

AF26-EX

Dual Channel Absorption Sensor



- Inline real-time process monitoring
- Designed for high temperatures, high pressures and hazardous locations
- Accurate measurement of color or color changes
- Dual channel turbidity compensation
- Extremely low maintenance
- CIP/SIP-compatible
- Broad variety of line sizes, process connections and wetted materials

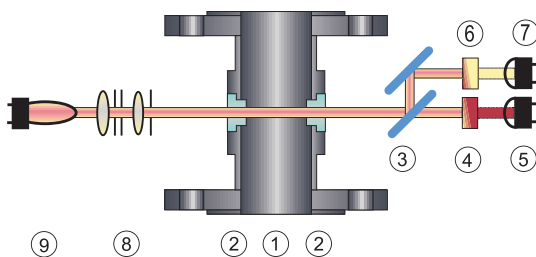
The model AF26-EX is a precise, dual channel absorption sensor designed especially for hazardous environments. It accurately measures color or color changes and can be used for inline applications in a variety of industrial processes.

The modular sensor consists of a flameproof stainless steel lamp housing and an intrinsically safe detector module. The appropriate converter can be located either in a safe area or in a flameproof or pressurized enclosure directly in the hazardous location.

The AF26-EX uses light in the range from 385 to 1000 nm at selected wavelengths. A precisely defined, constant light beam penetrates the process medium.

The light beam is divided by a beam splitter into two beams and passes through the specific interference filters. The attenuation of the light intensity, caused by absorption and/or scattering of the dissolved and undissolved substances, is detected by two photodiodes. This unique dual channel technology compensates for turbidity in the process stream and even the smallest presence of color can be measured.

The special optical sapphire window provides superior resistance to all abrasive and corrosive media. The AF26-EX is available with a broad variety of line sizes, process connections and wetted materials. NIST-traceable validation accessories assure absolute measurement confidence.



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|------------------------|------------------------|
| Type AF26-EX | 5 Detector 1 |
| 1 Sensor body | 6 Filter 2 |
| 2 Windows | 7 Detector 2 |
| 3 Beam splitter | 8 Optics module |
| 4 Filter 1 | 9 Lamp |

Technical Data

Sensor AF26-EX

**Material:**

sensor body made of stainless steel
SS 316 Ti, 1.4571 (standard)

Special materials:

SS 316 L (1.4435), 1.4539, 1.4462, TFM 4215, Hastelloy® C4, Hastelloy® C22, Titanium, Tantalum, Monel® 400, Inconel® 625, PP, and others on request.

Line size:

¼" to 8", (DN 6 to DN 200)

Process connections:

ASME Flange, DIN Flange, JIS Flange, Tri-Clamp, BBS-Clamp, Female Thread NPT, Female Thread DIN ISO 228/1 G, Sanitary Thread (DIN 11851), and others on request.

Gaskets:

Viton®, EPDM (FDA), EPDM (USP Class VI), Kalrez®, Chemraz®, Fluoraz®, Buna (NBR), Silicone, Viton® /FEP (FDA), and others on request.

Windows:

Pyrex®, Sapphire

Optical path length:

1 mm – 1000 mm

Process pressure:

10 mbar to 325 bar, (0.15 psi to 4713 psi), depending on process connection, material and design

Temperature specification:

elevated or reduced ambient temperatures may require restrictions to the operating temperatures.

ambient temperature: -30 °C to +40 °C, (-22 °F to +104 °F)

process temperature: -30 °C to +120 °C, (-22 °F to +248 °F)

periodic 15 min/day (no hazardous environment):

-30 °C to +150 °C, (-22 °F to +392 °F)

periodic 30 min/day (no hazardous environment):

-30 °C to +140 °C, (-22 °F to +284 °F)

during transport: -20 °C to +70 °C, (-4 °F to +158 °F)

Air purge:

connectors available as standard

Light source:

incandescent tungsten lamp: 5.0 V DC, 775 mA, typical life span 3 to 5 years

Wavelengths:

specific to application from 385 nm - 1000 nm

Detector:

silicon photo diodes, hermetically sealed

Calibration:

basic calibration in CU (concentration units)

Measuring range:

sensor specific
0 - 0.05 to 3 CU

Resolution:

< ± 0.05% of respective measuring range

Repeatability:

< ± 0.5% of respective measuring range

Linearity:

specific to application, < ± 1% of respective measuring range

Protection:

all optical parts protected according to IP65

Cable specification:

fixed cable connection 2 m, both side

0 - 400 m, (0 - 1312 ft.) appr. IIC T6/T5 (Groups A,B,C,D)

401 - 1000 m, (1313 - 3280 ft.) appr. IIB T6/T5 (Groups C,D)

Hazardous locations:

II 2G EEx ia IIC/IIB T6/T5

Class I, Div. 1, Groups A, B, C, D

Approval report:

DMT ATEX E176

FMG J.I. 3013884

Certificates:

ISO 9001:2000, ATEX, FM, PED, CE, HPO

Use with C400 converter!

Options



Measuring cells for any application

AF26-EX-HT

high temperature flameproof model
perman.:

-30 °C to +240 °C, (-22 °F to +464 °F)

periodic 15 min/day:

-30 °C to +260 °C, (-22 °F to +500 °F)

periodic 30 min/day:

-30 °C to +250 °C, (-22 °F to +482 °F)

Validation adapter

modular adapter with application specific
validation filter for sensor verification