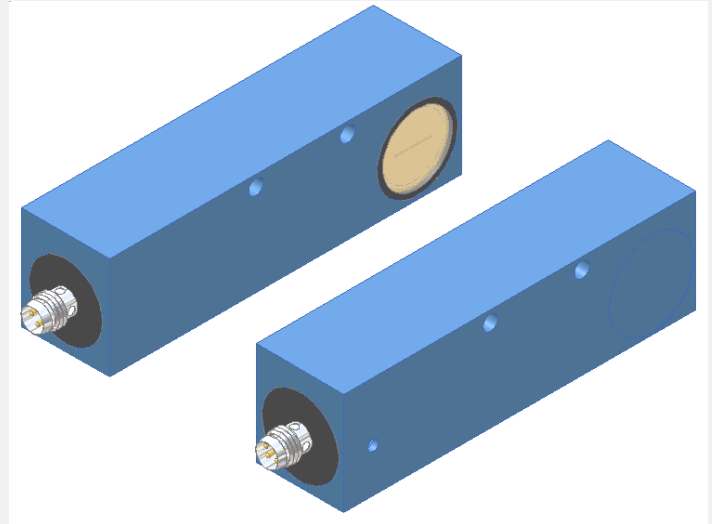


A-LAS Series

▶ A-LAS-24/90-...

- 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 (<0.4 mW, 670 nm), **laser class 1**
- Various apertures available
- Measuring range up to 16 mm (depends on aperture)
- Working range max. 5 m (depends on aperture)
- Insensitive to outside light due to interference filter
- Compact design, sturdy metal housing, IP67



Design

Produktbezeichnung:

A-LAS-24/90-(aperture)*-T (Transmitter)

A-LAS-24/90-(aperture)*-R (Receiver)

*Recommended aperture combinations for transmitter/receiver:

Aperture for transmitter AxB (mm):		Aperture for receiver AxB (mm):
1x16	+	0.5x16
1.5x9.5	+	0.2x9.5
2x10	+	0.3x10
2x16	+	0.5x16
9.5x1.5	+	9.5x0.2
10x2	+	10x0.3
16x1	+	16x0.5
16x2	+	16x0.5

Accessories: (cf. page 5)

