



Short range distance sensors (displacement)  
OD Max, RS-232

AOD-P1



**Model Name** > **AOD-P1**  
**Part No.** > **6028960**

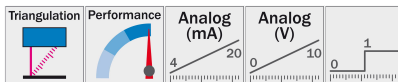


**At a glance**

- Several measurement ranges from 24 ... 26 mm up to 250 mm ... 450 mm
- CMOS receiving element for measurement independent of surface
- High measurement frequency and high linearity
- Variety of selectable integrated calculations based on values from two sensors
- Laser technology for precise measurement or detection of very small objects
- Several output options

**Your benefits**

- Minimum machine downtime due to its reliability on any surface, regardless of brightness or color
- Highly accurate measurement, even during the production process, ensures high product quality
- High measuring frequency of 10 kHz increases processing speeds and reduces cycle times
- Reduce the cost to change your process by making a reference measurement using two sensors
- Comparatively low investment costs for challenging measuring tasks
- An easy-to-read LC display and simple push-button keypad programming ensures simple setup and servicing
- Reduced material costs, when using the distance sensors to control costrelevant production processes



**Features**

System part:	Controller unit
<b>Performance</b>	
Response time <sup>1)</sup> :	0.5 ms
Measuring frequency:	10 kHz
Additional function:	8 memory banks, Arithmetic calculations, Automatic sensitivity adjustment, Teach-in of analog outputs, Teach-in of switching outputs, Set hysteresis, Frequency filters, Hold functions, Peak measurement, Internal data recorder, Manual sensitivity adjustment, Averaging settings 1 ... 4,096x, Switching mode: distance to object (DtO), Switching mode: window (Wnd), Peak to peak measurement, Bottom measurement, Timer functions
Output rate:	≤ 0.1 ms
Note:	Required for OD350-x, OD85-x, OD30-x

1) Automatic sensitivity adjustment  $\leq 2$  ms

## Interfaces

---

Data interface:	RS-232
Output type <sup>1)</sup> :	5 x PNP (100 mA)
Analog output::	2 x -5 ... +5 V ( $\geq 1$ k $\Omega$ ), 2 x 4 mA ... 20 mA ( $\leq 300$ $\Omega$ ) <sup>2) 3)</sup>
Resolution analog output:	16 bit
Error output (max. output current):	2 x alarm
Reference input:	2 x zero-ref
Inputs for memory bank selection:	3 x bank
Hold input:	2 x hold, 1 x hold-reset

1) PNP: HIGH =  $V_S - (< 2$  V)/LOW =  $< 2$  V; NPN: HIGH =  $< 2$  V/LOW =  $V_S$  <sup>2) 3)</sup> Source of analog output is either sensor heads, or calculation result

## Mechanics/electronics

---

Electrical connection:	Terminal board
Supply voltage $V_S$ <sup>1)</sup> :	DC 12 V ... 24 V
Power consumption <sup>2)</sup> :	6 W
Warm-up time:	$\leq 5$ min
Indication:	1,4" color display
Weight <sup>3)</sup> :	240 g
Housing material:	Polycarbonat and nylon 66

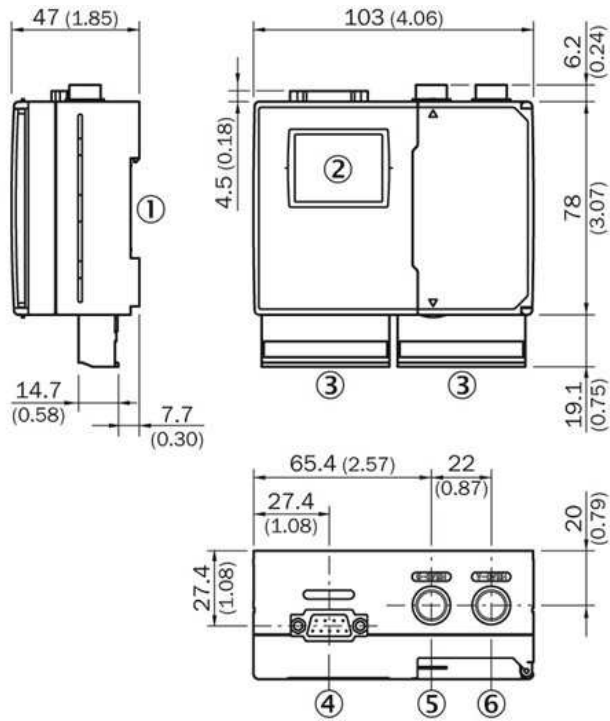
1) DC 12 V (-5 %) ... DC 24 V (+10 %) <sup>2)</sup> When connected with two sensor heads, incl. analog current output <sup>3)</sup> Inclusive terminal board

