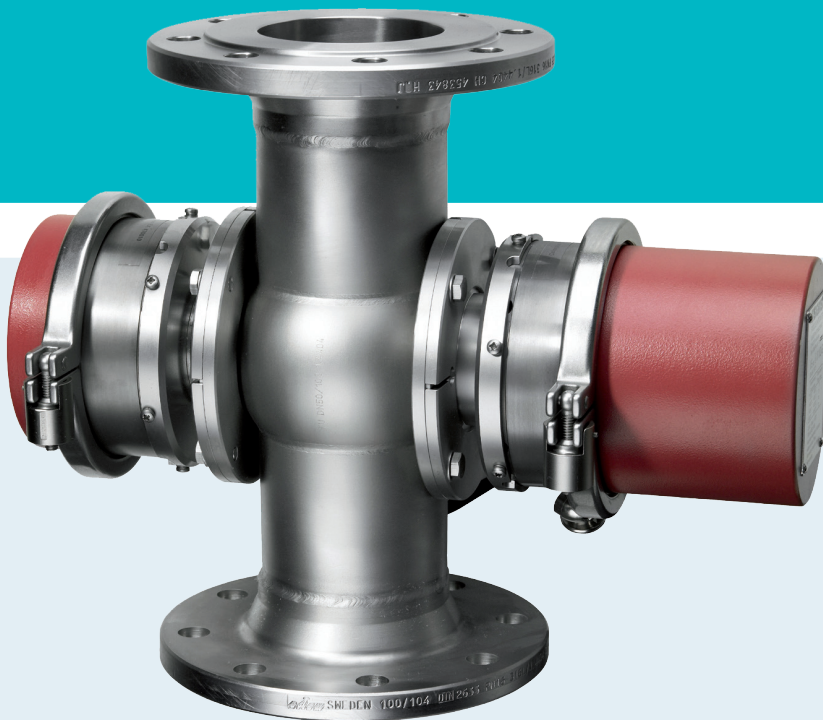


ColorPlus Ex

In-line absorptiometer in Ex-version



Applications

- Colour (ASTM, GOST) of diesel/gasoline
- Colour (Hazen) of acrylic and metacrylic acid
- Colour (Hazen) of maleic acid and phthalic anhydride
- Colour (Hazen, Saybolt) in organic based oils
- Colour of spirits at the blending unit

Advantages

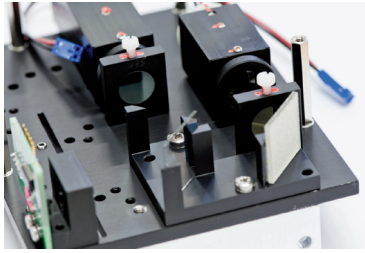
- Certification according to IECEx/ATEX, protection class Zone 0, Ex d IIC T3/T4/T5/T6 Ga/Gb
- Easy installation using standard Varivent® In-line housing
- Customer specific flow cells on request
- Various window and sealing materials available
- Turbidity compensation by a second wavelength (optional)

- Easy functional check with integrated checking filter
- Optional calibration with unique sliding measuring cell

Industries

- Petrochemical industry
- Refineries
- Chemical industry
- Spirits

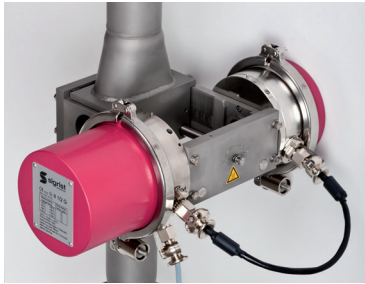
Innovations with tangible benefits



Precise colour measurement

High-quality components, LED-light sources and Swiss precision guarantee reliable colour measurement also in the Ex-field and, if need be, with turbidity compensation:

- Long-term stable, reproducible results for a reliable process flow
- A minimum of service and maintenance work
- Low operating costs



Flexible system integration

The process integration of the Color-Plus Ex can be adapted exactly to the customers' applications:

- Standard Varivent® housing with or without flanges
- Flow cell available with heating or cooling jacket
- Available in different materials
- Individual path length adaptation for optimum measuring range and sensitivity



Quality control

The installed checking glass or the optionally available sliding measuring cell is used for quality control:

- Fast verification of the optically correct measurement
- Option of a real calibration during an on-going process using a sliding measuring cell

Continuous Ex-protection

Operation is carried out either via the control unit SIREL SMD in a safe zone or via the SIREL Ex:

- Operating concept is adapted to the respective needs
- With the SIREL Ex a full range of function is available including display in the hazardous area

Main technical details

| | |
|----------------------|----------------------------|
| Measuring principle: | Absorption |
| Wave length: | 254 ... 760 nm |
| Measuring span: | 0 .. 3 E |
| Resolution: | 0.001 E |
| Measuring ranges: | 8, freely configurable |
| Sample temperature: | -20 .. +195 °C |
| Ambient temperature: | -20 .. +50 °C |
| Protection type: | IP65 |
| Ex-proof type: | Ex d IIC T3/T4/T5/T6 Ga/Gb |

Full details and
technical data:



ColorPlus Ex

Technical data

Sensor

| | |
|-----------------------|---|
| Measuring principle: | Absorption |
| Wave length: | 254 ... 760 nm |
| Measuring span: | 0 .. 3 E |
| Resolution: | 0.001 E |
| Measuring ranges: | 8, freely configurable |
| Installation: | In-line Varivent® housing or compatible. Optional: Customer specific measuring cell |
| Material sensor head: | Stainless steel 1.4301 |
| Windows: | Borosilicate glass, quartz or sapphire |
| Seals: | NBR, EPDM, FPM or FFKM |
| Housing: | Aluminium AlSi1MgMn, coated |
| Sample temperature: | -20 .. +195 °C |
| Ambient temperature: | -20 .. +50 °C |
| Protection type: | IP65 |
| Ex-proof type: | Ex d IIC T3/T4/T5/T6 Ga/Gb |

Measuring cells

| | |
|--------------|---|
| Standard: | In-line Varivent® housing or compatible, DN 40 .. 150 |
| Customized: | As agreed |
| Materials: | Stainless steel, PVDF, PVC, Hastelloy® |
| Connections: | Customized |

Control unit SIREL SMD/SIREL Ex

| | |
|---------------|--|
| Power supply: | 85 .. 264 VAC, 47 .. 63 Hz or 24 VDC |
| Power input: | 25 W |
| Display: | LC display with plain text information |

Output:

2 × 0/4 .. 20mA, max. 600 Ω
max. 24V with galvanic isolation, max. 50V to earth.
2 × relay contacts max. 250 VAC, max. 4A. Digital input and output, max. 5V

Dimensions:

SIREL SMD: 200 × 157 × 96 mm
SIREL Ex: 320 × 645 × 203 mm

Weight:

SIREL SMD: approx. 1.5 kg
SIREL Ex: approx. 25 kg

Protection class:

SIREL SMD: IP65

Ex certification:

SIREL Ex:
PTB 07 ATEX 1021X
IECEx BKI 07.0019
EX NESPI GYJ 02109

