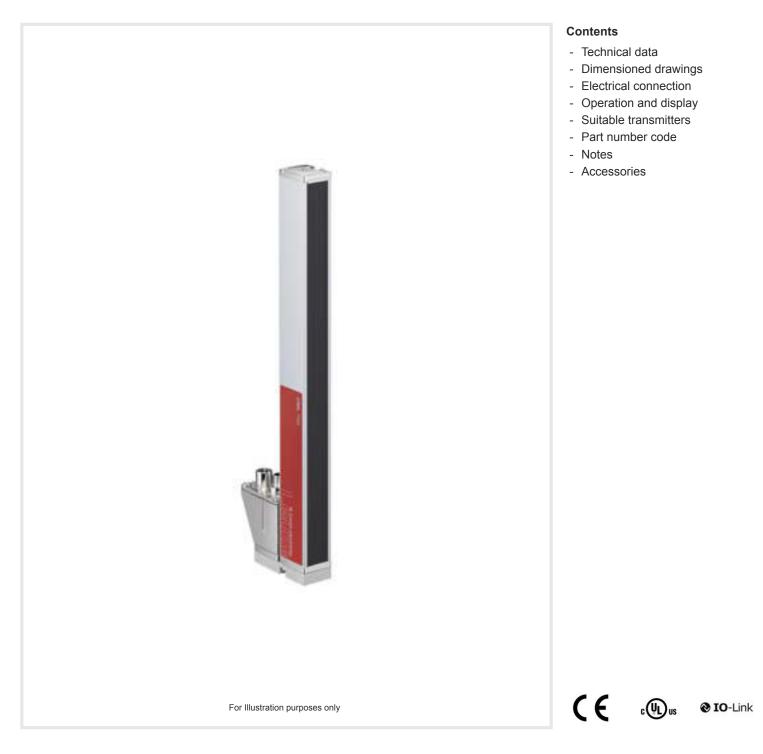
Technical data sheet Light curtain receiver Part no.: 50119990 CML720i-R05-480.R/L-M12



Leuze

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Technical data

eries	720
perating principle	Throughbeam principle
evice type	Receiver
ontains	Accessories for the use of the BT-2R1
pplication	Object measurement
pecial version	
pecial version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
Optical data	
perating range	0.1 3.5 m
perating range	Guaranteed operating range
perating range limit	0.1 4.5 m
	Typical operating range
perating range limit leasurement field length	480 mm
Ű	
lumber of beams	96 Piece(s)
Beam spacing	5 mm
leasurement data	
linimum object diameter	10 mm
lectrical data	
rotective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data	
Supply voltage U _B	18 30 V, DC
Residual ripple	0 15 %, From U _B
Open-circuit current	0 165 mA, The specified values refer to the entire package consisting of trans mitter and receiver.
Inputs/outputs selectable Output current, max.	100 mA
Input resistance	6,000 Ω
Number of inputs/outputs selectable	
Type	Inputs/outputs selectable
Voltage type, outputs	DC
Switching voltage, outputs	Typ. U _B / 0 V
Voltage type, inputs	DC
	DC high: ≥6V
Voltage type, inputs	DC
Voltage type, inputs Switching voltage, inputs	DC high: ≥6V
Voltage type, inputs Switching voltage, inputs Input/output 1	DC high: ≥6V low: ≤ 4 V
Voltage type, inputs Switching voltage, inputs	DC high: ≥6V
Voltage type, inputs Switching voltage, inputs Input/output 1	DC high: ≥6V low: ≤ 4 V
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	DC high: ≥6V low: ≤ 4 V
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	DC high: ≥6V low: ≤ 4 V 0 1 ms
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay	DC high: ≥6V low: ≤ 4 V 0 1 ms
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay ime behavior teadiness delay tycle time	DC high: ≥6V low: ≤ 4 V 0 1 ms 400 ms 3.28 ms

IO-Link	
COM mode	COM2
Min. cycle time	COM2 = 2.3 ms
Specification	V1.0.1
	V1.1
Service interface	
уре	IO-Link
IO-Link	
Function	Configuration via software
	Service
Connection	
lumber 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	Connection to transmitter
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded
Liteoung	A-coueu
lechanical data	
Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 503 mm
lousing material	Metal
letal housing	Aluminum
ens cover material	Plastic
let weight	750 g
lousing color	Silver
ype of fastening	Groove mounting Via optional mounting device
	via optional mounting device
Operation and display	
ype of display	LED
lumber of LEDe	OLED display
lumber of LEDs	2 Piece(s)
ype of configuration	Software
Operational controls	Teach-in Membrane keyboard
-	Memorane Reybuard
Environmental data	
mbient temperature, operation	-30 60 °C
mbient temperature, storage	-40 70 °C

