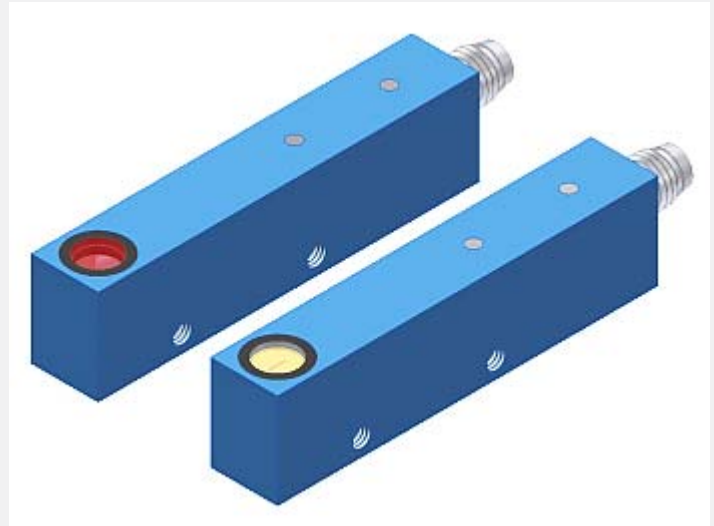


# A-LAS Series

## ▶ A-LAS-12/90-...

- Analog signal (0...+10V) in connection with an electronic control unit type AGL3, AGL4, AGL4-HS, AGL-DIF, SI-CON11 (without PC connection) or SI-CON4, SI-CON8, SI-CON34, A-LAS-CON1 (with PC connection and software)   
 (stand-alone operation of the light barrier is not possible)
- Parallel aligned, visible red laser beam (<0.39 mW, 670 nm), **laser class 1**
- Various apertures available
- Measuring range up to 6.5 mm (depends on aperture used)
- Working range max. 10 m (depends on aperture used)
- Insensitive to outside light due to interference filter
- Compact design, sturdy metal housing, IP67



## Design

### Product name:

**A-LAS-12/90-(aperture)\*-T** (Transmitter)

**A-LAS-12/90-(aperture)\*-R** (Receiver)

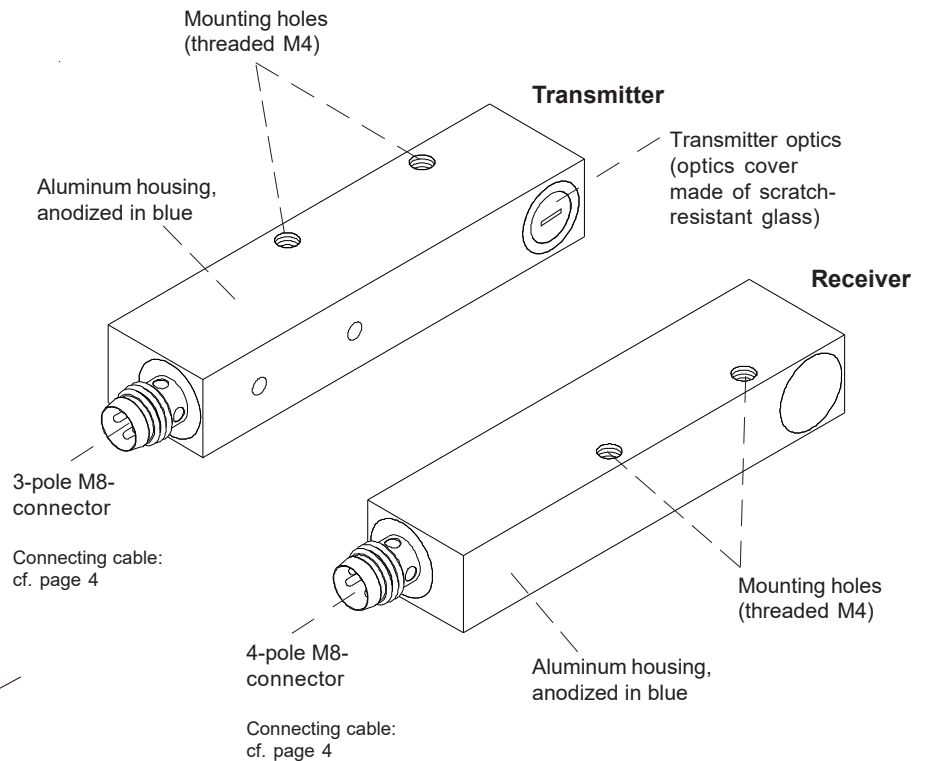
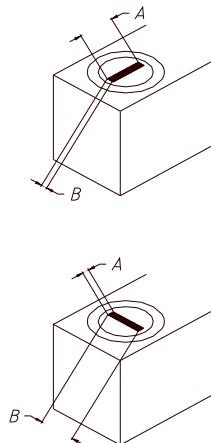
#### \*Available apertures:

