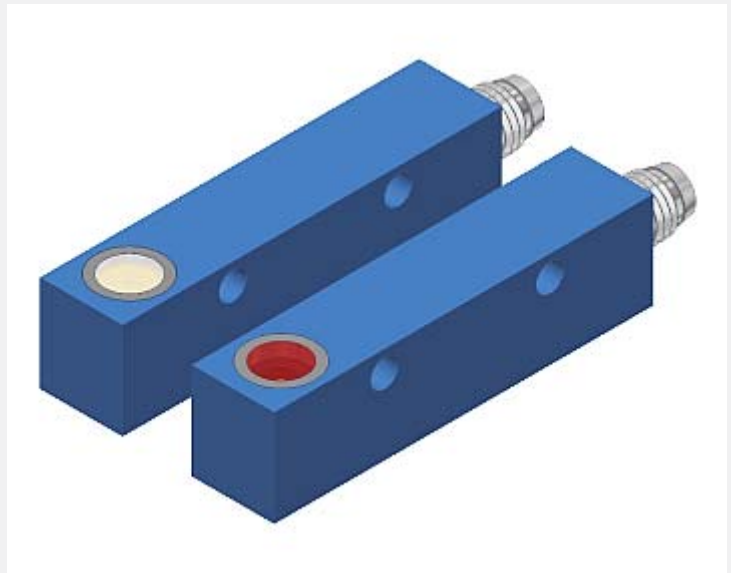


# D-LAS Series

## ► D-LAS90-S-... D-LAS90-L-...

Laser oneway light barriers (two models available):  
 D-LAS90-S: Aperture Ø 0.7 mm, max. range typ. 1 m  
 D-LAS90-L: Aperture typ. 3 mm x 1 mm, max. range typ. 60 m

- Collimated laser beam (<0.39 mW, 670 nm), **laser class 1**
- Minimum detectable object typ. 0.5 mm respectively 3 mm
- Interference filter
- Switching frequency 1 kHz
- Optics cover made of glass
- Sturdy aluminum housing, IP67



## Design

### Product name:

#### For short range: Type S

with integrated plastic optics and aperture Ø 0.7 mm

**Transmitter: D-LAS90-S-T**

**Receiver: D-LAS90-S-Q-R or  
D-LAS90-S-Qinv-R**

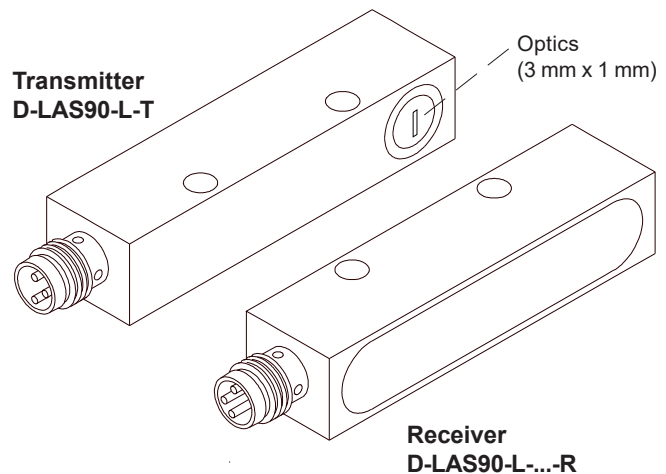
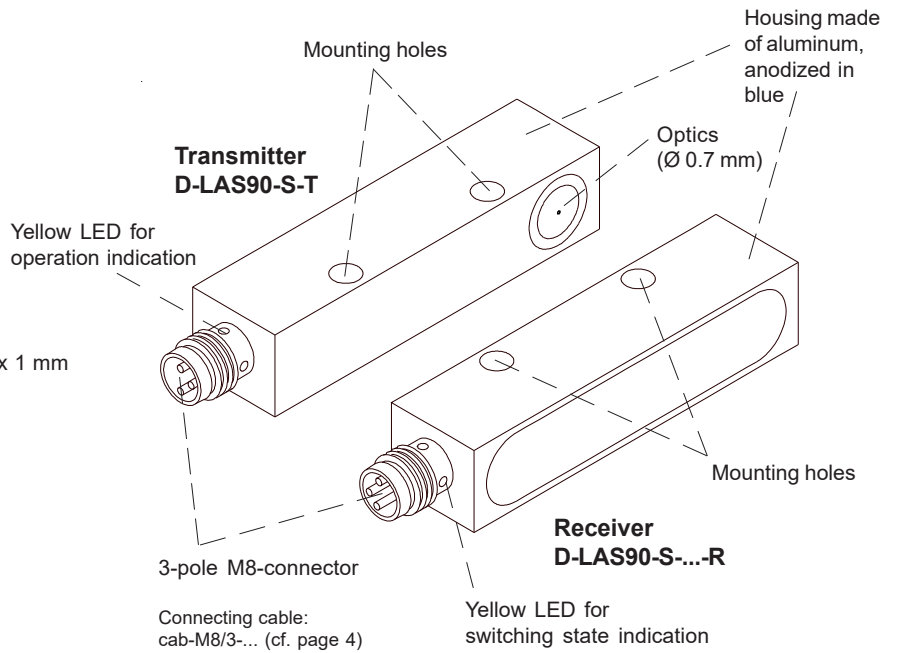
#### For wide range: Type L

