



Short range distance sensors (displacement) OD Precision

AOD5-N1



Model Name > [AOD5-N1](#)
Part No. > [6035984](#)

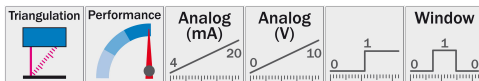


At a glance

- Many measurement ranges from 24 mm ... 26 mm up to 300 mm ... 700 mm
- CMOS receiving element for measurement independent of surface
- High measuring accuracy and frequency
- Glass thickness measurement with just one sensor head
- Different light spot sizes
- Integrated calculations for up to three sensors
- Stand alone use via RS-422

Your benefits

- Non-contact measurement improves quality inspection during production
- Surface-independent measurement algorithms ensure minimum machine downtime, regardless of surface gloss or color
- Reduced processing times as a result of the high measuring frequency of up to 10 kHz
- Simple, cost-effective solution for challenging measuring tasks due to a variety of sensor models
- Optional stand-alone operation via RS-422 means the OD Precision offers maximum performance at lower investment costs
- High visibility LC display enables simple, cost-effective setup
- Many interfaces for simple integration into an existing production environment



Features

System part: Controller unit

Performance

Measuring frequency: 10 kHz 1.25 kHz ¹⁾
 Light source: Laser, red
 Additional function: 16 memory banks, Arithmetic calculations, Automatic sensitivity adjustment, Teach-in of analog outputs, Teach-in of switching outputs, Set hysteresis, Selectable measuring frequency (automatic/0.1 ms ... 3.2 ms), Frequency filters, Anti interference mode, Glass thickness measurement, Hold functions, Peak measurement, Manual sensitivity adjustment, Averaging settings 1 ... 4,096x, Switching window, Peak to peak measurement, Timer functions
 Note: OD Precision sensor head can be used with AOD5-P/N1 or stand-alone via RS-422
 Output time: ≤ 0.1 ms

1) Depending on connected sensor head; averaging deactivated; sensitivity set manually

Interfaces

Data interface:	RS-232 USB
Output type ¹⁾ ; ²⁾ :	5 x NPN (100 mA)
Analog output:	3 x -10 ... +10 V ($\geq 10 \text{ k}\Omega$), 3 x 4 mA ... 20 mA ($\leq 300 \Omega$)
Resolution analog output:	16 bit
Error output (max. output current):	3 x alarm ³⁾
Reference input:	4 x zero-ref ⁴⁾
Inputs for memory bank selection:	4 x bank ⁵⁾
Laser off input:	3 x laser-off ⁶⁾
Hold input:	4 x hold, 1 x hold-reset ⁷⁾

1) PNP: HIGH = $V_S - (< 2 \text{ V})$ /LOW = $< 2 \text{ V}$; NPN: HIGH = $< 2 \text{ V}$ /LOW = V_S ^{2) 3) 4) 5) 6) 7)} With use of external 50-pin terminal (accessories)

