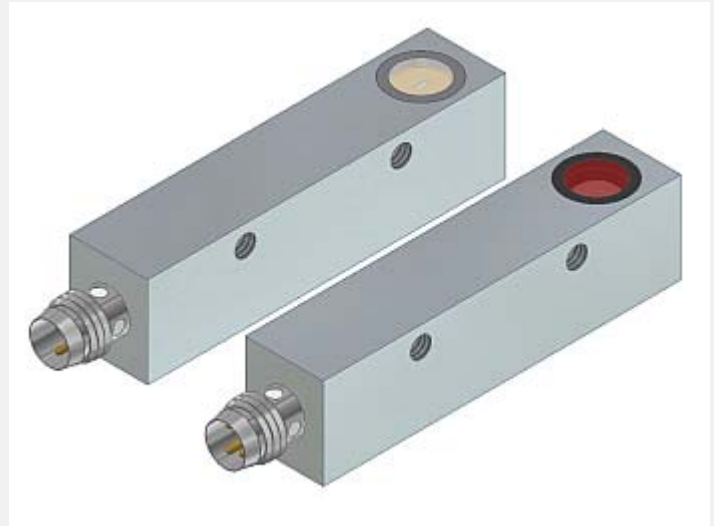


A-LAS Series

▶ A-LAS-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, 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 3 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-90-(aperture)*-T (Transmitter)
A-LAS-90-(aperture)*-R (Receiver)

Accessories: (cf. page 5)

FL-90 (Mounting flange)
WFL-90 (Mounting angle)

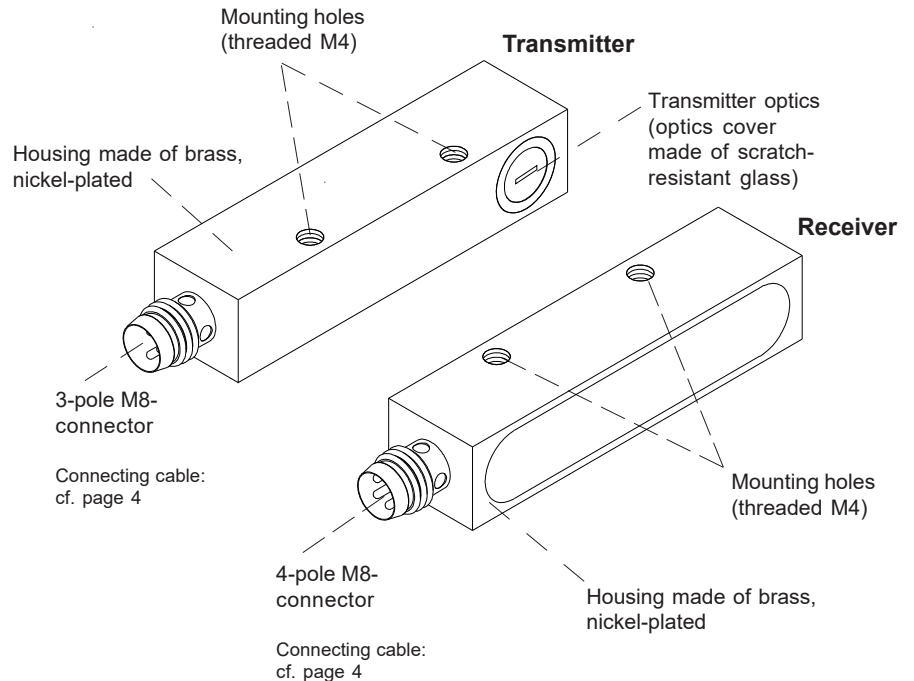
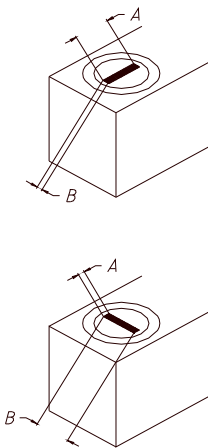
*Available apertures:

Round apertures d... (mm):

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

Rectangular apertures AxB (mm):

