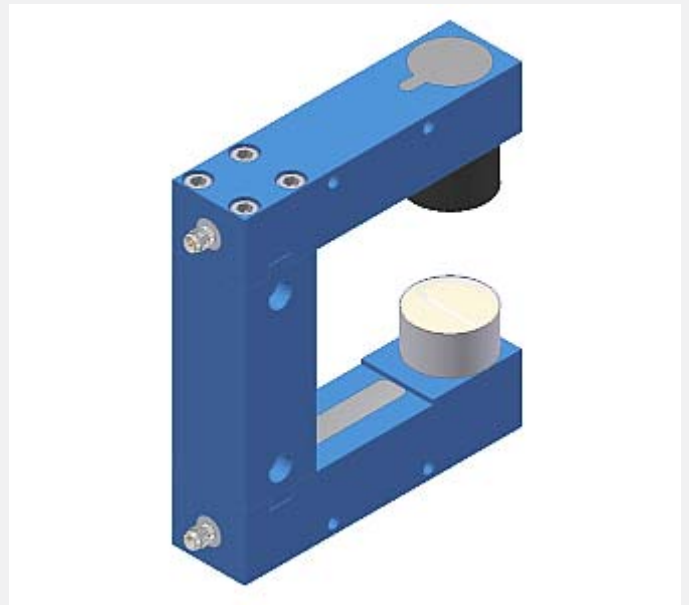


A-LAS Series

▶ A-LAS-F34-...

- 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 27 mm (depends on aperture)
- Working range = fork width
- Insensitive to outside light due to interference filter
- Compact design, sturdy metal housing, IP67



Design

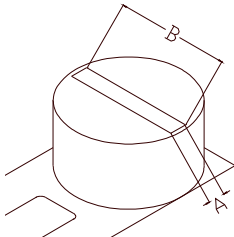
Product name:

A-LAS-F34-(aperture)*-(fork size)**

*Available aperture combinations (AxB):

(AxB)	Transmitter side:	Receiver side:
2x30	2 mm x 30 mm	0.5 mm x 30 mm
2x25	2 mm x 25 mm	0.3 mm x 25 mm
2x20	2 mm x 20 mm	0.3 mm x 20 mm
2x10	2 mm x 10 mm	0.3 mm x 10 mm
2x5	2 mm x 5 mm	0.3 mm x 5 mm
30x2	30 mm x 2 mm	30 mm x 0.5 mm
25x2	25 mm x 2 mm	25 mm x 0.3 mm
20x2	20 mm x 2 mm	20 mm x 0.3 mm
10x2	10 mm x 2 mm	10 mm x 0.3 mm
5x2	5 mm x 2 mm	5 mm x 0.3 mm