#### Round apertures d... (mm):

- d0.15
- d0.2
- d0.3
- d0.5
- d0.7
- d1.0
- d2.0
- d3.0


#### Rectangular apertures AxB (mm):

- |         |         |
|---------|---------|
| 0.2x1   | 1x4     |
| 0.3x0.5 | 1x5     |
| 0.3x0.8 | 1.2x2   |
| 0.3x1   | 1.5x0.3 |
| 0.3x1.5 | 2x0.75  |
| 0.3x3   | 2x1.2   |
| 0.5x0.3 | 2x1     |
| 0.5x1   | 2x3     |
| 0.5x4   | 2x6     |
| 0.5x6.5 | 3x0.3   |
| 0.75x2  | 3x0.75  |
| 0.75x3  | 3x2     |
| 0.75x5  | 4x0.5   |
| 0.8x0.3 | 4x1     |
| 0.8x6.5 | 5x0.75  |
| 1x0.2   | 5x1     |
| 1x0.3   | 6x2     |
| 1x0.5   | 6.5x0.5 |
| 1x1     | 6.5x0.8 |
| 1x2     |         |





**Technical Data**

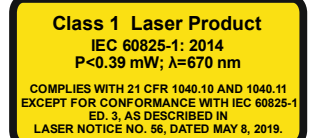
Type	A-LAS-12/90
Shape	Split laser light barrier in rectangular housing. Various round and rectangular apertures are available.
Laser	Solid-state laser, 670 nm, DC-operation, 0.39 mW max. opt. power, laser class 1 acc. to DIN EN 60825-1. The use of these laser transmitter therefore requires no additional protective measures.
Available aperture sizes	Cf. page 1
Measuring range	Up to 6.5 mm (depends on the aperture used)
Working range	Max. 10 m (depends on the aperture used)
Min. detectable object	Typ. 0.8% of aperture size
Reproducibility	Typ. 0.8% of aperture size, with threshold correction (via electronic control unit): typ. 0.1% of aperture size
Threshold correction	Can be activated via a software-controlled electronics of type A-LAS-CON1, SI-CON4, SI-CON8, or SI-CON34
Optical filters	Red light filter RG 630 and interference filter
Voltage supply	Transmitter: +5VDC, receiver: +5VDC
Ambient light (outside light)	With 5000 Lux ambient light around optical receiver unit typ. < 300mV influence on analog signal (0...+10V)
Analog output	0 ... +10V (in connection with any electronic control unit of A-LAS Series)
Band width analog signal	100 kHz (-3 dB)
Current control input (I-CONTROL)	0V ... 5V, laser power decreases linear to increase of voltage: 0V: full power, 5V: laser off
Sensitivity setting (switching threshold)	Via software (with control electronics A-LAS-CON1, SI-CON4, SI-CON34, or SI-CON8) or via potentiometer (with control electronics AGL4 or AGL4-HS)
Gain (analog signal)	Via software (with control electronics A-LAS-CON1, SI-CON4, SI-CON34, or SI-CON8) or via potentiometer (with control electronics AGL4, AGL4-HS, AGL-DIF, or SI-CON11)
Current consumption	Transmitter: typ. 50 mA, receiver typ. 20 mA
Operating temperature range	0°C ... +50°C
Storage temperature range	-20°C ... +85°C
Type of connector	Transmitter: 3-pole M8-connector, receiver: 4-pole M8-connector
Housing material	Aluminum, anodized in blue
Housing dimensions	Transmitter and receiver: each LxWxH approx. 68 mm x 12 mm x 17 mm (without connector M8)
Enclosure rating	IP67
EMC test acc. to	DIN EN 60947-5-2 



**Laser Information**

The laser transmitters of A-LAS 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.

