

A-LAS Series

▶ A-LAS-M12-...-C

- Analog signal (0...+10V) in connection with an electronic control unit type AGL4, AGL4-HS, AGL-DIF, SI-CON11 (without PC connection) or 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 4 mm (depends on aperture used)
- Working range max. 10 m (depends on aperture and cable length)
- Insensitive to outside light due to interference filter
- Compact design, sturdy metal housing, IP67



Design

Product name:

A-LAS-M12-(aperture)*-C-(cable length)**

(consists of transmitter and receiver, incl. cable with 7-pole circular connector 712)

Accessories: (cf. page 3)

- ABL-M12-3** (Blast air top-part)
- ABL-M12-10** (Blast air top-part)

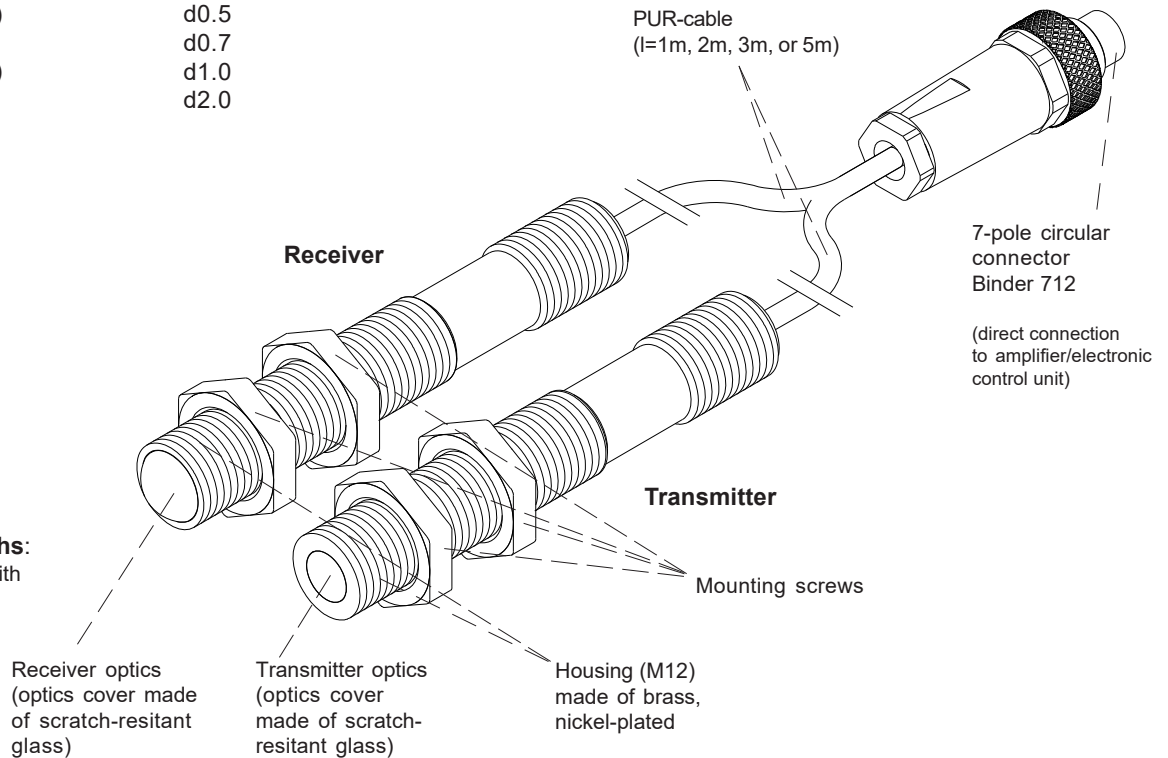
*Available apertures:

Rectangular apertures AxB (mm):	Round apertures d... (mm):
0.2x0.5 (= 0.5x0.2)	d0.15
0.2x1 (= 1x0.2)	d0.3
0.3x0.5 (= 0.5x0.3)	d0.5
0.3x1 (= 1x0.3)	d0.7
0.3x1.5 (= 1.5x0.3)	d1.0
0.3x3 (= 3x0.3)	d2.0
0.5x1 (= 1x0.5)	
0.5x2 (= 2x0.5)	
0.5x3 (= 3x0.5)	
0.5x4 (= 4x0.5)	
0.75x2 (= 2x0.75)	
0.75x3 (= 3x0.75)	
1x1	
1x2 (= 2x1)	
1x3 (= 3x1)	
1x4 (= 4x1)	
2x1.2 (= 1.2x2)	
2x3 (= 3x2)	