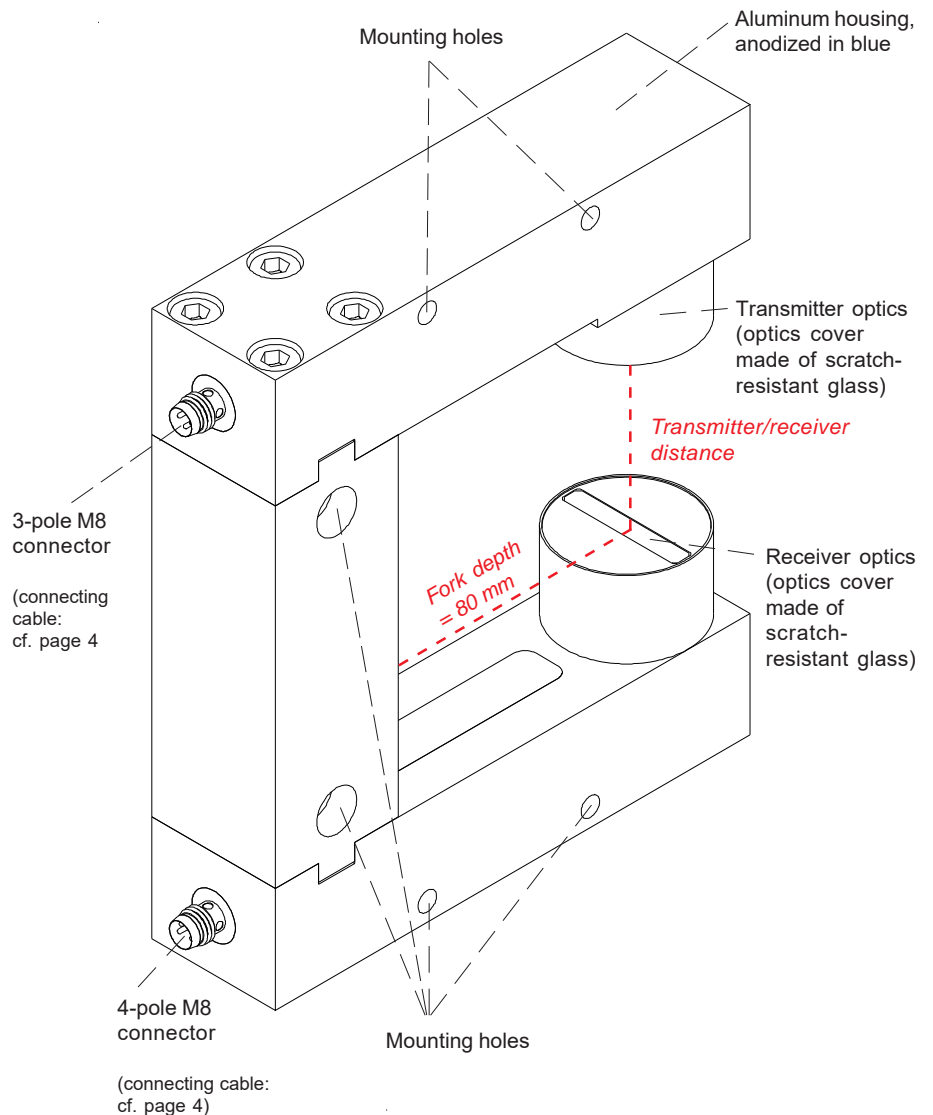
Position of aperture (AxB):



**Available fork sizes:

Fork size	Fork width (mm)	Fork depth (mm)
50/80	50	80
100/80	100	80
150/80	150	80
200/80	200	80
250/80	250	80
300/80	300	80

Fork width = distance transmitter to receiver optics
Fork depth = inner length to center of aperture





Technical Data

Type	A-LAS-F34
Shape	Laser light barrier in fork shape with 34 mm thick housing. Various rectangular apertures are available.
Laser	Solid-state laser, 670 nm, DC-operation, 0.39 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	Working range = fork width
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	Cf. page 3
Type of protection	IP67
EMC test acc. to	DIN EN 60947-5-2