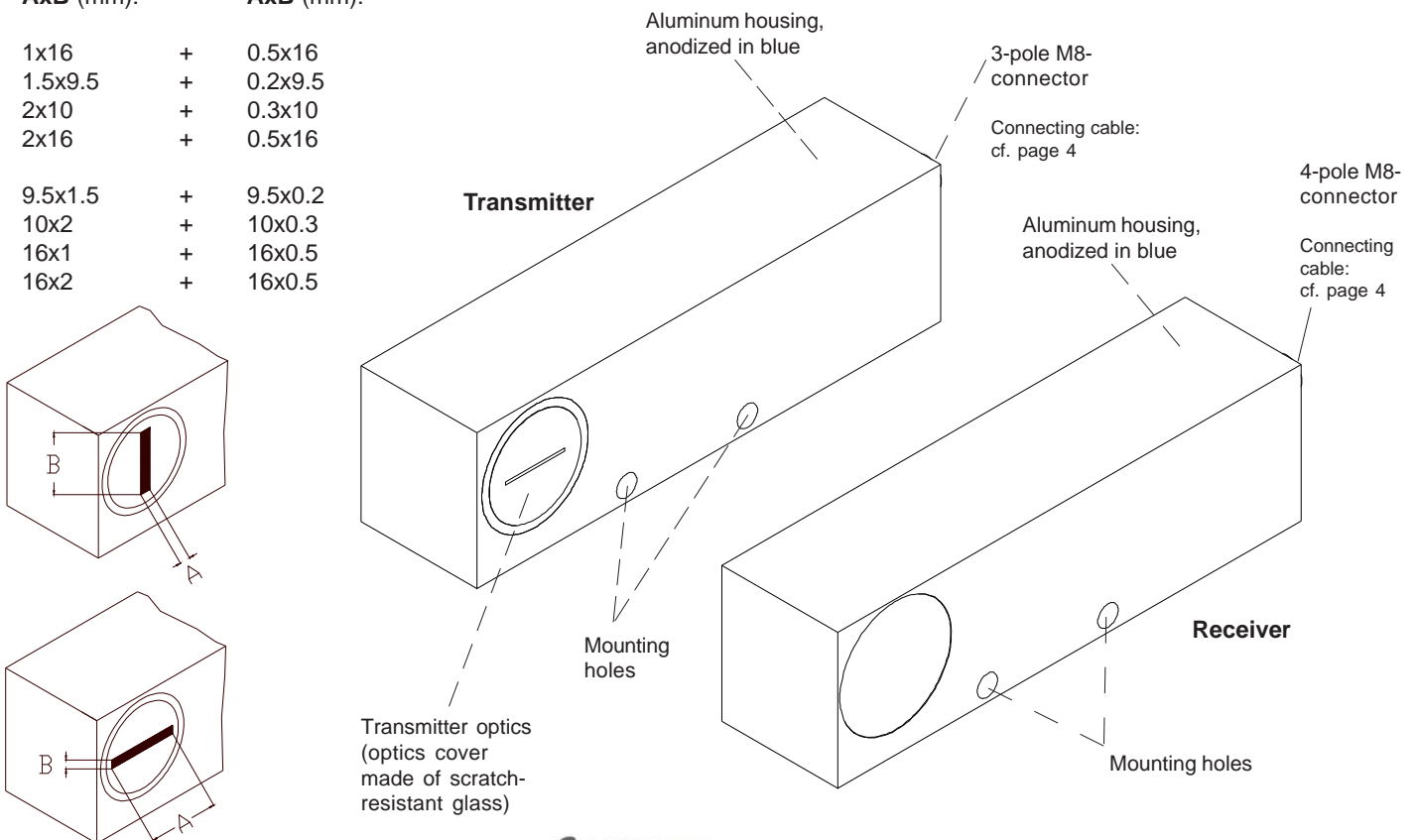
MOUNT-A-LAS-24/90-HT

MOUNT-A-LAS-24/90-HR

MOUNT-A-LAS-24/90-V-T


MOUNT-A-LAS-24/90-V-R

(Mounting flanges)





Technical Data

Type	A-LAS-24/90
Shape	Split laser light barrier in rectangular housing. Various rectangular apertures are available.
Laser	Solid-state laser, 670 nm, DC-operation, 0.4 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	Standard apertures (mm) for transmitter: 16x2, 16x1, 10x2, 9.5x1.5 (recommended aperture combinations for transmitter and receiver: cf. page 1)
Measuring range	Up to 16 mm (depends on the aperture used)
Working range	Max. 5 m (depends on the aperture used)
Min. detectable object	Typ. 0.5% of aperture size
Reproducibility	Typ. 0.5% 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) (depends on the aperture used)
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. 96 mm x 28 mm x 24 mm (without connector M8)
Enclosure rating	IP67
EMC test acc. to	DIN EN 60947-5-2 



Laser Information

The laser transmitters of A-LAS-24/90 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.

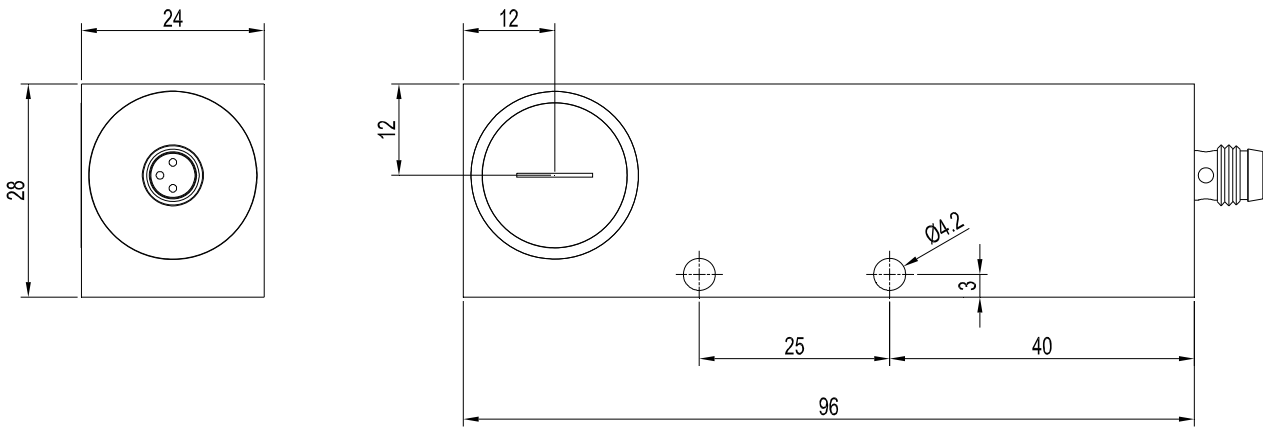
The laser transmitters of A-LAS-24/90 series series are supplied with an information label „CLASS 1 Laser Product“.

