# A-LAS Series

▶ **AGL4-...**

- Electronic control unit for control of A-LAS sensors
- Digital output static and dynamic (15 ms)
- Threshold correction can be activated via jumper
- High switching frequency (typ. 25 kHz)
- Analog output (0V ... +10V)
- Ultrahigh accuracy triggering (in µm-range)
- Detection of smallest objects (starting from 10 µm)
- Dirt accumulation compensation and display
- Switching state display dynamic/static
- Sturdy aluminum housing

In Proud Partnership with Sensor Instruments

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For technical support, sales, & distribution within the USA & Canada
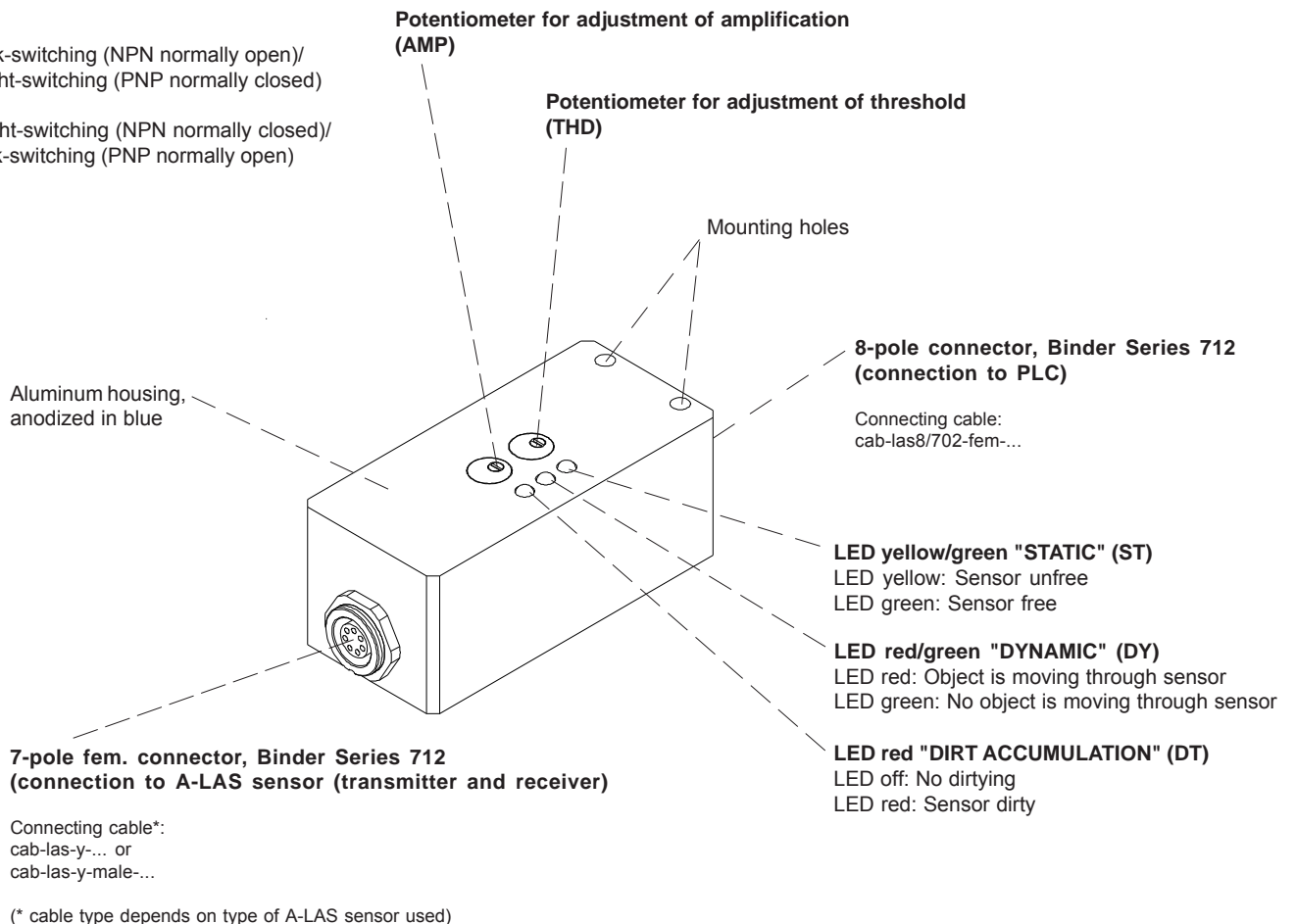www.paquin.com | (800) 831-8217 | paquinsensors@paquin.com