0.2x0.5	1.5x0.3
0.2x1	2x0.75
0.3x0.5	2x1
0.3x0.8	3x0.3
0.3x1	3x0.75
0.3x1.5	
0.3x3	
0.5x0.2	
0.5x0.3	
0.5x1	
0.75x2	
0.75x3	
0.8x0.3	
1x0.2	
1x0.3	
1x0.5	
1x1	
1x2	




Special combinations of transmitter and receiver apertures available:

Transmitter A-LAS-90-1x0.5-T (AxB: 1mm x 0.5 mm) with
 Receiver A-LAS-90-0.3x0.1-R (AxB: 0.3 mm x 0.1 mm) or
 A-LAS-90-0.5x0.07-R (AxB: 0.5 mm x 0.07 mm)



Technical Data

Type	A-LAS-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 3 mm (depends on the aperture used)
Working range	Max. 10 m (depends on the aperture used)
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-CON4, SI-CON8
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-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-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	Brass, nickel-plated
Housing dimensions	Transmitter and receiver: each LxWxH approx. 55 mm x 12 mm x 14 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.

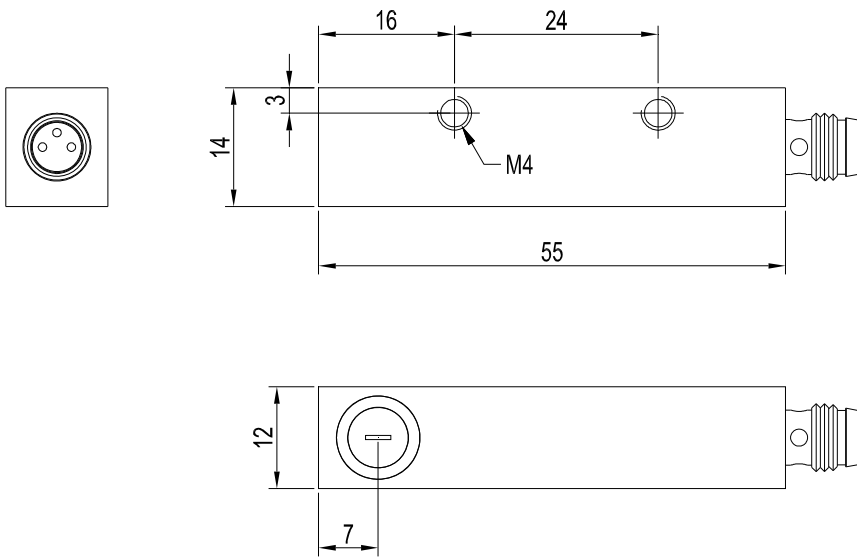
The laser transmitters of A-LAS series series are supplied with an information label „CLASS 1 Laser Product“.



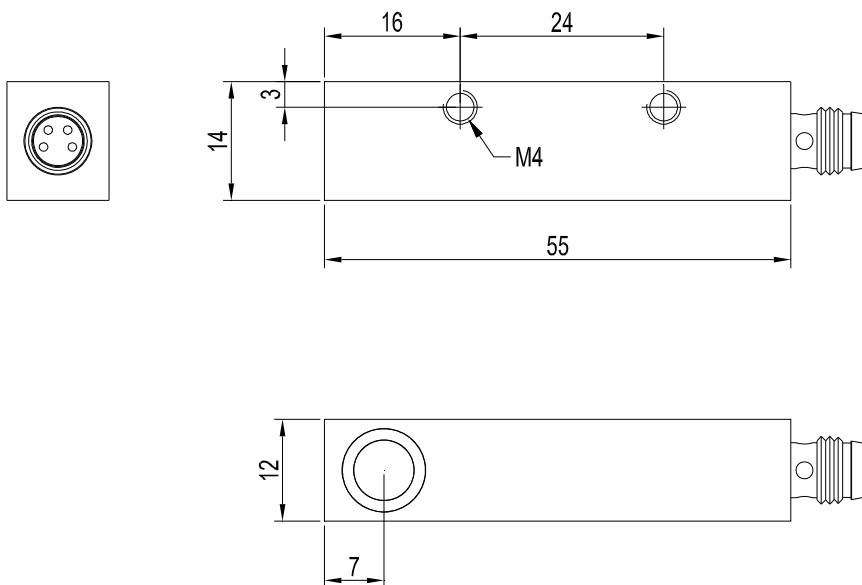
Class 1 Laser Product
IEC 60825-1: 2014
P<0.39 mW; λ=670 nm
COMPLIES WITH 21 CFR 1040.10 AND 1040.11
EXCEPT FOR CONFORMANCE WITH IEC 60825-1
ED. 3, AS DESCRIBED IN
LASER NOTICE NO. 56, DATED MAY 8, 2019.

