## SMART SENSOR BUSINESS

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Part no.: 50120093 CML720i-R10-2880.R/L-M12 Light curtain receiver



Figure can vary

# Contents

- Technical data
- Dimensioned drawings
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### Part no.: 50120093 – CML720i-R10-2880.R/L-M12 – Light curtain receiver

#### **Technical data**

Series       720         Operating principle       Throughbeam principle         Device type       Receiver         Contains       Accessories for the use of the BT-2R1         Application       Object measurement         Special design       Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning         Operating range       Guaranteed operating range         Operating range       0.3 7 m         Operating range       0.0 10 mm         Measur	Basic data	
Operating principle         Throughbeam principle           Device type         Receiver           Contains         Accessories for the use of the BT-2R1           Application         Object measurement           Special design         Crossed-beam scanning           Special design         Crossed-beam scanning           Operating range         0.3 7 m           Operating range limit         Typical operating range           Operating range limit         0.2 9 m           Weasurement field length         2.88 Price(s)           Beam spacing         10 mm           Mumber of beams         288 Price(s)           Beam spacing         0 mm           Mumber of beams         2.80 mm           Verating range interversal protection         Could the second the seco		720
Device type Receiver Contains Accessories for the use of the BT-2R1 Application Object measurement  Special design Special design Crossed-beam scanning Diagonal-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Operating range Operating Operating range Operating range Operating Operating range Operating Operating Operating range Operating Ope		
Contains       Accessories for the use of the BT-2R1         Application       Object measurement         Special design       Crossed-beam scanning Diagonal-beam scanning         Special design       Crossed-beam scanning         Optical date       Operating range         Operating range       Guaranteed operating range         Operating range       0.3 7 m         Operating range       0.3 7 m         Operating range limit       Typical operating range         Operating range limit       0.2 9 m         Weasurement field length       2.88 Mm         Vumber of beams       288 Piece(s)         Beam spacing       10 mm         Measurement data       Minimum object diameter         Proference data       Specify reversal protection Strof circuit protected Transmith protection         Proference data       Specify reversal protection         Specify open-circuit current       0 60 MA, The specified values refer to the entire package con- sisting of transmitter and recoiver.         Ipputs/outputs selectable       0.00 D         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, inputs       DC         Switching voltage, outputs       DC         S		
Application     Object measurement       Special design     Crossed-beam scanning Diagonal-beam scanning       Optical data     Crossed-beam scanning       Optical data     Tm       Operating range limit     0.29 m       Measurement field length     2.80 mm       Number of beams     288 Piece(s)       Beam spacing     10 mm       Measurement data     Cross of the scanning       Minimum object diameter     20 mm       Electrical data     Protective circuit       Protective circuit     Polarity reversal protection Short circuit protection       Protective circuit     015 %Form Up       Open-circuit current     0		
Special design       Crossed hearn scanning         Depretating range       Guaranteed operating range         Operating range       0.37 m         Operating range       07 m         Measurement field length       2.880 mm         Number of beams       280 Proce(s)         Beam spacing       10 mm         Measurement field length       2.800 m         Supply voltage Us       1830 V, DC         Residual ripple       015 %, From Us         Open-circuit current       0600 mA, The specified values refer to the		
Special design       Crossed-heam scanning Diagonal-heam scanning         Optical data	Αρριτατίοη	Object measurement
Special design       Crossed-heam scanning Diagonal-heam scanning         Optical data	• · · · · ·	
Diagonal-beam scanning         Parallel-beam scanning         Operating range       Guaranteed operating range         Operating range       0.3 7 m         Operating range limit       0.2 9 m         Measurement field length       2.880 mm         Number of beams       288 Piece(s)         Beam spacing       10 mm         Measurement field length       2.800 mm         Minimum object diameter       20 mm         Electrical data       Protective circuit         Protective circuit       Polarity reversal protection Short circuit protected Transient protection         Quencircuit current       0 16 % , From Ug         Open-circuit current       0 600 m, The specified values refer to the entire package consisting of transmitter and receiver. <td></td> <td></td>		
Operating range         Guaranteed operating range           Operating range limit         Typical operating range           Operating range limit         0 2 9 m           Measurement field length         2.80 mm           Number of beams         288 Piece(s)           Beam spacing         10 mm           Measurement data	Special design	Diagonal-beam scanning
