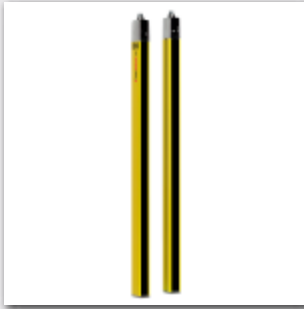


/// MLC 300



The 300 series MLC safety light curtains are the latest generation of extremely slim and robust type 2 devices with slightly set back front screen and reinforced side walls. The devices are available in the Basic and Standard versions, thereby fulfilling various requirements. They can be used universally, due to metal end caps, a flexible fastening concept and the option of form-locking installation. There are also variants which have an AIDA-compliant pin assignment.



PART NUMBER CODES – MLC 500, MLC 300 safety light curtains

M L C 3 0 0 T 1 4 h h h h H / A - E X 2

Type

MLC Safety light curtain

Series

3 MLC 300  
5 MLC 500

Function

00 Transmitter  
01 Transmitter (AIDA)  
10 Automatic restart  
11 Automatic restart (AIDA)  
20 EDM/RES selectable  
30 Muting/blinking/linkage (MLC 530 only)

Device type

T Transmitter  
R Receiver

Resolution

14 14 mm / operating range 0–6 m (MLC 500 only)  
20 20 mm / operating range 0–14 m  
30 30 mm / operating range 0–10 m  
40 40 mm / operating range 0–20 m  
90 90 mm / operating range 0–20 m

Protective field height

hhh 150...3000 mm

Host/Guest

H Host  
MG MiddleGuest  
G Guest

Interface (MLC 500 only)

/A AS-Interface

Option

EX2 Explosion protection  
/V Extra shock-resistant

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

## MLC 310

This type 2 Basic model provides the most important functions: Range reduction on the transmitter, reversible transmission channels, a LED display as well as an automatic start/restart interlock round out the range of service.

### Benefits:

- Automatic start/restart
- Optimal handling
- Prevention of mutual interference of the sensors by selectable transmission channels and range reduction, if applicable
- Universal application due to standard functions
- Short delivery times and global availability
- QR code on the sensor for quick service information

Part no.	Part description	Protective field height	Resolution	Operating range	Connection
68091201	► MLC310R20-150	150 mm	20 mm		Connector, metal, M12, 5-pin
68090201	◄ MLC300T20-150	150 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091202	► MLC310R20-225	225 mm	20 mm		Connector, metal, M12, 5-pin
68090202	◄ MLC300T20-225	225 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091203	► MLC310R20-300	300 mm	20 mm		Connector, metal, M12, 5-pin
68090203	◄ MLC300T20-300	300 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091204	► MLC310R20-450	450 mm	20 mm		Connector, metal, M12, 5-pin
68090204	◄ MLC300T20-450	450 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091206	► MLC310R20-600	600 mm	20 mm		Connector, metal, M12, 5-pin
68090206	◄ MLC300T20-600	600 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091207	► MLC310R20-750	750 mm	20 mm		Connector, metal, M12, 5-pin
68090207	◄ MLC300T20-750	750 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091209	► MLC310R20-900	900 mm	20 mm		Connector, metal, M12, 5-pin
68090209	◄ MLC300T20-900	900 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091210	► MLC310R20-1050	1,050 mm	20 mm		Connector, metal, M12, 5-pin
68090210	◄ MLC300T20-1050	1,050 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091212	► MLC310R20-1200	1,200 mm	20 mm		Connector, metal, M12, 5-pin
68090212	◄ MLC300T20-1200	1,200 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091213	► MLC310R20-1350	1,350 mm	20 mm		Connector, metal, M12, 5-pin
68090213	◄ MLC300T20-1350	1,350 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091215	► MLC310R20-1500	1,500 mm	20 mm		Connector, metal, M12, 5-pin
68090215	◄ MLC300T20-1500	1,500 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091216	► MLC310R20-1650	1,650 mm	20 mm		Connector, metal, M12, 5-pin
68090216	◄ MLC300T20-1650	1,650 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68091218	► MLC310R20-1800	1,800 mm	20 mm		Connector, metal, M12, 5-pin
68090218	◄ MLC300T20-1800	1,800 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin

► receiver / ◄ transmitter

Included in delivery: sliding blocks.