*** Available cable lengths:


(transmitter and receiver with same cable length)

- 1 m
- 2 m
- 4 m
- 5 m





Technical Data

Type	A-LAS-M12-...-C
Shape	Laser light barrier in M12 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	Round apertures: Ø 0.15 mm to Ø 2 mm Rectangular apertures: 0.2 mm x 0.5 mm to 4 mm x 1 mm
Measuring range	Up to 4 mm (depends on the aperture used)
Working range	Max. 10 m (depends on the aperture used and on cable length)
Min. detectable object	Typ. 1% of aperture size
Reproducibility	Typ. 1% 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-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-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-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	7-pole circular connector type Binder 712
Cable length	1m, 2m, 3m, or 5m
Housing material	Brass, nickel-plated
Housing dimensions	Transmitter: LxØ approx. 75 mm x M12x1 Receiver: LxØ approx. 76 mm x M12x1
Enclosure rating	IP67
EMC test acc. to	DIN EN 60947-5-2 



Laser Information

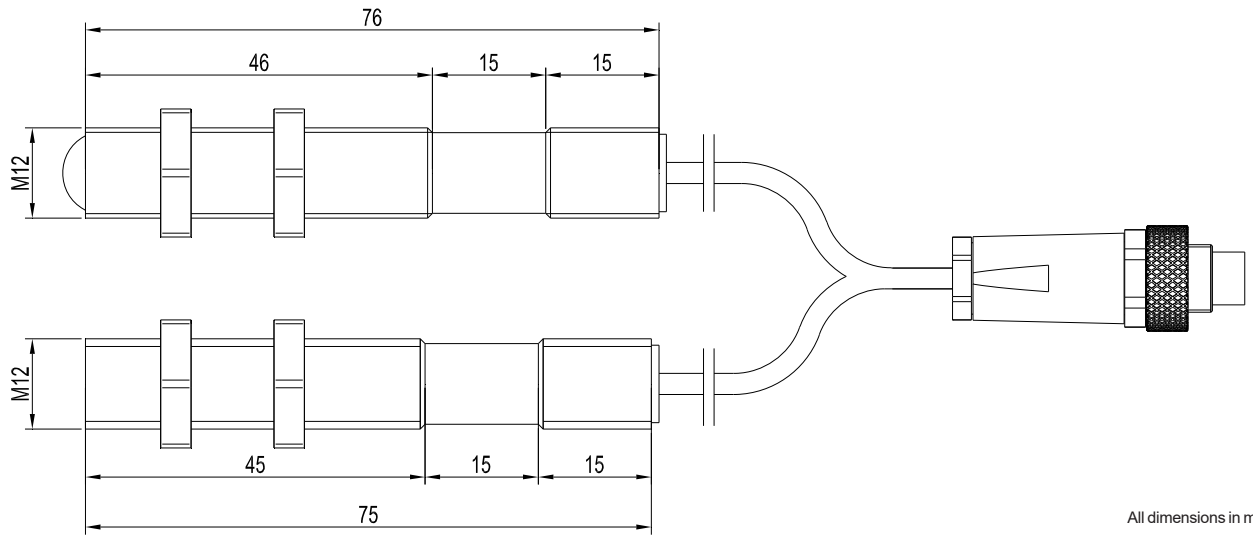
The laser transmitters of A-LAS series comply with laser class 1 according to EN 60825-1. Under reasonably foreseeable conditions a class 1 laser is safe. The reasonably foreseeable conditions are kept during specified normal operation. The use of these laser transmitters therefore requires no additional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

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



Class 1 Laser Product
IEC 60825-1: 2014
P<0.39 mW; λ=670 nm
COMPLIES WITH 21 CFR 1040.10 AND 1040.11
EXCEPT FOR CONFORMANCE WITH IEC 60825-1
ED. 3, AS DESCRIBED IN
LASER NOTICE NO. 56, DATED MAY 8, 2019.