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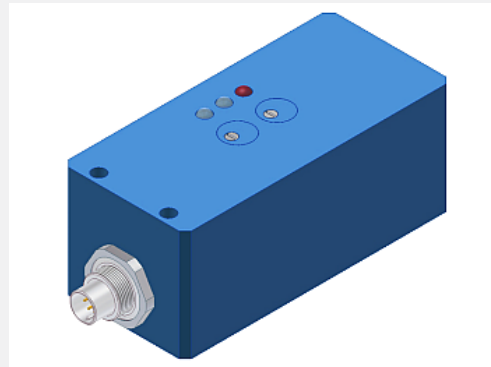
Design

Product name:

AGL4-Q
AGL4-Qinv

Q =   NPN dark-switching (NPN normally open)/
      PNP bright-switching (PNP normally closed)

Qinv = NPN bright-switching (NPN normally closed)/
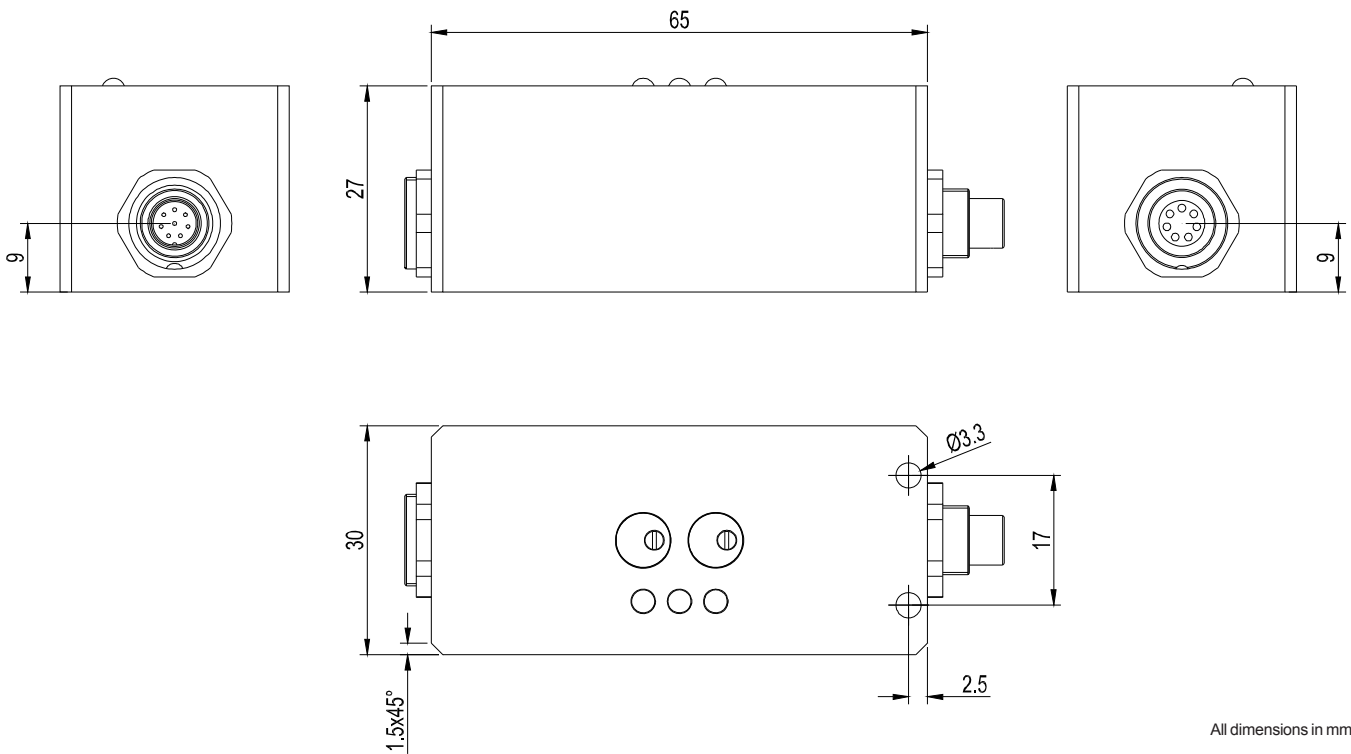   PNP dark-switching (PNP normally open)