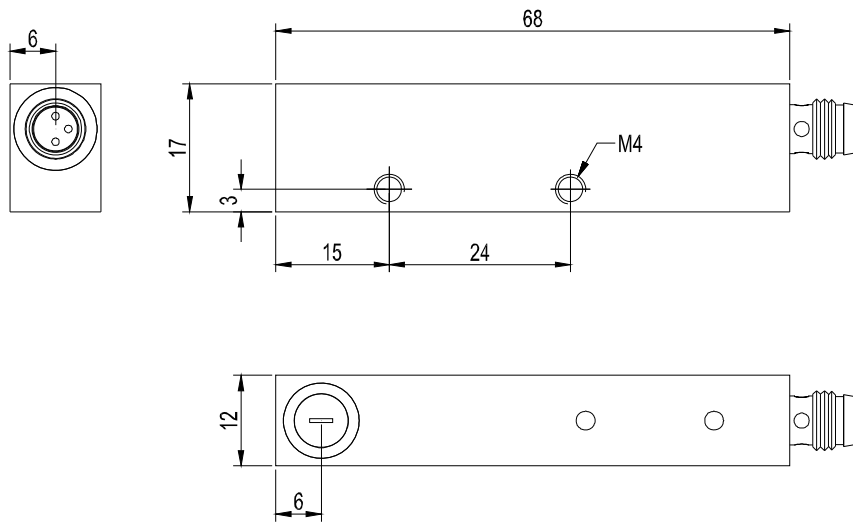
The laser transmitters of A-LAS series series are supplied with an information label „CLASS 1 Laser Product“.





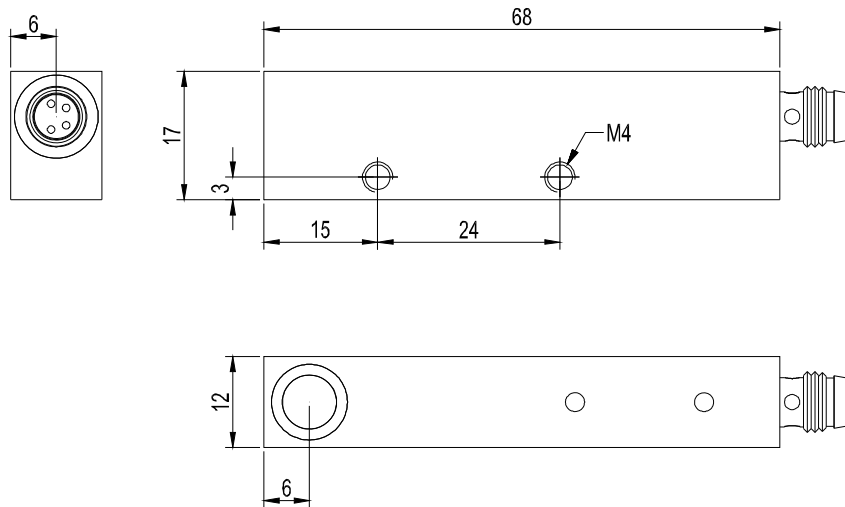
Dimensions

A-LAS-12/90-...-T (Transmitter):



A-LAS-12/90-...-R (Receiver):

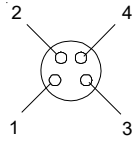
All dimensions in mm



Connector Assignment

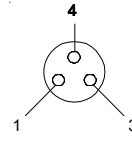
Receiver: 4-pole M8-connector

Pin No.:	Assignment:
1	+5 VDC
2	GND (0V)
3	SHIELD
4	ANALOG



Transmitter: 3-pole M8-connector

Pin No.:	Assignment:
1	+5 VDC
3	GND (0V)
4	I-CONTROL (0V...+5V)



Connecting cables:

For use with SI-CON4:

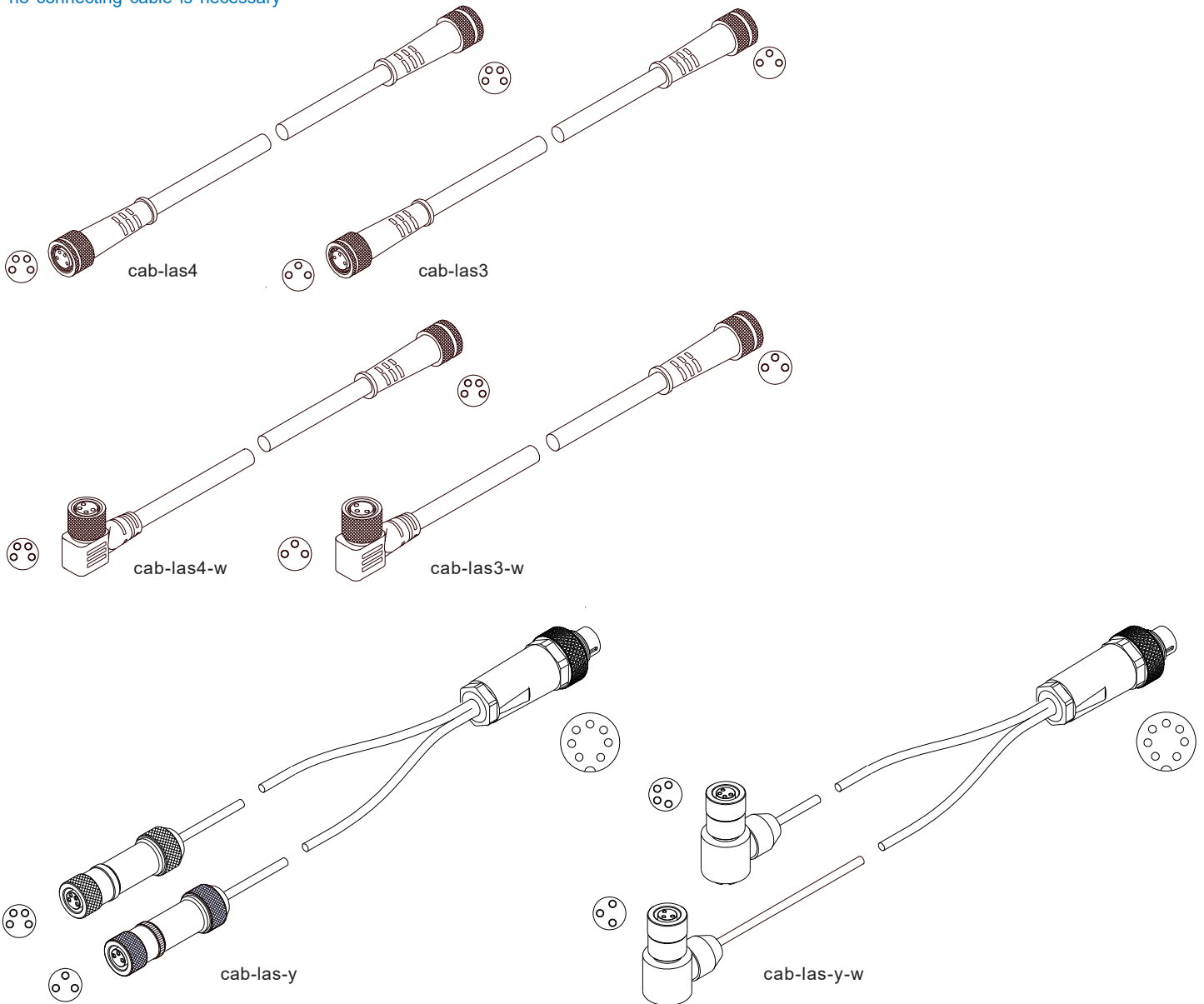
cab-las3-(length) or cab-las3-w-(length) für transmitter  
 cab-las4-(length) or cab-las4-w-(length) für receiver  
 (standard length each 1m, also available lengths: 2m, 3m, or 5m)

For use with AGL4, AGL4-HS, AGL-DIF, SI-CON11, SI-CON8, SI-CON34, A-LAS-CON1:

cab-las-y-(length) or  
 cab-las-y-w-(length)  
 (standard length each 1m, also available lengths: 2m, 3m, or 5m)