with integrated plastic optics and aperture typ. 3 mm x 1 mm

**Transmitter: D-LAS90-L-T**


**Receiver: D-LAS90-L-Q-R or  
D-LAS90-L-Qinv-R**

- Q = Switching output:  
 npn dark-switching (nnp n.o.)/  
 pnp bright-switching (pnp n.c.)
- Qinv = Switching output:  
 pnp dark-switching (pnp n.o.)/  
 npn bright-switching (nnp n.c.)





**Technical Data**

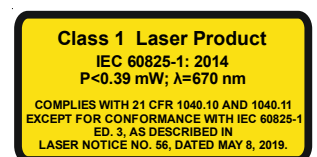
Type	D-LAS90-S	D-LAS90-L
Laser	Solid-state laser, 670 nm, AC operation, <0.39 mW opt. power, laser class 1 acc. to DIN EN 60825-1. The use of these laser transmitters therefore requires no additional protective measures.	
Aperture size	Ø 0.7 mm	typ. 3 mm x 1 mm
Max. range (working distance)	1 m	60 m
Spot size	(depends on working distance)	at max. range of 60 m: 200 mm x 80 mm
Min. detectable object	typ. 0.5 mm	typ. 3 mm
Reproducibility	typ. 1% of aperture size	
Optical filter	Interference filter	
Voltage supply	+24VDC (± 10%), protected against polarity reversal, overload protected	
Alternating current/ direct current supply	AC operation (100 kHz)	
Ambient light	Up to 5000 Lux	
Current consumption	Transmitter: typ. 60 mA      Receiver: typ. 30 mA	
Type of protection	IP67	
Operating temperature range	-20°C to +50°C	
Storage temperature range	-20°C to +85°C	
Housing material	Aluminum, anodized in blue	
Housing dimensions	Transmitter and receiver : approx. 55 mm x 14 mm x 12 mm	
Connector type	3-pole M8 connector	
LED indication	Transmitter: LED yellow for operation indication (integrated in M8 connector) Receiver: LED yellow for switching state indication (integrated in M8 connector)	
Max. switching current	100 mA, short-circuit-proof	
EMC test acc. to	DIN EN 60947-5-2 	
Switching frequency	typ. 1 kHz	



**Laser Information**

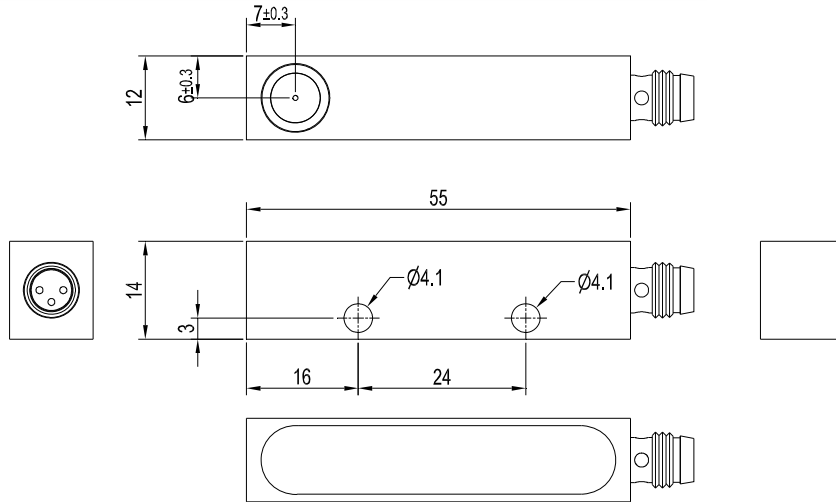
The laser transmitters of D-LAS90 series comply with laser class 1 according to EN 60825-1. Under reasonably foreseeable conditions a class 1 laser is safe. The reasonably foreseeable conditions are kept during specified normal operation. The use of these laser transmitters therefore requires no additional protective measures.

The laser transmitters of D-LAS90 series are supplied with an information label „CLASS 1 Laser Product“.