Potentiometer for adjustment of amplification (AMP)

Potentiometer for adjustment of threshold (THD)

Mounting holes

Aluminum housing, anodized in blue

8-pole connector, Binder Series 712 (connection to PLC)

Connecting cable:
cab-las8/702-fem-...

LED yellow/green "STATIC" (ST)
LED yellow: Sensor unfree
LED green: Sensor free

LED red/green "DYNAMIC" (DY)
LED red: Object is moving through sensor
LED green: No object is moving through sensor

LED red "DIRT ACCUMULATION" (DT)
LED off: No dirtying
LED red: Sensor dirty

7-pole fem. connector, Binder Series 712 (connection to A-LAS sensor (transmitter and receiver)

Connecting cable*:
cab-las-y-... or
cab-las-y-male-...

(* cable type depends on type of A-LAS sensor used)

Technical Data

Type	AGL4-...
Voltage supply	+24VDC ± 10%, reversed polarity protected, short-circuit protected
Current consumption	with A-LAS sensor: typ. 80 mA
Operating temperature range	-20°C ... +60°C
Storage temperature range	-20°C ... +85°C
Trigger accuracy	< 1µm (depends on the aperture used with A-LAS sensor, and with threshold correction activated)
Minimum detectable object	starting from 10 µm (depends on the aperture of the A-LAS sensor)
Housing material	Aluminium, anodized in blue
Housing dimensions	LxWxH approx. 65 mm x 27 mm x 30 mm
Type of protection	IP 64
Threshold correction	adjustable by means of integrated jumper
Output ANALOG	0V ... +10V
Output DIGITAL STATIC	2x static: Qinv: NPN bright-switching (NPN normally closed) / PNP dark-switching (PNP normally open) Q: NPN dark-switching (NPN normally open) / PNP bright-switching (PNP normally closed)
Output DIGITAL DYNAMIC	1x dynamic (Puls length 15 ms): with AGL4-Qinv: NPN bright-switching (NPN normally closed) / PNP dark-switching (PNP normally open) with AGL4-Q: NPN dark-switching (NPN normally open) / PNP bright-switching (PNP normally closed)
Potentiometer for adjustment of gain factor	3-revolutions-potentiometer integated in the housing
Potentiometers for adjustment trigger threshold	3-revolutions-potentiometer integated in the housing
Dirt accumulation display (DT)	LED red (red = sensor dirty, off = no dirtying)
Switching state display (ST)	LED yellow/green (yellow = sensor covered, green = sensor free)
Switching state display (DY)	LED red/green (red = object is moving through sensor, green = no object is moving through sensor)
Connector type	Connection to the PLC: 8-pole circular plug Binder Series 712 (= cab-las8/702-fem) Connection to the A-LAS sensor: 7-pole circular socket Binder Series 712 with integrated cable (various cable lengths available)
Connecting cables	Connecting cable to PLC: cab-las8/702-fem (standard length 2m, max. up to 25m) Connecting cable to A-LAS sensor: cab-las-y or cab-las-y-male (length 1m, 2m, 3m, or 5m)
Switching frequency	typ. 25 kHz
Max. switching current	200 mA, short-circuit-proof
Band width analog signal	50 kHz (-3dB)
EMV test acc. to	DIN EN 60947-5-2 CE

