

Technical data sheet Light curtain receiver Part no.: 50119833 CML720i-R10-160.A/CV-M12



Leuze electronic Gmb

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Technical data

Basic data

Basic data			
Series	720		
Operating principle	Throughbeam principle		
Device type	Receiver		
Contains	2x BT-NC sliding block		
Application	Object measurement		
Special version			
Special version	Crossed-beam scanning		
	Diagonal-beam scanning		
	Parallel-beam scanning		
Optical data			
•			
Operating range	Guaranteed operating range		
Operating range	0.3 7 m		
Operating range limit	Typical operating range		
Operating range limit	0.2 9 m		
Measurement field length	160 mm		
Number of beams	16 Piece(s)		
Beam spacing	10 mm		
Measurement data			
Minimum object diameter	20 mm		
Electrical data			
Protective circuit	Polarity reversal protection		
	Short circuit protected		
	Transient protection		
Derformence data			
Performance data Supply voltage U _B	18 30 V, DC		
Residual ripple	0 15 %, From U _R		
Open-circuit current	$0 \dots 135 \text{ mA}$, The specified values refer		
	to the entire package consisting of trans- mitter and receiver.		
Outputs			
Number of analog outputs	2 Piece(s)		
Analog outputs			
Analog outputs Current	0 24 mA		
Voltage	0 11 V		
vonage	0		
Analog output 1			
Туре	Voltage		
Analog output 2			
Туре	Current		
Inputs/outputs selectable	100 1		
Output current, max.	100 mA		
Input resistance	6,000 Ω		
Number of inputs/outputs selectable			
Туре	Inputs/outputs selectable		
Voltage type, outputs	DC		
Switching voltage, outputs	Typ. U _B / 0 V		
Voltage type, inputs	DC		
Switching voltage, inputs	high: ≥6V		
	low: ≤4V		

Input/output 1	
Activation/disable delay	1 ms
Timing	
Readiness delay	450 ms
Cycle time	1 ms
Response time per beam	30 µs
Service interface	
Туре	IO-Link
IO-Link	
Function	Configuration via software
	Service
Connection	
Number of connections	2 Piece(s)
Plug outlet	Axial
Connection 1	
Function	Configuration interface
	Signal IN
	Signal OUT
Turns of commention	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 235 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	350 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)
Type of configuration	Software Teach-in
Operational controls	Membrane keyboard

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Technical data

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Environmental data

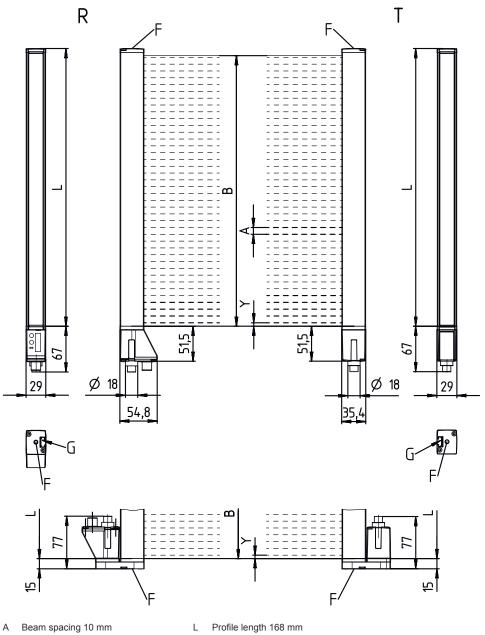
Ambient temperature, operation	-30 60 °C	
Ambient temperature, storage	-40 70 °C	
Certifications		
Degree of protection	IP 65	
Protection class	IP 65 III	
U		
Protection class	III	

Classification

90314990
27270910
27270910
27270910
27270910
27270910
EC002549
EC002549
EC002549

Dimensioned drawings

All dimensions in millimeters



В

Fastening groove

- Measurement field length 160 mm
- F M6 thread

G

R Receiver

Т

Υ 5 mm

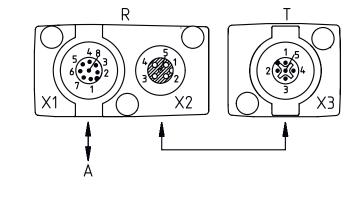
Transmitter



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Dimensioned drawings





A PWR / SW IN / OUT

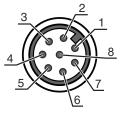
Electrical connection

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	I/O 1		
3	GND		
4	IO-Link		
5	I/O 2		
6	OUT V		
7	OUT mA		
8	AGND		



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-



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
50119405	CML720i-T10-160.A- M12	Light curtain transmitter	Operating range: 0.3 6 m Connection: Connector, M12, Axial, 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: 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	th all available device types can be found on the Leuze website at www.leuze.com.

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Notes

Observe intended use!

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

 ${\ensuremath{\,\textcircled{\tiny \ensuremath{\,\Downarrow}}}}$ The product may only be put into operation by competent persons.

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

	For UL applications:
A	 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
	50135128	KD S-M12-8A-P1-050	Connection cable	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
1 + 1 + + + + + + + + + + + + + + + + +	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

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Accessories



Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
ęę.	429046	BT-2R1	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. 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

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