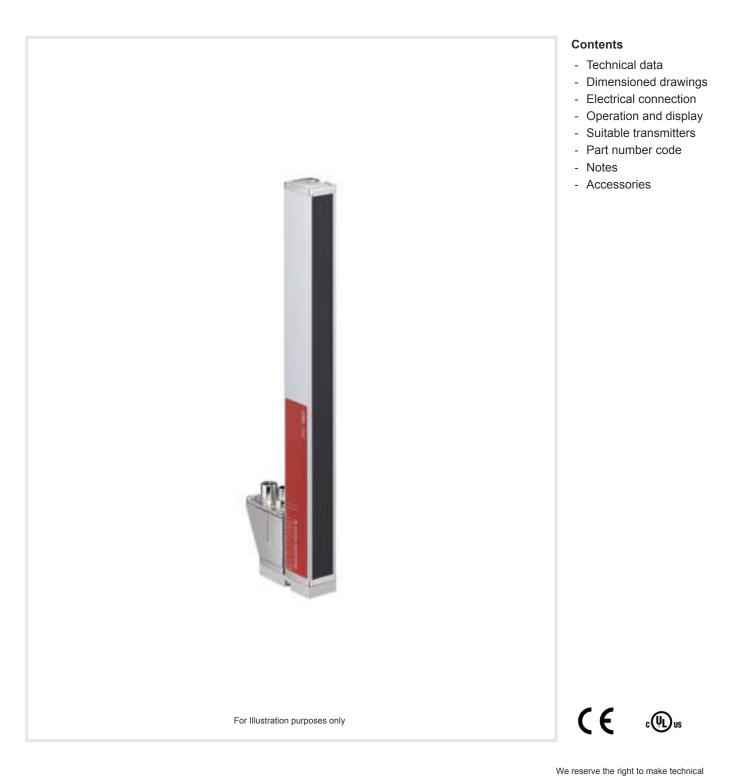


## **Technical data sheet** Light curtain receiver Part no.: 50122905 CML720i-R05-1920.R/PB-M12



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 eng • 2024-06-21

#### **Technical data**

# Leuze

Parties         720           Operating principle         Throughbeam principle           Device type         Receiver           Contains         Accessories for the use of the BT-2R1           Application         Object measurement           Special version         Crossed-beam scanning           Special version         Crossed-beam scanning           Operating range         0.13.5 m           Operating range         0.13.5 m           Operating range         Guaranteed operating range           Operating range limit         0.13.5 m           Operating range         Guaranteed operating range           Measurement field length         1,920 mm           Number of beams         384 Piece(s)           Beam spacing         5 mm           Measurement data         Minimum object diameter         10 mm           Electrical data         Performance data         Short circuit protected Transient protection           Shopy voltage Ug         18 30 V, DC         Residual ripple           Opencincuit current         0 435 mA, The specified values refer to the entire package consisting of trans- mutter and receiver.           Inputs/outputs selectable         Output current, max.         100 mA           Input resistance         6,000 Q<	Series	720
Device type         Receiver           Contains         Accessories for the use of the BT-2R1           Application         Object measurement           Special version         Crossed-beam scanning Diagonal-beam scanning           Special version         Crossed-beam scanning           Operating range         0.13.5 m           Operating range         Guaranteed operating range           Operating range limit         Typical operating range           Operating range limit         1,920 mm           Number of beams         384 Piece(s)           Beam spacing         5 mm           Measurement field length         1,920 mm           Number of beams         384 Piece(s)           Beam spacing         5 mm           Measurement data         Short circuit protected           Transient protection         Short circuit protected           Transient protection         Short circuit protected           Supply voltage Ug         18 30 V, DC           Residual ripple         0 15 %, From Ug           Open-circuit current         0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver.           Input solutputs selectable         Output current, max.         100 mA           Input/output 1         C <td></td> <td></td>		
Contains         Accessories for the use of the BT-2R1           Application         Object measurement           Special version         Crossed-beam scanning Diagonal-beam scanning           Special data         Operating range         0.1 3.5 m           Operating range         0.1 3.5 m         Operating range           Operating range limit         0.1 4.5 m         Operating range           Operating range limit         Typical operating range         Operating range           Measurement field length         1.920 mm         Number of beams           Beam spacing         5 mm         Measurement data           Minimum object diameter         10 mm         Electrical data           Protective circuit         Polarity reversal protection         Short circuit protected           Short circuit protected         Transient protection         Short circuit protected           Performance data         90 mA         10 mA         10 mA           Open-circuit current         0 15 %, From U <sub>B</sub> 00         10 mA           Input solutputs selectable         00 mA         10 mA         10 mA           Input resistance         6,000 Ω         Number of inputs/outputs selectable         2 Piece(s)         10 mA           Voltage type, outputs         DC <td></td> <td></td>		
Application Object measurement Special version Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Operating range Somm Measurement field length 1,920 mm Number of beams Operating Somm Performance data Supply voltage Ug Number of lameter  Performance data Supply voltage Ug Number of inputs/outputs selectable Open-circuit current Output current, max. 100 mA Input resistance 0,000 Q Number of inputs/outputs selectable Voltage type, outputs DC Switching voltage, inputs DC Swi		