Mechanics/electronics

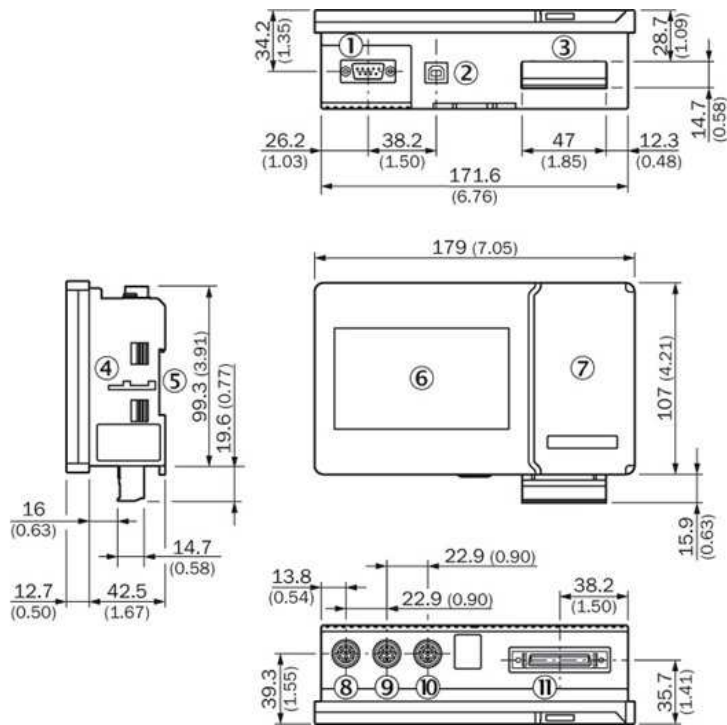
Electrical connection:	Terminal board
Supply voltage V_S ¹⁾ :	DC 12 V ... 24 V
Power consumption ²⁾ :	$\leq 10.8 \text{ W}$
Warm-up time:	$\leq 5 \text{ min}$
Indication:	4" color display
Weight ³⁾ :	550 g
Housing material:	Polycarbonat and nylon 66

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

Ambient data

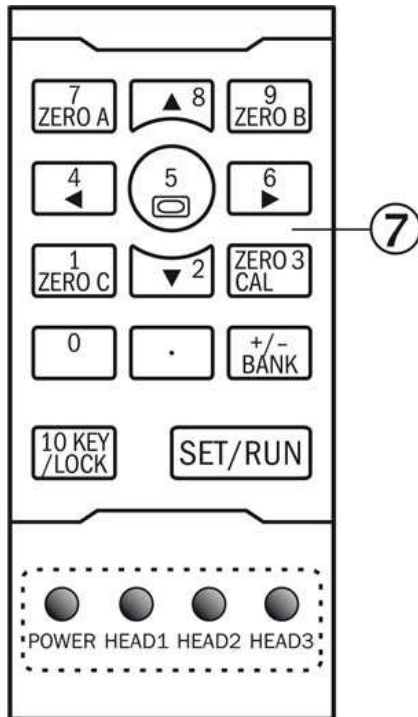
Enclosure rating:	IP 20
Protection class:	III
Ambient temperature:	Operation: -10 ... +45 °C, Storage: -20 ... +60 °C
Vibration resistance:	10 Hz ... 55 Hz (amplitude 1.5 mm, x-, y-, z-axis 2 hours each)
Shock resistance:	20 G (x-, y-, z-axis 3 times each)
Relative humidity (not condensing):	35 % ...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

Dimensional drawing



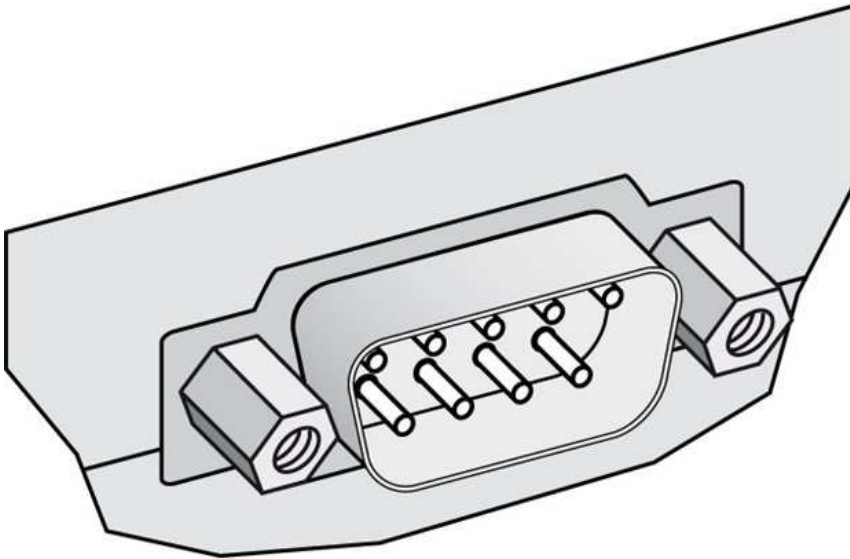
- |1| RS-232C interface
- |2| USB interface
- |3| terminal board (detachable)
- |4| for panel mounting bracket
(recommended window size 173 mm x 102 mm)
- |5| DIN rail mounting
- |6| LC display
- |7| Control elements
- |8| sensor head A connection port
- |9| sensor head B connection port
- |10| sensor head C connection port
- |11| External input and output
terminal (see accessories IO-EXP-AOD5)

