

AS56-N

Single Channel NIR Absorption Probe



- Inline real-time process monitoring
- Superior sapphire window with no seals, gaps or crevices
- Concentration measurement insensitive to color changes
- Extremely low maintenance
- CIP/SIP-compatible
- All wetted material and surface finishes are certifiable and traceable

The model AS56-N is a high-precision, single channel absorption probe. This stainless steel probe, equipped with an Ingold-style port, is designed for use in vessels or inline applications.

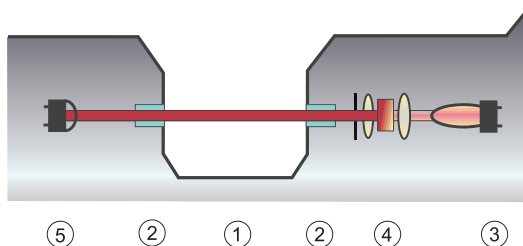
The AS56-N uses light in the Near Infrared (NIR) from 730 to 970 nm. A precisely defined, constant light beam penetrates the process medium.

The attenuation of the light intensity, caused by absorption and/or scattering by dissolved and undissolved substances, is detected by a hermetically sealed photodiode.

The optical filter on the lamp side adapts the wavelength for specific applications and allows color insensitive concentration measurements in the Near Infrared range.

The AS56-N is available with two different optical path lengths (OPL) for process versatility.

The seal-less, sapphire window design eliminates crevices and gaps to assure the highest level of sterility, cleanability and sensor integrity. The probe body demonstrates extreme durability and fulfills the CIP/SIP requirements demanded by ultra-sanitary process environments.



Type AS56-N

- | | |
|-----------------------------|-----------------------------|
| 1 Optical path length (OPL) | 4 Optics module with filter |
| 2 Sapphire windows | 5 Detector |
| 3 Lamp | |

Technical Data

AS56-N Probe



Material:

Wetted parts: stainless steel 1.4435 (SS 316 L)
Surface: electro-polished $Ra < 0.8 \mu m$
Windows: sapphire (without gasket)
Housing: stainless steel 1.4571 (SS 316 Ti)

Port gasket:

O-ring $\varnothing 18.64 \times 3.53 \text{ mm}$

Gasket material:

application specific, selection by end user

Permitted:

EPDM (FDA), Silicone (FDA), Kalrez 6375, Chemraz (FDA),
others on request

Port connection:

for ports AS25-GS60 (similar to Ingold-Ports)
Diameter: 25 mm ($\varnothing 25 \text{ H7}$)
Nominal length: 60 and 30 mm
Thread: G11/4" ISO 228/1

Insertion depth maximal:

OPL + 35 mm with port length 60 mm

Optical path length (OPL):

5 or 10 mm

Pressure rating:

PN10 (Test pressure PT 15 bar)

Permitted pressure PS:

10 mbar - 10 bar with TS $0^\circ \text{C} / +90^\circ \text{C}$

Permitted pressure at elevated temperature:

TS [$^\circ \text{C}$]	< 90	100
PS [bar]	10	8

Permitted process temperature TS:

- permanent: 0°C to $+90^\circ \text{C}$, ($+32^\circ \text{F}$ to $+194^\circ \text{F}$)
- peak (60 min/day): 0°C to $+100^\circ \text{C}$, ($+32^\circ \text{F}$ to $+212^\circ \text{F}$)

Ambient temperature:

- operation: 0°C to $+40^\circ \text{C}$, ($+32^\circ \text{F}$ to $+104^\circ \text{F}$)
- transportation: -20°C to $+70^\circ \text{C}$, (-4°F to $+158^\circ \text{F}$)

Air purge:

connections M5 available as standard

Light source:

incandescent tungsten lamp: 5.0 V DC, 450 mA

Wavelength range:

730 - 970 nm

Detector:

silicon photodiode, hermetically sealed

Measuring range:

sensor specific
0 - 3 CU

Cable connection:

probe cable ASx6-TT, end splice on both sides
probe cable ASx6-SCT, with stainless steel plug and socket
2, 3, 5, 10, 15, 20, ... 45 or 50 m
(7, 10, 16, 33, 49, 66, ...148 or 164 ft.)

Weight:

- Probe: approx. 2.0 – 2.5 kg, depending on version
- Cable set: approx. 1.5 kg / 10 m

Type of protection:

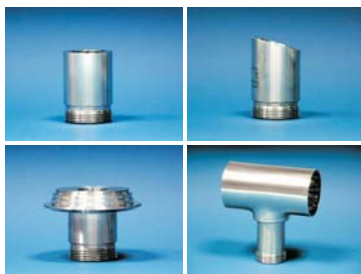
IP65

Certificates:

ISO 9001:2000, PED, CE, HPO

Use with C4000 or 156 converter!

Options



- Weld-in ports AS25 installation angle 0° or 15°
- Adapter-Varivent 50/0.0 AS25-G60
- Adapter-Clamp 2.0" AS25-G60
- T-pieces with port AS25-G60 for tube ends DIN, DN50 – DN150
- T-pieces with port AS25-G60 for tube ends OD, 2.0" – 6.0"
- Sealing flange AS25