Dimensions

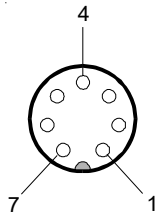


All dimensions in mm

Connector Assignment

Connection to electronic control unit via 7-pole circular connector Binder Series 712:

Pin-No.:	Assignment:
1	0V (GND)
2	+5V
3	I-CONTROL (0V...+5V)
4	+5V
5	ANALOG
6	n.c.
7	0V (GND)



Connection directly to an electronic control unit from A-LAS Series: AGL4, AGL4-HS, AGL-DIF, SI-CON11, SI-CON8, SI-CON34, A-LAS-CON1

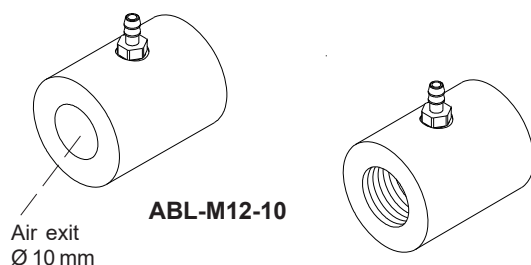
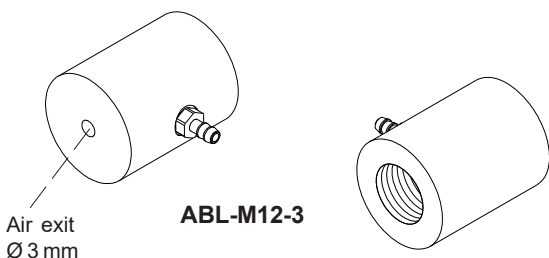
Accessories

Blast-air top-parts for A-LAS-M12-...-C (suitable for both transmitter and receiver frontend)

(please order blast-air top-parts separately for each transmitter and receiver frontend):

ABL-M12-3 (air exit opening Ø 3 mm)

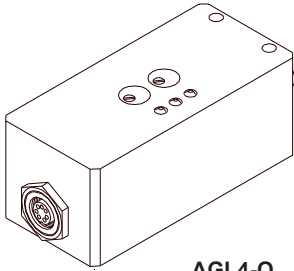
ABL-M12-10 (air exit opening Ø 10 mm)



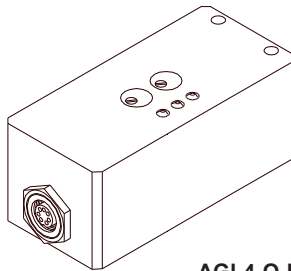


Electronic Control Units

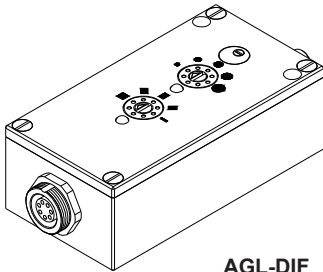
Suitable electronic control units for A-LAS-...-C:



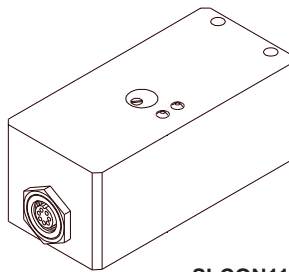
AGL4-Q
AGL4-Qinv
AGL4-Qinv-200ms



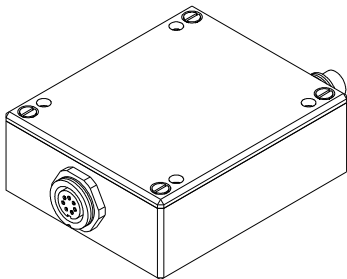
AGL4-Q-HS-500kHz-24V_LED
AGL4-Qinv-HS-500kHz-24V_LED



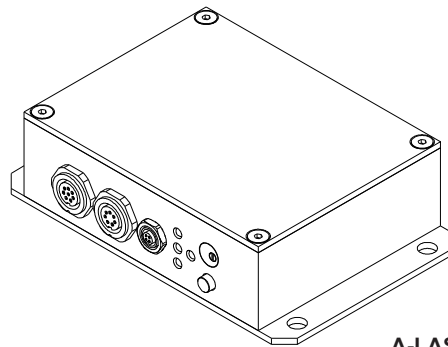
AGL-DIF



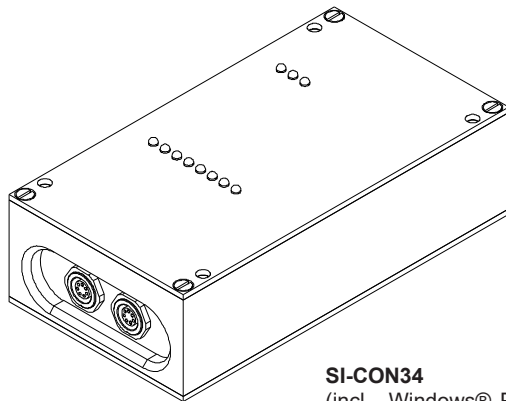
SI-CON11-0/20
SI-CON11-0/20-5V
SI-CON11-0/20-IC
SI-CON11-4/20
SI-CON11-4/20-IC
SI-CON11-5/25
SI-CON11-5/25-IC



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



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



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

