Technical data sheet Light curtain transmitter Part no.: 50118601 CML730i-T05-2080.A-M12





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Technical data

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Device type Transmitter Contains 2x BT-NC sliding block Application Detection of transparent objects Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Special version Crossed-beam scanning Optical data Diagonal-beam scanning Operating range Guaranteed operating range Operating range limit 0.1 4 m Operating range limit 0.1 6 m Measurement field length 2.080 mm Number of beams 416 Piece(s) Beam spacing 5 mm LED light wavelength 940 nm Measurement data Minimum object diameter Minimum object diameter 10 mm Electrical data Polarity reversal protection Short circuit protected Transient protection Short circuit protected Transient protection Supply voltage U _B 18 30 V, DC Residual ripple 0 15 %, From U _B Open-circuit current	Series	730
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Parallel-beam scanning Optical data Operating range Guaranteed operating range Operating range 0.1 4 m Operating range, transparent media 0.1 4 m Operating range limit 1 6 m Operating range limit 0.1 6 m Measurement field length 2,080 mm Number of beams 416 Piece(s) Beam spacing 5 mm Light source LED, Infrared LED light wavelength 940 nm Measurement data Minimum object diameter Minimum object diameter 10 mm Electrical data Protective circuit Protective circuit Polarity reversal protection Short circuit protected Transient protection Short circuit protected Transient protection Supply voltage U _B 18 30 V, DC Residual ripple 0 15 %, From U _B Open-circuit current 0 435 mA, The specified values re to the entire package consisting of tra witter and receiver. Timing Readiness delay 450 ms Cycle time 4.36 ms Connection 1 Piece(s)	Special version	Crossed-beam scanning
Optical data Operating range Guaranteed operating range Operating range, transparent media 0.1 4 m Operating range, transparent media 0.1 1.75 m Operating range limit 0.1 6 m Measurement field length 2,080 mm Number of beams 416 Piece(s) Beam spacing 5 mm Light source LED, Infrared LED light wavelength 940 nm Measurement data 10 mm Electrical data Protective circuit Protective circuit Polarity reversal protection Short circuit protected Transient protection Supply voltage U _B 18 30 V, DC Residual ripple 0 435 mA, The specified values rei to the entire package consisting of tra Open-circuit current 0 436 ms Connection 4.36 ms Connections 1 Piece(s)		Diagonal-beam scanning
Operating range Guaranteed operating range Operating range 0.1 4 m Operating range, transparent media 0.1 4 m Operating range limit Typical operating range Operating range limit 0.1 6 m Operating range limit 0.1 6 m Measurement field length 2,080 mm Number of beams 416 Piece(s) Beam spacing 5 mm Light source LED, Infrared LED light wavelength 940 nm Measurement data 10 mm Minimum object diameter 10 mm Electrical data Polarity reversal protection Short circuit protected Transient protection Short circuit protected Transient protection Performance data 8 30 V, DC Residual ripple 0 15 %, From U _B Open-circuit current 0 435 mA, The specified values re to the entire package consisting of tra- mitter and receiver. Timing Readiness delay 450 ms Cycle time 4.36 ms Connection 1 Piece(s)		Parallel-beam scanning
Operating range 0.14 m Operating range, transparent media 0.11.75 m Operating range limit 16 m Operating range limit 0.16 m Measurement field length 2,080 mm Number of beams 416 Piece(s) Beam spacing 5 mm Light source LED, Infrared LED light wavelength 940 nm Measurement data 10 mm Electrical data Polarity reversal protection Short circuit protected Transient protection Short circuit protected Transient protection Short circuit protected Transient protection Short circuit current 0	Optical data	
Operating range, transparent media 0.11.75 m Operating range limit 0.106 m Operating range limit 0.16 m Measurement field length 2,080 mm Number of beams 416 Piece(s) Beam spacing 5 mm Light source LED, Infrared LED light wavelength 940 nm Measurement data 10 mm Electrical data Protective circuit Protective circuit Polarity reversal protection Short circuit protected Transient protection Supply voltage U _B 18 30 V, DC Residual ripple Open-circuit current 0	Operating range	Guaranteed operating range
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Measurement data Minimum object diameter 10 mm Electrical data Polarity reversal protection Protective circuit Polarity reversal protected Transient protection Short circuit protected Performance data Transient protection Supply voltage U _B 18 30 V, DC Residual ripple 0 15 %, From U _B Open-circuit current 0 435 mA, The specified values retors to the entire package consisting of tramitter and receiver. Timing Readiness delay Readiness delay 450 ms Cycle time 4.36 ms Connection 1 Piece(s)	Light source	LED, Infrared
Minimum object diameter 10 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 0 435 mA, The specified values retore to the entire package consisting of tramitter and receiver. Timing 450 ms Cycle time 4.36 ms Connection 1 Piece(s)	LED light wavelength	940 nm
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 0 435 mA, The specified values re to the entire package consisting of tra mitter and receiver. Timing Readiness delay 450 ms Cycle time 4.36 ms Connection Number of connections 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 Residual ripple 0 15 %, From U _B Open-circuit current 0 435 mA, The specified values reto the entire package consisting of tramitter and receiver. Timing Readiness delay Readiness delay 450 ms Cycle time 4.36 ms Connection 1 Piece(s)	Minimum object diameter	10 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 0 435 mA, The specified values retore to the entire package consisting of training Readiness delay 450 ms Cycle time 4.36 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 0 435 mA, The specified values retore to the entire package consisting of training Timing Readiness delay 450 ms Cycle time 4.36 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 0 435 mA, The specified values reto the entire package consisting of tramitter and receiver. Timing Readiness delay Readiness delay 450 ms Cycle time 4.36 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 0 435 mA, The specified values reit to the entire package consisting of tramitter and receiver. Timing Readiness delay 450 ms Cycle time 4.36 ms Connection 1 Piece(s)		Transient protection
Residual ripple 0 15 %, From U _B Open-circuit current 0 435 mA, The specified values reito the entire package consisting of tramitter and receiver. Timing Readiness delay Readiness delay 450 ms Cycle time 4.36 ms Connection 1 Piece(s)	Performance data	
Open-circuit current 0 435 mA, The specified values reito the entire package consisting of tramitter and receiver. Timing Readiness delay Readiness delay 450 ms Cycle time 4.36 ms Connection 1 Piece(s)	Supply voltage U _B	18 30 V, DC
to the entire package consisting of tra- mitter and receiver. Timing Readiness delay 450 ms Cycle time 4.36 ms Connection Number of connections 1 Piece(s)	Residual ripple	0 15 %, From U _B
Readiness delay 450 ms Cycle time 4.36 ms Connection I Piece(s)	Open-circuit current	0 435 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.
Cycle time 4.36 ms Connection Number of connections 1 Piece(s)	Timing	
Connection Number of connections 1 Piece(s)	Readiness delay	450 ms
Number of connections 1 Piece(s)	Cycle time	4.36 ms
	Connection	
Plug outlet Axial	Number of connections	1 Piece(s)

