Leuze

Technical data sheet Light curtain receiver Part no.: 50119643 CML720i-R10-160.A/CN-M12



The Sensor People In der Braike 1, 73277 Owen

Leuze electronic GmbH + Co. KG info@leuze.com • www.leuze.com

Phone: +49 7021 573-0 • Fax: +49 7021 573-199

Technical data

Leuze

Series	720
Operating principle Device type	Throughbeam principle Receiver
Contains	2x BT-NC sliding block
pplication	Object measurement
pecial version	
pecial version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
Optical data	
perating range	Guaranteed operating range
Derating range	0.3 7 m
perating range limit	Typical operating range
perating range limit	0.2 9 m
leasurement field length	160 mm
umber of beams	16 Piece(s)
eam spacing	10 mm
leasurement data	
	20 mm
linimum object diameter	20 11111
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	0 135 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.
Inputo/outputo coloctoble	
Inputs/outputs selectable 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	Тур. U _в / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V
	low: ≤4V
Input/output 1	1
Activation/disable delay	1 ms
ïming	
	450 ms
-	
ycle time	1 ms
Readiness delay Cycle time Response time per beam	1 ms 30 µs
ycle time	
ycle time esponse time per beam	
ycle time esponse time per beam Iterface	30 µs

S	ervice interface			
Туре		IO-Link		
	IO-Link			
	Function	Configuration via software Service		
С	onnection			
N	umber of connections	2 Piece(s)		
ΡI	ug outlet	Axial		
	Connection 1			
	Function	Configuration interface		
		Connection to transmitter		
		Signal IN		
		Signal OUT		
	Type of connection	Voltage supply Connector		
	Thread size	M12		
	Type	Male		
	Material	Metal		
	No. of pins	8 -pin		
	Encoding	A-coded		
	Encounig	A-coded		
	Connection 2			
	Function	BUS IN		
		BUS OUT		
	Type of connection	Connector		
	Thread size	M12		
	Туре	Female		
	Material	Metal		
	No. of pins	5 -pin		
	Encoding	A-coded		
М	echanical data			
De	esign	Cubic		
Di	mension (W x H x L)	29 mm x 35.4 mm x 235 mm		
He	ousing material	Metal		
М	etal housing	Aluminum		
Le	ens cover material	Plastic		
Ne	et weight	350 g		
	ousing color	Silver		
Ту	pe of fastening	Groove mounting		
		Via optional mounting device		
0	peration and display			
Ту	vpe of display	LED		
-		OLED display		
N	umber of LEDs	2 Piece(s)		
Ту	pe of configuration	Software		
		Teach-in		
0	perational controls	Membrane keyboard		
E	nvironmental data			
A	mbient temperature, operation	-30 60 °C		
	mbient temperature, storage	-40 70 °C		

Technical data

Leuze

Certifications

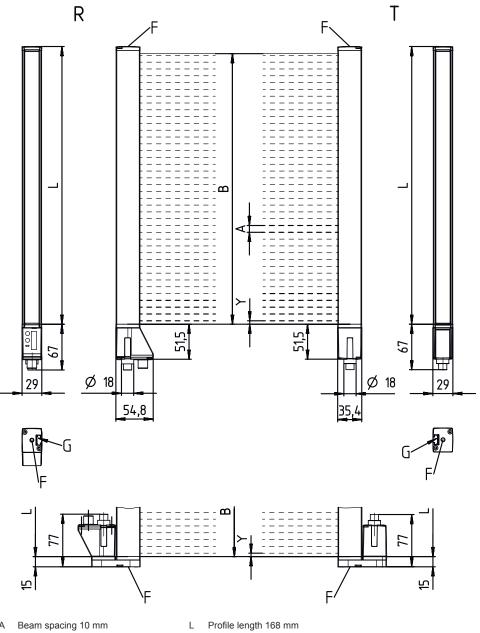
Degree of protection	IP 65
Protection class	III
Certifications	c CSA US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	90314990
eCl@ss 5.1.4	27270910
eCl@ss 8.0	27270910
eCl@ss 9.0	27270910
eCl@ss 10.0	27270910
eCl@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

Dimensioned drawings

All dimensions in millimeters



Beam spacing 10 mm А

- В Measurement field length 160 mm
- F M6 thread G Fastening groove

Т Transmitter R Receiver

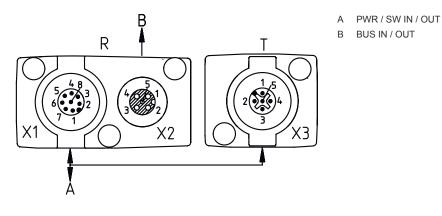
Υ 5 mm

Leuze electronic GmbH + Co. KG info@leuze.com • www.leuze.com The Sensor People In der Braike 1, 73277 Owen Phone: +49 7021 573-0 • Fax: +49 7021 573-199



Dimensioned drawings





Electrical connection

Connection 1

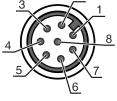
Function	Configuration interface
	Connection to transmitter
	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Туре	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

Pin Pin assignment

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



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



Electrical connection

Pin	Pin assignment	$-\frac{2}{2}$
1	FE/SHIELD	1
2	n.c.	
3	CAN GND	
4	CAN H	
5	CAN L	

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

6/9

Leuze

Part number code



DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
	Note
A	✤ A list with all available device types can be found on the Leuze 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

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

Accessories

Leuze

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 - Mounting brackets

	Part no.	Designation	Article	Description
1.1. 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

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

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.

Accessories

Leuze

 Part no.	Designation	Article	Description
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
6	Note: A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.

 Leuze electronic GmbH + Co. KG
 info@leuze.com • www.leuze.com
 We reserve the right to make technical changes

 The Sensor People
 In der Braike 1, 73277 Owen
 info@leuze.com • www.leuze.com
 were electronic GmbH + Co. KG
 eng • 2020-12-17