Special version Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Parallel-beam scanning Operating range Summer field length 1,920 mm Number of beams 384 Piece(s) Beam spacing 5 mm Measurement data Minimum object diameter 10 mm Electrical data Protective circuit Potective circuit Performance data Supply voltage Ug 8 18 30 V, DC Residual ripple 0 15 %, From Ug 0pen-circuit current 0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver. Inputs/outputs selectable Open-circuit selectable Open-circuit selectable Voltage type, outputs DC Switching voltage, outputs DC Switching voltage, inputs DC Switching vo		
Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Optical data Operating range 0.13.5 m Operating range 0.13.5 m Operating range 0.13.5 m Operating range 0.14.5 m Measurement field length 1.920 mm Measurement data Minimum object diameter 10 mm Electrical data Protective circuit Polarity reversal protection Short circuit protected Transient protection Short circuit protected Transient protection Performance data Supply voltage U <sub>B</sub> 1830 V, DC Residual ripple 0435 mA, The specified values refer to the entire package consisting of trans mitter and receiver. Inputs/outputs selectable Output current, max. 100 mA Input resistance 6,000 Q Number of inputs/outputs selectable Voltage type, outputs DC Switching voltage, inputs DC Switchi	Application	Object measurement
Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Optical data Operating range Sampacing Sampaci	Special version	
Parallel-beam scanning           Optical data           Operating range         0.1 3.5 m           Operating range limit         0.1 4.5 m           Operating range limit         1 4.5 m           Operating range limit         1.920 mm           Number of beams         384 Piece(s)           Beam spacing         5 mm           Measurement field length         1.920 mm           Number of beams         384 Piece(s)           Beam spacing         5 mm           Measurement data         10 mm           Electrical data         Polarity reversal protection           Supply voltage Ug         18 30 V, DC           Residual ripple         0 15 %, From Ug           Open-circuit current         0 435 mA, The specified values refer           Supply voltage Ug         18 30 V, DC           Residual ripple         0 435 mA, The specified values refer           Output current, max.         100 mA           Input resistance         6,000 Ω           Number of inputs/outputs selectable         2 Piece(s)           Type         Input/output           Voltage type, outputs         DC           Switching voltage, outputs         Typ. Ug / 0 V           Voltage type, in	Special version	Crossed-beam scanning
Optical data     Operating range     0.1 3.5 m       Operating range     Guaranteed operating range       Operating range limit     0.1 4.5 m       Operating range limit     1.920 mm       Number of beams     384 Piece(s)       Beam spacing     5 mm       Measurement field length     1.920 mm       Number of beams     384 Piece(s)       Beam spacing     5 mm       Measurement data     10 mm       Electrical data     Polarity reversal protection       Short circuit protected     Transient protection       Short circuit protected     Transient protection       Supply voltage U <sub>B</sub> 18 30 V, DC       Residual ripple     0 435 m, A, The specified values refer to the entire package consisting of transmitter and receiver.       Inputs/outputs selectable     Output current, max.       Output current, max.     100 mA       Input resistance     6,000 Ω       Number of inputs/outputs selectable     2 Piece(s)       Type     Input/output       Voltage type, outputs     DC       Switching voltage, inputs     DC       Switching voltage		Diagonal-beam scanning
Operating range       0.1 3.5 m         Operating range       Guaranteed operating range         Operating range limit       1, 4.5 m         Operating range limit       1,920 mm         Number of beams       384 Piece(s)         Beam spacing       5 mm         Measurement field length       1,920 mm         Number of beams       384 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         Shopt voltage Ug       18 30 V, DC         Residual ripple       0 15 %, From Ug         Open-circuit current       0 435 mA, The specified values refer to the entire package consisting of transmitter and receiver.         Inputs/outputs selectable       Ou mA         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       DC         Switching voltage, outputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Input/output 1       Activation/disable delay<		Parallel-beam scanning