Operating range       0.3 7 m         Operating range limit       Typical operating range         Operating range limit       0.2 9 m         Measurement field length       2.80 mm         Number of beams       288 Piece(s)         Beam spacing       10 mm         Masurement data	Optical data	
Operating range limit       Typical operating range         Operating range limit       0.2 9 m         Weasurement field leigth       2,880 mm         Number of beams       288 Piece(s)         Beam spacing       10 mm         Minimum object diameter       20 mm         Electrical data          Protective circuit       Polarity reversal protection Short circuit protected Transient protection         Performance data          Supply voltage UB       18 30 V, DC         Residual ripple       0 15 %, From UB         Open-circuit current       0 600 mA, The specified values refer to the entire package con- sisting of transmitter and receiver.         Inputs/outputs selectable       4 Piece(s)         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, udputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       Input output 1         Activation/disable dela	Operating range	Guaranteed operating range
Operating range limit       0.2 9 m         Weasurement field length       2,880 mm         Number of beams       288 Piece(s)         Beam spacing       10 mm         Wessurement data	Operating range	0.3 7 m
Weasurement field length       2,880 mm         Number of beams       288 Piece(s)         Beam spacing       10 mm         Measurement data	Operating range limit	Typical operating range
Number of beams       288 Piece(s)         Beam spacing       10 mm         Measurement data       20 mm         Minimum object diameter       20 mm         Electrical data       Polarity reversal protection Short circuit protected Transient protection         Performance data       Polarity reversal protection         Supply voltage Us       18 30 V, DC         Residual ripple       0 15 %, From Us         Open-circuit current       0 600 πA, The specified values refer to the entire package con- sisting of transmitter and receiver.         Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       DC         Switching voltage, inputs       DC         Input/output 1       Activa	Operating range limit	0.2 9 m
Beam spacing 10 mm  Messurement data  Menimum object diameter 20 mm  Electrical data  Protective circuit  Petrormance data  Supply voltage Us 18 30 V , DC  Residual ripple 0 15 % , From Us Open-circuit current 0 600 mA , The specified values refer to the entire package consisting of transmitter and receiver.  Inputs/outputs selectable Output current, max. 100 mA Input resistance 6,000 Ω Number of inputs/outputs selectable 4 Piece(s) Type Inputs/outputs selectable 0C Switching voltage, inputs DC Switching voltage, inputs DC  Switching voltage, inputs DC  Switching voltage, inputs bigh: 26V Input/output 1 Activation/disable delay 0 1 ms  Timing Readiness delay 400 ms Cycle time 9,04 ms	Measurement field length	2,880 mm
Measurement data         Minimum object diameter       20 mm         Electrical data       Polarity reversal protection Short circuit protected Transient protection         Performance data       Supply voltage UB         Supply voltage UB       18 30 V , DC         Residual ripple       0 15 % , From UB         Open-circuit current       0 600 mA , The specified values refer to the entire package consisting of transmitter and receiver.         Inputs/outputs selectable       0 Utput current, max.         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       bits: 26V low: ≤4V         Input/output 1       C         Activation/disable delay       0 1 ms         Timing       400 ms         Cycle time       9.04 ms	Number of beams	288 Piece(s)
Minimum object diameter     20 mm       Electrical data     Polarity reversal protection Short circuit protected Transient protection       Performance data     Supply voltage Us       Supply voltage Us     18 30 V, DC       Residual ripple     0 15 %, From Us       Open-circuit current     0 600 mA, The specified values refer to the entire package con- sisting of transmitter and receiver.       Inputs/outputs selectable     100 mA       Output current, max.     100 mA       Input resistance     6,000 Ω       Number of inputs/outputs selectable     4 Piece(s)       Type     Inputs/outputs selectable       Voltage type, outputs     DC       Switching voltage, outputs     DC       Switching voltage, inputs     DC       Switching voltage, inputs     high: ≥6V low: ≤4V       Input/output 1     Activation/disable delay       Cycle time     9.04 ms	Beam spacing	10 mm
Minimum object diameter     20 mm       Electrical data     Polarity reversal protection Short circuit protected Transient protection       Performance data     Supply voltage Us       Supply voltage Us     18 30 V, DC       Residual ripple     0 15 %, From Us       Open-circuit current     0 600 mA, The specified values refer to the entire package con- sisting of transmitter and receiver.       Inputs/outputs selectable     100 mA       Output current, max.     100 mA       Input resistance     6,000 Ω       Number of inputs/outputs selectable     4 Piece(s)       Type     Inputs/outputs selectable       Voltage type, outputs     DC       Switching voltage, outputs     DC       Switching voltage, inputs     DC       Switching voltage, inputs     high: ≥6V low: ≤4V       Input/output 1     Activation/disable delay       Cycle time     9.04 ms		
