

# ColorPlus Ex

## In-line absorptiometer in Ex-version



### Applications

- Colour (ASTM, Saybolt) of diesel/gasolin
- 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

### Industries

- Petrochemical industry
- Refineries
- Chemical industry
- Spirits/Distilling industry

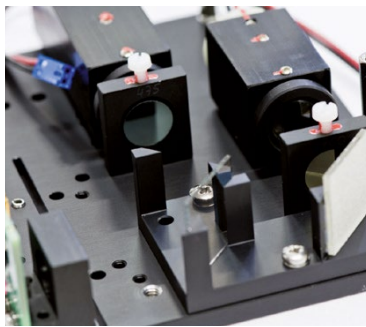
### Advantages

- Certification according to ATEX/IECEX  
ColorPlus Ex: Ex Zone 1, Ex db IIC T3/ T4/ T5/ T6 Ga/Gb  
SICON (M) Ex: Ex Zone 1, Ex db de IIB T6 Gb
- Easy installation using standard Varinline® 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 or sliding measuring cell
- Up to 8 photometers can be connected to the control unit

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## 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

Process integration of the ColorPlus Ex can be adapted exactly to the customers' applications:

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



### 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



### Intelligent control system

Control unit SICON with the latest touch-screen technology and colour display.

- The display selectively shows values, graphs, or status and alarm messages.
- An internal data logger allows displaying the measured values of the last 32 days.

### Continuous Ex

Operation is carried out either via the control unit SICON (M) in a safe zone or via the SICON (M) Ex:

- Operating concept is adapted to the respective needs.
- With the SICON (M) Ex a full range of function is available including display and touchscreen in the hazardous area.
- With the SICON M with connecting box Conn-A or the SICON M Ex, up to 8 photometer can be connected.

Your representative:



[photometer.com/56c4](http://photometer.com/56c4)

## Technical data

### Sensor

Measuring principle:	Absorption
Wave length UV-lamp:	254, 313, 365, 436, 546 nm
Wave length LED:	365 .. 760 nm
Measuring span:	0 .. 3 E
Resolution:	0.001 E
Measuring ranges:	8, freely configurable
Installation:	In-line Varinline® housing or compatible Optional: Customer specific flow cell

Material sensor head:	Stainless steel 1.4435
Window:	Borosilicate glass, quartz or sapphire
Seals:	NBR, EPDM, FPM oder FPM
Housing:	Aluminium AlSi1MgMn, coated
Sample temperature:	-20 .. +195 °C
Ambient temperature:	-20 .. +50 °C
Operation voltage:	24V
Power consumption:	4W for LED 9W for UV

Protection type:	IP 65
Ex-group/device category:	II 1/2G
Ex-proof type:	Ex db IIC T3/ T4/ T5/ T6 Ga/Gb

### Measuring cells

Standard:	In-line Varinline® housing or compatible, DN 40 .. 150
Customized:	As agreed
Materials:	Stainless steel Hastelloy® etc. Customized
Connections:	

### Control units

#### SICON (M)/SICON (M) Ex

Power supply:	VIS: 9.. 30 VDC / UV:24 VDC
Power input:	7 W + photometer
Display:	1/4 VGA, 5.7"
Operation:	Touchscreen
Protection type:	IP 66
Output:	4 x 0/4 .. 20mA, with galvanic isolation, max. 50V to earth and max. 500 Ω load 7 x digital, freely configurable
Input:	5 x digital, freely configurable
Digital interfaces:	Ethernet, Modbus TCP (only SICON), microSD card optional
Optional Moduls (max. 2):	Modbus RTU, Profibus DP, HART 4 x 0/4 .. 20mA output, with galvanic isolation 4 x 0/4 .. 20mA input
Dimensions:	SICON (M): 160 x 157 x 60 mm SICON (M) Ex: 322 x 558 x 191 mm
Weight:	SICON (M): approx. 0.6 kg SICON (M) Ex: approx. 30 kg
Ex-group/device category:	SICON (M) Ex: II 2G
Ex-proof type:	SICON (M) Ex: Ex db eb IIB T6 Gb
Ex certification:	SICON (M) Ex: BVS 17 ATEX E xxx X IECEx BVS 17.00 xx X

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