Further products of this series can be found on our website.

Available resolutions: 20 mm, 30 mm, 40 mm, 90 mm.

## MLC 311

The devices have a plug connection with AIDA-compliant M12 pin assignment (Automatisierungs-Initiative deutscher Automobilisten (AIDA) = Automation Initiative of German automobile manufacturers).

### Benefits:

- Automatic start/restart
- Optimal handling
- Range reduction on demand
- Universal application due to standard functions
- Short delivery times and global availability
- QR code on the sensor for quick service information

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Design
68095403	► MLC311R40-300	300 mm	40 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68094403	◄ MLC301T40-300	300 mm	40 mm	0 ... 20 m	Connector, metal, M12, 4-pin	AIDA-compliant
68095404	► MLC311R40-450	450 mm	40 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68094404	◄ MLC301T40-450	450 mm	40 mm	0 ... 20 m	Connector, metal, M12, 4-pin	AIDA-compliant
68095406	► MLC311R40-600	600 mm	40 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68094406	◄ MLC301T40-600	600 mm	40 mm	0 ... 20 m	Connector, metal, M12, 4-pin	AIDA-compliant
68095407	► MLC311R40-750	750 mm	40 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68094407	◄ MLC301T40-750	750 mm	40 mm	0 ... 20 m	Connector, metal, M12, 4-pin	AIDA-compliant
68095409	► MLC311R40-900	900 mm	40 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68094409	◄ MLC301T40-900	900 mm	40 mm	0 ... 20 m	Connector, metal, M12, 4-pin	AIDA-compliant
68095410	► MLC311R40-1050	1,050 mm	40 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68094410	◄ MLC301T40-1050	1,050 mm	40 mm	0 ... 20 m	Connector, metal, M12, 4-pin	AIDA-compliant
68095412	► MLC311R40-1200	1,200 mm	40 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68094412	◄ MLC301T40-1200	1,200 mm	40 mm	0 ... 20 m	Connector, metal, M12, 4-pin	AIDA-compliant

► receiver / ◄ transmitter

Included in delivery: sliding blocks.

Further products of this series can be found on our website.

Available resolutions: 40 mm.

## MLC 320

The Standard version of this type 2 safety light curtain, with a start/restart interlock (RES) and contactor monitoring (EDM), also features practical function extensions for increased performance – still being simple to handle and integrate into your systems.

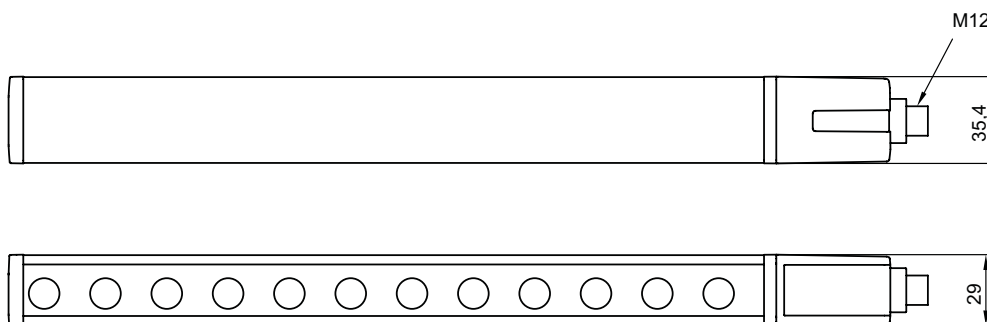
### Benefits:

- Basic functions such as automatic start/restart, start/restart interlock (RES), contactor monitoring (EDM)
- Optimal handling due to function selection without PC as well as LED and 7-segment display with integrated 3-zone alignment aid
- Prevention of mutual interference of the sensors by selectable transmission channels and range reduction, if applicable
- Universal application due to standard functions
- Short delivery times and global availability
- QR code on the sensor for quick service information

Part no.	Part description	Protective field height	Resolution	Operating range	Connection
68092201	▶ MLC320R20-150	150 mm	20 mm		Connector, metal, M12, 8-pin
68090201	◀ MLC300T20-150	150 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092202	▶ MLC320R20-225	225 mm	20 mm		Connector, metal, M12, 8-pin
68090202	◀ MLC300T20-225	225 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092203	▶ MLC320R20-300	300 mm	20 mm		Connector, metal, M12, 8-pin
68090203	◀ MLC300T20-300	300 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092204	▶ MLC320R20-450	450 mm	20 mm		Connector, metal, M12, 8-pin
68090204	◀ MLC300T20-450	450 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092206	▶ MLC320R20-600	600 mm	20 mm		Connector, metal, M12, 8-pin
68090206	◀ MLC300T20-600	600 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092207	▶ MLC320R20-750	750 mm	20 mm		Connector, metal, M12, 8-pin
68090207	◀ MLC300T20-750	750 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092209	▶ MLC320R20-900	900 mm	20 mm		Connector, metal, M12, 8-pin
68090209	◀ MLC300T20-900	900 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092210	▶ MLC320R20-1050	1,050 mm	20 mm		Connector, metal, M12, 8-pin
68090210	◀ MLC300T20-1050	1,050 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092212	▶ MLC320R20-1200	1,200 mm	20 mm		Connector, metal, M12, 8-pin
68090212	◀ MLC300T20-1200	1,200 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092213	▶ MLC320R20-1350	1,350 mm	20 mm		Connector, metal, M12, 8-pin
68090213	◀ MLC300T20-1350	1,350 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092215	▶ MLC320R20-1500	1,500 mm	20 mm		Connector, metal, M12, 8-pin
68090215	◀ MLC300T20-1500	1,500 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092216	▶ MLC320R20-1650	1,650 mm	20 mm		Connector, metal, M12, 8-pin
68090216	◀ MLC300T20-1650	1,650 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin
68092218	▶ MLC320R20-1800	1,800 mm	20 mm		Connector, metal, M12, 8-pin
68090218	◀ MLC300T20-1800	1,800 mm	20 mm	0 ... 15 m	Connector, metal, M12, 5-pin

▶ receiver / ◀ transmitter  
 Included in delivery: sliding blocks.  
 Further products of this series can be found on our website.  
 Available resolutions: 20 mm, 30 mm, 40 mm, 90 mm.

## Dimensioned drawings: MLC 300



MLC 300 safety light curtain

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

## ACCESSORIES: MLC 300, MLC 500

### Connection technology

Connection cables for MLC 300, MLC 500 transmitter, MLC 510receiver

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
678055	CB-M12-5000E-5GF	Connector, M12, axial, female	5-pin	5,000 mm	PUR
678056	CB-M12-10000E-5GF	Connector, M12, axial, female	5-pin	10,000 mm	PUR
678057	CB-M12-15000E-5GF	Connector, M12, axial, female	5-pin	15,000 mm	PUR
678058	CB-M12-25000E-5GF	Connector, M12, axial, female	5-pin	25,000 mm	PUR
678059	CB-M12-50000E-5GF	Connector, M12, axial, female	5-pin	50,000 mm	PUR

Further connection cables can be found on our website

Connection cables for MLC 520, MLC 530receiver

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
678060	CB-M12-5000E-8GF	Connector, M12, axial, female	8-pin	5,000 mm	PUR
678061	CB-M12-10000E-8GF	Connector, M12, axial, female	8-pin	10,000 mm	PUR
678062	CB-M12-15000E-8GF	Connector, M12, axial, female	8-pin	15,000 mm	PUR
678063	CB-M12-25000E-8GF	Connector, M12, axial, female	8-pin	25,000 mm	PUR
678064	CB-M12-50000E-8GF	Connector, M12, axial, female	8-pin	50,000 mm	PUR

