

# **Technical data sheet Light curtain receiver** Part no.: 50123059 CML720i-R40-2850.R/PB-M12



 Leuze electronic GmbH + Co. KG
 info@leuze.com • www.leuze.com
 changes

 The Sensor People
 In der Braike 1, D-73277 Owen/Germany
 Phone: +49 7021 573-0 • Fax: +49 7021 573-199
 eng • 2025-04-04

#### **Technical data**

# Leuze

Series         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         0.3 7 m           Operating range         Guaranteed operating range           Operating range limit         0.2 9 m           Operating range limit         Typical operating range           Mumber of beams         71 Piece(s)           Beam spacing         40 mm           Measurement field length         2.850 mm           Number of beams         71 Piece(s)           Beam spacing         40 mm           Measurement data         Short circuit protected           Transient protection         Short circuit protected           Short circuit protected         Transient protection           Short circuit protected         Transient protection           Number of inputs/outputs selectable         0 435 mA, The specified values refer           Output current, max.         100 mA           Input resistance         6,0000 Ω	Sariaa	700
Device type         Receiver           Contains         Accessories for the use of the BT-2R1           Application         Object measurement           Special version         Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning           Special version         Crossed-beam scanning Diagonal-beam scanning           Operating range         0.3 7 m           Operating range         0.3 7 m           Operating range limit         0.2 9 m           Operating range limit         0.2 9 m           Operating range limit         2.850 mm           Number of beams         71 Piece(s)           Beam spacing         40 mm           Measurement data         Short circuit protected Transient protection           Performance data         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 trans mitter and receiver.           Input solutputs selectable         Output current, max.           Output current, max.         100 mA           Input resistance         6,000 Ω           Number of inputs/outputs selectable         Voltage type, outputs <t< td=""><td></td><td></td></t<>		
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         0.3 7 m           Operating range         Guaranteed operating range           Operating range limit         0.2 9 m           Mumber of beams         71 Piece(s)           Beam spacing         40 mm           Measurement data         Minimum object diameter           Stort circuit protected         Transient protection           Short circuit protected         Transient protection           Short circuit current         0 15 %, From U <sub>B</sub> Open-circuit current         10 mA           Input solutputs selectable         Output current, max.           Output current, max.         100 mA           Input solutputs selectable         2 Piece(s)           Type         Input/output 1		
Application Object measurement Special version Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Parallel-beam scanning Operating range Operating ra		
Special version Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Parallel-beam scanning Parallel-beam scanning Operating range Operating range Guaranteed operating range Operating range limit 0.29 m Operating range limit 0.29 m Operating range limit 7ypical operating range Measurement field length 2.850 mm Number of beams 71 Piece(s) Beam spacing 40 mm Measurement data Minimum object diameter 50 mm Electrical data Protective circuit Potective circuit Potective circuit Performance data Supply voltage U <sub>B</sub> 1830 V, DC Residual ripple 015 %, From U <sub>B</sub> Open-circuit current 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 Ω Number of inputs/outputs selectable Voltage type, outputs DC Switching voltage, unputs DC Switching voltage, inputs D		
Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Optical data Operating range 0.37 m Operating range 0.29 m Operating range O	Application	Object measurement
Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Optical data Operating range Operating r	Special version	
Parallel-beam scanning           Optical data           Operating range         0.3 7 m           Operating range limit         0.2 9 m           Operating range limit         2.850 mm           Number of beams         71 Piece(s)           Beam spacing         40 mm           Measurement data         Minimum object diameter           So mm         50 mm           Electrical data         Polarity reversal protection           Short circuit protected         Transient protected           Transient protection         Short circuit protected           Supply voltage U <sub>B</sub> 18 30 V, DC           Residual ripple         0 435 mA, The specified values refer to the entire package consisting of transmitter and receiver.           Optupt 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, outputs	Special version	Crossed-beam scanning
Optical data         0.3 7 m           Operating range         0.3 7 m           Operating range limit         0.2 9 m           Operating range limit         7 typical operating range           Measurement field length         2,850 mm           Number of beams         71 Piece(s)           Beam spacing         40 mm           Measurement data         Minimum object diameter           So mm         50 mm           Electrical data         Polarity reversal protection           Short circuit protected         Transient protected           Transient protection         Short circuit protected           Supply voltage U <sub>B</sub> 18 30 V, DC           Residual ripple         0 435 mA. The specified values refer           Open-circuit current         0 435 mA. The specified values refer           Utup tresistance         6,000 Ω           Number of inputs/outputs selectable         Output current, max.           Number of inputs/outputs         Typ. U <sub>B</sub> / 0 V           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		Diagonal-beam scanning
