Leuze

Technical data sheet Light curtain transmitter Part no.: 50118631 CML730i-T20-470.A-M12



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Leuze electronic GmbH + Co. KG

Technical data

Leuze

Basic data

Connection 1 Function

Thread size

Туре

Material

No. of pins

Encoding

Type of connection

Series 730 Operating principle Throughbeam principle Device type Transmitter Contains 2x BT-NC sliding block Application Detection of transparent objects Object measurement Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Diagonal-beam scanning Optical data Diagonal-beam scanning Operating range 0.3 9.5 m Operating range 0.3 9.5 m Operating range imit 0.2 12 m Operating range limit Typical operating range Operating range limit Typical operating range Mumber of beams 24 Piece(s) Beam spacing 20 mm Light source LED, Infrared Wavelength 940 nm Measurement data Short circuit protection Short circuit protected Transient protection Performance data Short circuit protected 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 Time behavior 1 Readiness delay 450 ms Cycle time 1 ms	Basic data			
Device type Transmitter Contains 2x BT-NC sliding block Application Detection of transparent objects Object measurement Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Operating range 0.3 9.5 m Operating range Guaranteed operating range Operating range, transparent media 0.3 3.5 m Operating range limit 0.2 12 m Operating range limit Typical operating range Measurement field length 470 mm Number of beams 24 Piece(s) Beam spacing 20 mm Light source LED, Infrared Wavelength 940 nm Measurement data Short circuit protection Short circuit protected Transient protection Short circuit protected Transient protection Short circuit current 0 165 mA, The specified values refer Open-circuit current 0 165 mA, The specified values refer Open-circuit current 0 165 mA, The specified values refer Open-circuit current 0 165 mA, The specified valu	Series	730		
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Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Optical data Operating range 0.3 9.5 m Operating range Guaranteed operating range Operating range imit 0.2 12 m Operating range limit 0.2 12 m Operating range limit 70 mm Number of beams 24 Piece(s) Beam spacing 20 mm Light source LED, Infrared Wavelength 940 nm Measurement data 30 mm Protective circuit Polarity reversal protection Short circuit protected Transient protected Transient protection Short circuit protected Performance data 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 transmitter and receiver. Time behavior 1 ms Connection 1 ms		Object measurement		
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Beam spacing 20 mm Light source LED, Infrared Wavelength 940 nm Measurement data 30 mm Electrical data Polarity reversal protection Short circuit protected Transient protection Performance data 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 transmitter and receiver. Time behavior 450 ms Cycle time 1 ms Connection 1 Piece(s)	Measurement field length	470 mm		
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Wavelength 940 nm Measurement data Minimum object diameter 30 mm Electrical data 30 mm Protective circuit Polarity reversal protection Short circuit protected Transient protection Performance data Supply voltage U _B 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 transmitter and receiver. Time behavior 450 ms Cycle time 1 ms Connection 1 Piece(s)	Beam spacing	20 mm		
Measurement data Minimum object diameter 30 mm Electrical data 90 arity reversal protection Protective circuit Polarity reversal protection Short circuit protected Transient protection Performance data 90 arity reversal protection Supply voltage UB 18 30 V, DC Residual ripple 0 15 %, From UB Open-circuit current 0 165 mA, The specified values refer to the entire package consisting of transmitter and receiver. Time behavior 450 ms Cycle time 1 ms Connection 1 Piece(s)	Light source	LED, Infrared		
Minimum object diameter 30 mm Electrical data Polarity reversal protection Protective circuit Polarity reversal protection Short circuit protected Transient protection Performance data Supply voltage UB Supply voltage UB 18 30 V, DC Residual ripple 0 15 %, From UB Open-circuit current 0 165 mA, The specified values refer to the entire package consisting of transmitter and receiver. Time behavior X50 ms Cycle time 1 ms Connection 1 Piece(s)	Wavelength	940 nm		
Electrical data Protective circuit Polarity reversal protection Short circuit protected Transient protection Performance data Supply voltage UB 18 30 V, DC Residual ripple 0 15 %, From UB Open-circuit current 0 165 mA, The specified values refer to the entire package consisting of transmitter and receiver. Time behavior X450 ms Cycle time 1 ms Connection 1 Piece(s)	Measurement data			
Protective circuit Polarity reversal protection Short circuit protected Short circuit protected Transient protection Transient protection Performance data 18 30 V, DC 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 transmitter and receiver. Time behavior Readiness delay Readiness delay 450 ms Cycle time 1 ms Connection 1 Piece(s)	Minimum object diameter	30 mm		
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 transmitter and receiver. Time behavior Readiness delay Qycle time 1 ms Connection 1 Piece(s)	Electrical data			
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 transmitter and receiver. Time behavior Readiness delay Qycle time 1 ms Connection 1 Piece(s)	Protective circuit	Polarity reversal 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 transmitter and receiver. Time behavior Readiness delay Readiness delay 450 ms Cycle time 1 ms Connection 1 Piece(s)		Short circuit protected		
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 transmitter and receiver. Time behavior Readiness delay Qycle time 1 ms Connection 1 Piece(s)		Transient protection		
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Open-circuit current 0 165 mA, The specified values refer to the entire package consisting of transmitter and receiver. Time behavior Readiness delay Readiness delay 450 ms Cycle time 1 ms Connection 1 Piece(s)		0 15 %, From U _P		
Readiness delay 450 ms Cycle time 1 ms Connection 1 Piece(s)		0 165 mA, The specified values refer to the entire package consisting of trans		
Cycle time 1 ms Connection 1 Piece(s)	Time behavior			
Connection Number of connections 1 Piece(s)	Readiness delay	450 ms		
Number of connections 1 Piece(s)	Cycle time	1 ms		
	Connection			
	Number of connections	1 Piece(s)		
	Plug outlet			