Electrical data         Protective circuit       Polarity reversal protection Short circuit protected Transient protection         Performance data         Supply voltage UB       18 30 V , DC         Residual ripple       0 15 % , From UB         Open-circuit current       0 600 mA , The specified values refer to the entire package con- sisting of transmitter and receiver.         Inputs/outputs selectable       0 Utput current, max.         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       DC         Switching voltage, inputs       DC         Switching voltage delay       0 1 ms         Input/output 1       Activation/disable delay         Activation/disable delay       400 ms         Cycle time       9.04 ms	Measurement data	
Protective circuit       Polarity reversal protection Short circuit protected Transient protection         Performance data         Supply voltage UB       18 30 V , DC         Residual ripple       0 15 % , From UB         Open-circuit current       0 600 mA , The specified values refer to the entire package con- sisting of transmitter and receiver.         Inputs/outputs selectable       0         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, ouputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Input/output 1       Input/output 1         Activation/disable delay       0 1 ms         Timing       2000 ms         Cycle time       9.04 ms	Minimum object diameter	20 mm
Supply voltage UB       18 30 V, DC         Residual ripple       0 15 %, From UB         Open-circuit current       0 600 mA , The specified values refer to the entire package consisting of transmitter and receiver. <i>Inputs/outputs selectable</i> 0 mA         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       DC         Switching voltage, inputs       Nome         Cycle time       9.04 ms	Protective circuit	Short circuit protected
Residual ripple       0 15 % , From UB         Open-circuit current       0 600 mA , The specified values refer to the entire package consisting of transmitter and receiver.         Inputs/outputs selectable       0 Utput current, max.         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       DC         Switching voltage, inputs       0 1 ms         Input/output 1       Activation/disable delay         Activation/disable delay       0 1 ms         Cycle time       9.04 ms	Performance data	
Open-circuit current       0 600 mA , The specified values refer to the entire package consisting of transmitter and receiver.         Inputs/outputs selectable       00 mA         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Input/output 1          Activation/disable delay       0 1 ms         Timing       400 ms         Cycle time       9.04 ms	Supply voltage UB	18 30 V , DC
isisting of transmitter and receiver.         Inputs/outputs selectable         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       DC         Switching voltage, inputs       bigh: ≥6V low: ≤4V         Input/output 1	Residual ripple	0 15 % , From U <sub>B</sub>
Output current, max.100 mAInput resistance $6,000 \Omega$ Number of inputs/outputs selectable $4 \text{ Piece(s)}$ TypeInputs/outputs selectableVoltage type, outputsDCSwitching voltage, outputsTyp. UB / 0 VVoltage type, inputsDCSwitching voltage, inputsDCSwitching voltage, inputsDCSwitching voltage, inputsDCSwitching voltage, inputsDCSwitching voltage, inputsDCSwitching voltage, inputs0 1 msTimingReadiness delay400 msCycle time9.04 ms	Open-circuit current	
Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       Typ. UB / 0 V         Voltage type, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Input/output 1       Activation/disable delay         Activation/disable delay       0 1 ms	Inputs/outputs selectable	
Number of inputs/outputs selectable       4 Piece(s)         Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       Typ. U <sub>B</sub> / 0 V         Voltage type, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       high: ≥6V low: ≤4V         Input/output 1	Output current, max.	100 mA
Type       Inputs/outputs selectable         Voltage type, outputs       DC         Switching voltage, outputs       Typ. U <sub>B</sub> / 0 V         Voltage type, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Input/output 1       Input/output 1         Activation/disable delay       0 1 ms         Timing         Readiness delay       400 ms         Cycle time       9.04 ms	Input resistance	6,000 Ω
Voltage type, outputs     DC       Switching voltage, outputs     Typ. U <sub>B</sub> / 0 V       Voltage type, inputs     DC       Switching voltage, inputs     DC       Switching voltage, inputs     high: ≥6V low: ≤4V       Input/output 1     0 1 ms       Activation/disable delay     0 1 ms	Number of inputs/outputs selectable	4 Piece(s)
Switching voltage, outputs     Typ. U <sub>B</sub> / 0 V       Voltage type, inputs     DC       Switching voltage, inputs     high: ≥6V low: ≤4V       Input/output 1     0 1 ms       Activation/disable delay     0 1 ms       Timing     400 ms       Cycle time     9.04 ms	Туре	Inputs/outputs selectable
Voltage type, inputs     DC       Switching voltage, inputs     high: ≥6V low: ≤4V       Input/output 1       Activation/disable delay     0 1 ms	Voltage type, outputs	DC
Switching voltage, inputs       high: ≥6V low: ≤4V         Input/output 1         Activation/disable delay       0 1 ms         Timing         Readiness delay       400 ms         Cycle time       9.04 ms	Switching voltage, outputs	Typ. U <sub>B</sub> / 0 V
Input/output 1       Activation/disable delay       0 1 ms	Voltage type, inputs	DC
Input/output 1         Activation/disable delay       0 1 ms         Timing         Readiness delay       400 ms         Cycle time       9.04 ms	Switching voltage, inputs	
Timing       Readiness delay     400 ms       Cycle time     9.04 ms	Input/output 1	
Readiness delay     400 ms       Cycle time     9.04 ms	Activation/disable delay	0 1 ms
Readiness delay     400 ms       Cycle time     9.04 ms	Timing	
Cycle time 9.04 ms	-	400 ms