Operating range       Guaranteed operating range         Operating range limit       0.1 4.5 m         Operating range limit       Typical operating range         Measurement field length       1,920 mm         Number of beams       384 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         Short circuit protected       Transient protection         Supply voltage Ug       18 30 V, DC         Residual ripple       0 15 %, From Ug         Open-circuit current       0 435 mA, The specified values refer to the entire package consisting of transmitter and receiver.         Inputs/outputs selectable       Output current, max.         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       2 Piece(s)         Type       Input/output 1         Activation/disable delay       1 ms         Time behavior       Cycle time         Cycle time       11.92 ms         Response time per beam       30 µs         Interface	Optical data	
Operating range         Guaranteed operating range           Operating range limit         0.1 4.5 m           Operating range limit         Typical operating range           Measurement field length         1.920 mm           Number of beams         384 Piece(s)           Beam spacing         5 mm           Measurement data         Minimum object diameter         10 mm           Electrical data         Polarity reversal protection           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         0 435 mA, The specified values refer to the entire package consisting of transmitter and receiver.           Inputs/outputs selectable         Output current, max.           Output current, max.         100 mA           Input resistance         6,000 Ω           Number of inputs/outputs selectable         2 Piece(s)           Type         Input/output           Voltage type, outputs         DC           Switching voltage, outputs         DC           Switching voltage, inputs         DC           Switchindy voltage, inputs         DC </td <td>Operating range</td> <td>0.1 3.5 m</td>	Operating range	0.1 3.5 m
Operating range limit         0.14.5 m           Operating range limit         Typical operating range           Measurement field length         1.920 mm           Number of beams         384 Piece(s)           Beam spacing         5 mm           Measurement data         Minimum object diameter         10 mm           Electrical data         Polarity reversal protection           Short circuit protected         Transient protection           Performance data         Supply voltage U <sub>B</sub> 18 30 V, DC           Residual ripple         0 15 %, From U <sub>B</sub> Open-circuit current           Open-circuit current         0 435 mA, The specified values refer to the entire package consisting of transmitter and receiver.           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         DC           Switching voltage, outputs         DC         Switching voltage, inputs           Switching voltage, inputs         DC         Switching voltage, inputs           DC         Switching voltage, inputs         DC           Switching voltage, inputs         DC         Switching voltage, inputs           Imput/ou		Guaranteed operating range
Operating range limit       Typical operating range         Measurement field length       1,920 mm         Number of beams       384 Piece(s)         Beam spacing       5 mm         Measurement data       Minimum object diameter       10 mm         Electrical data       Polarity reversal protection         Short circuit protected       Transient protection         Supply voltage U <sub>B</sub> 18 30 V, DC         Residual ripple       0 15 %, From U <sub>B</sub> Open-circuit current       0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver.         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, upputs       DC         Switching voltage, inputs       DC         Switching voltage liputs       Imput/output 1         Activation/disable delay       1 ms         Time behavior       30 µs         Cycle time       11.92 ms         Response time per beam       30 µs         Interface       Type		
