### SMART SENSOR BUSINESS

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Part no.: 50119938 CML720i-R05-2800.R/CN-M12 Light curtain receiver



Figure can vary

# Contents

- Technical data
- · Dimensioned drawings
- Electrical connection
- · Operation and display
- Suitable transmitters
- Part number code
- Notes
- Accessories

### Part no.: 50119938 – CML720i-R05-2800.R/CN-M12 – Light curtain receiver

#### **Technical data**

Basic data	
Series	720
Operating principle	Throughbeam principle
Device type	Receiver
Contains	Accessories for the use of the BT-2R1
Application	Object measurement
Special design	
Special design	Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning
Optical data	
Operating range	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	2,800 mm
Number of beams	560 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>	
Residual ripple	18 30 V , DC 0 15 % , From U <sub>B</sub>
Residual ripple	0 15 % , From $U_B$ 0 435 mA , The specified values refer to the entire package con-
Residual ripple Open-circuit current	0 15 % , From $U_B$ 0 435 mA , The specified values refer to the entire package con-
Residual ripple Open-circuit current Inputs/outputs selectable	0 15 % , From ${\sf U}_{\sf B}$ 0 435 mA , The specified values refer to the entire package consisting of transmitter and receiver.
Residual ripple Open-circuit current Inputs/outputs selectable Output current, max.	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA
Residual ripple Open-circuit current Inputs/outputs selectable Output current, max. Input resistance	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s)
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable       Type	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable       Type       Voltage type, outputs	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable DC
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable       Type       Voltage type, outputs       Switching voltage, outputs	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s) 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable       Type       Voltage type, outputs       Switching voltage, outputs       Voltage type, inputs	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable       Type       Voltage type, outputs       Switching voltage, outputs       Voltage type, inputs       Switching voltage, inputs	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s) 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable       Type       Voltage type, outputs       Switching voltage, outputs       Voltage type, inputs       Switching voltage, inputs       Input/output 1	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s) 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V Iow: ≤4V
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable       Type       Voltage type, outputs       Switching voltage, outputs       Voltage type, inputs       Switching voltage, inputs       Switching voltage, inputs       Activation/disable delay	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s) 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V Iow: ≤4V
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable       Type       Voltage type, outputs       Switching voltage, outputs       Voltage type, inputs       Switching voltage, inputs       Input/output 1	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s) 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V Iow: ≤4V
Residual ripple       Open-circuit current       Inputs/outputs selectable       Output current, max.       Input resistance       Number of inputs/outputs selectable       Type       Voltage type, outputs       Switching voltage, outputs       Voltage type, inputs       Switching voltage, inputs       Switching voltage, inputs       Type       Voltage type, inputs       Switching voltage, inputs       Switching voltage, inputs       Timing	0 15 % , From U <sub>B</sub> 0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V low: ≤4V 1 ms

