## SMART SENSOR BUSINESS

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Part no.: 50131896 CML720i-R05-320.A/PN-M12 Light curtain receiver





# Contents

- Technical data
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- Electrical connection
- · Operation and display
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## Part no.: 50131896 – CML720i-R05-320.A/PN-M12 – Light curtain receiver

#### **Technical data**

Series   720     Operating principle   Throughbeam principle     Device type   Receiver     Contains   2x BT-NC sliding block     Application   Object measurement     Operating range     Operating range   0.1 3.5 m     Operating range   0.1 3.5 m     Operating range   0.1 3.5 m     Operating range limit   0.1 4.5 m     Measurement field length   320 mm     Number of beams   64 Piece(s)     Beam spacing   5 mm     Electrical data     Protective circuit   Polarity reversal protection Short circuit protected Transient protection Short circuit protection Short circuit protection Short circuit protection Transient protection Transient protection Transient protection Short circuit protection Short circuit protection Transient prote	Basic data	
Operating principle     Throughbeam principle       Device type     Receiver       Contains     2x BT-NC sliding block       Application     Object measurement       Operating range     Guaranteed operating range       Operating range     0.1 3.5 m       Operating range limit     0.1 3.5 m       Operating range limit     0.1 4.5 m       Measurement field length     320 mm       Number of beams     64 Piece(s)       Beam spacing     5 mm       Minimum object diameter     10 mm       Electrical data     Polarity reversal protection short circuit protected transient protection       Short circuit protected transient protection     Short circuit protected transient protection       Supply voltage Ug     18 30 V. DC       Residual ripple     0 165 RA, The specified values refer to the entire package co sisting of transmiter and receiver.       Input resistance     6.000 Ω       Number of inputs/outputs selectable     2 Piece(s)       Type     Inputs/outputs selectable       Voltage type, outputs     DC       Switching voltage, outputs     DC       Voltage type, inputs     DC		720
Device type     Receiver       Contains     2x BT-NC silding block       Application     Object measurement       Optral data     Operating range     Guaranteed operating range       Operating range     0.13.5 m     Operating range       Operating range limit     0.14.5 m     Measurement field length       Measurement field length     320 mm     Number of beams       Measurement data     Measurement field length     320 mm       Number of beams     64 Piece(s)     Beam spacing     5 mm       Measurement data     Measurement field length     320 mm     Measurement data       Minimum object diameter     10 mm     Measurement data     Measurement data       Minimum object diameter     10 mm     Measurement data     Measurement grotection       Protective circuit     Polarity reversal protection     Short circuit protected Transient protection     Short circuit protected Transient protection       Supply voltage Ug     18 30 V , DC     Residual ripple     0 15 % , From Ug     Open-circuit current     0 15 % or , From Ug     Open-circuit current     Ministro of protected Transient protection     Supply voltage Ug     10		
Contains   2x BT-NC sliding block     Application   Object measurement     Operating range   Guaranteed operating range     Operating range   0.13.5 m     Operating range limit   Typical operating range     Operating range limit   Typical operating range     Operating range limit   0.14.5 m     Measurement field length   320 nm     Number of beams   64 Piece(s)     Beam spacing   5 mm     Measurement data   Minimum object diameter     Minimum object diameter   10 mm     Protective circuit   Polarity reversal protection Short circuit protected Transient protection     Supply voltage Ug   18 30 V, DC     Residual ripple   0 15 % , From Ug     Open-circuit current   0 15 % , From Ug     Open-circuit current   0 15 % , From Ug     Open-circuit current   0 15 % , From Ug     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Input/soluputs selectable     Voltage type, outputs   DC     Switching voltage, outputs		
Application   Object measurement     Operating range   Guaranteed operating range     Operating range   0.1 3.5 m     Operating range limit   0.1 4.5 m     Measurement field length   320 mm     Number of beams   64 Piece(s)     Beam spacing   5 mm     Minimum object diameter   10 mm     Electrical data     Protective circuit   Polarity reversal protection Stort circuit protected Transient protection     Performance data   9     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 co sisting of transmitter and receiver.     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs		
Optical data     Guaranteed operating range       Operating range     0.1 3.5 m       Operating range limit     Typical operating range       Operating range limit     0.1 4.5 m       Measurement field length     320 mm       Number of beams     64 Piece(s)       Beam spacing     5 mm       Measurement data     Minimum object diameter       Minimum object diameter     10 mm       Fleetrical data     Polarity reversal protection Short circuit protected Transient protection Short circuit protected Transient protection       Supply voltage Up     18 30 V , DC       Residual ripple     0 15% , From UB       Open-circuit current     0 15% , From UB       Output current, max.     100 mA       Input/outputs selectable     2 Piece(s)       Type     Inputs/outputs selectable       Output current, max.     100 mA       Input resistance     6,000 Q       Number of inputs/outputs selectable     2 Piece(s)       Type     Input/output selectable       Voltage type, outputs     DC       Switching voltage, unputs     DC       Switching voltage, inputs		