Measurement field length 1,920 mm Number of beams 384 Piece(s) Beam spacing 5 mm Measurement data Minimum object diameter 10 mm Electrical data Protective circuit Polarity reversal protection Short circuit protected Transient protection Performance data Supply voltage U <sub>B</sub> 18 30 V, DC Residual ripple 0 15 %, From U <sub>B</sub> Open-circuit current 0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver. 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 2 Piece(s) Type Inputs/outputs DC Switching voltage, inputs DC Switching voltage, inputs DC Switching voltage, inputs DC Switching voltage, inputs DC Switching voltage J, inputs DC Switching voltage J, inputs DC Switching voltage J, inputs DC Switching voltage J, inputs DC Switching voltage, inputs DC Switching voltage delay 1 ms Time behavior Cycle time 11.92 ms Response time per beam 30 µs Interface Type PROFIBUS DP		
Number of beams       384 Piece(s)         Beam spacing       5 mm         Measurement data       5 mm         Minimum object diameter       10 mm         Electrical data       Polarity reversal protection         Short circuit protected       Transient protection         Performance data       Supply voltage U <sub>B</sub> Supply voltage U <sub>B</sub> 18 30 V, DC         Residual ripple       0 15 %, From U <sub>B</sub> Open-circuit current       0 435 mA, The specified values refer         to the entire package consisting of transmitter and receiver.       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         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       30 µs         Interface       Type         Type       PROFIBUS DP		
Beam spacing 5 mm Measurement data Minimum object diameter 10 mm Electrical data Protective circuit Polarity reversal protection Short circuit protected Transient protection Performance data Supply voltage U <sub>B</sub> 18 30 V, DC Residual ripple 0 15 %, From U <sub>B</sub> Open-circuit current 0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver. 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 2 Piece(s) Type Inputs/outputs selectable 2 Piece(s) Switching voltage, outputs Typ. U <sub>B</sub> / 0 V Voltage type, inputs DC Switching voltage, inputs DC Switching voltage, inputs DC Switching voltage, inputs Activation/disable delay 1 ms Time behavior Cycle time 11.92 ms Response time per beam 30 μs Interface Type PROFIBUS DP		,
Measurement data Minimum object diameter 10 mm  Electrical data Protective circuit Potective circuit Polarity reversal protection Short circuit protected Transient protected Transient protection Performance data Supply voltage U <sub>B</sub> 18 30 V, DC Residual ripple 0 15 %, From U <sub>B</sub> Open-circuit current 0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver. Inputs/outputs selectable Output current, max. 100 mA Input resistance 6,000 Ω Number of inputs/outputs selectable 2 Piece(s) Type Inputs/outputs DC Switching voltage, outputs DC Switching voltage, inputs DC Switc		
Minimum object diameter 10 mm Electrical data Protective circuit Polarity reversal protection Short circuit protected Transient protection Performance data Supply voltage U <sub>B</sub> 18 30 V, DC Residual ripple 0 15 %, From U <sub>B</sub> Open-circuit current 0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver. 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 Typ. U <sub>B</sub> / 0 V Voltage type, inputs DC Switching voltage, inputs AC Switching voltage, inputs AC Time behavior Cycle time 11.92 ms Response time per beam 30 μs Interface Type PROFIBUS DP	Souri Spacing	V 11111
Flectrical data Protective circuit Polarity reversal protection Short circuit protected Transient protection Performance data Supply voltage U <sub>B</sub> 18 30 V, DC Residual ripple 0 15 %, From U <sub>B</sub> Open-circuit current 0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver. Inputs/outputs selectable Output current, max. 100 mA Input resistance 6,000 Ω Number of inputs/outputs selectable Voltage type, outputs DC Switching voltage, outputs DC Switching voltage, inputs DC Switching volta	Measurement data	