CLASS 1 Laser Product
IEC 60825-1: 2008-05
THIS LASER PRODUCT COMPLIES
WITH 21 CFR 1040 AS APPLICABLE

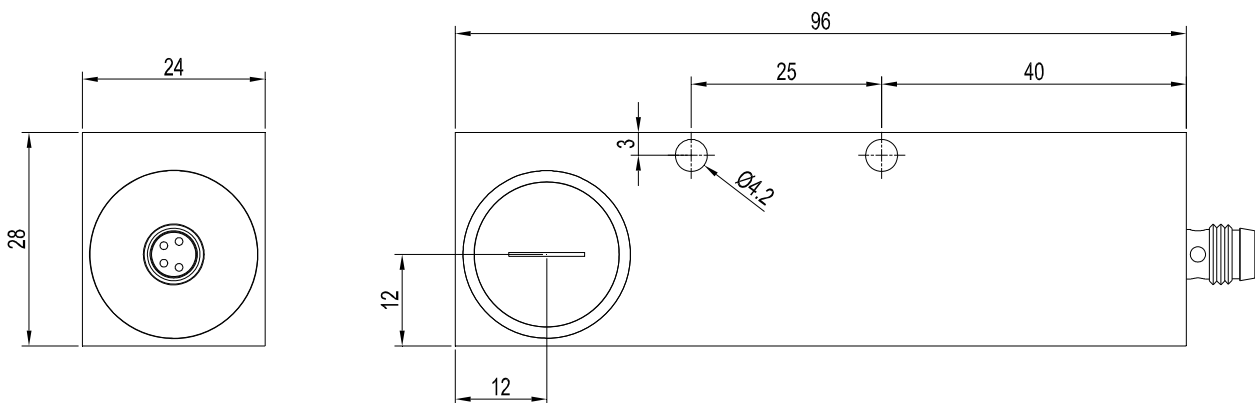


Dimensions

A-LAS-24/90-...-T (Transmitter):



A-LAS-24/90-...-R (Receiver):

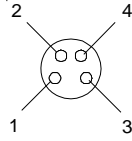


All dimensions in mm

Connector Assignment

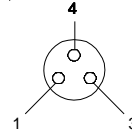
Receiver: 4-pole M8-connector

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:

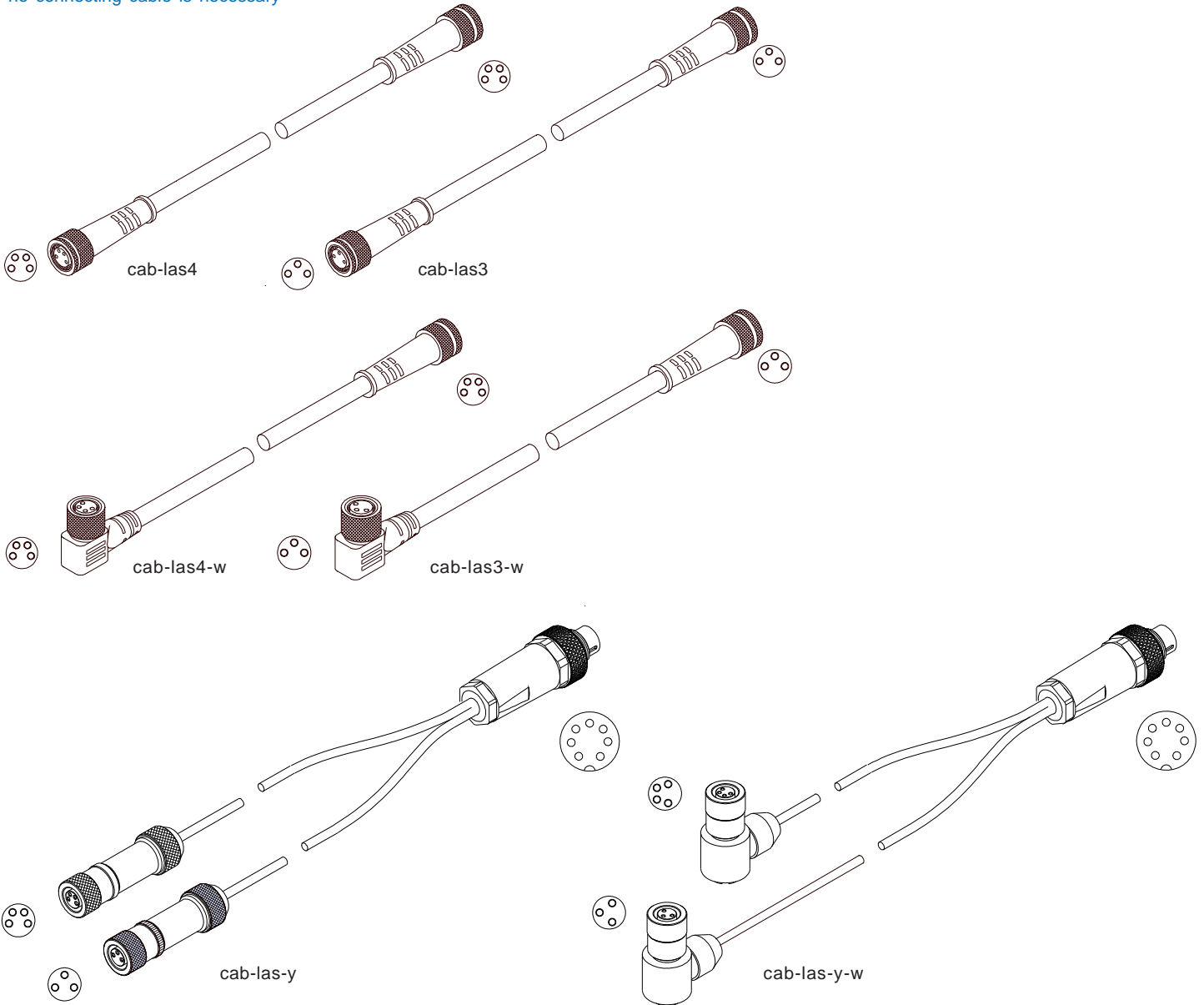
cab-las3-(length) or cab-las3-w-(length) für transmitter
 cab-las4-(length) or cab-las4-w-(length) für receiver
 (standard length each 1m, also available lengths: 2m, 3m, or 5m)