Operating range   Guaranteed operating range     Operating range limit   0.13.5 m     Operating range limit   0.13.5 m     Operating range limit   0.14.5 m     Measurement field length   320 mm     Number of beams   64 Piece(s)     Beam spacing   5 mm     Measurement data   Minimum object diameter     Minimum object diameter   10 mm     Electrical data   Polarity reversal protection Short dircuit protected Transient protection     Protective circuit   Polarity reversal protection Short dircuit protected Transient protection     Supply voltage UB   1830 V , DC     Residual ripple   015 % , From UB     Open-circuit current   015 % , From UB     Output current, max.   100 mA     Inputs/outputs selectable   100 mA     Inputs/outputs selectable   2 Piece(s)     Voltage type, outputs   DC     Switching voltage, outputs   Typ. UB / 0 V     Voltage type, outputs   DC     Switching voltage, outputs   Typ. UB / 0 V     Voltage type, inputs   DC     Switching voltage, inputs   DC     Switching voltage	Αρμισατιστ	Object measurement
Operating range   Guaranteed operating range     Operating range   0.13.5 m     Operating range limit   Typical operating range     Operating range limit   0.14.5 m     Measurement field length   320 mm     Number of beams   64 Piece(s)     Beam spacing   5 mm     Measurement data      Minimum object diameter   10 mm     Fortective circuit     Protective circuit   Polarity reversal protection Short circuit protected Transient protection     Supply voltage UB   1830 V , DC     Residual ripple   015 % , From UB     Open-circuit current   0165 m , The specified values refer to the entire package co sisting of transitter and receiver.     Inputs/outputs selectable   100 mA     Output current, max.   100 mA     Inputs/outputs selectable   2 Piece(s)     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs <t< td=""><td>Onthe Islats</td><td></td></t<>	Onthe Islats	
Operating range   0.13.5 m     Operating range limit   Typical operating range     Operating range limit   0.14.5 m     Measurement field length   320 mm     Number of beams   64 Piece(s)     Beam spacing   5 mm     Measurement data   Minimum object diameter     Minimum object diameter   10 mm     Electrical data   Polarity reversal protection Short circuit protected Transient protection     Supply voltage UB   18 30 V, DC     Residual ripple   0 15 % , From UB     Open-circuit current   0 165 m , The specified values refer to the entire package co siting of transmitter and receiver.     Inputs/outputs selectable   2 Piece(s)     Output current, max.   100 mA     Inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   high: 26V low: :4V     Inputs/output 1   bigh: 26V	•	Outprostend encoding serves
Operating range limit   Typical operating range     Operating range limit   0.1 4.5 m     Measurement field length   320 mm     Number of beams   64 Piece(s)     Beam spacing   5 mm     Measurement data   Minimum object diameter     Minimum object diameter   10 mm     Electrical data   Polarity reversal protection     Protective circuit   Polarity reversal protection     Supply voltage Ug   18 30 V, DC     Residual ripple   0 15 %, From Ug     Open-circuit current   0 165 mA. The specified values refer to the entire package co sisting of transmitter and receiver.     Input solutputs selectable   2 Piece(s)     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs<		
Operating range limit   0.1 4.5 m     Measurement field length   320 mm     Number of beams   64 Piece(s)     Beam spacing   5 mm     Messurement data   10 mm     Minimum object diameter   10 mm     Electrical data     Protective circuit   Polarity reversal protection Short circuit protected Transient protection     Supply voltage Ug   18 30 V, DC     Residual ripple   0 15 %, From Ug     Open-circuit current   0 165 mA, The specified values refer to the entire package co sisting of transmitter and receiver.     Inputs/outputs selectable   0 piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   high: 26V low: 54V		
Number of beams   320 mm     Number of beams   64 Piece(s)     Beam spacing   5 mm     Measurement data   10 mm     Minimum object diameter   10 mm <b>Electrical data</b> Protective circuit   Polarity reversal protection Short circuit protected Transient 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 co sisting of transmitter and receiver.     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC		
Number of beams   64 Piece(s)     Beam spacing   5 mm     Measurement data   10 mm     Minimum object diameter   10 mm     Electrical data   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 co sisting of transmitter and receiver.     Input/outputs selectable   0 Piece(s)     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   Typ. UB / 0 V     Voltage type, inputs   DC     Switching voltage, inputs		