Connection to receiver

Connector

M12

Male

Metal

5 -pin

A-coded

Dimension (W x H x L) 29 mm x 35.4 mm x 555 mm Housing material Metal Metal housing Aluminum Lens cover material Plastic Net weight 650 g Housing color Silver Type of fastening Groove mounting Via optional mounting device **Operation and display** Type of display LED Number of LEDs 1 Piece(s) **Environmental data** Ambient temperature, operation -30 ... 60 °C Ambient temperature, storage -40 ... 70 °C Certifications IP 65 Degree of protection Ш **Protection class** Approvals c UL US Standards applied IEC 60947-5-2

Cubic

Classification

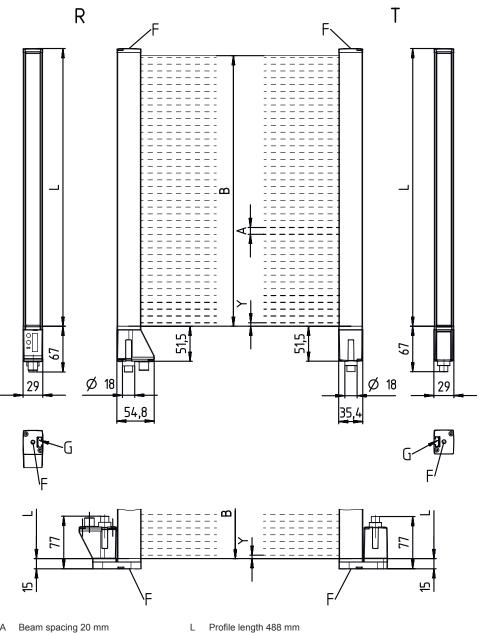
Mechanical data

Design

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
ECLASS 15.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549
ETIM 10.0	EC002549

Dimensioned drawings

All dimensions in millimeters



Beam spacing 20 mm А

- В Measurement field length 470 mm
- F M6 thread G Fastening groove

R

Υ 5 mm

Т

Transmitter

Receiver



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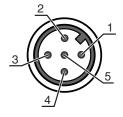
Electrical connection

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Connection 1

Function	Connection to receiver
Type of connection	Connector
Thread size	M12
Туре	Male
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	Continuous mode
	Off	No communication with the receiver / waiting for trigger
	green, flashing in sync with the measurement	Measurement frequency display

Suitable receivers

Suitable	Part no.	Designation	Article	Description
ļ	50118713	CML730i-R20-470.A/ CN-M12	Light curtain receiver	Operating range: 0.3 9.5 m Interface: CANopen Connection: Connector, M12, Axial, 8 -pin
	50118888	CML730i-R20-470.A/ CV-M12	Light curtain receiver	Operating range: 0.3 9.5 m Analog outputs: 2 Piece(s), Voltage, Current Connection: Connector, M12, Axial, 8 -pin
	50123328	CML730i-R20-470.A/ D3-M12	Light curtain receiver	Operating range: 0.3 9.5 m Interface: RS 485 Modbus Connection: Connector, M12, Axial, 8 -pin
	50118794	CML730i-R20-470.A/ L-M12	Light curtain receiver	Operating range: 0.3 9.5 m Interface: IO-Link Connection: Connector, M12, Axial, 8 -pin

Suitable receivers

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	Part no.	Designation	Article	Description
	50123204	CML730i-R20-470.A/ PB-M12	Light curtain receiver	Operating range: 0.3 9.5 m Interface: PROFIBUS DP Connection: Connector, M12, Axial, 8 -pin
Į	50131816	CML730i-R20-470.A/ PN-M12	Light curtain receiver	Operating range: 0.3 9.5 m Interface: PROFINET Connection: Connector, M12, Axial, 8 -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	
A list w	ith 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:
	& For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
Ĭ)	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 - 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

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
R. Ca	429393	BT-2HF	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
165	50121098	SET MD12-US2-IL1.1 + Zub.	Diagnostics set	Interface: USB Connections: 2 Piece(s) Degree of protection: IP 20

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Accessories

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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.
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.