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

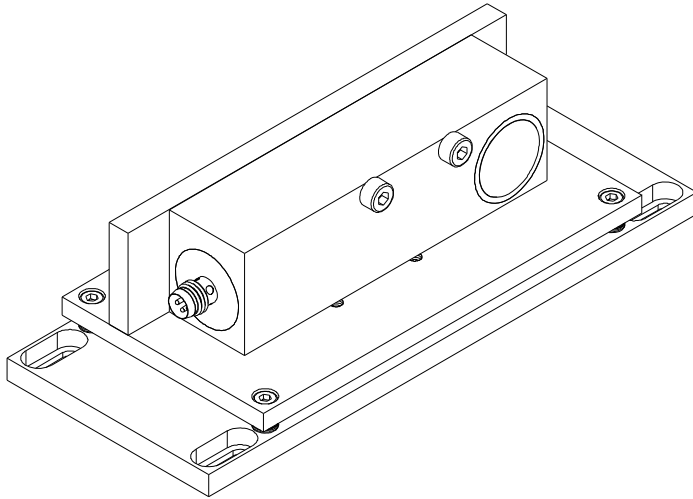




Mounting Accessories

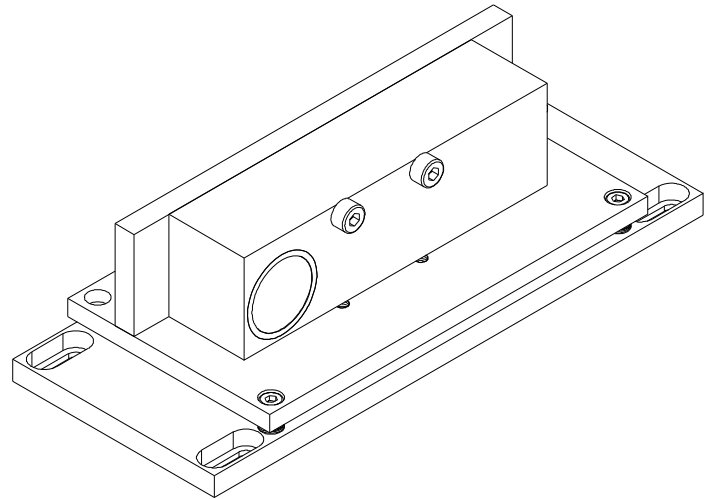
Horizontal mounting of A-LAS-24/90-T with

MOUNT-A-LAS-24/90-H-T
(please order separately)



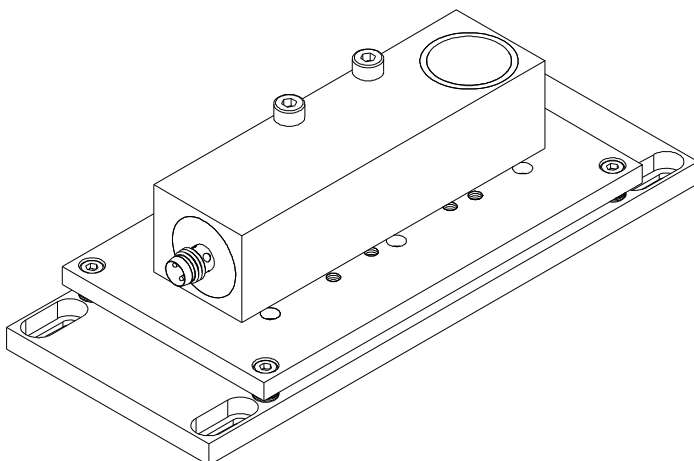
Horizontal mounting of A-LAS-24/90-R with

MOUNT-A-LAS-24/90-H-R
(please order separately)



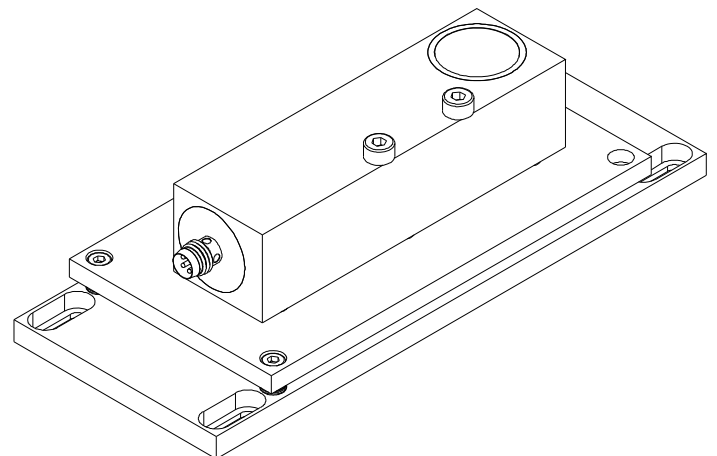
Vertical mounting of A-LAS-24/90-T with

MOUNT-A-LAS-24/90-V-T
(please order separately)