Dimensions

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



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

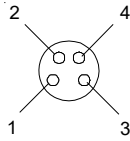


All dimensions in mm

Connector Assignment

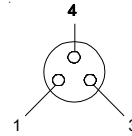
Receiver: 4-pole M8-connector

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:

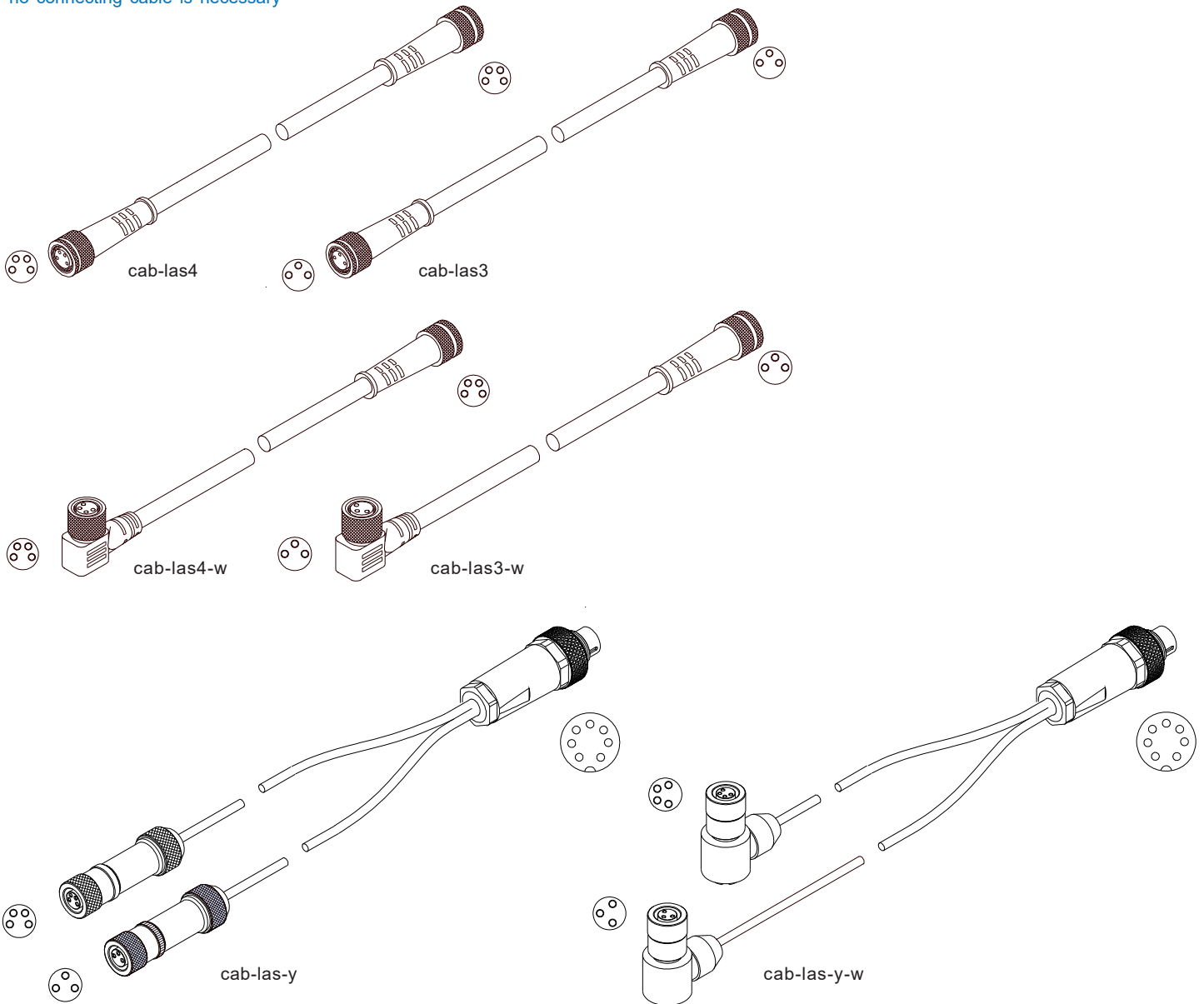
cab-las3-(length) or cab-las3-w-(length) für transmitter
 cab-las4-(length) or cab-las4-w-(length) für receiver
 (standard length each 1m, also available lengths: 2m, 3m, or 5m)