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## Part no.: 50120093 – CML720i-R10-2880.R/L-M12 – Light curtain receiver

Interface				
Туре	IO-Link			
IO-Link	001/0			
COM mode	COM2			
Specification	V1.0.1 V1.1			
Min. cycle time	COM2 = 2.3 ms			
Service interface				
Туре	IO-Link			
IO-Link				
Function	Configuration via software			
T difetion	Service			
Connection				
Number of connections	2 Piece(s)			
Plug outlet	Rear side			
Connection 1				
Function	Configuration interface Signal IN Signal OUT Voltage supply			
Type of connection	Connector			
Thread size	M12			
Туре	Male			
Material	Metal			
No. of pins	8 -pin			
Encoding	A-coded			
Connection 2				
Function	Connection to transmitter			
Type of connection	Connector			
Thread size	M12			
Туре	Female			
Material	Metal			
No. of pins	5 -pin			
Encoding	A-coded			
Mechanical data				
Design	Cubic			
Dimension (W x H x L)	29 mm x 35.4 mm x 2,903 mm			
Housing material	Metal , Aluminum			
Lens cover material	Plastic			
Net weight	2,950 g			
Housing color	Silver			
Type of fastening	Groove mounting Via optional mounting device			
Operation and display				
Type of display	LED OLED display			
Number of LEDs	2 Piece(s)			

## Part no.: 50120093 – CML720i-R10-2880.R/L-M12 – Light curtain receiver

Type of configuration	Software			
	Teach-in			
Operational controls	Membrane keyboard			
Environmental data				
Ambient temperature, operation	-30 60 °C			
Ambient temperature, storage	-40 70 °C			
Certifications				
Degree of protection	IP 65			
Protection class	III			
Certifications	c CSA US			
Standards applied	IEC 60947-5-2			
Classification				
Customs tariff number	90314990			
eCl@ss 8.0	27270910			
eCl@ss 9.0	27270910			
ETIM 5.0	EC002549	EC002549		

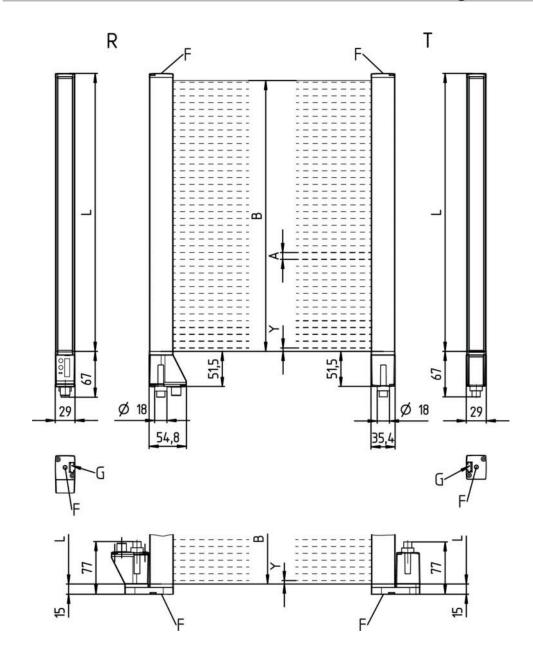
EC002549

#### **Dimensioned drawings**

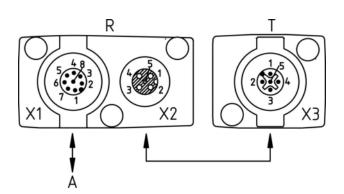
All dimensions in millimeters

ETIM 6.0

Part no.: 50120093 – CML720i-R10-2880.R/L-M12 – Light curtain receiver



- A Beam spacing 10 mm B Measurement field length 2880 mm
- F M6 thread
- G Fastening groove L Profile length 2888 mm
- T Transmitter
- R Receiver
- Y 5 mm