Operating range       0.3 7 m         Operating range       Guaranteed operating range         Operating range limit       0.2 9 m         Operating range limit       71 Piece(s)         Beam spacing       40 mm         Measurement field length       2,850 mm         Number of beams       71 Piece(s)         Beam spacing       40 mm         Measurement data       Minimum object diameter         S0 pm object diameter       50 mm         Electrical data       Polarity reversal protection         Short circuit protected       Transient protection         Shopply voltage Ug       18 30 V, DC         Residual ripple       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       2.53 ms         Cycle time       2.53 ms         Response time per beam       30 µs         Interface       Type         PROF		Parallel-beam scanning
Operating range         0.3 7 m           Operating range         Guaranteed operating range           Operating range limit         0.2 9 m           Operating range limit         2,850 mm           Number of beams         71 Piece(s)           Beam spacing         40 mm           Measurement field length         2,850 mm           Mumber of beams         71 Piece(s)           Beam spacing         40 mm           Measurement data         Minimum object diameter           S0 performance data         Polarity reversal protection           Short circuit protected         Transient protection           Performance data         Short circuit protected           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           Voltage type, outputs         DC         Switching voltage, outputs           DC         Switching voltage, inputs         DC           Switching voltage, inputs         DC	Optical data	
Operating range       Guaranteed operating range         Operating range limit       0.2 9 m         Operating range limit       2,850 nm         Number of beams       71 Piece(s)         Beam spacing       40 mm         Measurement field length       2,850 nm         Number of beams       71 Piece(s)         Beam spacing       40 mm         Measurement data       Minimum object diameter         S0 pm retricted data       Folarity 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.       100 mA         Input resistance       6,000 Ω       Number of 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       Input/output 1         Ac		0.3 7 m
Operating range limit       0.2 9 m         Operating range limit       Typical operating range         Measurement field length       2.850 mm         Number of beams       71 Piece(s)         Beam spacing       40 mm         Measurement data       Minimum object diameter         Somm       50 mm         Electrical data       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         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       DC         Switching voltage, outputs       DC       Switching voltage, inputs         Switching voltage, inputs       DC       Switching voltage, inputs         Imput/output 1       Activation/disable delay       1 ms         Time behavior       2.53 ms       Response time per beam         Sio µS       PROFIBUS DP       PROFIBUS DP		
Operating range limit       Typical operating range         Measurement field length       2,850 mm         Number of beams       71 Piece(s)         Beam spacing       40 mm         Measurement data       Minimum object diameter         Supply control data       50 mm         Electrical data       Polarity reversal protection         Short circuit protected       Transient protected         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 referto the entire package consisting of transmitter and receiver.         Inputs/outputs selectable       0 und A         Output current, max.       100 mA         Input resistance       6,000 Ω         Number of inputs/outputs selectable       2 Piece(s)         Type       Inputs/outputs         Voltage type, outputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage leagh       1 ms         Time behavior       2.53 ms		
Measurement field length       2,850 mm         Number of beams       71 Piece(s)         Beam spacing       40 mm         Measurement data       Minimum object diameter       50 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       0 435 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       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage, inputs       DC         Switching voltage delay       1 ms         Time behavior       2,53 ms         Cycle time       2,53 ms         Response time per beam       30 µs         Interface       Type         Type       PROFIBUS DP		
Number of beams       71 Piece(s)         Beam spacing       40 mm         Measurement data       50 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 referere to the entire package consisting of transmitter and receiver.         Inputs/outputs selectable       Output current, max.         100 mA       Input resistance         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       2.53 ms         Response time per beam       30 µs         Interface       Type         Type       PROFIBUS DP		
Beam spacing     40 mm       Measurement data     50 mm       Minimum object diameter     50 mm       Electrical data     Polarity reversal protection       Short circuit protected     Transient protected       Transient protection     Short circuit protected       Performance data     Supply voltage U <sub>B</sub> Supply voltage U <sub>B</sub> 18 30 V, DC       Residual ripple     0 455 mA, The specified values refer to the entire package consisting of transmitter and receiver.       Inputs/outputs selectable     0 up numeroit current       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       Imput/output 1     Activation/disable delay       Activation/disable delay     1 ms       Time behavior     2.53 ms       Cycle time     2.53 ms       Response time per beam     30 µs       Interface     FROFIBUS DP	-	,
Measurement data         Minimum object diameter       50 mm         Electrical data         Protective circuit       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.         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         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       2.53 ms         Cycle time       2.53 ms         Response time per beam       30 µs         Interface       PROFIBUS DP		
