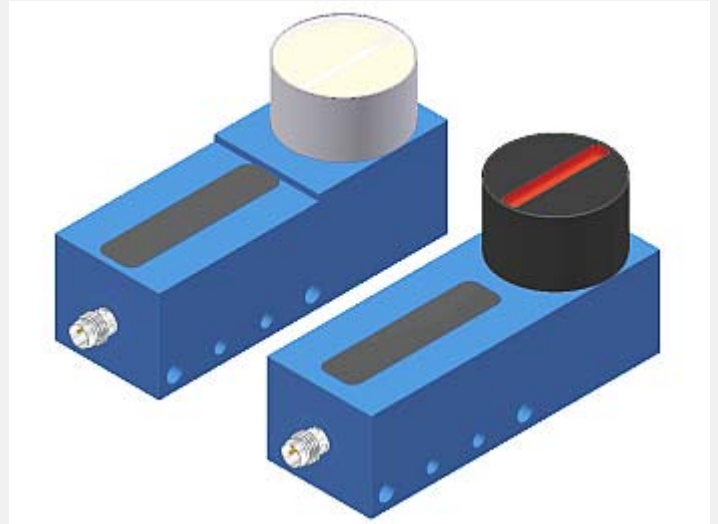


A-LAS Series

▶ A-LAS-34/90-...

- 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 (670 nm) (<0,4 mW, 670 nm), **laser class 1**
- Various apertures available
- Measuring range up to 27 mm (depends on aperture)
- Working range max. 3 m (depends on aperture)
- Insensitive to outside light due to interference filter
- Compact design, sturdy metal housing, IP67



Design

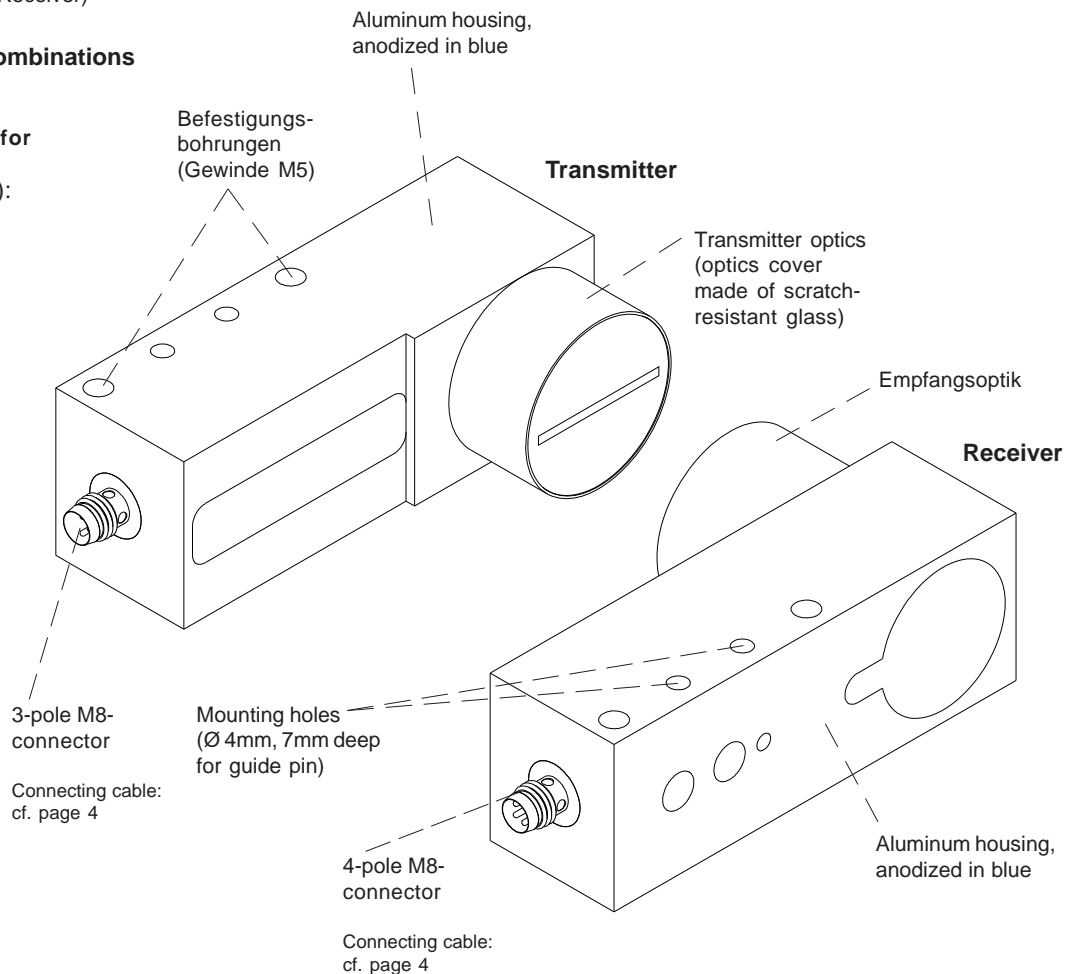
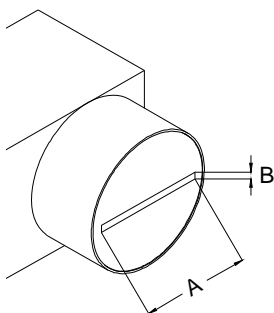
Product name:

A-LAS-34/90-(aperture)*-T (Transmitter)

A-LAS-34/90-(aperture)*-R (Receiver)

*Recommended aperture combinations for transmitter/receiver:

Aperture for transmitter AxB (mm):		Aperture for receiver AxB (mm):
30x2	+	30x0.5
25x2	+	25x0.3
20x2	+	20x0.3
10x2	+	10x0.3
5x2	+	5x0.3





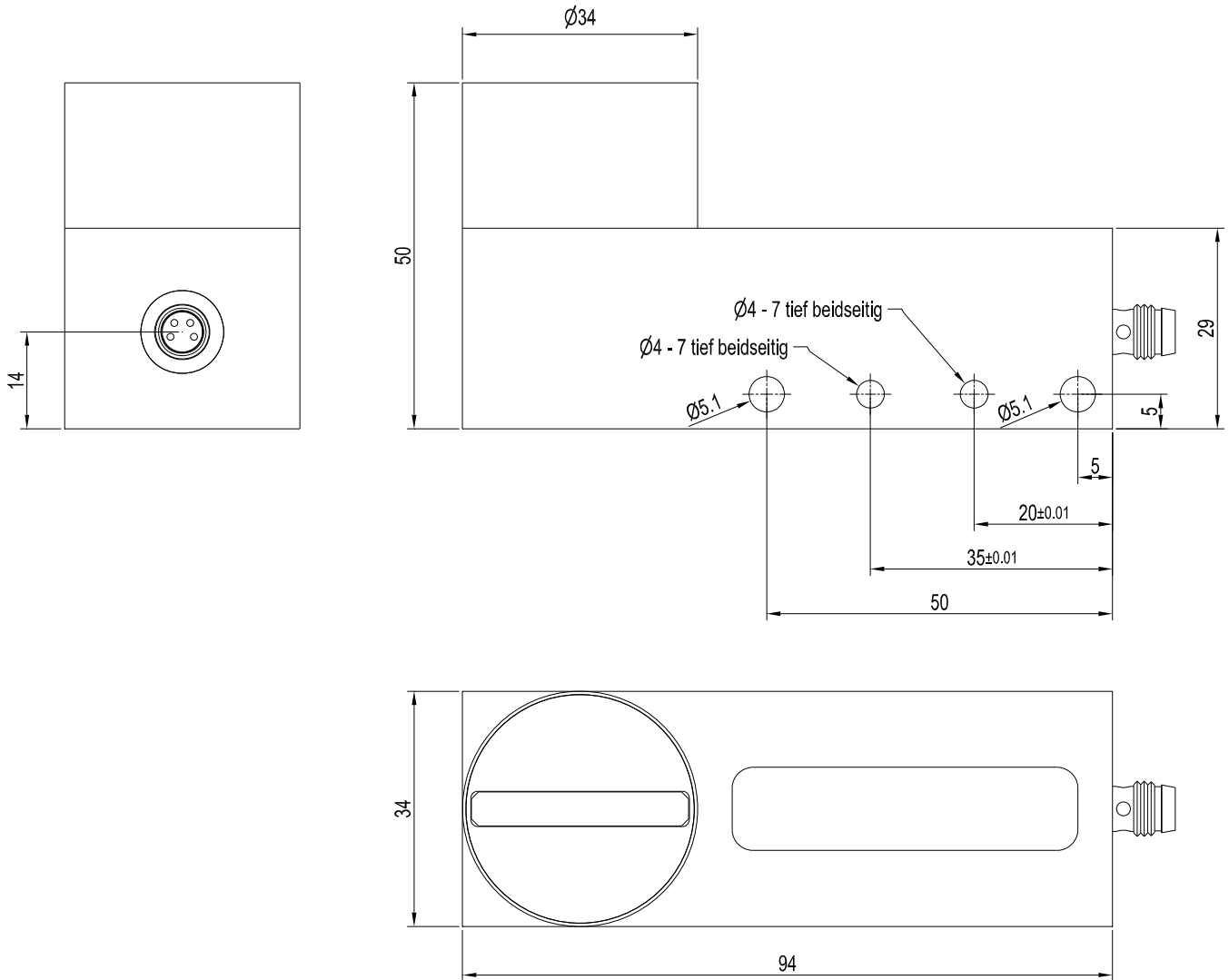
Technical Data

Type	A-LAS-34/90
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. output, Laser class 1 acc. to DIN EN 60825-1. The use of these laser transmitters therefore requires no additional protective measures.
Available aperture sizes	Recommended aperture combinations for transmitter and receiver: 30x2 + 30x0.5 or 2x30 + 0.5x30 (measuring range 27 mm) 25x2 + 25x0.3 or 2x25 + 0.3x25 (measuring range 25 mm) 20x2 + 20x0.3 or 2x20 + 0.3x20 (measuring range 20 mm) 10x2 + 10x0.3 or 2x10 + 0.3x10 (measuring range 10 mm) 5x2 + 5x0.3 or 2x5 + 0.3x5 (measuring range 5 mm)
Linearity	with aperture 30mm: Center aperture \pm 10mm: typ. 3%, over \pm 10mm: typ. 8% with aperture 25mm: typ. 5% with aperture 20mm: typ. 3% with aperture 10mm: typ. 1% with aperture 5mm: typ. 0.3%
Measuring range	Up to 27 mm (depends on aperture used)
Working range	Depends on the aperture used: transmitter with 2 mm wide aperture: max. 3 m, transmitter with 0.3 mm wide aperture: max. 0.3 m
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	Interference filter and polarisation 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, AGL4-DIF, or SI-CON11)
Current consumption	Transmitter: typ. 30 mA, receiver: typ. 10 mA
Operating temperature range	0°C ... +50°C
Storage temperature range	-20°C ... +85°C
Connector type	Transmitter: 3-pole M8 connector, receiver: 4-pole M8 connector
Housing material	Aluminum, anodized in blue
Housing dimensions	Transmitter and receiver: each LxWxH approx. 94 mm x 34 mm x 50 mm
Type of protection	IP67
EMC test acc. to	DIN EN 60947-5-2