Protective circuit       Polarity reversal protection         Short circuit protected       Transient protection         Performance data       Image: Supply voltage UB       18 30 V, DC         Residual ripple       0 15 %, From UB       Open-circuit current         Open-circuit current       0 435 mA, The specified values referer to the entire package consisting of transmitter and receiver.         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         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Input/output 1       Input/output 1         Activation/disable delay       1 ms         Time behavior       30 µs         Interface       Type         Type       PROFIBUS DP	Minimum object diameter	10 mm
Short circuit protected Transient protectionPerformance dataSupply voltage UB18 30 V, DCResidual ripple0 15 %, From UBOpen-circuit current0 435 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.Inputs/outputs selectableOutput current, max.Output current, max.100 mAInput resistance6,000 $\Omega$ Number of inputs/outputs selectable2 Piece(s)TypeInputs/outputs selectableVoltage type, outputsDCSwitching voltage, outputsTyp. UB / 0 VVoltage type, inputsDCSwitching voltage, inputsDCSwitching voltage, inputshigh: ≥6V low: ≤ 4 VInput/output 1 Activation/disable delay1 msTime behavior30 µsCycle time11.92 msResponse time per beam30 µsInterfaceTypeTypePROFIBUS DP	Electrical data	
Performance data         Supply voltage U <sub>B</sub> 18 30 V, DC         Residual ripple       0 15 %, From U <sub>B</sub> Open-circuit current       0 435 mA, The specified values refer to the entire package consisting of transmitter and receiver.         Inputs/outputs selectable       Output current, max.         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, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       30 μs         Interface       Type         Type       PROFIBUS DP	Protective circuit	Polarity reversal protection
Performance data         Supply voltage U <sub>B</sub> 18 30 V, DC         Residual ripple       0 15 %, From U <sub>B</sub> Open-circuit current       0 435 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         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       30 μs         Interface       Type         Type       PROFIBUS DP		Short circuit protected
Performance dataSupply voltage UB18 30 V, DCResidual ripple0 15 %, From UBOpen-circuit current0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver.Inputs/outputs selectable0 mAOutput current, max.100 mAInput resistance6,000 QNumber of inputs/outputs selectable2 Piece(s)TypeInputs/outputs selectableVoltage type, outputsDCSwitching voltage, outputsDCSwitching voltage, inputsDCSwitching voltage, inputsDCSwitching voltage, inputsInput - 2000 MInput/output 1 Activation/disable delay1 msTime behavior11.92 msCycle time11.92 msResponse time per beam30 µsInterfaceFROFIBUS DPPROFIBUS DPPROFIBUS DP		Transient protection
Supply voltage UB18 30 V, DCResidual ripple0 15 %, From UBOpen-circuit current0 435 mA, The specified values refer to the entire package consisting of transmitter and receiver.Inputs/outputs selectable0Output current, max.100 mAInput resistance6,000 ΩNumber of inputs/outputs selectable2 Piece(s)TypeInputs/outputs selectableVoltage type, outputsDCSwitching voltage, outputsDCSwitching voltage, inputsDCSwitching voltage, inputsInow: ≤ 4 VInput/output 1 Activation/disable delay1 msTime behavior30 µsCycle time11.92 msResponse time per beam30 µsInterfacePROFIBUS DPPROFIBUS DPPROFIBUS DP		
Residual ripple       0 15 %, From U <sub>B</sub> Open-circuit current       0435 mA, The specified values refer to the entire package consisting of transmitter and receiver.         Inputs/outputs selectable       Output current, max.         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. U <sub>B</sub> / 0 V         Voltage type, inputs       DC         Switching voltage, inputs       Input / 0 V         Voltage type, inputs       DC         Switching voltage, inputs       Inow: ≤ 4 V         Input/output 1       Activation/disable delay       1 ms         Time behavior       30 µs         Interface       11.92 ms         Response time per beam       30 µs         Interface       PROFIBUS DP	Performance data	
Open-circuit current       0435 mA, The specified values refer to the entire package consisting of trans mitter and receiver.         Inputs/outputs selectable       00 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         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       30 µs         Interface       PROFIBUS DP	Supply voltage U <sub>B</sub>	18 30 V, DC