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 2019-12-08 2 / 10

### Part no.: 50119938 – CML720i-R05-2800.R/CN-M12 – Light curtain receiver

Type       CANopen         Function       Process         Service interface       IO-Link         Function       IO-Link         Function       Configuration via software Service         Connection       Configuration via software Service         Connection       2 Piece(s)         Plug outlet       Rear side         Connection 1       Configuration interface Dignal IV         Function       Configuration interface Dignal IV         Signal OUT       Voltage supply         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Toreid       Be-pin         Encoding       A-coded         Connection 2       US N         Type of connection       Connector         Type of connection       <	Interface	
CAMpon   Process     Function   Process     Service interface   Type     Type   IO-Link     DoLink   Configuration via software Service     Connection   Configuration via software Service     Number of connections   2 Ploce(s)     Plug outet   Rear side     Connection 1   Configuration interface Connection to transmitter Signal OUT Voltage supply     Type of connection   Configuration interface Connector to transmitter Signal OUT Voltage supply     Type of connection   Connector     Thread size   M12     Type   Male     Material   Metal     No. of pins   8-pin     Encoding   A-coded     Connector   Thread size     Thread size   M12     Type of connection   BUS IN BUS OUT     Function   BUS IN BUS OUT     Type of connection   Connector     Thread size   M12     Type of connection   Connector     Thread size   M12 <		CANopen
Function       Process         Service interface       IO-Link         Type       IO-Link         IOLInk       Configuration via software Service         Function       Configuration via software Service         Connection       2 Piece(s)         Pug outlet       Rear side         Connection 1       Configuration interface Configuration interface         Function 2       Connector 1         Function 3       Connector 1         Function 4       Configuration interface         Connector 1       Configuration via software         Function 3       Configuration via software         Type of connection 4       Configuration via software         Type of connection 5       B - pin         Thread size       M12         Type of connection 7       Configuration interface         Conding       A-coded         Connection 2       Function         Function 8       B - pin         Function 8       BUS NT         Type of connection 1       Connector         Thread size       M12         Type 0       Fernale         Material       Metal         No.		Слюрен
Service interface         Type       IO-Link         IOLInk       Configuration via software Service         Function       Configuration via software Service         Connection       2 Piece(s)         Plug outet       Rear side         Connection 1       Configuration interface Connection to transmitter Signal NL Type of connection         Type of connection       Configuration interface Connection to transmitter Signal NL Type of connection         Thread size       M12         Type of connection       Connector         Thread size       M12         Type of connection       B-pin         Encoding       A-coded         Connector       Encoding         A-coded       Connector         Type of connection       BUS N         Encoding       A-coded         Connector       Type of connector         Type of connection       BUS N         Type of connection       BUS N         Type of connection       Connector         Type of connection       Connector         Thread size       M12         Type of connection       Cubic         Thread size       M12		Process
Type       IO-Link         Function       Configuration via software Service         Connection       Service         Punder of connections       2 Piece(s)         Plug outlet       Rear side         Connection 1       Connection transmitter Signal IV Voltage supply         Type of connection       Connector or transmitter Signal IV Voltage supply         Type of connection       Connector or Connector or transmitter Signal IV Voltage supply         Type of connection       Connector or Connector or Thread size         Type of connection       Connector or Connector or Thread size         No. of pins       B - sin         Encoding       Acoded         Connector or       Type         Type of connector       Connector         Type of connecton       Connector         Totading       Acoded         Connecton 2       Encoding         Type of connecton       Connector         Thread size       M12		
Type       IO-Link         Function       Configuration via software Service         Connection       Service         Punder of connections       2 Piece(s)         Plug outlet       Rear side         Connection 1       Connection transmitter Signal IV Voltage supply         Type of connection       Connector or transmitter Signal IV Voltage supply         Type of connection       Connector or Connector or transmitter Signal IV Voltage supply         Type of connection       Connector or Connector or Thread size         Type of connection       Connector or Connector or Thread size         No. of pins       B - sin         Encoding       Acoded         Connector or       Type         Type of connector       Connector         Type of connecton       Connector         Totading       Acoded         Connecton 2       Encoding         Type of connecton       Connector         Thread size       M12	Sanvias interface	