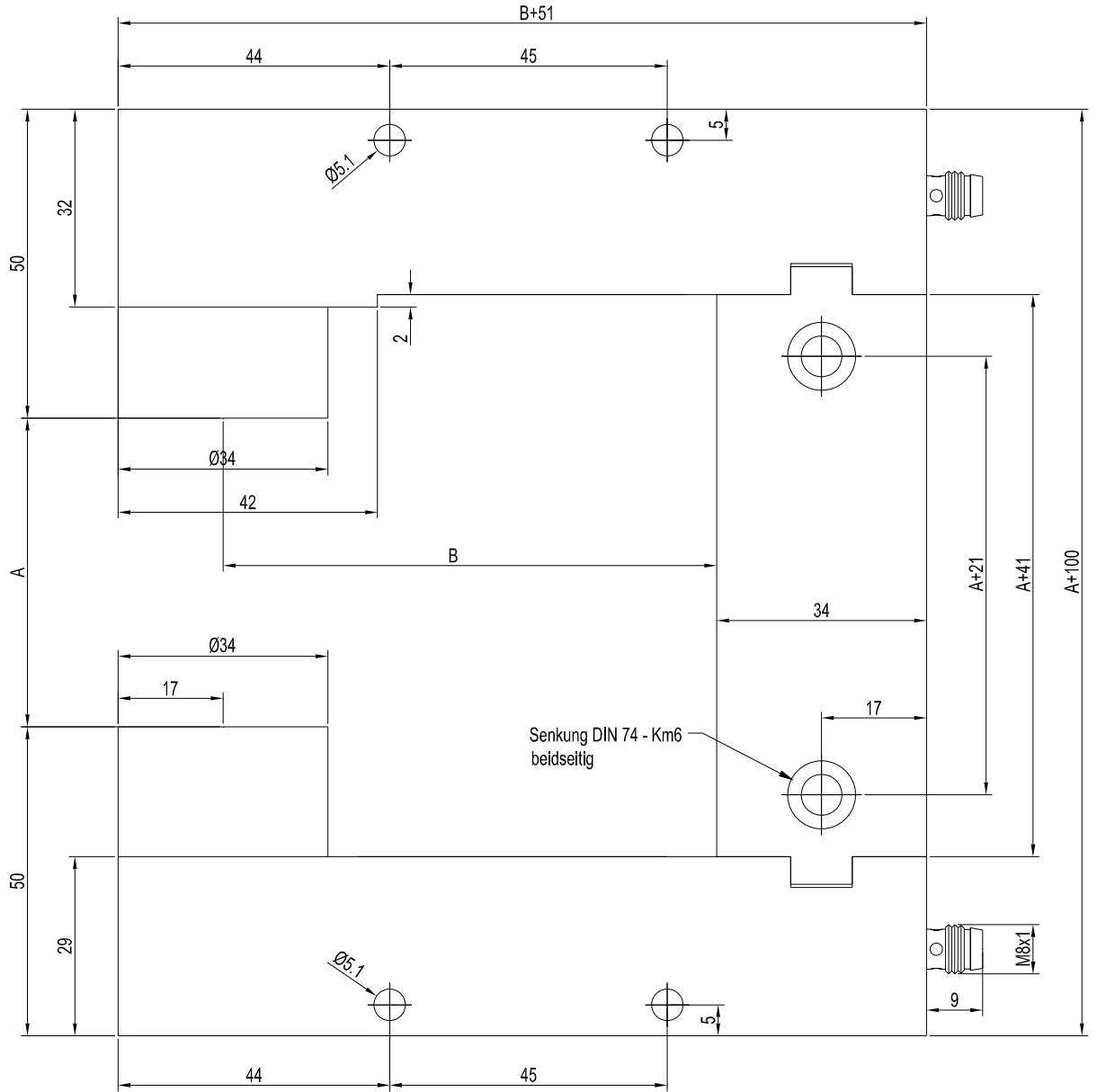


Dimensions

A-LAS-F34-...-(fork size):

Fork size	Fork width A	Fork depth B
50/80	50 mm	80 mm
100/80	100 mm	80 mm
150/80	150 mm	80 mm
200/80	200 mm	80 mm
250/80	250 mm	80 mm
300/80	300 mm	80 mm

A= Fork width (distance transmitter to receiver optics)
 B= Fork depth (inner length to center of aperture)

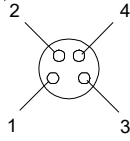


All dimensions in mm

Connector Assignment

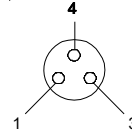
Receiver: 4-pole M8-connector

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:

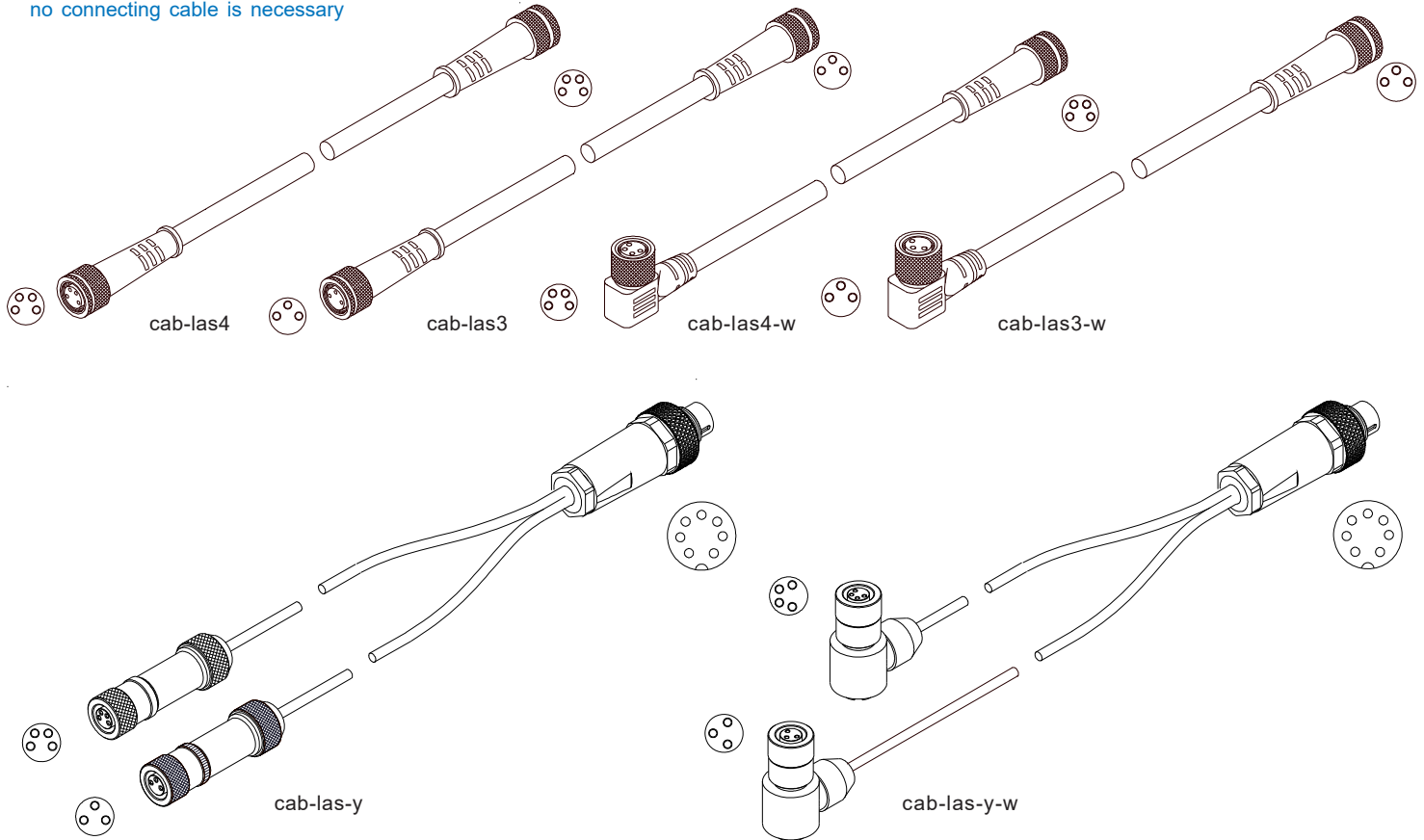
cab-las3-(length) or cab-las3-w-(length) für transmitter
 cab-las4-(length) or cab-las4-w-(length) für receiver
 (standard length each 1m, also available lengths: 2m, 3m, or 5m)

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



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“.



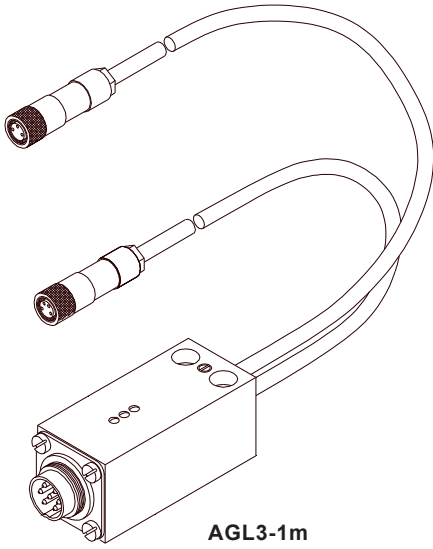
Class 1 Laser Product
 IEC 60825-1: 2014
 P<0.39 mW; λ=670 nm

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.

