ONLINE DATA SHEET
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Short range distance sensors (displacement)
OD Precision, RS-232
USB

AOD5-N1

SICK
Sensor Intelligence.

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

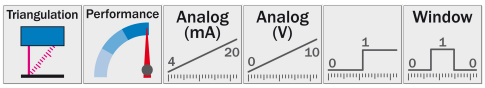
Model Name > AOD5-N1
Part No. > 6035984

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



RS-232

Features

System part:	Controller unit

Performance

Measuring frequency:	10 kHz 1.25 kHz [1)]
Light source:	Laser, red
Additional function:	16 memory banks, Anti interference mode, 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, Glass thickness measurement, Hold functions, Peak measurement, Manual sensitivity adjustment, Averaging settings 1 ... 4,096x, Switching window, Peak to peak measurement, Timer functions
Output rate:	0.1 ms
Note:	OD Precision sensor head can be used with AOD5-P/N1 or stand-alone via RS-422

[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 (≥ 10 kΩ), 3 x 4 mA ... 20 mA (≤ 300 Ω)
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 V)/LOW = < 2 V; NPN: HIGH = < 2 V/LOW = V_S [2] [3] [4] [5] [6] [7] With use of external 50-pin terminal (accessories)

Mechanics/electronics

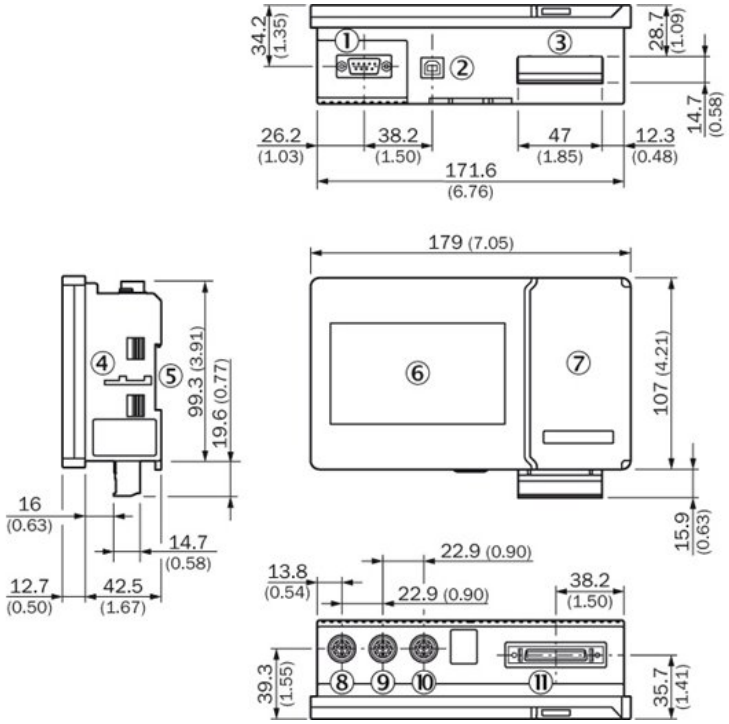
Connection type:	Terminal board
Supply voltage Vs [1].	DC 12 V ... 24 V
Power consumption [2]:	≤ 10.8 W
Warm-up time:	≤ 5 min
Indication:	4" color display
Weight:	550 g [3]
Housing material:	Polycarbonat and nylon 66

[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

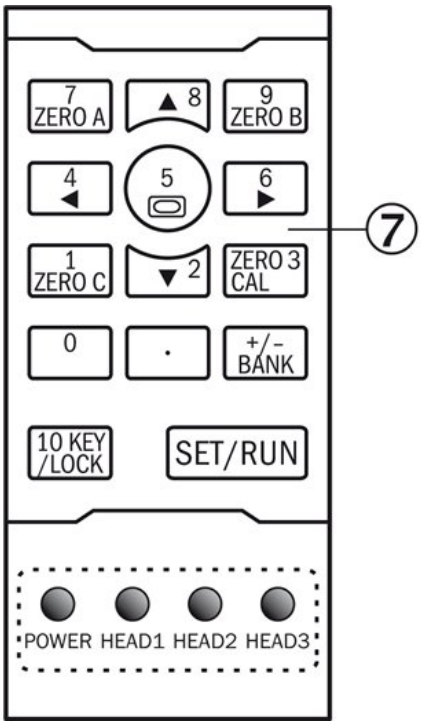
Enclosure rating:	IP 20
Protection class:	III
Ambient temperature:	Operation: -10 ... 45 °C, Storage: -20 ... 60 °C
Vibration resistance:	10 Hz ... 55 Hz (amplitude 1.5 mm, x-, y-, z-axis 2 hours each)
Shock resistance:	20 G (x-, y-, z-axis 3 times each)
Relative humidity (not condensing):	35 % ... 85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