Beam spacing 5 mm   Measurement data Minimum object diameter   Minimum object diameter 10 mm   Electrical data 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 0 155 mA , The specified values refer to the entire package co sisting of transmitter and receiver.   Inputs/outputs selectable Output current, max.   Output current, max. 100 mA   Inputs/outputs selectable 2 Piece(s)   Type Inputs/outputs selectable   Voltage type, outputs DC   Switching voltage, outputs Typ. Ug / 0 V   Voltage type, inputs DC   Switching voltage, inputs DC		
Measurement data     Minimum object diameter   10 mm     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 co sisting of transmitter and receiver.     Inputs/outputs selectable   0 0 mA     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Input/output 1   Input/output 1		
Minimum object diameter   10 mm     Electrical data     Protective circuit     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.     Inputs/outputs selectable   0     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Input/output 1   Input/output 1	Beam spacing	5 mm
Minimum object diameter   10 mm     Electrical data   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 co sisting of transmitter and receiver.     Inputs/outputs selectable   0     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC		
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 15 % , From UB     Open-circuit current   0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver.     Inputs/outputs selectable   0     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC		
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.     Inputs/outputs selectable   0 100 mA     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   bC     Input/output 1   100 reserve	Minimum object diameter	10 mm
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.     Inputs/outputs selectable   0 100 mA     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   bC     Input/output 1   100 reserve		
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.     Inputs/outputs selectable   0     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   high: ≥6V low: ≤4V	Electrical data	
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.     Inputs/outputs selectable   0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver.     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   bigh: ≥6V low: ≤4V     Input/output 1   Input/output 1	Protective circuit	Polarity 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.     Inputs/outputs selectable   0 mA     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   bC     Input/output 1   Input/output 1		Transient protection
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.     Inputs/outputs selectable   0 mA     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Input/output 1   Input/output 1	Performance data	
Open-circuit current   0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver.     Inputs/outputs selectable   0     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Input/output 1   Input/output 1	Supply voltage U <sub>B</sub>	18 30 V , DC
Inputs/outputs selectable     Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Voltage type, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Input/output 1   Input/output 1	Residual ripple	0 15 % , From U <sub>B</sub>
Inputs/outputs selectableOutput current, max.100 mAInput resistance $6,000 \Omega$ Number of inputs/outputs selectable2 Piece(s)TypeInputs/outputs selectableVoltage type, outputsDCSwitching voltage, outputsDCVoltage type, inputsDCSwitching voltage, inputsDCSwitching voltage, inputsDCInput/output 1Input/output 1	Open-circuit current	0 165 mA , The specified values refer to the entire package con- sisting of transmitter and receiver.
Output current, max.   100 mA     Input resistance   6,000 Ω     Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   DC     Voltage type, inputs   DC     Switching voltage, outputs   DC     Switching voltage, inputs   DC     Input/output 1   high: ≥6V low: ≤4V	Inputs/outputs selectable	
Number of inputs/outputs selectable   2 Piece(s)     Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   Typ. U <sub>B</sub> / 0 V     Voltage type, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Input/output 1   Input/output 1		100 mA
Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   Typ. U <sub>B</sub> / 0 V     Voltage type, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Input/output 1   Input/output 1	Input resistance	6,000 Ω
Type   Inputs/outputs selectable     Voltage type, outputs   DC     Switching voltage, outputs   Typ. U <sub>B</sub> / 0 V     Voltage type, inputs   DC     Switching voltage, inputs   DC     Switching voltage, inputs   DC     Input/output 1   Input/output 1	Number of inputs/outputs selectable	2 Piece(s)
Voltage type, outputs   DC     Switching voltage, outputs   Typ. U <sub>B</sub> / 0 V     Voltage type, inputs   DC     Switching voltage, inputs   high: ≥6V low: ≤4V		
Voltage type, inputs     DC       Switching voltage, inputs     high: ≥6V low: ≤4V       Input/output 1     Imput/output 1		DC
Switching voltage, inputs   high: ≥6∨     Input/output 1   Input/output 1	Switching voltage, outputs	Тур. U <sub>B</sub> / 0 V
Switching voltage, inputs   high: ≥6∨     Input/output 1   Input/output 1	Voltage type, inputs	DC
Input/output 1		high: ≥6V
	Input/output 1	·····-··
		1 ms
Timing	Timing	
Readiness delay 1,500 ms	-	1,500 ms
Cycle time 2.32 ms		
Response time per beam 30 µs		
	······································	F-
Interface	Interface	
Type PROFINET		
-7F- 1100100-1	Туре	PROFINET