Subject to alteration

Dimensions

65
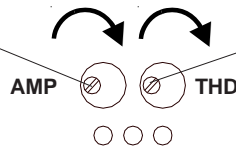
27

9

9

Ø3.3

30

17

2.5

1.5x45°

All dimensions in mm

Setting

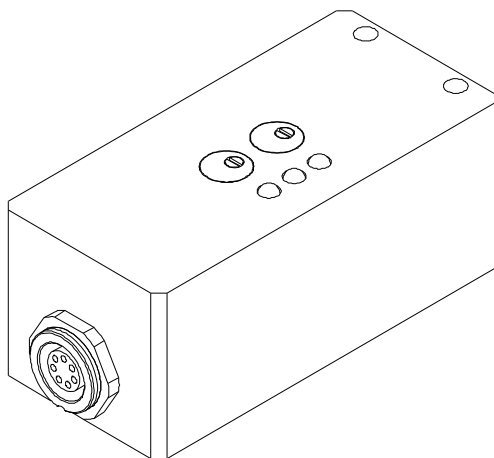**Potentiometer for adjustment of amplificiation (AMP)**

Increase of analog signal:
Rotation clockwise
(3-revolutions-potentiometer)

AMP **THD**

Potentiometer for adjustment of threshold (THD)

Increase of sensitivity
Rotation clockwise
(3-revolutions-potentiometer)

LED yellow/green "STATIC" (ST)
LED yellow: Sensor covered
LED green: Sensor free

LED red/green "DYNAMIC" (DY)
LED red: Object is moved through sensor
LED green: No object is moved through sensor

LED red "DIRT ACCUMULATION" (DT)
LED off: No dirt accumulation
LED red: Sensor dirty

**Jumper for adjustment of threshold correction**
(Jumper inside housing, under cap)

● ● ● Fix threshold
(standard adjustment)

● ● ● Alternatively adjustable:
Threshold correction TC
(please open cap of housing to switch jumper)

Connector Assignment

**Connection AGL4-... to A-LAS sensor
(transmitter and receiver)
7-pole female connector Binder Series 712**

Pin: Assignment:

1   GND (0V)
2   +5V
3   not connected
4   +5V
5   ANALOG (0V ... +5V)
6   not connected
7   GND (0V)
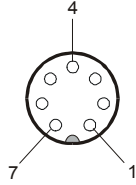
Connecting cable*:
cab-las-y-(length)   or
cab-las-y-male-(length)
(standard length: 1m, also available lengths: 2m, 3m, 5m)

(* cable type depends on
  type of A-LAS sensor used)