Minimum object diameter     50 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.       Output current, max.     100 mA       Input resistance     6,000 Ω       Number of inputs/outputs selectable     2 Piece(s)       Type     Inputs/output selectable       Voltage type, outputs     DC       Switching voltage, outputs     DC       Switching voltage, inputs     DC       Switching voltage, and the analysis     S       Input/output 1     Activation/disable delay     1 ms       Time behavior     ZiS3 ms		
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 transmitter 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, inputs DC Switching voltage		
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       0 435 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         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       Activation/disable delay       1 ms         Time behavior       2.53 ms         Cycle time       2.53 ms         Response time per beam       30 µs         Interface       Type         Type       PROFIBUS DP	Minimum object diameter	50 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 transmitter 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: ≥6VIow: ≤ 4 VInput/output 1 Activation/disable delay1 msTime behavior2.53 msCycle time2.53 msResponse time per beam30 µsInterfaceTypeTypePROFIBUS DPPROFIBUS DPPROFIBUS 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         Cycle time       2.53 ms         Response time per beam       30 µs         Interface       PROFIBUS DP	Protective circuit	Polarity reversal protection
Performance dataSupply voltage $U_B$ 18 30 V, DCResidual ripple0 15 %, From $U_B$ Open-circuit current0 435 mA, The specified values refer to the entire package consisting of transmitter 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, inputsDCInput/output 1 Activation/disable delay1 msTime behavior $30 \ \mu s$ Interface $30 \ \mu s$ Interface $7pe$ TypePROFIBUS DPPROFIBUS DP $PROFIBUS DP$		Short circuit protected
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 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       bigh: ≥6V         Iow: ≤ 4 V       Iow: ≤ 4 V         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       2.53 ms         Response time per beam       30 µs         Interface       7         Type       PROFIBUS 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 selectable00 mAOutput current, max.100 mAInput resistance6,000 ΩNumber of inputs/outputs selectable2 Piece(s)TypeInputs/outputs selectableVoltage type, outputsDCSwitching voltage, outputsDCSwitching voltage, inputsDCSwitching voltage, inputsInput / 0VVoltage type, inputsDCSwitching voltage, inputs30 μSTime behavior2.53 msCycle time2.53 msResponse time per beam30 μSInterface9ROFIBUS DPPROFIBUS DP9ROFIBUS DP	Performance data	
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       Typ. U <sub>B</sub> / 0 V         Voltage type, inputs       DC         Switching voltage, inputs       bigh: ≥6V         Iow: ≤ 4 V       Iow: ≤ 4 V         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       30 µs         Interface       PROFIBUS DP		18 30 V, DC
Open-circuit current       0435 mA, The specified values refer to the entire package consisting of transmitter 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	··· · · ·	
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		0 435 mA, The specified values refer to the entire package consisting of trans
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       bigh: ≥6V         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms	Inputa/outputa coloctable	
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       bigh: ≥6∨         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       2.53 ms         Response time per beam       30 µs         Interface       PROFIBUS DP		100 mA
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       high: ≥6V         Input/output 1       Activation/disable delay         Activation/disable delay       1 ms         Time behavior       2.53 ms         Response time per beam       30 μs         Interface       PROFIBUS DP		
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     2.53 ms       Response time per beam     30 μs       Interface     PROFIBUS DP	•	-,
Voltage type, outputs     DC       Switching voltage, outputs     Typ. U <sub>B</sub> / 0 V       Voltage type, inputs     DC       Switching voltage, inputs     high: ≥6V       low: ≤ 4 V     low: ≤ 4 V       Input/output 1     Activation/disable delay       Activation/disable delay     1 ms       Time behavior     2.53 ms       Response time per beam     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       Input/output 1       Activation/disable delay     1 ms   Time behavior Cycle time Response time per beam 30 µs Interface Type 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 2.53 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     2.53 ms       Cycle time     2.53 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 2.53 ms Response time per beam 30 μs Interface Type PROFIBUS DP		
Input/output 1       Activation/disable delay     1 ms       Time behavior     2.53 ms       Cycle time     2.53 ms       Response time per beam     30 μs       Interface     7       Type     PROFIBUS DP	- moning voluge, inputa	
Activation/disable delay       1 ms         Time behavior       2.53 ms         Cycle time       2.53 ms         Response time per beam       30 µs         Interface       Type         PROFIBUS DP       PROFIBUS DP		
Activation/disable delay       1 ms         Time behavior       2.53 ms         Cycle time       2.53 ms         Response time per beam       30 μs         Interface       7000000000000000000000000000000000000		
Cycle time     2.53 ms       Response time per beam     30 μs       Interface     Type       PROFIBUS DP	Input/output 1	
Cycle time     2.53 ms       Response time per beam     30 μs       Interface     Type       PROFIBUS DP		1 ms
Response time per beam     30 µs       Interface       Type     PROFIBUS DP	Activation/disable delay	1 ms
Interface Type PROFIBUS DP PROFIBUS DP	Activation/disable delay Time behavior	
Type PROFIBUS DP PROFIBUS DP	Activation/disable delay Time behavior Cycle time	2.53 ms
PROFIBUS DP	Activation/disable delay Time behavior Cycle time	2.53 ms
	Activation/disable delay Time behavior Cycle time Response time per beam	2.53 ms
	Activation/disable delay Time behavior Cycle time Response time per beam Interface	2.53 ms 30 μs
	Activation/disable delay Time behavior Cycle time Response time per beam Interface Type	2.53 ms 30 μs