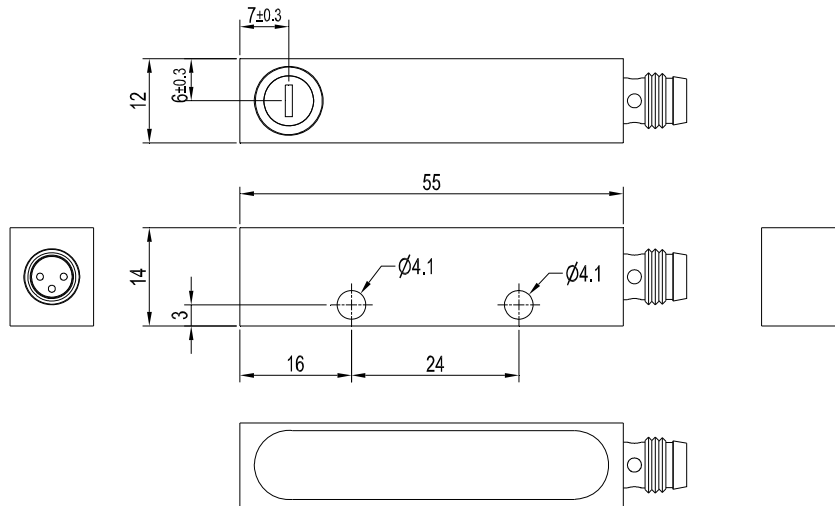


Dimensions

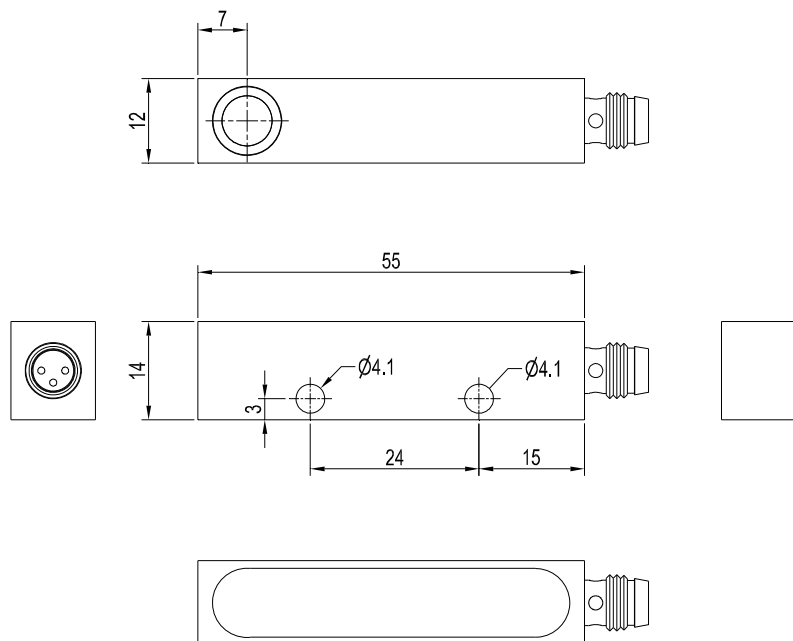
D-LAS90-S-T  
Transmitter



D-LAS90-L-T  
Transmitter



D-LAS90-S-R  
D-LAS90-L-R  
Receiver



(All dimensions in mm)

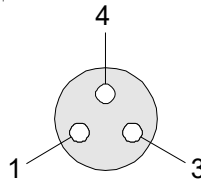
**Connector Assignment**

**Receiver**

(3-pole M8-connector)

**Type Q (npn dark-switching / npn bright-switching):**

Pin No.:	Color:	Assignment:
1	brn	+24VDC (± 10%)
3	blu	GND (0V)
4	blk	OUTPUT



**Transmitter**

(3-pole M8-connector)

Pin No.:	Color:	Assignment:
1	brn	+24VDC (± 10%)
3	blu	GND (0V)
4	blk	Shield

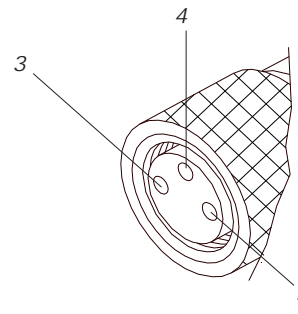
**Type Qinv (npn dark-switching / npn bright-switching):**

Pin No.:	Color:	Assignment:
1	brn	+24VDC (± 10%)
3	blu	GND (0V)
4	blk	OUTPUT INV

**Connecting Cables**

**Available connecting cables:**

<b>cab-M8/3-g-2m</b>	Length: 2m	Outer jacket: PUR	
<b>cab-M8/3-g-5m</b>	Length: 5m	Outer jacket: PUR	
<b>cab-M8/3-w-2m</b>	Length: 2m	Outer jacket: PUR	angle type
<b>cab-M8/3-w-5m</b>	Length: 5m	Outer jacket: PUR	angle type
<b>cab-M8/3-w-npn-2m</b>	Length: 2m	Outer jacket: PUR	angle type, LED
<b>cab-M8/3-w-npn-5m</b>	Length: 5m	Outer jacket: PUR	angle type, LED
<b>cab-M8/3-w-pnp-2m</b>	Length: 2m	Outer jacket: PUR	angle type, LED
<b>cab-M8/3-w-pnp-5m</b>	Length: 5m	Outer jacket: PUR	angle type, LED



(3-pole M8 female connector)