Technical data

Certifications

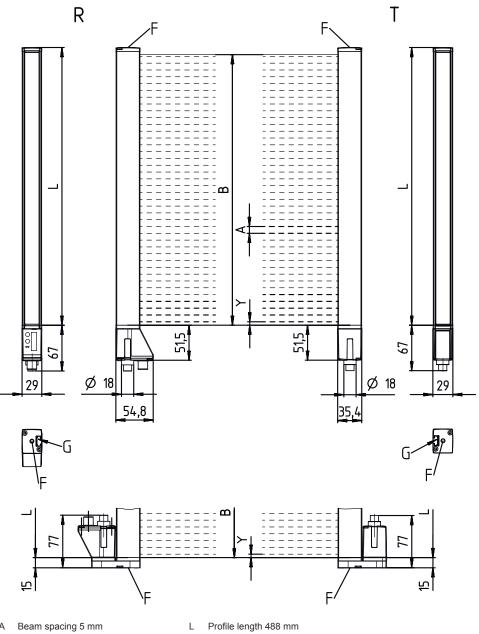
Degree of protection	IP 65
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	90314990
ECLASS 5.1.4	27270910
ECLASS 8.0	27270910
ECLASS 9.0	27270910
ECLASS 10.0	27270910
ECLASS 11.0	27270910
ECLASS 12.0	27270910
ECLASS 13.0	27270910
ECLASS 14.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549

Dimensioned drawings

All dimensions in millimeters



Beam spacing 5 mm А

Fastening groove

- В Measurement field length 480 mm
- F M6 thread

G

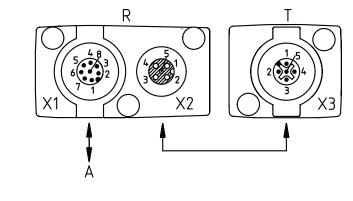
- R Receiver
 - Υ 2.5 mm

Т

Transmitter

Dimensioned drawings





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 IO1 3 GND 4 IO-Link 5 IO2 6 IO3 7 IO4		
3 GND 4 IO-Link 5 IO2 6 IO3	1	V+
4 IO-Link 5 IO2 6 IO3	2	IO1
5 IO2 6 IO3	3	GND
6 IO3	4	IO-Link
	5	IO2
7 104	6	IO3
1 104	7	IO4
8 GND	8	GND



Connection 2

Connection to transmitter
Connector
M12
Female
Metal
5 -pin
A-coded

Pin Pin assignment

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



Operation and display

LED	Display	Meaning
1	Green, continuous light	Operational readiness
	Green, flashing	Teach / error
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
50119454	CML720i-T05-480.R- M12	Light curtain transmitter	Operating range: 0.1 3.5 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	
22	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: Axial connector outlet 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		

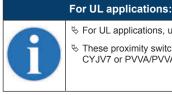
Notes

Observe intended use!

✤ This product is not a safety sensor and is not intended as personnel protection.

b The product may only be put into operation by competent persons.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$ Only use the product in accordance with its intended use.



b 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 unit

	Part no.	Designation	Article	Description
C. LEATING	50144900	MD 798i-11-82/L5- 2222	IO-Link master	Type: IO-Link master Current consumption, max.: 11,000 mA Switching outputs for each sensor connection: 1 Piece(s) Switching output: Transistor, PNP Interface: IO-Link, Automatic protocol detection, EtherNet IP, Modbus TCP, PROFINET Connections: 12 Piece(s) Sensor connections: 8 Piece(s) Connections for voltage supply: 2 Piece(s) Interface connections: 2 Piece(s) Degree of protection: IP 67, IP 65, IP 69K

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135128	KD S-M12-8A-P1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connector, LED: No 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: 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

Accessories

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Mounting technology - Mounting brackets

 Part no.	Designation	Article	Description
 50142900	BT 700M.5-2SET	Mounting device set	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

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
ęę.	429029	BT-2RG	Mounting bracket set	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

Configuration devices

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

Services

	Part no.	Designation	Article	Description
y; U	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.
	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.

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