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

Mechanical data

Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 2,155 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	2,150 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

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	

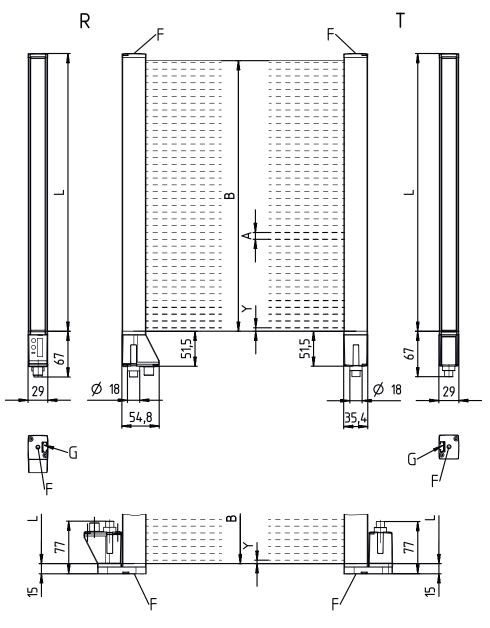
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Dimensioned drawings

All dimensions in millimeters



- В Measurement field length 2080 mm
- F M6 thread
- G Fastening groove
- Profile length 2088 mm L Т
 - Transmitter
- R Receiver
- 2.5 mm Υ



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Electrical connection

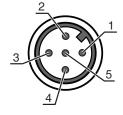
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Connection 1

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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+



Operation and display

RS 485 Tx-

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 it	Part no.	Designation	Article	Description
	50118680	CML730i-R05- 2080.A/CN-M12	Light curtain receiver	Operating range: 0.1 4.5 m Interface: CANopen Connection: Connector, M12, Axial, 8 -pin
	50118843	CML730i-R05- 2080.A/CV-M12	Light curtain receiver	Operating range: 0.1 4.5 m Analog outputs: 2 Piece(s), Voltage, Current Connection: Connector, M12, Axial, 8 -pin
	50123295	CML730i-R05- 2080.A/D3-M12	Light curtain receiver	Operating range: 0.1 4.5 m Interface: RS 485 Modbus Connection: Connector, M12, Axial, 8 -pin
	50118762	CML730i-R05- 2080.A/L-M12	Light curtain receiver	Operating range: 0.1 4.5 m Interface: IO-Link Connection: Connector, M12, Axial, 8 -pin

Suitable receivers

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	Part no.	Designation	Article	Description
Į	50123089	CML730i-R05- 2080.A/PB-M12	Light curtain receiver	Operating range: 0.1 4.5 m Interface: PROFIBUS DP Connection: Connector, M12, Axial, 8 -pin
Į	50131708	CML730i-R05- 2080.A/PN-M12	Light curtain receiver	Operating range: 0.1 4.5 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
ZZ	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 v	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.

 ${\ensuremath{\,\textcircled{\tiny \ensuremath{\,\Downarrow}}}}$ 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:
0	the 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 - 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. 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
ęł.	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

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Accessories

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