**Connection AGL4-... to PLC:
8-pole connector Binder Series 712**

| Pin:	Wire/cable:	Assignment:
1	white	GND (0V)
2	brown	+Ub (+24VDC ± 10%)
3	green	THD
4	yellow	DIRT
5	grey	OUT
6	pink	OUT/
7	blue	in case of AGL4-Q: PULS
		in case of AGL4-Qinv: PULS/
8	red	ANALOG (0V ... +10V)
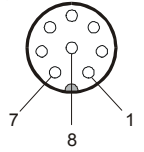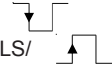
Connecting cable:
cab-las8/702-fem-(length)
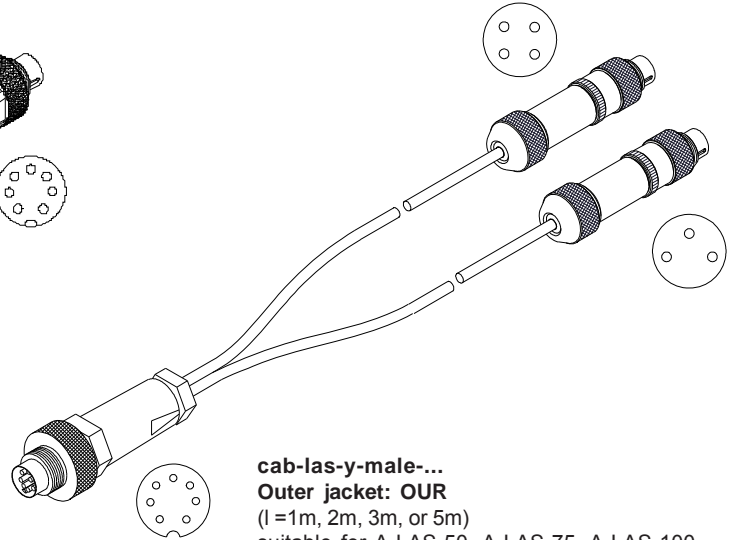(standard length: 2m, max. available length: 25m)

Connecting Cables

**Connecting cable
AGL4-... to A-LAS laser light barrier:**

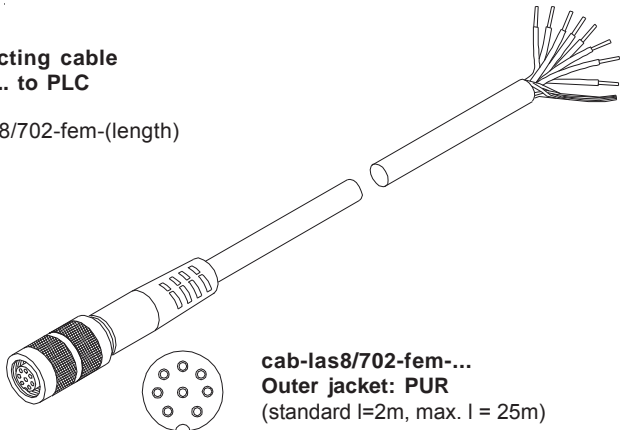cab-las-y-(length) or
cab-las-y-male-(length)
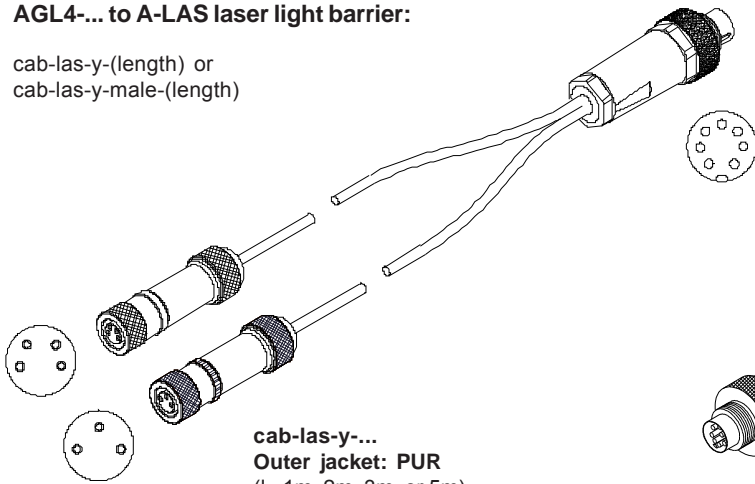
**cab-las-y-...
Outer jacket: PUR**
(l =1m, 2m, 3m, or 5m)

**cab-las-y-male-...
Outer jacket: OUR**
(l =1m, 2m, 3m, or 5m)
suitable for A-LAS-50, A-LAS-75, A-LAS-100

**Connecting cable
AGL4-... to PLC**

cab-las8/702-fem-(length)

**cab-las8/702-fem-...
Outer jacket: PUR**
(standard l=2m, max. l = 25m)

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