Do-Link         Function       Configuration via software Service         Connection       Connections         Number of connections       2 Piece(s)         Plug outlet       Rear side         Connection 1       Configuration interface Connection to transmitter Signal IOUT         Function       Connector         Thread size       M12         Type of connector       Thread size         Thread size       M12         Type of connector       8-pin         Encoding       A-coded         Connecton 2       Encoding         Function       BUS IN BUS OUT         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Thread size       M12         Type       Female         Material       Metal         No. of pins       5-pin         Encoding       Cubic         Dimension (W xH x L)       20 mm x 35 mm x 2,823 mm         Housing material       Metal         Net of pins       <		IO Link
Function     Configuration via software Service       Connection     2 Piece(s)       Plug outlet     Rear side       Connection 1     Configuration interface Connection to transmitter Signal IN Signal OUT Voltage supply       Type of connection     Connector 0       Thread size     M12       Type of connection     Connector 0       Thread size     M12       Type of connection     Connector 0       Thread size     M12       Type of connection     Bus IN Beard       Recoding     A-coded       Connection     BUS IN BUS IN BUS IN BUS IN BUS IN BUS IN BUS OUT       Function     BUS IN		
Service         Connection         Number of connections       2 Piece(s)         Plug outlet       Rear side         Connection 1       Connection interface         Function       Connection interface         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Recoding       A-coded         Connection 2       Encoding         Function       BUS N         BUS OUT       Support         Type of connector       Type of connector         Thread size       M12         Type of connecton       Connector         Thread size       M12         Type of connecton       Connector         Thread size       M12         Type of connector       Encoding         A-coded       Connector         Thread size       M12         Type of connector       Encoding         A-coded       C		Configuration via software
Number of connections       2 Piece(s)         Plug oulet       Rear side         Connection 1       Configuration interface Connection to transmitter Signal NUT Voltage supply         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Material       Metal         No. of pins       8 -pin         Encoding       A-coded         Connector 2       Function         Function       BUS N BUS N BUS SOUT         Type of connection       Connector         Tayle of connection       Connector         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Thread size       M12         Type of connection       Connector <t< td=""><td></td><td>Service</td></t<>		Service
Number of connections       2 Piece(s)         Plug oulet       Rear side         Connection 1       Configuration interface Connection to transmitter Signal NUT Voltage supply         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Material       Metal         No. of pins       8 -pin         Encoding       A-coded         Connector 2       Function         Function       BUS N BUS N BUS SOUT         Type of connection       Connector         Tayle of connection       Connector         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Thread size       M12         Type of connection       Connector <t< td=""><td>Connection</td><td></td></t<>	Connection	
Plug outlet   Rear side     Connection 1   Configuration interface Connection to transmitter Signal DUT Viatage supply     Type of connection   Connector     Thread size   M12     Type of connection   Connector     Thread size   M12     Type of pins   8 -pin     Encoding   A-coded     Connection 1   BUS IN BUS IN BUS OUT     Type of connection   Connector     Thread size   M12     Type of connection   BUS IN BUS OUT     Type of connection   Connector     Thread size   M12     Type of connection   Connector     Thread size   M12     Type of connection   Connector     Thread size   M12     Type if connection   Sense     No. of pins   5 -pin     Encoding   A-coded     Material   Metal     No. of pins   5 -pin     Encoding   Cubic     Dimension (Wx H x L)   29 mm x 35.4 mm x 2.823 mm     Housing material   Metal, Aluminum     Lens cover material   Plastic     Net weight   2,900 g     Housing color   Silver     Type of display   LED OLED display     Vueber of LEDs		2 Piece(s)
Connection 1         Function       Configuration interface Connection to transmitter Signal IOUT Voltage supply         Type of connection       Connector         Thread size       M12         Type of connection       Male         Material       Metal         No. of pins       8 -pin         Encoding       A-coded         Connection 2       Function         Function       BUS IN BUS OUT         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Function       BUS IN BUS OUT         Type of connection       Connector         Thread size       M12         Type of connection       Connector         Thread size       M2         No. of pins       5		
Function     Configuration interface Connection to transmitter Signal Dr Votage supply       Type of connection     Connector       Thread size     M12       Type of pins     8-pin       Encoding     A-coded       Connection Z     Pinction       Function     BUS IN BUS OUT       Type of connection     Connector       Function     BUS NUT       Type of connection     Connector       Turead size     M12       Type of connection     Connector       Thread size     M12       Type of connection     Connector       Thread size     M12       Type of pins     5-pin       Encoding     A-coded       Material     Metal       No. of pins     5-pin       Encoding     A-coded       Wetanical data     Design       Design     Cubic       Dimension (W x H x L)     29 mm x 35.4 mm x 2.823 mm       Housing material     Metal, Aluminum       Lens cover material     Plastic       Housing color     Silver       Type of fastening     Groove mounting device       Via opti		