## Part no.: 50131896 – CML720i-R05-320.A/PN-M12 – Light curtain receiver

Profinet		
Function	Process	
Conformance class	В	
Protocol	PROFINET RT	
Switch functionality	Integrated	
Transmission speed	10 Mbit/s 100 Mbit/s	
ervice interface		
ре	IO-Link	
IO-Link		
Function	Configuration via software Service	
onnection		
umber of connections	3 Piece(s)	
ug outlet	Axial	
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	
Connection 2		
Function	BUS IN	
Type of connection	Connector	
Thread size	M12	
Туре	Female	
Material	Metal	
No. of pins	4 -pin	
Encoding	D-coded	
Connection 3		
Function	BUS OUT	
Type of connection	Connector	
Thread size	M12	
Туре	Female	
Material	Metal	
No. of pins	4 -pin	
	D-coded	

Mechanical data		
Design	Cubic	
Dimension (W x H x L)	29 mm x 35.4 mm x 395 mm	
Housing material	Metal , Aluminum	
Lens cover material	Plastic	
Net weight	550 g	

Leuze electronic GmbH + Co. KG, In der Braike 1, 73277 Owen Phone: +49 7021 573-0, Fax: +49 7021 573-199 info@leuze.com • www.leuze.com We reserve the right to make technical changes • eng 2019-12-11 3 / 10

