



Figure can vary

Part no.: 50128889
CSL710-R05-160.A/L-M12
Light curtain receiver



Contents

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- Dimensioned drawings
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Technical data

Basic data	
Series	710
Operating principle	Throughbeam principle
Device type	Receiver
Contains	2x BT-NC sliding block
Application	Precise object detection

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	160 mm
Number of beams	32 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_B	18 ... 30 V , DC
Residual ripple	0 ... 15 % , From U_B
Open-circuit current	0 ... 135 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	4 Piece(s)
Voltage type, outputs	DC
Switching voltage, outputs	Typ. $U_B / 0$ V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥ 6 V low: ≤ 4 V

Input/output 1	
Activation/disable delay	0 ... 1 ms

Timing	
Readiness delay	400 ms
Cycle time	1.36 ms
Response time per beam	30 μ s

Interface	
Type	IO-Link

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IO-Link

COM mode	COM2 COM3
Specification	V1.0.1 V1.1
Min. cycle time	COM2 = 2.3 ms

Service interface

Type	IO-Link
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IO-Link

Function	Configuration via software Service
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Connection

Number of connections	2 Piece(s)
Plug outlet	Axial

Connection 1

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

Connection 2

Type of connection	Connector
Function	Connection to transmitter
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 54.8 mm x 233 mm
Housing material	Metal , Aluminum
Lens cover material	Plastic / PMMA
Net weight	300 g
Housing color	Red
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
Operational controls	Membrane keyboard

Environmental data

Ambient temperature, operation	-30 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C

Certifications

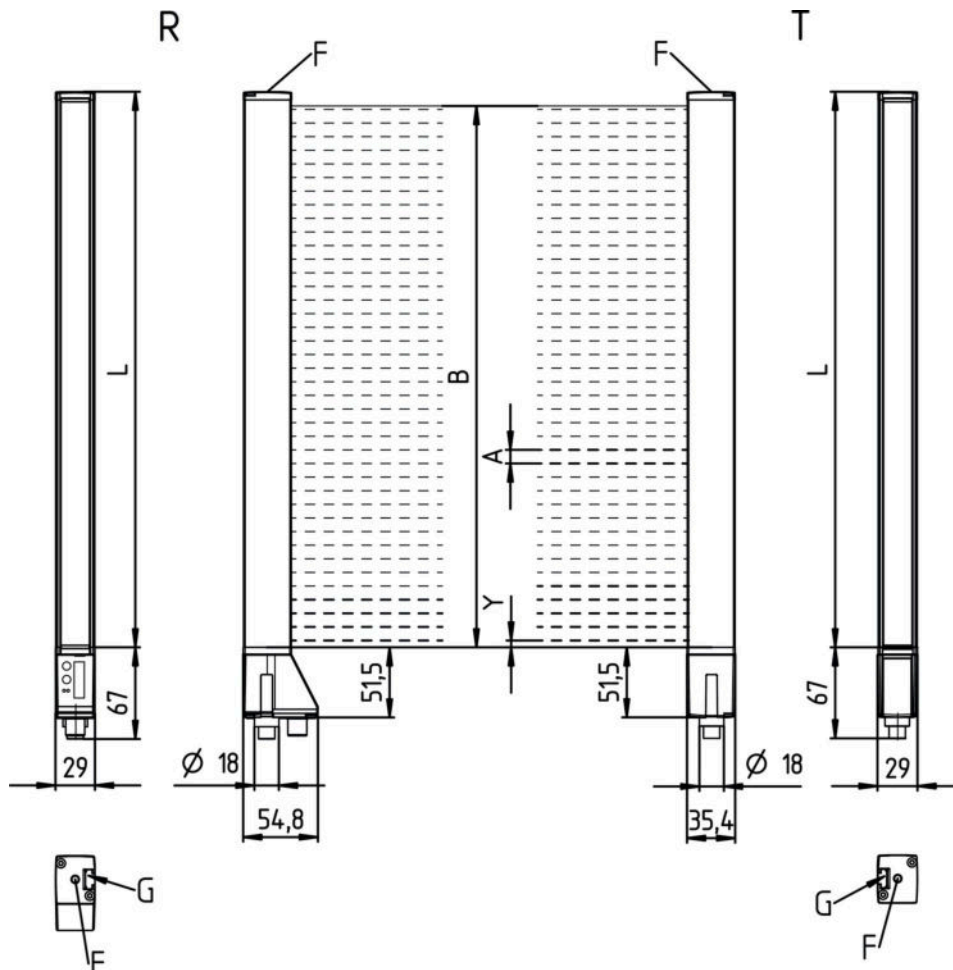
Degree of protection	IP 65
Protection class	III
Certifications	c CSA US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	90314990
eCl@ss 8.0	27270910
eCl@ss 9.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549