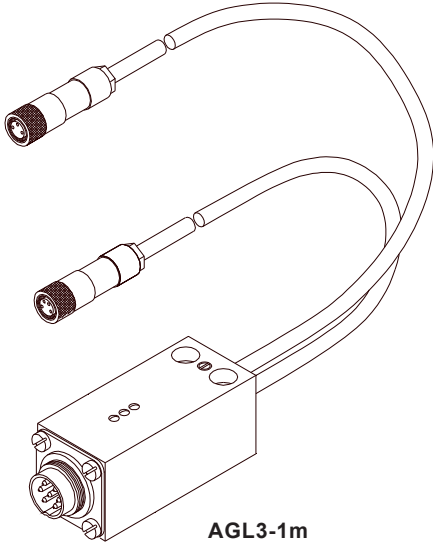
For use with AGL3:

no connecting cable is necessary

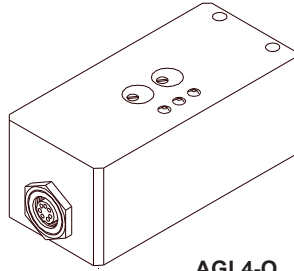


**Electronic Control Units**

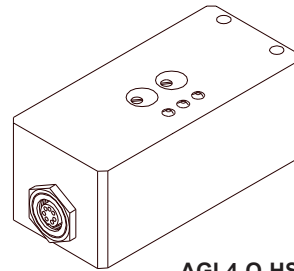
Suitable electronic control units:



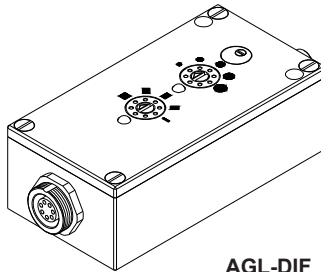
AGL3-1m  
AGL3-2m  
AGL3-3m  
AGL3-4m  
AGL3-5m



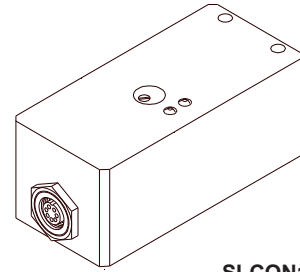
AGL4-Q  
AGL4-Qinv  
AGL4-Qinv-200ms



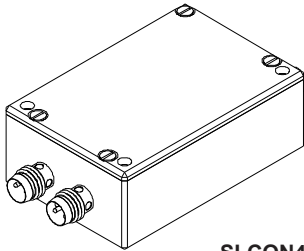
AGL4-Q-HS-500kHz-24V\_LED  
AGL4-Qinv-HS-500kHz-24V\_LED



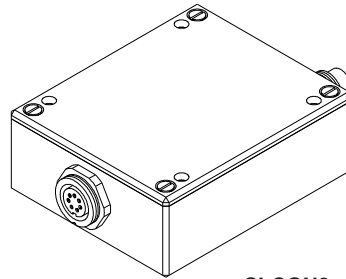
AGL-DIF



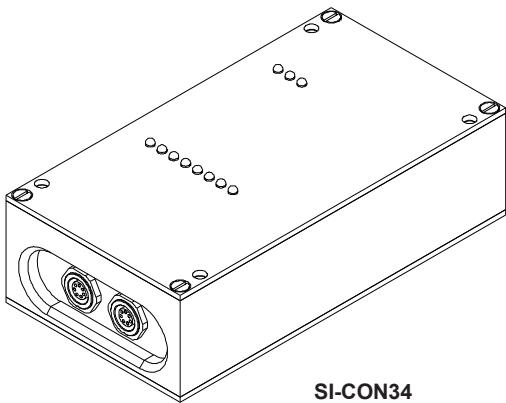
SI-CON11-0/20  
SI-CON11-0/20-5V  
SI-CON11-0/20-IC  
SI-CON11-4/20  
SI-CON11-4/20-IC  
SI-CON11-5/25  
SI-CON11-5/25-IC



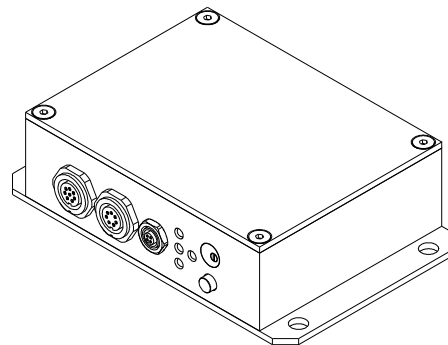
SI-CON4  
(incl. Windows® PC software  
A-LAS-Scope)



SI-CON8  
(incl. Windows® PC software  
SI-CON8-Scope)



SI-CON34  
(incl. Windows® PC software  
SCOPE34)



A-LAS-CON1  
(incl. Windows® PC software  
A-LAS-CON1-Scope)