread size	M12
Material	Metal
No. of pins	5 -pin
Connector housing	FE/SHIELD

Pin	Pin assignment
1	VIN1
2	n.c.
3	VIN2
4	RNG
5	FE/SHIELD



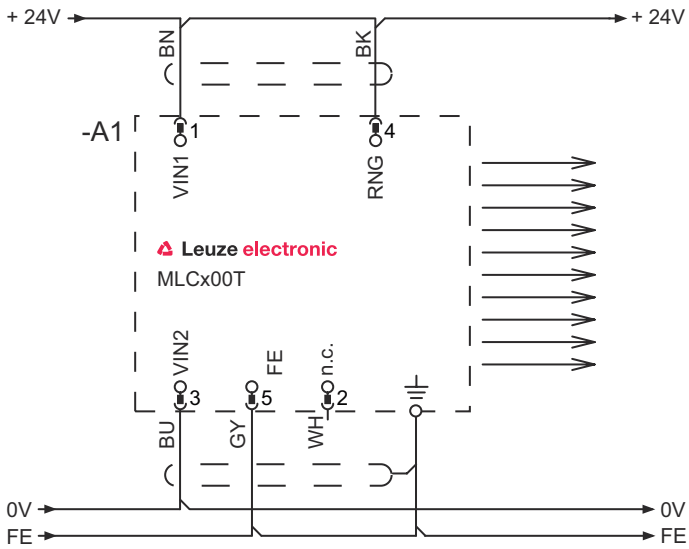
## Circuit diagrams

### Transmission channel C1, reduced range



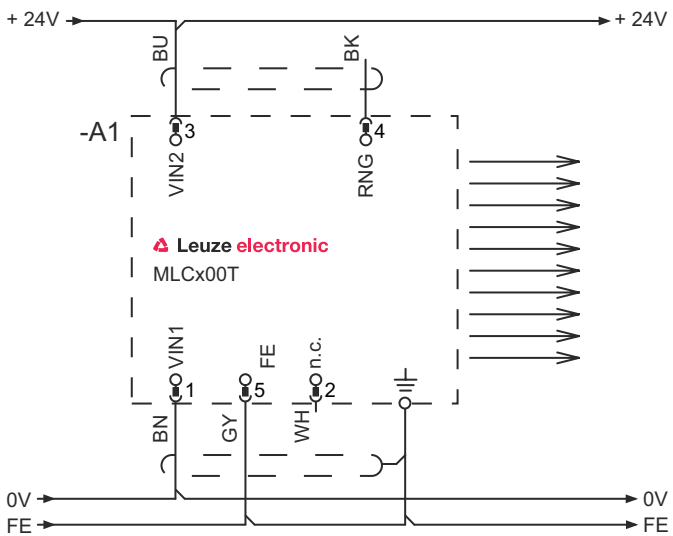
## Circuit diagrams

### Transmission channel C1, standard range



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

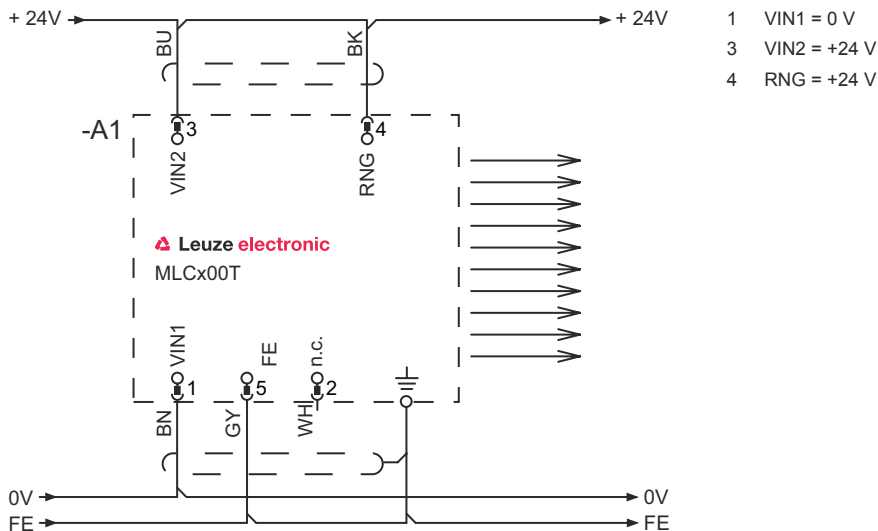
### Transmission channel C2, reduced range



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

## Circuit diagrams

### Transmission channel C2, standard range



## Operation and display

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

## Suitable receivers

Part no.	Designation	Article	Description
544031	MLC530R20-600-IP	Safety sensor/receiver set	Function package: Extended Resolution: 20 mm Protective field height: 600 mm Response time: 12 ms Connection: Cable with connector, M12, Metal, 8 -pin, 25.000 mm, PVC

## Part number code

Part designation: MLCxyy-za-hhhhei-ooo

MLC	Safety light curtain
x	<b>Series</b> 3: MLC 300 5: MLC 500
yy	<b>Function classes</b> 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 or gating 35: Extended receiver – Gating

## Part number code

### MLC Safety light curtain

<b>z</b>	<b>Device type</b> T: transmitter R: receiver
<b>a</b>	<b>Resolution</b> 14: 14 mm 20: 20 mm 30: 30 mm 40: 40 mm 90: 90 mm
<b>hhhh</b>	<b>Protective field height</b> 150 ... 3000: from 150 mm to 3000 mm
<b>e</b>	<b>Host/Guest (optional)</b> H: Host MG: Middle Guest G: Guest
<b>i</b>	<b>Interface (optional)</b> /A: AS-i
<b>ooo</b>	<b>Option</b> /V: high Vibration-proof EX2: explosion protection (zones 2 + 22) SPG: Smart Process Gating SPG RR: Smart Process Gating – Reduced resolution

#### Note



A list with all available device types can be found on the Leuze website at [www.leuze.com](http://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.

## Accessories

### 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.
	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.

## Accessories

### Note



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