



Figure can vary

Part no.: 50126371
CML720i-R20-130.A/CN-M12-EX
Light curtain receiver



Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Operation and display
- Suitable transmitters
- Part number code
- Notes
- Accessories

Technical data

Basic data	
Series	720
Operating principle	Throughbeam principle
Device type	Receiver
Contains	2x BT-NC sliding block
Application	Object measurement
Special design	
Special design	Crossed-beam scanning Diagonal-beam scanning Ex-protected 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	130 mm
Number of beams	7 Piece(s)
Beam spacing	20 mm
Measurement data	
Minimum object diameter	30 mm
Electrical data	
Protective 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 ... 135 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	2 Piece(s)
Voltage type, outputs	DC
Switching voltage, outputs	Typ. $U_B / 0$ V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥ 6 V low: ≤ 4 V
Input/output 1	
Activation/disable delay	1 ms
Timing	
Readiness delay	450 ms
Cycle time	1 ms
Response time per beam	30 μ s

Interface	
Type	IO-Link , CANopen
IO-Link	
COM mode	COM2
Specification	V1.0.1 V1.1
CANopen	
Function	Process
Connection	
Number of connections	2 Piece(s)
Plug outlet	Axial
Connection 1	
Type of connection	Connector
Function	Configuration interface Connection to transmitter Signal IN Signal OUT Voltage supply
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded
Connection 2	
Type of connection	Connector
Function	BUS IN BUS OUT
Thread size	M12
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded
Mechanical data	
Design	Cubic
Dimension (W x H x L)	30.7 mm x 54.8 mm x 183 mm
Housing material	Metal , Aluminum
Lens cover material	Plastic
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
Operational controls	Membrane keyboard
Environmental data	
Ambient temperature, operation	-30 ... 60 °C

Part no.: 50126371 – CML720i-R20-130.A/CN-M12-EX – Light curtain receiver

Ambient temperature, storage	-40 ... 70 °C
------------------------------	---------------

Ex specification

Ex-zone	2 22
Ex device group	II

Certifications

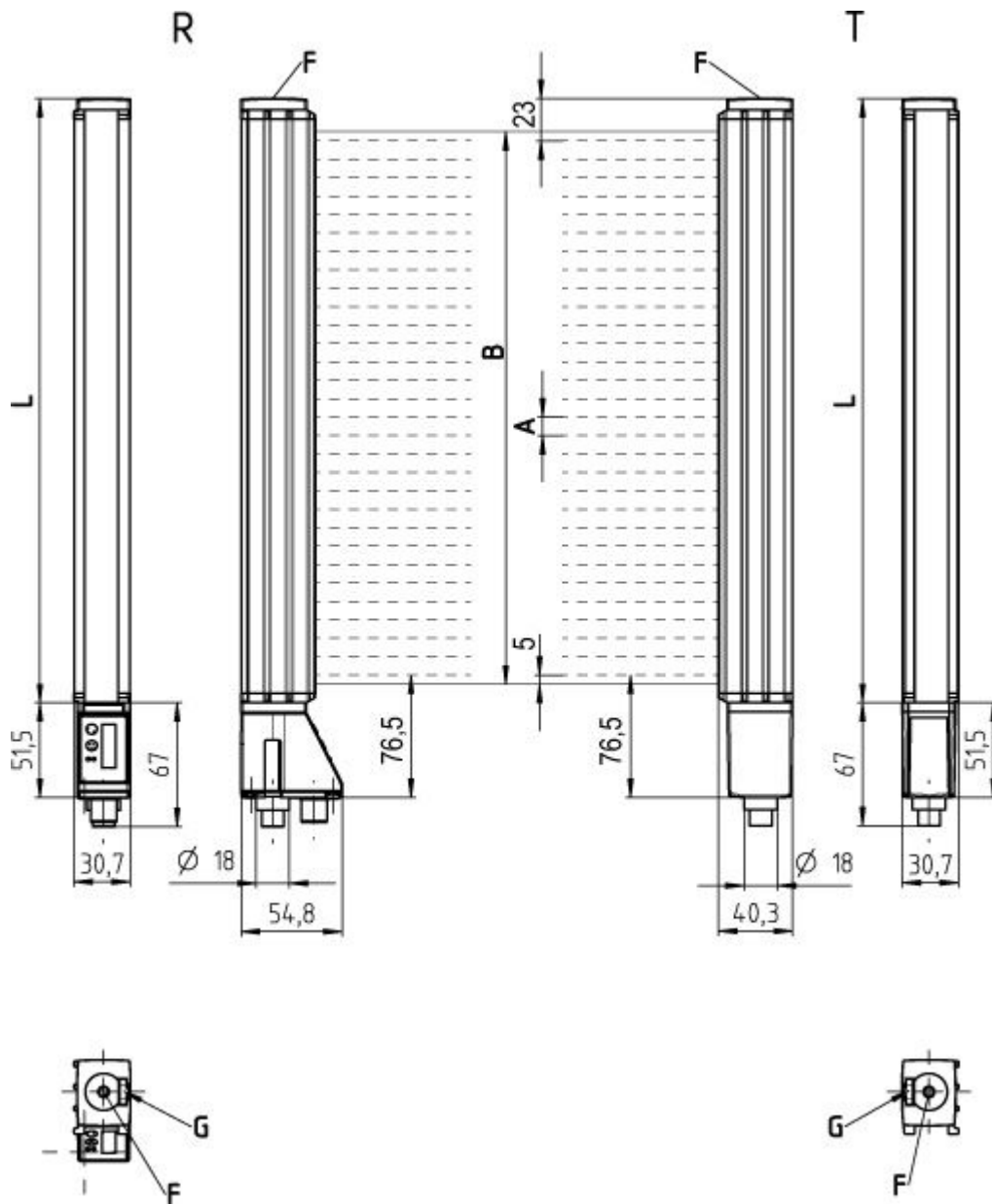
Degree of protection	IP 65
Protection class	III
Standards applied	IEC 60947-5-2