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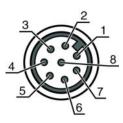
### Part no.: 50120093 – CML720i-R10-2880.R/L-M12 – Light curtain receiver

A PWR / SW IN/OUT

### **Electrical connection**

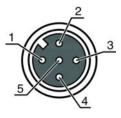
Connection 1		
Function	Configuration interface Signal IN Signal OUT Voltage supply	
Type of connection	Connector	
Thread size	M12	
Туре	Male	
Material	Metal	
No. of pins	8 -pin	
Encoding	A-coded	

Pin	Pin assignment
1	V+
2	101
3	GND
4	IO-Link
5	102
6	103
7	IO4
8	GND



Connection 2	
Function	Connection to transmitter
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment
1	FE/SHIELD
2	V+
3	GND
4	RS 485 Tx+
5	RS 485 Tx-



## Part no.: 50120093 - CML720i-R10-2880.R/L-M12 - Light curtain receiver

#### **Operation and display**

#### LEDs

LED	Display	Meaning
1	Green, continuous light	Operational readiness
	Green, flashing	Teach / error
		Measurement frequency display
2	Yellow, continuous light	Light path free, with function reserve
	Yellow, flashing	No function reserve
	Off	Object detected

#### Suitable transmitters

Part no.	Designation	Article	Description
50119504	CML720i- T10-2880.R-M12	Light curtain transmitter	Operating range: 0.3 6 m Connection: Connector, M12, Rear side, 5 -pin

#### Part number code

#### Part designation: CML7XXi-YZZ-AAAA.BCCCDDD-EEEFFF

CML	Operating principle: Measuring light curtain			
7XXi	Series: 720i: 720i series 730i: 730i series			
Y	Device type: T: transmitter R: receiver			
ZZ	Beam spacing: 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm			
AAAA	Measurement field length [mm], dependent on beam spacing			
В	Equipment: A: connector outlet, axial R: rear connector outlet			
CCC	Interface: L: IO-Link /CN: CANopen /PB: PROFIBUS /PN: PROFINET /CV: Analog current and voltage output /D3: RS 485 Modbus			
DDD	Special equipment: -PS: Power Setting			
EEE	Electrical connection: M12: M12 connector			
FFF	-EX: Explosion protection:			

#### Note

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

#### Part no.: 50120093 – CML720i-R10-2880.R/L-M12 – Light curtain receiver

#### Notes

Observe intended use!

- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

#### For UL applications:

• For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).

 These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)

### Accessories

### Connection technology - Connection cables

	Part no.	Designation	Article	Description
50		KD S-M12-8A- P1-050		Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

### Connection technology - Interconnection cables

Part no.	Designation	Article	Description
50129781	KDS DN-M12-5A- M12-5A-P3-050	Interconnection cable	Suitable for interface: IO-Link, DeviceNet, CANopen Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

## Mounting technology - Mounting brackets

Part no.	Designation	Article	Description
50142900	BT 700M.5-2SET	Mounting device set	Contains: 2x mounting brackets, 1 teach template, 4 M6 x 10 screws Design of mounting device: Bracket mounting Fastening, at system: Through-hole mounting, T slotted hole Mounting bracket, at device: Screw type, Sliding block Type of mounting device: Rigid Material: Steel

## Part no.: 50120093 – CML720i-R10-2880.R/L-M12 – Light curtain receiver

## Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
ęł.	429046	BT-2R1	Mounting bracket set	Contains: 2x BT-R swivel mount, 1 cylinder for mounting on the light curtain Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

Part no.	Designation	Article	Description
50121098	SET MD12-US2-IL1.1 + Zub.		Interface: USB Connections: 2 Piece(s) Degree of protection: IP 20

#### Services

Part no.	Designation	Article	Description
S981001	CS10-S-110	Start-up support	Details: Performed at location of customer's choosing, duration: max. 10 hours. Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses. Restrictions: No mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment.
S981005	CS10-T-110	Product training	Details: Location and content to be agreed upon, duration: max. 10 hours. Conditions: Price not including travel costs and, if applicable, accommodation expenses. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.

#### Note

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