## Ambient data

---

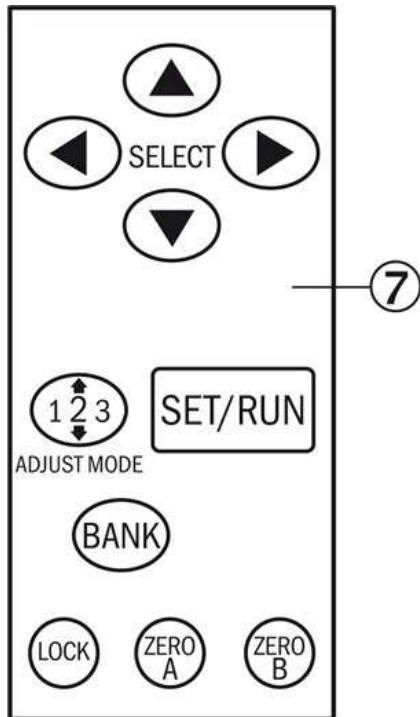
Enclosure rating:	IP 20
Protection class:	III
Ambient temperature:	Operation: -10 ... 45 °C, Storage: -20 ... 60 °C
Vibration resistance:	10 Hz ... 55 Hz (amplitude 1.5 mm, x-, y-, z-axis 2 hours each)
Shock resistance:	50 G (x-, y-, z-axis 3 times each)
Relative humidity (not condensing):	35 % ... 85 %

**Dimensional drawing**



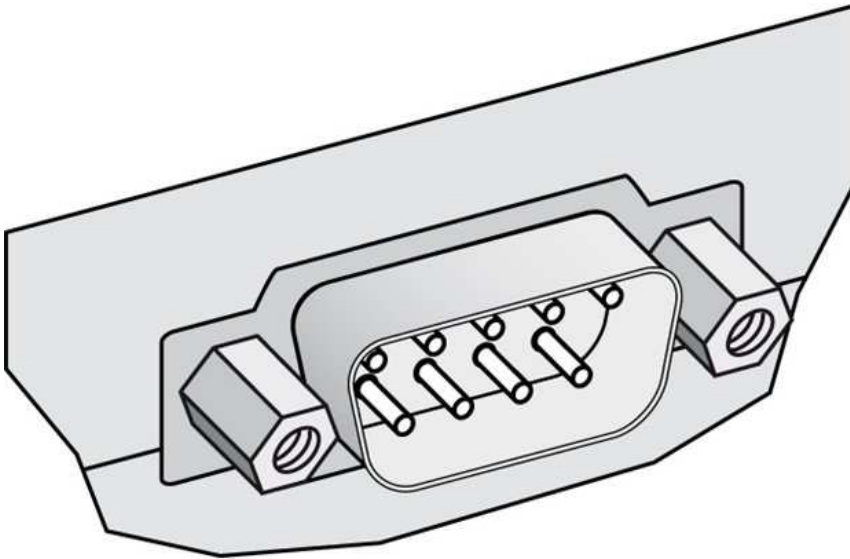
- |1| DIN rail mounting
- |2| LC display
- |3| terminal board (detachable)
- |4| RS-232C interface
- |5| sensor head B connection port
- |6| sensor head A connection port