For use with AGL4, AGL4-HS, AGL-DIF, SI-CON11, SI-CON8, 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





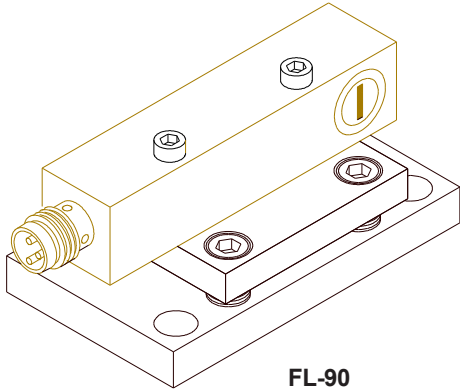
Mounting Accessories

Mounting accessories

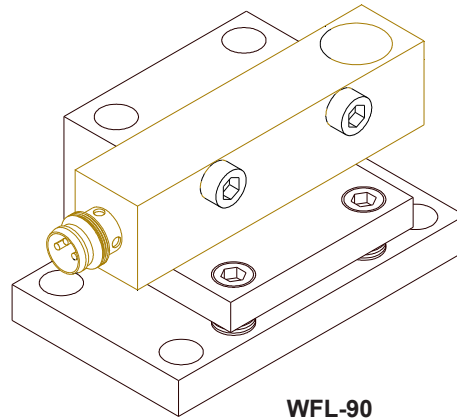
(please order separately for fixation of each transmitter and receiver):

FL-90 (mounting flange)
(suitable for transmitter and receiver)

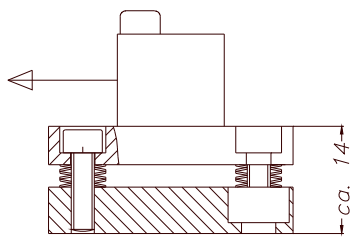
WFL-90 (mounting flange, angle type 90°)
(suitable for transmitter and receiver)



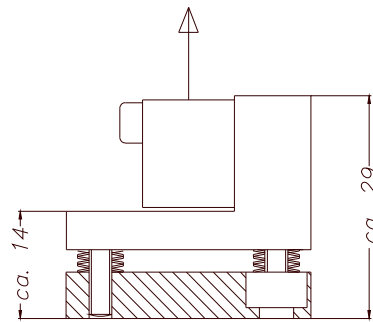
FL-90



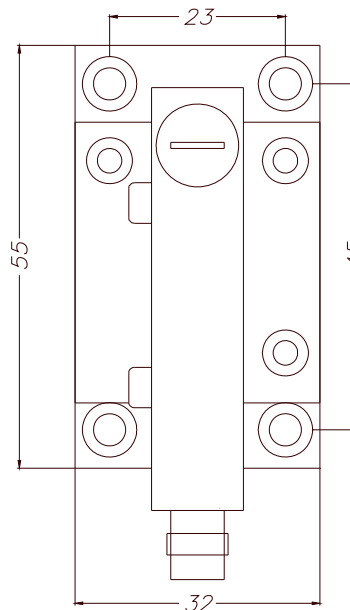
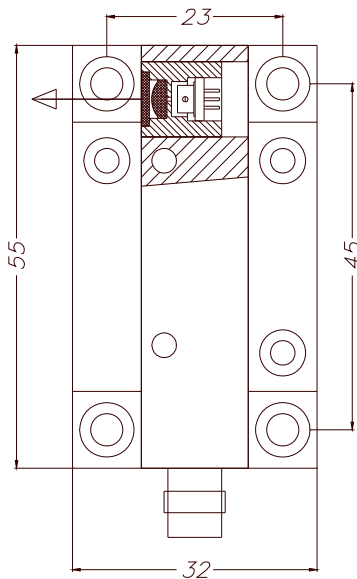
WFL-90