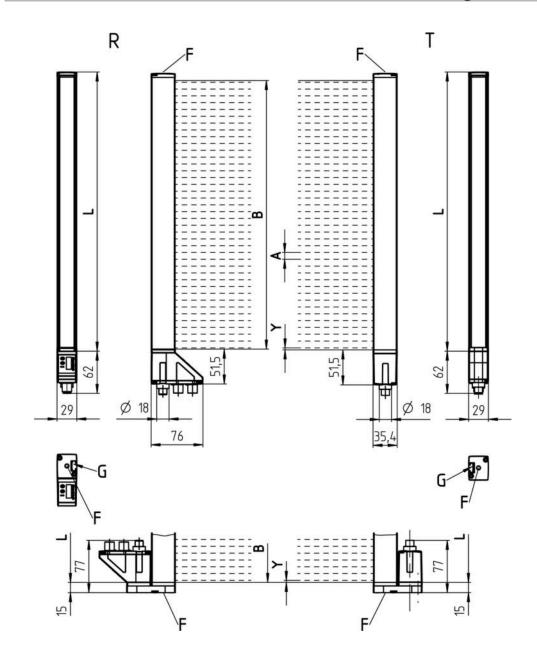
## Part no.: 50131896 – CML720i-R05-320.A/PN-M12 – Light curtain receiver

Housing color	Silver	
Type of fastening	Groove mounting Via optional mounting device	
Operation and display		
Type of display	LED OLED display	
Number of LEDs	4 Piece(s)	
Type of configuration	Software Teach-in	
Operational controls	Membrane keyboard	
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 8.0	27270910	
eCl@ss 9.0	27270910	
ETIM 5.0	EC002549	
ETIM 6.0	EC002549	

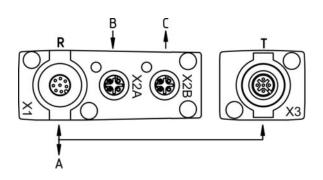
### **Dimensioned drawings**

All dimensions in millimeters

Part no.: 50131896 - CML720i-R05-320.A/PN-M12 - Light curtain receiver



- A Beam spacing 5 mm B Measurement field length 320 mm
- F M6 thread
- G Fastening groove
- L Profile length 328 mm
- T Transmitter
- R Receiver
- Y 2.5 mm



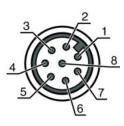
### Part no.: 50131896 – CML720i-R05-320.A/PN-M12 – Light curtain receiver

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

#### **Electrical connection**

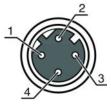
Connection 1	X1	
Function	Configuration interface Connection to transmitter Signal IN Signal OUT Voltage supply	
Type of connection	Connector	
Thread size	M12	
Туре	Male	
Material	Metal	
No. of pins	8 -pin	
Encoding	A-coded	

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



Connection 2	X2A
Function	BUS IN
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Pin	Pin assignment
1	TD0+
2	RD0+
3	TD0-
4	RD0-



Connection 3	X2B
Function	BUS OUT
Type of connection	Connector
Thread size	M12
Туре	Female

## Part no.: 50131896 – CML720i-R05-320.A/PN-M12 – Light curtain receiver

Connection 3	Х2В
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Pin	Pin assignment
1	TD0+
2	RD0+
3	TD0-
4	RD0-



#### **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
3	Green, continuous light (at the X2A / X2B connector)	Link
4	Yellow, continuous light (at the X2A / X2B connector)	Activity

#### Suitable transmitters

Part no.	Designation	Article	Description
50119371	CML720i- T05-320.A-M12	Light curtain transmitter	Operating range: 0.1 3.5 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

### Part no.: 50131896 – CML720i-R05-320.A/PN-M12 – Light curtain 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 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 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

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Par	art no. De	esignation	Article	Description
5013	35074 KS B P7-0			Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

## Connection technology - Interconnection cables

Part no.	Designation	Article	Description
	KSS ET-M12-4A- RJ45-A-P7-050		Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

## Connection technology - Y distribution cables

Part no.	Designation	Article	Description
	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

## Mounting technology - Mounting brackets

Part no.	Designation	Article	Description
50142900	BT 700M.5-2SET	Mounting device set	Contains: 2x mounting brackets, 1 teach template, 4 M6 x 10 screws 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
ę.	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

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

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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. 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 electronic website in the Download tab of the article detailed page.