**Adjustment possible**

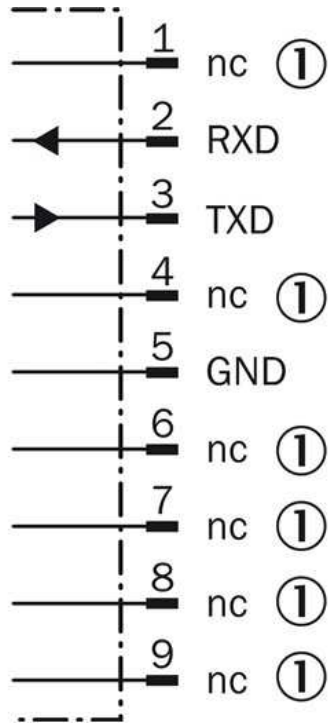


- |7| Control elements

Connection type RS-232C

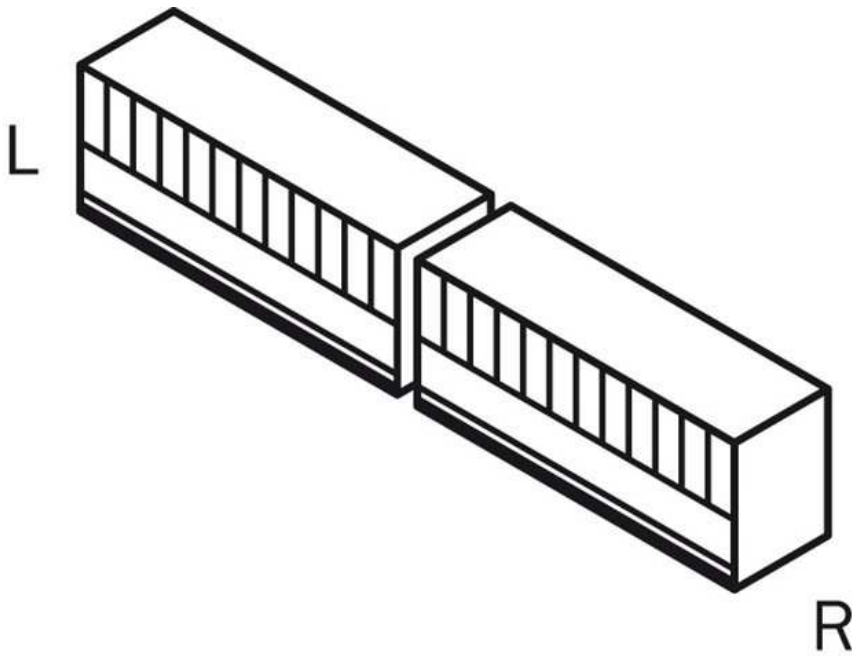


Connection diagram RS-232C

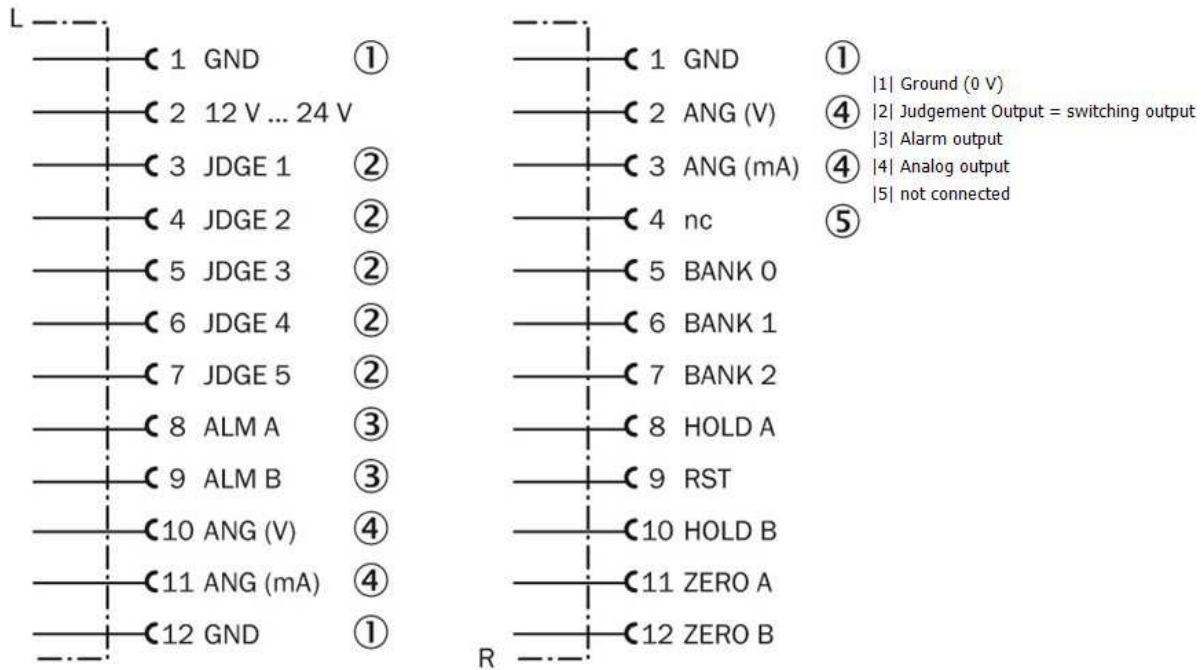


[1] not connected

Connection type terminal board



Connection diagramm terminal board



**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)