Connection bransmitter Signal OUT Voltage supplyType of connectionConnectorTread sizeM12Type (mathematical dataMetalNo. of pins8 -pinEncodingA-codedConnector 2Function 2Function 2BUS IN BUS OUTType of connectionConnectorThread sizeM12Type of connection 1BUS NT BUS OUTType of connectionConnectorThread sizeM12Type of connectionConnectorThread sizeM12Type of connectionConnectorThread sizeM12Type of connectionSignal OUTType of connectionSignal OUTTo of pins5 -pinEncodingA-codedMetarialMetalNo. of pins5 -pinEncodingCubicDesignCubicDimension (W X H x L)29 mm x 35.4 mm x 2.823 mmHousing materialMetal , AluminumLens cover materialPlasticNet weight2.900 gHousing colorSilverType of displayCubicnal mounting deviceType of displayCubicnal mounting deviceNumber of LEDs2 Plece(s)Type of configurationSoftware Teach-in		Configuration interface
Signal OUT Voltage supply         Type of connection       Connector         Thread size       M12         Type       Male         Material       Metal         No. of pins       8 -pin         Encoding       A-coded         Connection 2       Function         Function       BUS IN BUS OUT         Type of connection       Connector         Thread size       M12         Type of connection       Connector         No. of pins       5 -pin         Encoding       A-coded         Design       Cubic         Dimension (W x H x L)       29 mm x 35.4 mm x 2.823 mm         Housing material       Metal , Aluminum         Lens cover material       Metal , Aluminum         Lens cover material       Piastic		Connection to transmitter
Type of connection     Connector       Thread size     M12       Type     Male       Material     Metal       No. of pins     8-pin       Encoding     A-coded       Connection 2     Function       Function     BUS IN BUS OUT       Type of connection     Connector       Thread size     M12       Type of connection     Connector       Baterial     Metal       No. of pins     5 -pin       Encoding     A-coded       Dimension (W x H x L)     29 mm x 35.4 mm		Signal OUT
Thread sizeM12TypeMaleMaterialMetalNo. of pins8 -pinEncodingA-codedConnection 2FunctionBUS N BUS OUTType of connectionConnectorThread sizeM12TypeFemaleMaterialMetalNo. of pins5 -pinEncodingA-codedMaterialMetalNo. of pins5 -pinEncodingCubicDimension (W x H x L)29 mm x 35.4 mm x 2,823 mmHousing materialMetal.Net weight2,900 gHousing colorSilverType of fasteningGroove mounting Via optional mounting deviceVia optional mounting deviceUED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Tracech-in		
TypeMaleMaterialMetalNo. of pins8 -pinEncodingA-codedConnection 2FunctionBUS IN BUS OUTType of connectionConnectorThread sizeM12TypeFemaleMaterialMetalNo. of pins5 -pinEncodingA-codedMetarialMetalNo. of pins5 -pinEncodingA-codedMethanical dataDesignDesignCubicDimension (W x H x L)29 mm x 35.4 mm x 2.823 mmHousing materialMetal, AluminumLens cover materialPlasticNet weight2.900 gHousing colorSilverType of fasteningGroove mounting Via optional mounting deviceType of LEDs2 Plece(s)Type of ConfigurationSoftwareType of configurationSoftware		
Material   Metal     No. of pins   8 -pin     Encoding   A-coded     Connection 2   Encoding     Function   BUS IN BUS OUT     Type of connection   Connector     Thread size   M12     Type   Female     Material   Metal     No. of pins   5 -pin     Encoding   A-coded     Methal     Material   Metal     No. of pins   5 -pin     Encoding   A-coded     Methal     Metarial   Metal     No. of pins   5 -pin     Encoding   A-coded     Mechanical data     Design     Cubic   Dimension (W x H x L)     29 mm x 35.4 mm x 2.823 mm   Housing material     Housing material   Metal , Aluminum     Lens cover material   Plastic     Net weight   2.900 g     Housing color   Silver     Type of fastening   Groove mounting device     Operation and display     Number of LEDs   2 Plece(s)     Type of configuration   Software     Type of configuration   Toftware		
No. of pins8 -pinEncodingA-codedConnection 2FunctionBUS IN BUS OUTType of connectionConnectorThread sizeM12TypeFemaleMaterialMetalNo. of pins5 -pinEncodingA-codedMechanical dataMetrialMetalNo. of pins5 -pinEncodingA-codedMechanical dataDesignCubicDimension (W x H x L)29 mm x 35.4 mm x 2.823 mmHousing materialMetal , AluminumLens cover materialPlasticNet weight2.900 gHousing colorSilverType of fasteningGroove mounting Via optional mounting deviceOperation and displayNumber of LEDs2 Plece(s)Type of configurationSoftware Teach-in		
Encoding     A-coded       Connection 2     Function       Function     BUS IN BUS OUT       Type of connection     Connector       Thread size     M12       Type     Female       Material     Metal       No. of pins     5 -pin       Encoding     A-coded       Mechanical data     Design       Dimension (W x H x L)     29 mm x 35.4 mm x 2,823 mm       Housing material     Metal, Aluminum       Lens cover material     Plastic       Net weight     2,900 g       Housing color     Silver       Type of fastening     Groove mounting Via optional mounting device       Operation and display     LED OLED display       Number of LEDs     2 Piece(s)       Type of configuration     Software Teach-in		
Connection 2     BUS IN BUS OUT       Function     BUS OUT       Type of connection     Connector       Thread size     M12       Type     Female       Material     Metal       No. of pins     5 -pin       Encoding     A-coded       Mechanical data       Design     Cubic       Dimension (W x H x L)     29 mm x 35.4 mm x 2,823 mm       Housing material     Metal , Aluminum       Lens cover material     Plastic       Net weight     2,900 g       Housing color     Silver       Type of fastening     Groove mounting Via optional mounting device       Operation and display       LED OLEDs     2 Piece(s)       Type of configuration     Software Teach-in		
FunctionBUS IN BUS OUTType of connectionConnectorThread sizeM12TypeFemaleMaterialMetalNo. of pins5 -pinEncodingA-codedMechanical dataDesignCubicDimension (W x H x L)29 mm x 35.4 mm x 2,823 mmHousing materialMetal , AluminumLens cover materialPlasticNet weight2,900 gHousing colorSilverType of fasteningGroove mounting Via optional mounting deviceDeration and displayLED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Teach-in		A-coded