Dimensional drawing



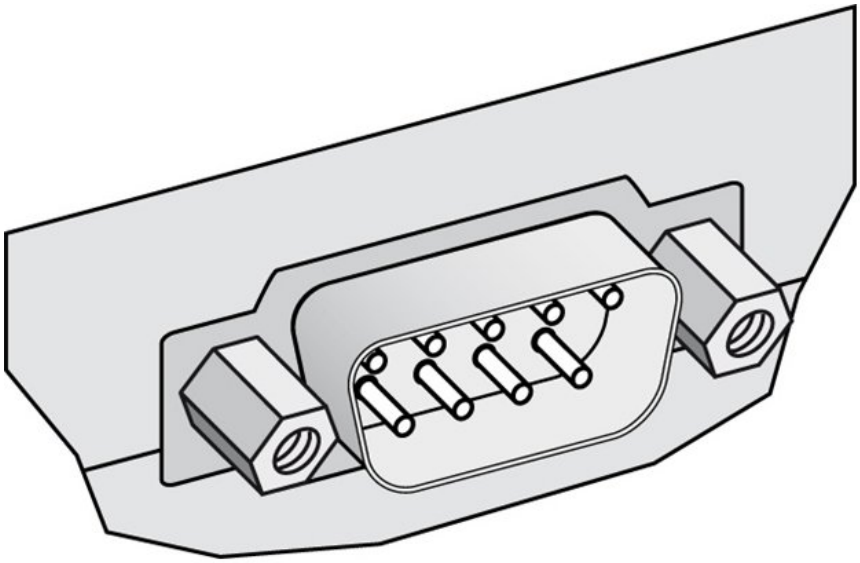
|1| RS-232C interface
|2| USB interface
|3| terminal board (detachable)
|4| for panel mounting bracket
(recommended window size 173 mm x 102 mm)
|5| DIN rail mounting
|6| LC display
|7| Control elements
|8| sensor head A connection port
|9| sensor head B connection port
|10| sensor head C connection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

Adjustment possible

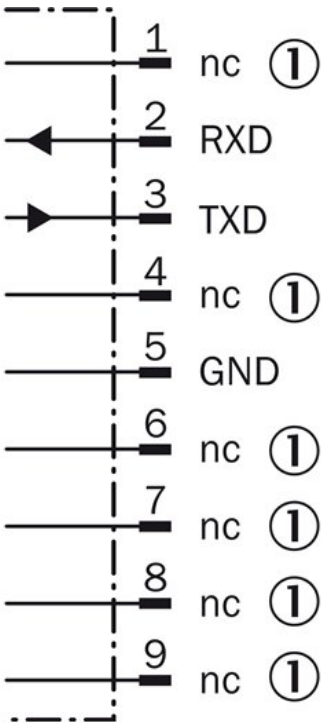


|7| Control elements

Connection type RS-232C

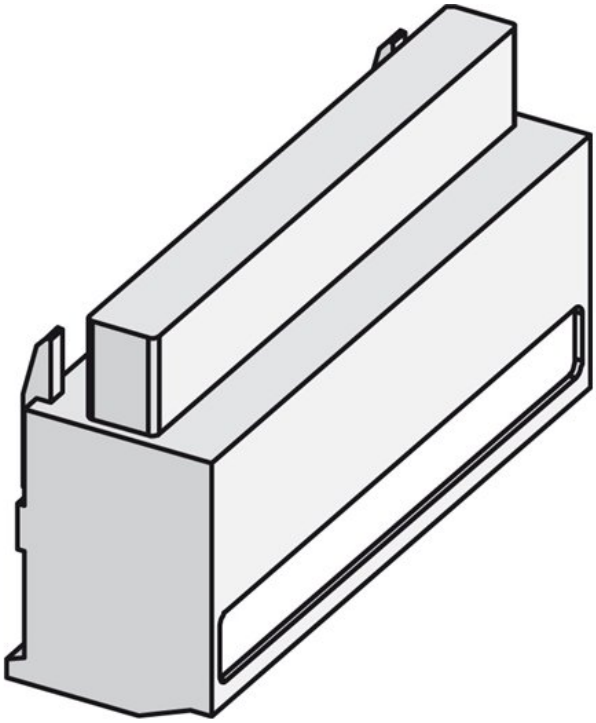


Connection diagram RS-232C

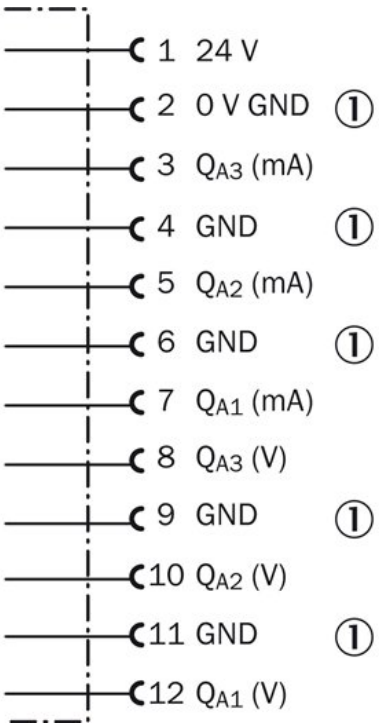


|1| not connected

Connection type terminal board



Connection diagramm terminal board



|1| Ground (0 V)

· USmod 4c int40

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