AS56-N

1-Channel Absorption probe (NIR)

inline control



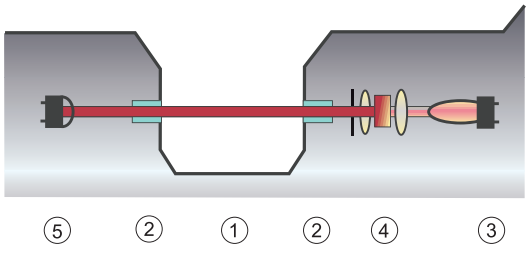
- **Inline real-time process monitoring**
- **Superior sapphire window with no seals, gaps or crevices**
- **Concentration measurement insensitive to color changes**
- **Extremely low maintenance**
- **CIP/SIP-compatible**
- **All wetted material and surface finishes are certifiable and traceable**

The model AS56-N is a high-precision, 1-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)
2 Sapphire windows
3 Lamp
4 Optics module with filter
5 Detector

Technical Data

AS56-N Probe

Materials (wetted parts):
Stainless steel 1.4435 (SS 316 L)
Surface: electro-polished Ra < 0.8 µm
Windows: Sapphire (seal-less)

Material (housing):
Stainless steel 1.4571 (SS 316 Ti)

Port connection:
Thread G 1-1/4", ISO 228/1
for port AS25 (similar Ingold-Port)
Diameter: 25 mm (D= 25 H7)
O-Ring groove for 30 mm and for 60 mm port length

Port gasket:
O-Ring 18,64 x 3,53 mm EPDM (FDA, USP Class VI)

Optical path length (OPL):
5 or 10 mm

Insertion depth maximal:
35 mm + OPL with port length 60 mm

Pressure rating:
PN10 (Test pressure PT 15 bar)

Permitted pressure PS:
10 mbar - 10 bar with TS 0 °C / +90 °C

Permitted pressure at elevated temperature:

TS [°C]	< 90	100
PS [bar]	10	8

Permitted process temperature TS:
- permanent: 0 - 90 °C (32 - 194 °F)
- peak 60 min/day: 0 - 100 °C (32 - 212 °F)

Ambient temperature:
- operation: 0 - 40 °C (32 - 104 °F)
- transportation: -20 - 70 °C (-4 - 158 °F)

Airpurge:
connection M5: standard

Light source:
incandescent tungsten lamp: 5.0 V DC, 450 mA

Wavelength range:
730 - 970 nm

Detector:
silicon photodiode, hermetically sealed
Calibration:
basic calibration in CU (concentration units)

Measuring range:
Depends on used converter
C4000: any measuring range between 0-0.05 to 4.0 CU
156: 0-0.5 to 4.0 CU

Resolution:
< ± 0.5% of respective measuring range

Repeatability:
< ± 1.0% of respective measuring range

Linearity:
specific to application, < ± 2% of respective measuring range

Cable connection:
with stainless steel connector
length:
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!

Accessories:



- Weld-in port AS25 (0° or 15°)
- Varivent 50.00 adapter port AS25-G60
- Clamp 1.5 inch adapter port AS25-G60
- Clamp 2.0 inch adapter port AS25-G60
- optek T-pieces for pipe DIN 11850 with port AS25-G60, DN 50 - DN 100
- optek T-pieces for pipe OD (BS 4825-1) with port AS25-G60, 2.0" - 4.0"
- Sealing flange AS25

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