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Technical data sheet Light curtain receiver Part no.: 50120061 CML720i-R05-1840.R/L-M12



The Sensor People In der Braike 1, 73277 Owen

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

Technical data

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Series	720
Operating principle	Throughbeam principle
Device type	Receiver
Contains	Accessories for the use of the BT-2R1
Application	Object measurement
Special version	
Special version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
Optical data	
Dperating range	Guaranteed operating range
Operating range	0.1 3.5 m
Operating range limit	Typical operating range
Operating range limit	0.1 4.5 m
leasurement field length	1,840 mm
lumber of beams	368 Piece(s)
Beam spacing	5 mm
leasurement data	
Ainimum object diameter	10 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	0 350 mA, The specified values refer
	to the entire package consisting of transmitter and receiver.
Inputa/outputa calestable	
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	Typ. U _B / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V
	low: ≤4V
Input/output 1	
Activation/disable delay	0 1 ms
iming	
Readiness delay	400 ms
Cycle time	11.44 ms
Response time per beam	30 µs
	~~ ~~
nterface	

	IO-Link	
	COM mode	COM2
	Specification	V1.0.1
	Batta a sta atta a	V1.1
	Min. cycle time	COM2 = 2.3 ms
S	ervice interface	
Ту	/pe	IO-Link
	IO-Link	
	Function	Configuration via software
		Service
С	onnection	
N	umber of connections	2 Piece(s)
Р	lug outlet	Rear side
	• • •	
	Connection 1 Function	Configuration interface
	Function	
		Signal IN
		Signal OUT
	Tune of compaction	Voltage supply
	Type of connection Thread size	Connector M12
		Male
	Type Material	Metal
	No. of pins	8 -pin
	Encoding	A-coded
	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		
D	esign	Cubic
D	imension (W x H x L)	29 mm x 35.4 mm x 1,863 mm
Н	ousing material	Metal
Μ	etal housing	Aluminum
Le	ens cover material	Plastic
N	et weight	2,000 g
	ousing color	Silver
Ту	/pe of fastening	Groove mounting
		Via optional mounting device
0	peration and display	
Ту	/pe of display	LED
		OLED display
Ν	umber of LEDs	2 Piece(s)
Ту	/pe of configuration	Software
		Teach-in
F	nvironmental data	
_		20 60.00
	mbient temperature, operation	-30 60 °C -40 70 °C
A	mbient temperature, storage	-4070 C

 Leuze electronic GmbH + Co. KG
 info@leuze.com • www.leuze.com
 We reserve the rig

 The Sensor People
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 Phone: +49 7021 573-0 • Fax: +49 7021 573-199
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We reserve the right to make technical changes

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Certifications

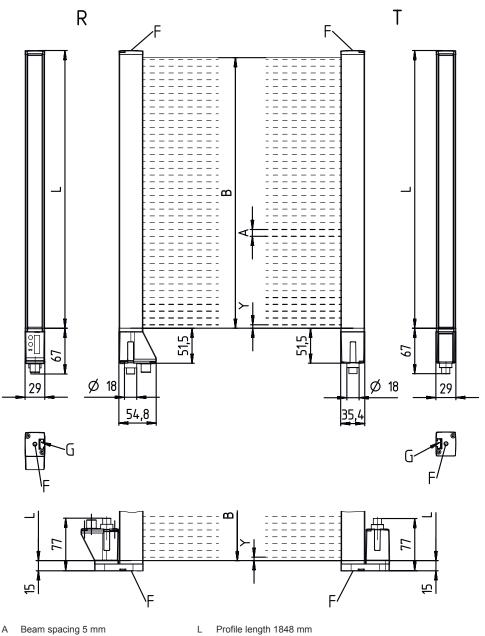
IP 65
III
c CSA US
IEC 60947-5-2

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
Cl@ss 10.0 Cl@ss 11.0 FIM 5.0 FIM 6.0	27270910 27270910 EC002549 EC002549

Dimensioned drawings

All dimensions in millimeters



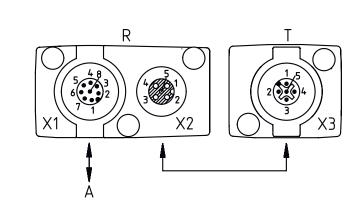
- Beam spacing 5 mm А
- В Measurement field length 1840 mm
- F M6 thread G Fastening groove
- Transmitter Т R Receiver

 - 2.5 mm Υ

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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	IO1
3	GND
4	IO-Link
5	102
6	IO3
7	104
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-



Operation and display

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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
50119471	CML720i-T05- 1840.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: 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 wi	th 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.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$ 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

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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
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 website in the Download tab of the article detailed page.