Classification

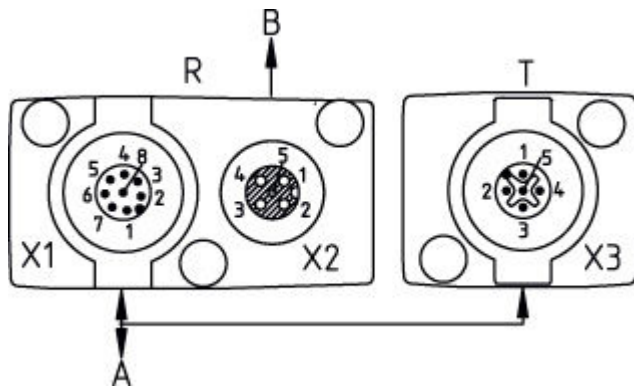
Customs tariff number	90314990
eCl@ss 8.0	27270910
eCl@ss 9.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549

Dimensioned drawings

All dimensions in millimeters



- A Beam spacing 20 mm
- B Measurement field length 130 mm
- F M6 thread
- G Fastening groove
- L Profile length 168 mm
- T Transmitter
- R Receiver

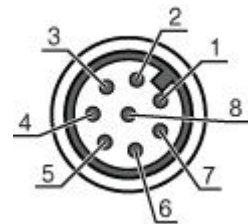


A PWR / SW IN/OUT
B BUS IN / OUT

Electrical connection

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

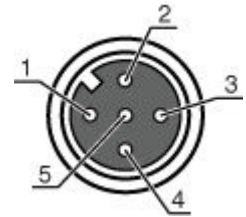
Pin	Pin assignment
1	V+
2	I/O 1
3	GND
4	IO-Link
5	I/O 2
6	RS 485 Tx-
7	RS 485 Tx+
8	FE/SHIELD



Connection 2	
Type of connection	Connector
Function	BUS IN BUS OUT
Thread size	M12
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Part no.: 50126371 – CML720i-R20-130.A/CN-M12-EX – Light curtain receiver

Pin	Pin assignment
1	FE/SHIELD
2	n.c.
3	CAN GND
4	CAN H
5	CAN L




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
	50126402	CML720i-T20-130.A-M12-EX	Light curtain transmitter	Operating range: 0.3 ... 6 m Connection: Connector, M12, Axial, 5 -pin

Part number code

Part designation: CML7XXi-YYZ-AAAA.BCCDDDD-EEEEFF

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
B	Equipment: A: connector outlet, axial R: rear connector outlet

Part no.: 50126371 – CML720i-R20-130.A/CN-M12-EX – Light curtain receiver

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.

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)

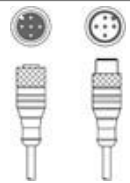
Accessories

Connection technology - Connection cables

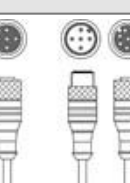
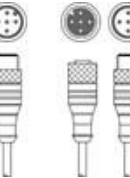
	Part no.	Designation	Article	Description
	50132079	KD U-M12-5A-V1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5-pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

Part no.: 50126371 – CML720i-R20-130.A/CN-M12-EX – Light curtain receiver


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


Connection technology - Y distribution cables

	Part no.	Designation	Article	Description
	50118183	K-Y1 M12A-5m-M12A-S-PUR	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Female, A-coded, 8 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 150 mm Sheathing material: PUR
	50118185	K-YCN M12A-M12A-S-PUR	Interconnection cable	Suitable for interface: CANopen Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length fork 1: 250 mm Cable length fork 2: 350 mm Sheathing material: PUR


Connection technology - Terminating resistors

	Part no.	Designation	Article	Description
	50040099	TS 01-5-SA	Terminator plug	Suitable for: DeviceNet, CANopen Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin Function: Bus termination



Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
	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

General

	Part no.	Designation	Article	Description
	50109217	K-V M12-Ex	Safety locking device	Housing material: Plastic, PA

Services

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