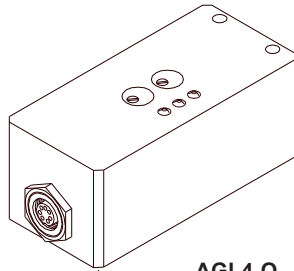


Electronic Control Units

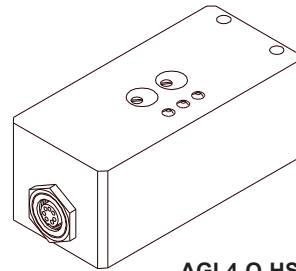
Suitable electronic control units:



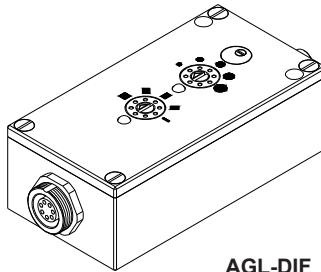
AGL3-1m
AGL3-2m
AGL3-3m
AGL3-4m
AGL3-5m



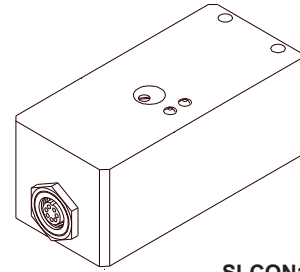
AGL4-Q
AGL4-Qinv
AGL4-Qinv-200ms



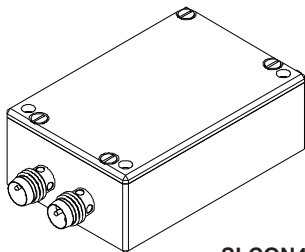
AGL4-Q-HS-500kHz-24V_LED
AGL4-Qinv-HS-500kHz-24V_LED



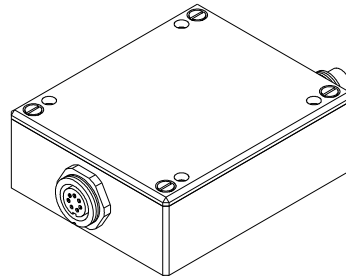
AGL-DIF



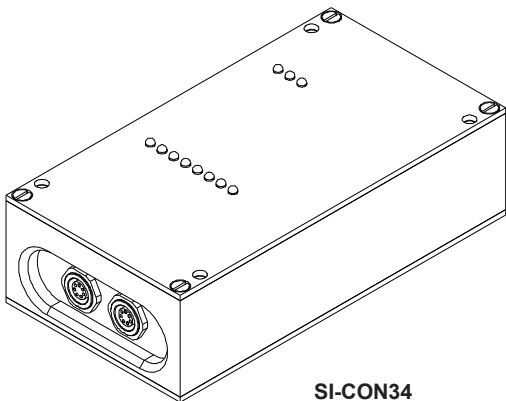
SI-CON11-0/20
SI-CON11-0/20-5V
SI-CON11-0/20-IC
SI-CON11-4/20
SI-CON11-4/20-IC
SI-CON11-5/25
SI-CON11-5/25-IC



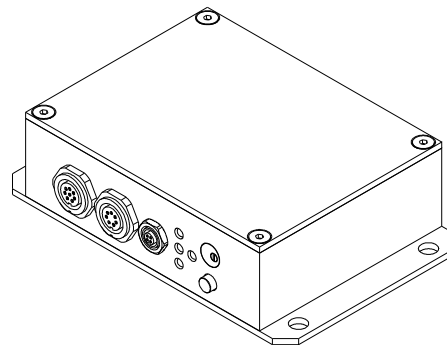
SI-CON4
 (incl. Windows® PC software
 A-LAS-Scope)



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)