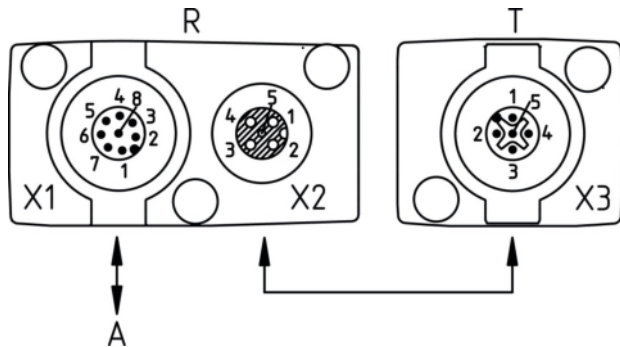
Dimensioned drawings

All dimensions in millimeters



Part no.: 50128889 – CSL710-R05-160.A/L-M12 – Light curtain receiver

- A Beam spacing 5 mm
- B Measurement field length 160 mm
- F M6 thread
- G Fastening groove
- L Profile length 168 mm
- T Transmitter
- R Receiver
- Y

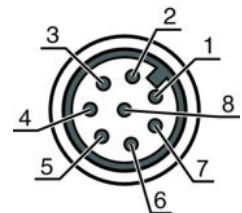


A PWR / SW IN/OUT

Electrical connection

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

Pin	Pin assignment
1	V+
2	IO1
3	GND
4	IO-Link
5	IO2
6	IO3
7	IO4
8	GND

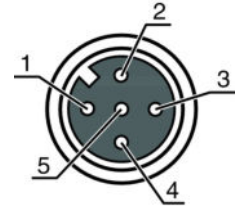


Connection 2	
Type of connection	Connector
Function	Connection to transmitter
Thread size	M12
Type	Female

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Connection 2	
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment
1	FE/SHIELD
2	V+
3	GND
4	RS 485 Tx+
5	RS 485 Tx-




Operation and display

LEDs

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
	50128977	CSL710-T05-160.A-M12	Light curtain transmitter	Application: Precise object detection Operating range: 0.1 ... 3.5 m Connection: Connector, M12, 5 -pin

Part number code

Part designation: **CSL710-XYZ-ZZZZ.A/B-CCC**

CSL710	Operating principle: CSL: switching light curtain of the 710 series
X	Function classes: T: transmitter R: receiver
YY	Beam spacing: 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm
ZZZZ	Measurement field length [mm], dependent on beam spacing: Value, see technical data

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A	Equipment: A: connector outlet, axial
B	Interface: L: IO-Link
CCC	Electrical connection: M12: M12 connector

Note
A list with all available device types can be found on the Leuze electronic website at www.leuze.com .


Notes

Observe intended use!
<ul style="list-style-type: none"> 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:
<ul style="list-style-type: none"> 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
	50135128	KD S-M12-8A-P1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR


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

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Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
	429046	BT-2R1	Mounting bracket set	Contains: 2x BT-R swivel mount, 1 cylinder for mounting on the light curtain Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

	Part no.	Designation	Article	Description
	50121098	SET MD12-US2-IL1.1 + Zub.	Diagnostics set	Interface: USB Connections: 2 Piece(s) Degree of protection: IP 20

Note

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