Senkung DIN 74Km4



Senkung DIN 74Km4

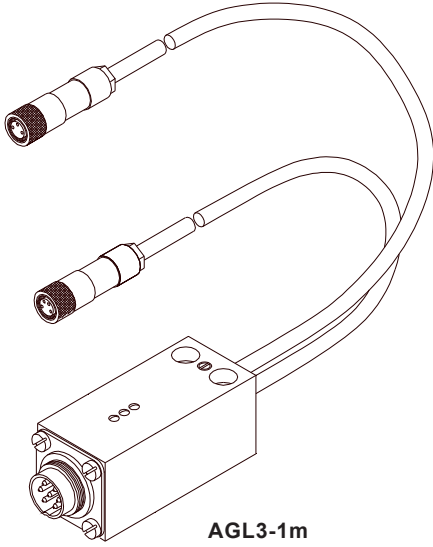


(All dimensions in mm)

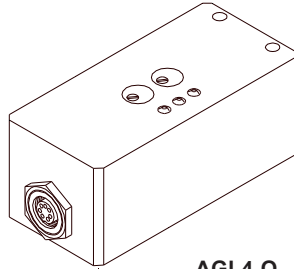


Electronic Control Units

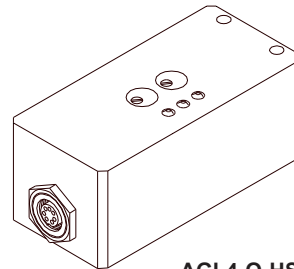
Suitable electronic control units:



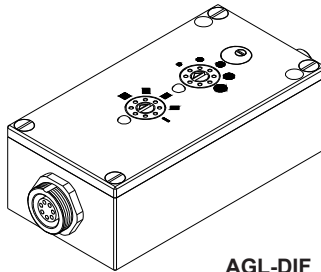
AGL3-1m
AGL3-2m
AGL3-3m
AGL3-4m
AGL3-5m



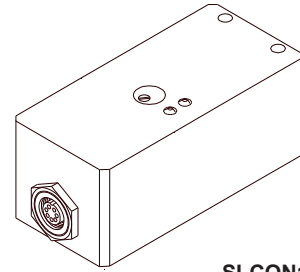
AGL4-Q
AGL4-Qinv
AGL4-Qinv-200ms



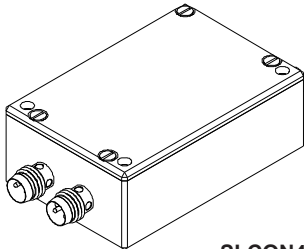
AGL4-Q-HS-500kHz-24V_LED
AGL4-Qinv-HS-500kHz-24V_LED



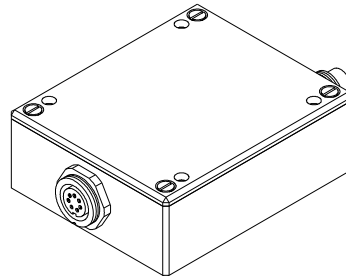
AGL-DIF



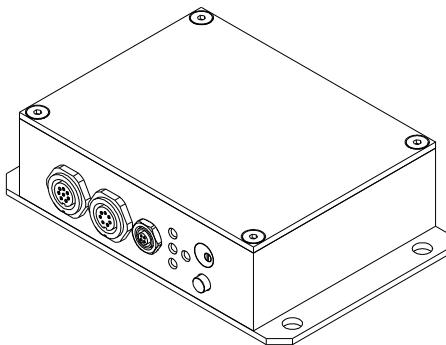
SI-CON11-0/20
SI-CON11-0/20-5V
SI-CON11-0/20-IC
SI-CON11-4/20
SI-CON11-4/20-IC
SI-CON11-5/25
SI-CON11-5/25-IC



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



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



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