Type of connection     Connector       Thread size     M12       Type     Female       Material     Metal       No. of pins     5 -pin       Encoding     A-coded       Mechanical data       Design       Cubic       Dimension (W x H x L)     29 mm x 35.4 mm x 2,823 mm       Housing material     Metal , Aluminum       Lens cover material     Plastic       Net weight     2,900 g       Housing color     Silver       Type of fastening     Groove mounting via optional mounting device       Operation and display       Number of LEDs     2 Piece(s)       Type of configuration     Software Teach-in		DUCIN
Thread sizeM12TypeFemaleMaterialMetalNo. of pins5 -pinEncodingA-codedMechanical dataDesignCubicDimension (W x H x L)29 mm x 35.4 mm x 2,823 mmHousing materialMetal , AluminumLens cover materialPlasticNet weight2,900 gHousing colorSilverType of fasteningGroove mounting Via optional mounting deviceType of displayLED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Teach-in	Function	
TypeFemaleMaterialMetalNo. of pins5 -pinEncodingA-codedMechanical dataDesignCubicDimension (W x H x L)29 mm x 35.4 mm x 2,823 mmHousing materialMetal , AluminumLens cover materialPlasticNet weight2,900 gHousing colorSilverType of fasteningGroove mounting Via optional mounting deviceOperation and displayLED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Teach-in	Type of connection	Connector
Material     Metal       No. of pins     5 -pin       Encoding     A-coded       Mechanical data       Design     Cubic       Dimension (W x H x L)     29 mm x 35.4 mm x 2,823 mm       Housing material     Metal , Aluminum       Lens cover material     Plastic       Net weight     2,900 g       Housing color     Silver       Type of fastening     Groove mounting via optional mounting device       Deration and display       Type of display     LED OLED display       Number of LEDs     2 Piece(s)       Type of configuration     Software Teach-in	Thread size	M12
No. of pins     5 -pin       Encoding     A-coded       Mechanical data        Design     Cubic       Dimension (W x H x L)     29 mm x 35.4 mm x 2,823 mm       Housing material     Metal , Aluminum       Lens cover material     Plastic       Net weight     2,900 g       Housing color     Silver       Type of fastening     Groove mounting Via optional mounting device       Operation and display     LED OLED display       Number of LEDs     2 Piece(s)       Type of configuration     Software Teach-in	Туре	Female
Encoding     A-coded       Mechanical data     Cubic       Design     Cubic       Dimension (W x H x L)     29 mm x 35.4 mm x 2,823 mm       Housing material     Metal , Aluminum       Lens cover material     Plastic       Net weight     2,900 g       Housing color     Silver       Type of fastening     Groove mounting via optional mounting device       Operation and display       Type of display     LED OLED display       Number of LEDs     2 Piece(s)       Type of configuration     Software Teach-in	Material	Metal
Mechanical data       Design     Cubic       Dimension (W x H x L)     29 mm x 35.4 mm x 2,823 mm       Housing material     Metal , Aluminum       Lens cover material     Plastic       Net weight     2,900 g       Housing color     Silver       Type of fastening     Groove mounting Via optional mounting device       Operation and display       Type of display     LED OLED display       Number of LEDs     2 Piece(s)       Type of configuration     Software Teach-in	No. of pins	5 -pin
DesignCubicDimension (W x H x L)29 mm x 35.4 mm x 2,823 mmHousing materialMetal , AluminumLens cover materialPlasticNet weight2,900 gHousing colorSilverType of fasteningGroove mounting deviceOperation and displayType of displayLED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Teach-in	Encoding	A-coded
DesignCubicDimension (W x H x L)29 mm x 35.4 mm x 2,823 mmHousing materialMetal , AluminumLens cover materialPlasticNet weight2,900 gHousing colorSilverType of fasteningGroove mounting deviceOperation and displayType of displayLED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Teach-in	Machanical data	
Dimension (W x H x L)29 mm x 35.4 mm x 2,823 mmHousing materialMetal , AluminumLens cover materialPlasticNet weight2,900 gHousing colorSilverType of fasteningGroove mounting Via optional mounting deviceOperation and displayType of displayLED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Teach-in		Cubic
Housing materialMetal , AluminumLens cover materialPlasticNet weight2,900 gHousing colorSilverType of fasteningGroove mounting Via optional mounting deviceOperation and displayType of displayLED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Teach-in		
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Net weight2,900 gHousing colorSilverType of fasteningGroove mounting Via optional mounting deviceOperation and displayType of displayLED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Teach-in		
Housing color     Silver       Type of fastening     Groove mounting Via optional mounting device       Operation and display       Type of display     LED OLED display       Number of LEDs     2 Piece(s)       Type of configuration     Software Teach-in		
Type of fastening     Groove mounting Via optional mounting device       Operation and display     LED OLED display       Type of display     LED OLED display       Number of LEDs     2 Piece(s)       Type of configuration     Software Teach-in		
Operation and display       Type of display     LED OLED display       Number of LEDs     2 Piece(s)       Type of configuration     Software Teach-in		Groove mounting
Type of displayLED OLED displayNumber of LEDs2 Piece(s)Type of configurationSoftware Teach-in		
OLED display         Number of LEDs       2 Piece(s)         Type of configuration       Software Teach-in	Operation and display	
Type of configuration Software Teach-in	Type of display	
Teach-in	Number of LEDs	2 Piece(s)
Operational controls Membrane keyboard	Type of configuration	
	Operational controls	Membrane keyboard