to the entire package consisting of transmitter and receiver. 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 Switching voltage, inputs DC Switching voltage, inputs DC Switching voltage, inputs DC Switching voltage, inputs 1 Activation/disable delay 1 ms Time behavior Cycle time 11.92 ms Response time per beam 30 μs Interface Type PROFIBUS DP	Residual ripple	0 15 %, From U <sub>B</sub>
Output current, max.100 mAInput resistance6,000 ΩNumber of inputs/outputs selectable2 Piece(s)TypeInputs/outputs selectableVoltage type, outputsDCSwitching voltage, outputsDCSwitching voltage, inputsDCSwitching voltage, inputsNigh: ≥6VInput/output 1Activation/disable delayActivation/disable delay1 msTime behavior30 μsInterfacePROFIBUS DP	Open-circuit current	to the entire package consisting of trans
Output current, max.100 mAInput resistance6,000 ΩNumber of inputs/outputs selectable2 Piece(s)TypeInputs/outputs selectableVoltage type, outputsDCSwitching voltage, outputsDCSwitching voltage, inputsDCSwitching voltage, inputsNigh: ≥6VInput/output 1Activation/disable delayActivation/disable delay1 msTime behavior30 μsInterfacePROFIBUS DP		
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       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       30 μs         Interface       PROFIBUS DP		100 1
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       high: ≥6V         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       30 μs         Interface       PROFIBUS DP	•	
Type     Inputs/outputs selectable       Voltage type, outputs     DC       Switching voltage, outputs     Typ. Ug / 0 ∨       Voltage type, inputs     DC       Switching voltage, inputs     high: ≥6∨       Input/output 1     Activation/disable delay       Activation/disable delay     1 ms       Time behavior     30 μs       Interface     PROFIBUS DP	1	-,
Voltage type, outputs     DC       Switching voltage, outputs     Typ. U <sub>B</sub> / 0 ∨       Voltage type, inputs     DC       Switching voltage, inputs     high: ≥6∨       Input/output 1     Input/output 1       Activation/disable delay     1 ms       Time behavior     30 μs       Interface     PROFIBUS DP		
Switching voltage, outputs       Typ. U <sub>B</sub> / 0 V         Voltage type, inputs       DC         Switching voltage, inputs       high: ≥6V         Iow: ≤ 4 V       Iow: ≤ 4 V         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       200 μs         Cycle time       11.92 ms         Response time per beam       30 μs         Interface       PROFIBUS DP		
Voltage type, inputs     DC       Switching voltage, inputs     high: ≥6∨       low: ≤ 4 ∨       Input/output 1       Activation/disable delay     1 ms   Time behavior Cycle time 11.92 ms Response time per beam 30 μs Interface Type PROFIBUS DP PROFIBUS DP		
Switching voltage, inputs     high: ≥6∨       Input/output 1     Input/output 1       Activation/disable delay     1 ms       Time behavior     11.92 ms       Cycle time     11.92 ms       Response time per beam     30 μs       Interface     PROFIBUS DP		-
low: ≤ 4 V Input/output 1 Activation/disable delay 1 ms Time behavior Cycle time per beam 30 μs Interface Type PROFIBUS DP PROFIBUS DP		
Input/output 1 Activation/disable delay 1 ms Time behavior Cycle time 11.92 ms Response time per beam 30 µs Interface Type PROFIBUS DP	Switching voltage, inputs	•
Activation/disable delay       1 ms         Time behavior       11.92 ms         Cycle time       11.92 ms         Response time per beam       30 μs         Interface       Type         PROFIBUS DP       PROFIBUS DP		low: ≤ 4 V
Activation/disable delay       1 ms         Time behavior       11.92 ms         Cycle time       11.92 ms         Response time per beam       30 µs         Interface       Type         PROFIBUS DP       PROFIBUS DP		
Time behavior Cycle time 11.92 ms Response time per beam 30 µs Interface Type PROFIBUS DP PROFIBUS DP	· ·	
Cycle time     11.92 ms       Response time per beam     30 μs       Interface     Type       PROFIBUS DP	Activation/disable delay	1 ms
Response time per beam     30 µs       Interface     Type       PROFIBUS DP	Time behavior	
Response time per beam     30 µs       Interface       Type     PROFIBUS DP		11.92 ms
Type PROFIBUS DP PROFIBUS DP	Cycle time	
Type PROFIBUS DP PROFIBUS DP	•	30 µs
PROFIBUS DP	Response time per beam	30 µs
	Response time per beam	·
Function         Process	Response time per beam	·
	Response time per beam Interface Type	·