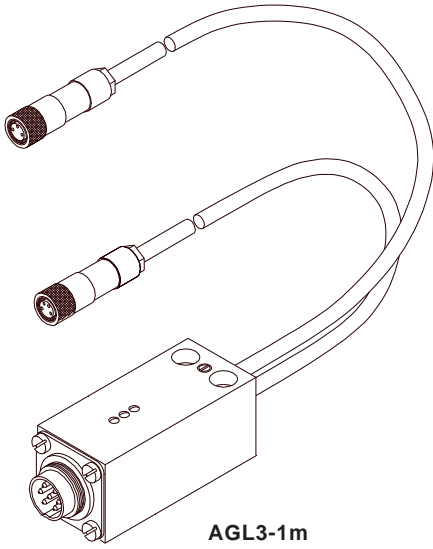
Vertical mounting of A-LAS-24/90-R with

MOUNT-A-LAS-24/90-V-R
(please order separately)

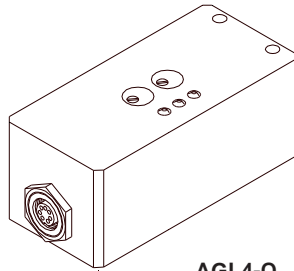


Electronic Control Units

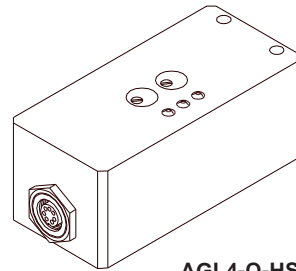
Suitable electronic control units:



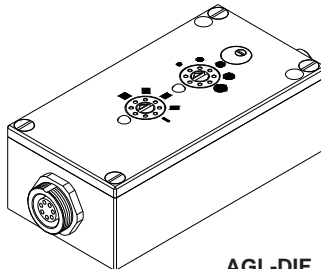
AGL3-1m
AGL3-2m
AGL3-3m
AGL3-4m
AGL3-5m



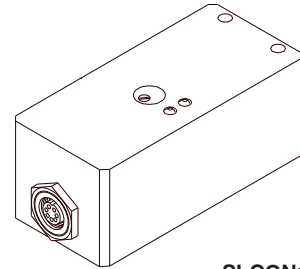
AGL4-Q
AGL4-Qinv
AGL4-Qinv-200ms



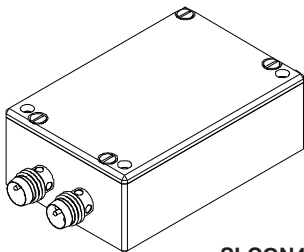
AGL4-Q-HS-500kHz-24V_LED
AGL4-Qinv-HS-500kHz-24V_LED



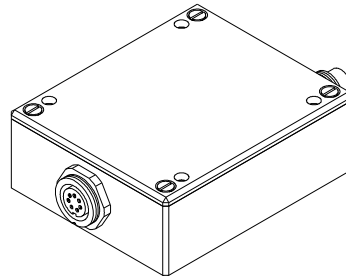
AGL-DIF



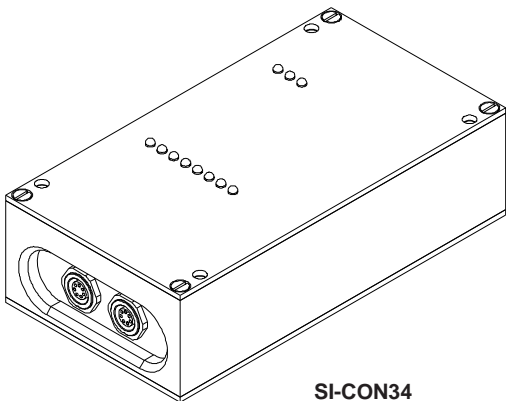
SI-CON11-0/20
SI-CON11-0/20-5V
SI-CON11-0/20-IC
SI-CON11-4/20
SI-CON11-4/20-IC
SI-CON11-5/25
SI-CON11-5/25-IC



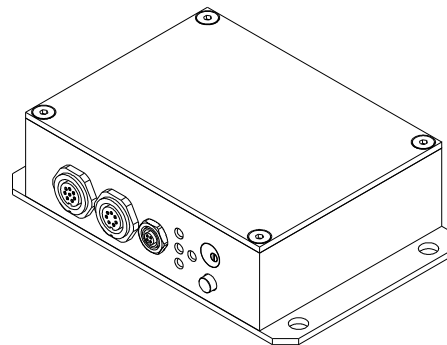
SI-CON4
(incl. Windows® PC software
A-LAS-Scope)



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)