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### Part no.: 50119938 – CML720i-R05-2800.R/CN-M12 – Light curtain receiver

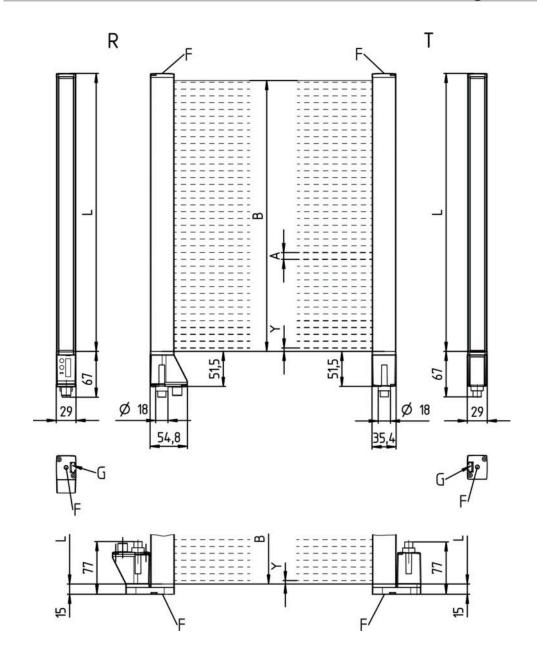
Environmental data			
Ambient temperature, operation	-30 60 °C		
Ambient temperature, storage	-40 70 °C		
Certifications			
Degree of protection	IP 65		
Protection class	III		
Certifications	c CSA US		
Standards applied	IEC 60947-5-2	IEC 60947-5-2	