Adjustment possible

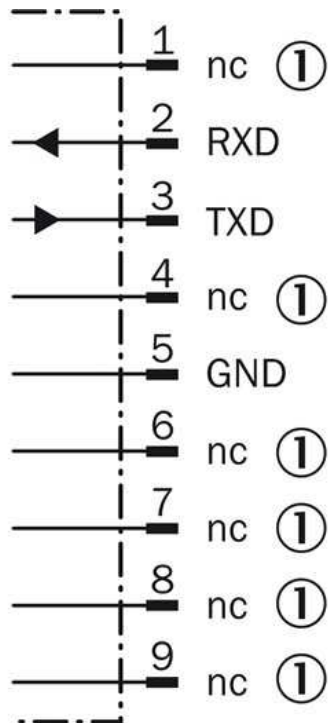


- |7| Control elements

Connection diagram RS-232C

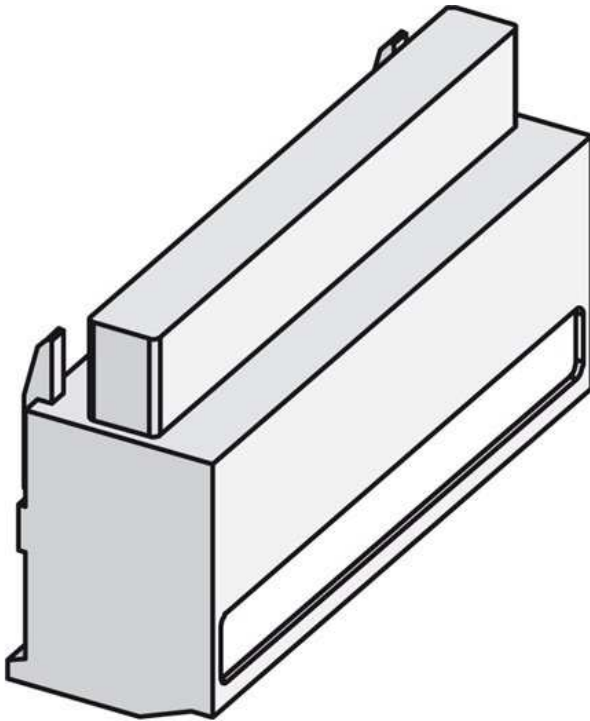


Connection diagram RS-232C

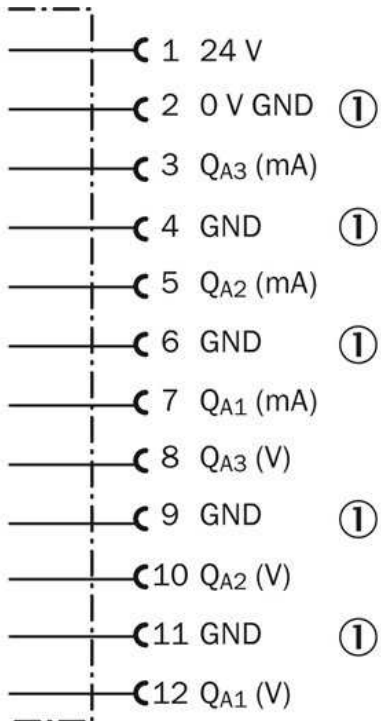


[1] not connected

Connection type terminal board



Connection diagram terminal board



① Ground (0 V)

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