Dimensions

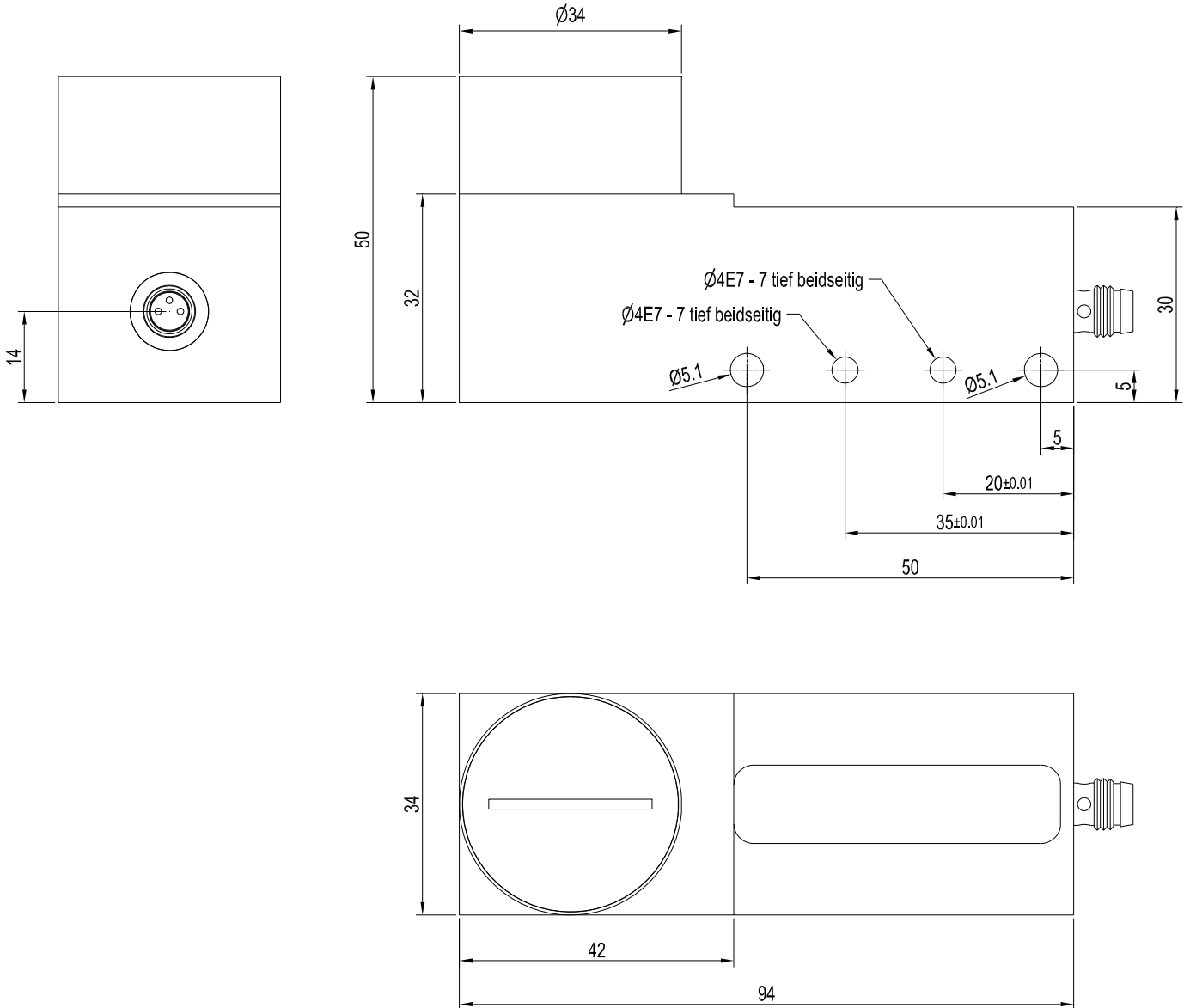
A-LAS-34/90-...-R (Receiver):



All dimensions in mm

Dimensions

A-LAS-34/90-...-T (Transmitter):



All dimensions in mm

Laser Information

The laser transmitters of A-LAS-34/90 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-34/90 series series are supplied with an information label „CLASS 1 Laser Product“.

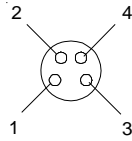
CLASS 1 Laser Product
IEC 60825-1: 2008-05
THIS LASER PRODUCT COMPLIES
WITH 21 CFR 1040 AS APPLICABLE



Connector Assignment

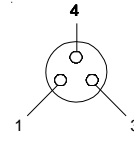
Receiver: 4-pole M8-connector

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:

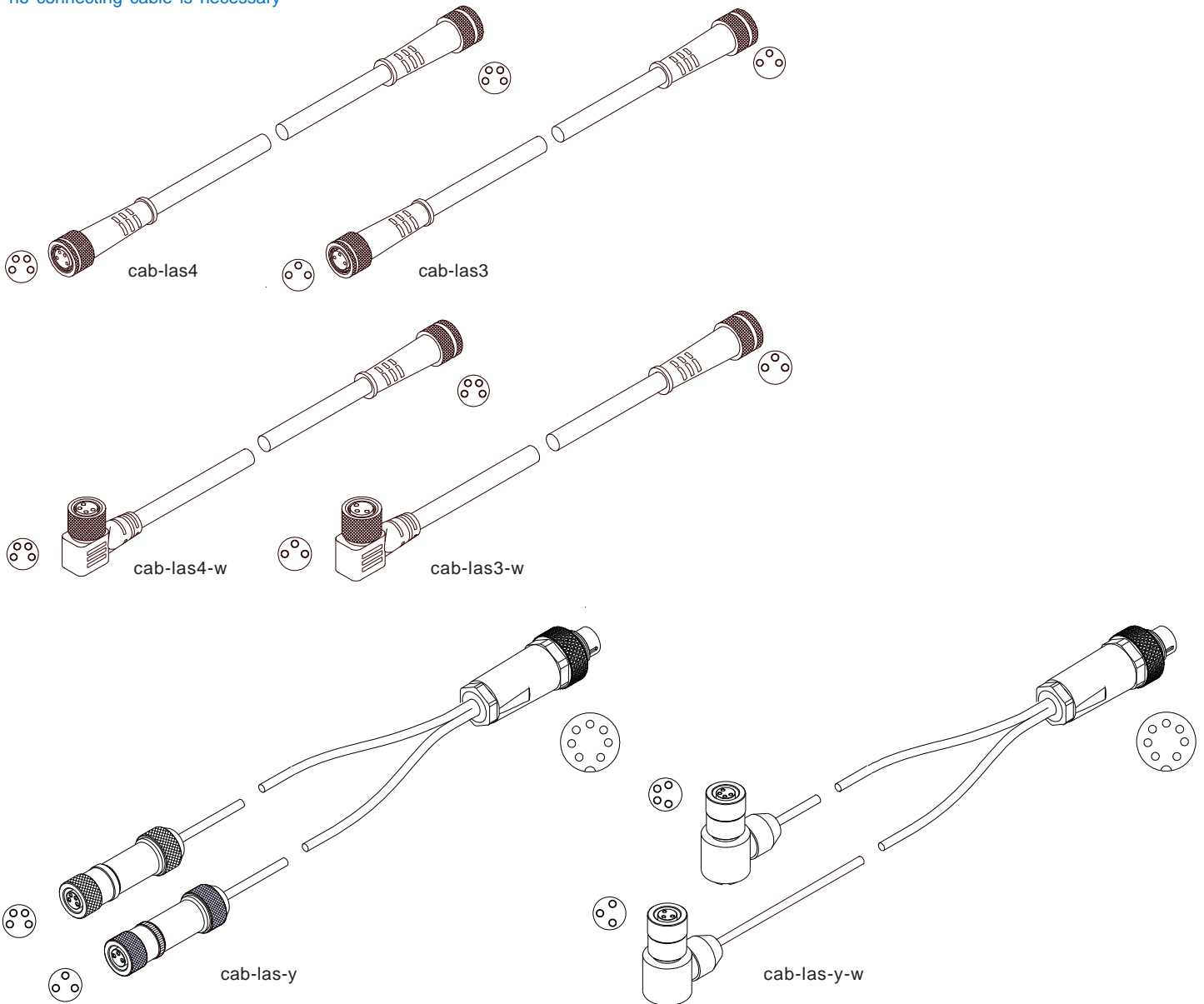
cab-las3-(length) or cab-las3-w-(length) für transmitter
 cab-las4-(length) or cab-las4-w-(length) für receiver
 (standard length each 1m, also available lengths: 2m, 3m, or 5m)

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)