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.: 50119938 – CML720i-R05-2800.R/CN-M12 – Light curtain receiver



A Beam spacing 5 mm B Measurement field length 2800 mm

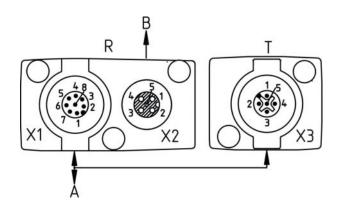
F M6 thread

- G Fastening groove L Profile length 2808 mm

T Transmitter

- R Receiver
- Y 2.5 mm

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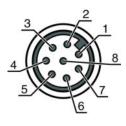


A PWR / SW IN/OUT B BUS IN / OUT

#### **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

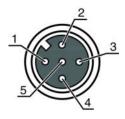
Pin	Pin assignment
1	V+
2	I/O 1
3	GND
4	IO-Link
5	I/O 2
6	RS 485 Tx+
7	RS 485 Tx+
8	FE/SHIELD



Connection 2		
Function	BUS IN BUS OUT	
Type of connection	Connector	
Thread size	M12	
Туре	Female	
Material	Metal	
No. of pins	5 -pin	
Encoding	A-coded	

### Part no.: 50119938 – CML720i-R05-2800.R/CN-M12 – Light curtain receiver

Pin	Pin assignment
1	FE/SHIELD
2	n.c.
3	CAN GND
4	CAN H
5	CAN L



### **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

### Suitable transmitters

Part no.	Designation	Article	Description
50119483	CML720i- T05-2800.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
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

### Part no.: 50119938 – CML720i-R05-2800.R/CN-M12 – Light curtain receiver

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 cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

### Part no.: 50119938 – CML720i-R05-2800.R/CN-M12 – Light curtain receiver

### Connection technology - Interconnection cables

Part no.	Designation	Article	Description
50129781	KDS DN-M12-5A- M12-5A-P3-050	Interconnection cable	Suitable for interface: IO-Link, DeviceNet, CANopen Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

## 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
	50118185	K-YCN M12A- M12A-S-PUR	Interconnection cable	Suitable for interface: CANopen Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length fork 1: 250 mm Cable length fork 2: 350 mm Sheathing material: PUR

### Connection technology - Terminating resistors

Part no.	Designation	Article	Description
50040099	TS 01-5-SA	Terminator plug	Suitable for: DeviceNet, CANopen Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin Function: Bus termination

## 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.: 50119938 – CML720i-R05-2800.R/CN-M12 – Light curtain receiver

### 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.