Further connection cables can be found on our website

Connection cables for MLC 301, MLC 501 transmitter, MLC 311, MLC 511receiver

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130726	KD S-M12-4A-P1-050	Connector, M12, axial, female	4-pin	5,000 mm	PUR
50130727	KD S-M12-4A-P1-100	Connector, M12, axial, female	4-pin	10,000 mm	PUR
50123846	CB-M12-25000E-4GF-PUR	Connector, M12, axial, female	4-pin	25,000 mm	PUR

Further connection cables can be found on our website

Interconnection cables for Host/MiddleGuest/Guest

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Sheathing material
429278	CB-M12-2000E-8TP	Connector, M12, axial, female	8-pin	Connector, M12, axial, male	8-pin	2,000 mm	PUR
429279	CB-M12-5000E-8TP	Connector, M12, axial, female	8-pin	Connector, M12, axial, male	8-pin	5,000 mm	PUR

Further interconnection cables can be found on our website

User-configurable connectors

Part no.	Part description	Connection	No. of pins
429175	CB-M12-5GF	Connector, M12, axial, female	5-pin
429178	CB-M12-8GF	Connector, M12, axial, female	8-pin

Further connectors can be found on our website

### Mounting systems

Mounting brackets

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
429006	BT-2L-HG	Host/Guest connection bracket	Screw type		Metal
429005	BT-L-HG	Host/Guest connection bracket	Screw type		Metal
429056	BT-2L	Angle, L-shape	Screw type	Through-hole mounting	Metal
429057	BT-2Z	Angle, Z-shape	Screw type	Through-hole mounting	Metal

Swivel mounts

Part no.	Part description	Suitable for	Fastening at device	Fastening at system	Material	Shock absorber
429393	BT-2HF		Clampable	Through-hole mounting	Metal, plastic	No
429394	BT-2HF-S		Clampable	Through-hole mounting	Metal, plastic	Yes
429395	BT-2HF-G	MLC MiddleGuest and Guest	Clampable	Through-hole mounting	Metal, plastic	No
429396	BT-2HF-GS	MLC MiddleGuest and Guest	Clampable	Through-hole mounting	Metal, plastic	Yes

### Other mounting systems

Part no.	Part description	Design	Fastening at device	Fastening at system	Material	Swivel range	Shock absorber
424417	BT-2P40	Mounting clamp	Groove mounting	Groove mounting	Metal		
424422	BT-2SB10	Mounting clamp	Clampable	Through-hole mounting	Metal	-8 ... 8 °	No
424423	BT-2SB10-S	Mounting clamp	Clampable	Through-hole mounting	Metal	-8 ... 8 °	Yes
425740	BT-10NC60	Sliding block	Groove mounting	Mounting thread	Metal		
425741	BT-10NC64	Sliding block	Groove mounting	Mounting thread	Metal		
425742	BT-10NC65	Sliding block	Groove mounting	Mounting thread	Metal		

### Muting

Sensor connection boxes for MLC 530receiver

Part no.	Part description	Connection	Connections	Fastening
520160	AC-SCM8U	Cable with connector, 500 mm, M12, 8-pin	6x	Through-hole mounting, groove mounting
520162	AC-SCM8U-BT-L	Cable with connector, 500 mm, M12, 8-pin	6x	Mounting plate with L-angle, groove mounting

### Test rods

Part no.	Part description	Diameter 1	Diameter 2
349945	AC-TR14/30	14 mm	30 mm
349939	AC-TR20/40	20 mm	40 mm

### Alignment aids

Part no.	Part description	Receiver operating range	Display	Voltage supply
520101	AC-ALM-M	30 m	5 multi-color LEDs	2 AA batteries, replaceable, 2 x 1.5V