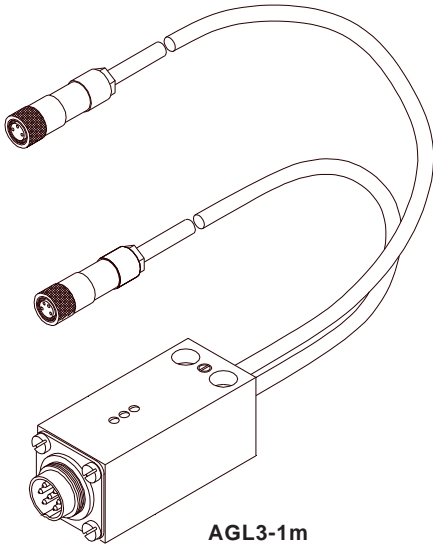
For use with AGL3:

no connecting cable is necessary

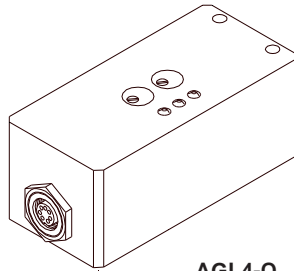


Electronic Control Units

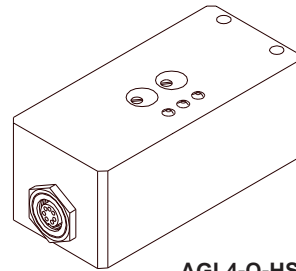
Suitable electronic control units:



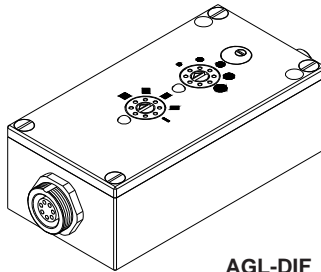
AGL3-1m
AGL3-2m
AGL3-3m
AGL3-4m
AGL3-5m



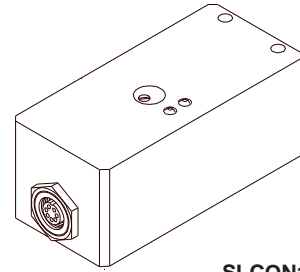
AGL4-Q
AGL4-Qinv
AGL4-Qinv-200ms



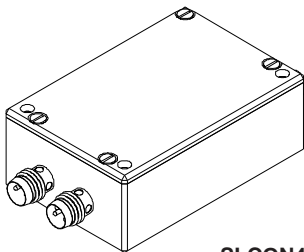
AGL4-Q-HS-500kHz-24V_LED
AGL4-Qinv-HS-500kHz-24V_LED



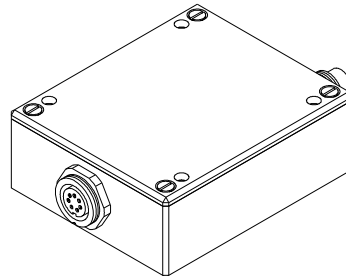
AGL-DIF



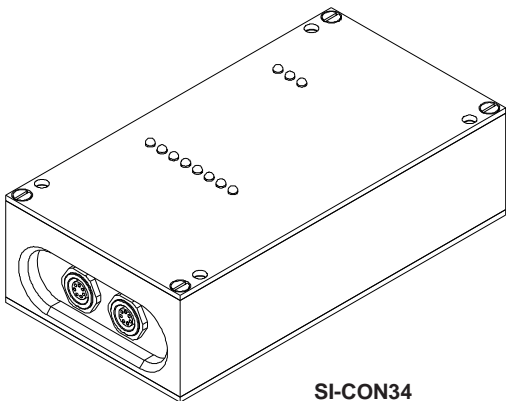
SI-CON11-0/20
SI-CON11-0/20-5V
SI-CON11-0/20-IC
SI-CON11-4/20
SI-CON11-4/20-IC
SI-CON11-5/25
SI-CON11-5/25-IC



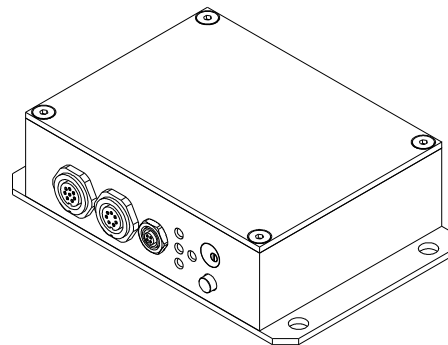
SI-CON4
(incl. Windows® PC software
A-LAS-Scope)



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)