S	Service interface			
Ту	/pe	IO-Link		
	IO-Link			
	Function	Configuration via software		
		Service		
С	onnection			
N	umber of connections	2 Piece(s)		
P	lug outlet	Rear side		
	Connection 1 Function	Configuration interface		
	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		
	<b>T</b>	BUS OUT		
	Type of connection	Connector		
	Thread size	M12 Female		
	Type Material	Metal		
	No. of pins	5 -pin		
	Encoding	B-coded		
Μ	lechanical data			
	esign	Cubic		
	imension (W x H x L)	29 mm x 35.4 mm x 2,903 mm		
	ousing material	Metal Aluminum		
	etal housing ens cover material	Plastic		
	et weight	2,950 g		
	ousing color	Silver		
Type of fastening		Groove mounting		
-		Via optional mounting device		
0	peration and display			
Ту	/pe of display	LED		
		OLED display		
	umber of LEDs	2 Piece(s)		
Ту	/pe of configuration	Software		
0	novetional controls	Teach-in		
0	perational controls	Membrane keyboard		
E	nvironmental data			
A	mbient temperature, operation	-30 60 °C		
A	mbient temperature, storage	-40 70 °C		

#### **Technical data**

#### Certifications

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

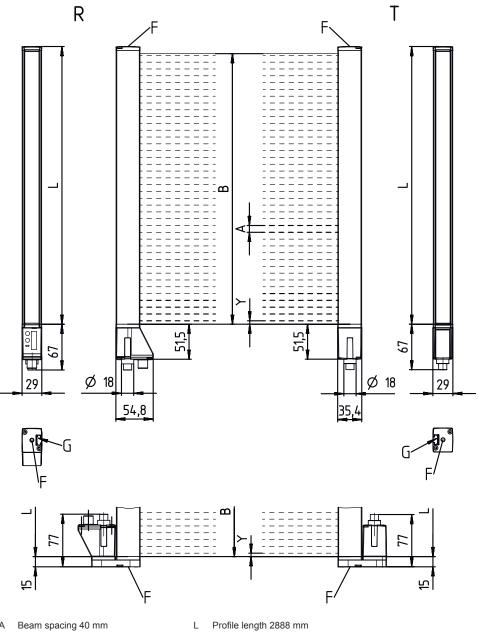
#### Classification

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
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 40 mm А
- В Measurement field length 2850 mm
- F M6 thread G Fastening groove
- Transmitter R Receiver
  - Υ 5 mm

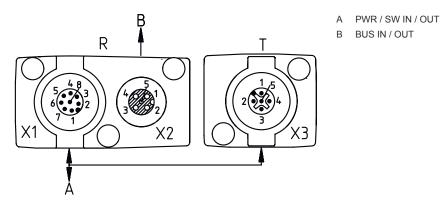
Т

We reserve the right to make technical Leuze electronic GmbH + Co. KG info@leuze.com • www.leuze.com changes 
 The Sensor People
 In der Braike 1, D-73277 Owen/Germany
 Phone: +49 7021 573-0 • Fax: +49 7021 573-199
 eng • 2025-04-04



#### **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		



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**

# PinPin assignment1V+2Tx-3PB GND4Tx+5FE/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
50119531	CML720i-T40- 2850.R-M12	Light curtain transmitter	Operating range: 0.3 7 m Connection: Connector, M12, Rear side, 5 -pin

#### Part number code

Part designation: CML7XXi-YZZ-AAAA.BCCCDDD-EEEFFF

CML	Operating principle Measuring light curtain
7XXi	Series           720i: 720i series           730i: 730i series
Y	Device type T: transmitter R: receiver
22	Beam spacing 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm
AAAA	Measurement field length [mm], dependent on beam spacing
В	Equipment A: 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	∜ 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

# Leuze

## 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
ęę.	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.