S	Service interface			
Туре		IO-Link		
	IO-Link			
	Function	Configuration via software Service		
_	onnection			
	umber of connections	2 Piece(s)		
PI	ug outlet	Rear side		
	Connection 1			
	Function	Configuration interface		
	T unction	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		
		BUSOUT		
	Type of connection	Connector		
	Thread size	M12		
	Туре	Female		
	Material	Metal		
	No. of pins	5 -pin B-coded		
	Encoding	B-coded		
Μ	echanical data			
D	esign	Cubic		
Di	mension (W x H x L)	29 mm x 35.4 mm x 1,943 mm		
	ousing material	Metal		
	etal housing	Aluminum		
	ens cover material	Plastic		
Net weight		2,100 g		
	ousing color vpe of fastening	Silver Groove mounting		
1 y	pe or lastening	Via optional mounting device		
0	peration and display	via optional mounting device		
_		LED		
1 y	vpe of display			
M	umber of LEDs	OLED display 2 Piece(s)		
	vpe of configuration	Software		
۰y	po or configuration	Teach-in		
E	nvironmental data			
۵.	mbient temperature, operation	-30 60 °C		
	mbient temperature, storage	-40 70 °C		

## **Technical data**

#### Certifications

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

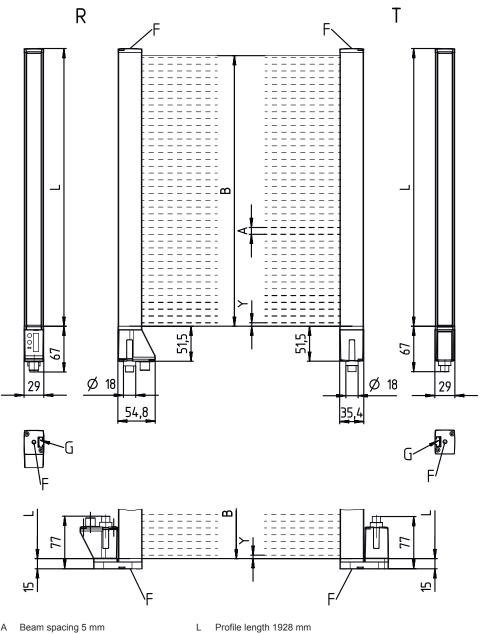
#### Classification

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
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549



#### **Dimensioned drawings**

All dimensions in millimeters



Beam spacing 5 mm А

Fastening groove

- В Measurement field length 1920 mm
- F M6 thread

G

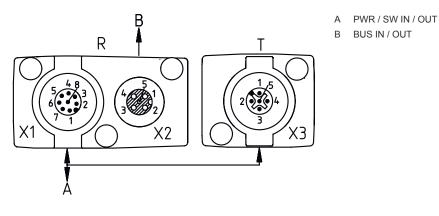
- Т R Receiver
  - 2.5 mm Υ

Transmitter

Leuze

#### **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		



#### **Connection 2**

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

## **Electrical connection**

# Pin Pin assignment 1 V+ 2 Tx 3 PB GND 4 Tx+ 5 FE/SHIELD

## **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
50119472	CML720i-T05- 1920.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	<b>Beam spacing</b> 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



#### Part number code



DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
	Note
A	K A list with all available device types can be found on the Leuze website at www.leuze.com.

#### Notes

Observe intended use!
<ul> <li>This product is not a safety sensor and is not intended as personnel protection.</li> <li>The product may only be put into operation by competent persons.</li> <li>Only use the product in accordance with its intended use.</li> </ul>



#### 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 Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC

#### 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

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## Accessories

## 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

#### Mounting technology - Swivel mounts

 Part no.	Designation	Article	Description
429029	BT-2RG	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
y: U	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	S A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.