

# ColorPlus 3 Nitrat

On-line-monitoring in nitrate concentration



## Features

- Online measurement of nitrate concentration
- Detection of window contamination with cleaning indicator
- Integrated compensation for window fouling, SAK and turbidity
- Easy-to-clean measuring cell requiring no tools
- Elimination of turbidity via a filter in the sample feed
- Automatic instrument self-test

## Applications

- Nitrate measurement

## Industries

- Drinking water extraction and treatment

## Innovations with tangible benefits



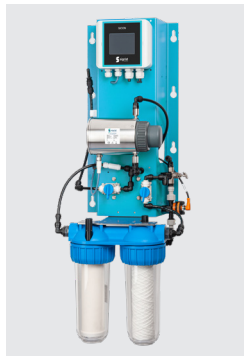
### Flexible instrument configuration

- Modular optical system with freely configurable filters for nitrate and any other wavelengths
- Can be configured with DOC and turbidity compensation filters
- Two integrated filters for instrument verification
- Path length 5 mm



### Maximum reliability and measurement accuracy

- Automatic compensation for window contamination thanks to measurement using two optical path lengths (5/1.5 mm)
- The optical windows are flushed by the sample liquid, which reduces contamination on the windows
- Highly precise and consistently reliable measurement results



### Optimised design for particularly easy maintenance

- The measuring cell can be opened without tools for easy and safe on-site cleaning
- Optional wall-mounting kit with sample guide, flow meter and filter unit for particularly easy installation
- The sensor detects contamination at an early stage and signals the need for cleaning in good time



### Robust design & durable materials

- The xenon flash lamp is extremely durable and lasts for its entire service life (> 10 years). No need for costly replacement of the UV lamp or expensive recalibration
- PVC, 1.4435 stainless steel and a quartz window guarantee a long service life



### Smart control unit with touchscreen

- Intuitive operation & clear colour display – measured values, graphs, status and alarm messages at a glance
- Integrated data storage – visualisation of measurement data from the last 32 days, protected by password access.
- Versatile connectivity & expandability – integrated web server, fieldbus options and the SiCon M or SiCon XX 40 variant for up to 8 measurement channels and multiple devices

### Main technical details

Measuring principle: Absorption  
Measuring range: 0 ... 100 mg/l Nitrate  
Resolution: 0.01 mg/l  
Protection degree: IP 67  
Sample temperature: 0 ... 50 °C  
Sample flow: 0.5 ... 1 l/min

Full details and  
technical data:



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## Technical data

### Device

|                      |                                             |
|----------------------|---------------------------------------------|
| Measuring principle: | Absorption                                  |
| Measuring range:     | 0 .. 100 mg/l nitrate                       |
| Reproducibility:     | +/- 0.1 mg/l or<br>+/- 1% of measured value |
| Resolution:          | 0.01 mg/l                                   |
| Measuring ranges:    | 8, freely configurable                      |
| Units:               | mg/l                                        |
| Sample temperature:  | 0 to 50 °C                                  |
| Sample pressure:     | 6 bar                                       |
| Sample flow rate:    | 0.5 to 1 l/min                              |
| Housing material:    | Stainless steel 1.4301                      |
| Protection class:    | IP 67                                       |
| Weight:              | 3.4 kg                                      |

### Measuring cell

|                           |                                  |
|---------------------------|----------------------------------|
| Material:                 | PVC                              |
| Path lengths for nitrate: | 5/1.5 mm                         |
| Window material:          | Quartz                           |
| Seals:                    | EPDM                             |
| Connections:              | Push-fit 8 mm /<br>G 1/4" thread |

### Control unit SICON

|                     |                                                                                |
|---------------------|--------------------------------------------------------------------------------|
| Mains supply:       | 24 VDC ± 10%                                                                   |
| Power consumption:  | max. 8 W incl. photometer                                                      |
| Display:            | 1/4 VGA, 3.5"                                                                  |
| Operation:          | Touchscreen                                                                    |
| Ambient humidity:   | 0 to 100% rel. F                                                               |
| Protection class:   | IP 66                                                                          |
| Outputs:            | 4 x 0/4 to 20 mA, galvanically<br>isolated<br>7 x digital, freely configurable |
| Inputs:             | 5 x digital, freely configurable                                               |
| Digital interfaces: | Ethernet, micro-SD card,<br>Modbus TCP                                         |

Optional modules (max. 2): Profibus DP, Modbus RTU,  
HART, Profinet IO,  
4 x 0/4 ... 20 mA  
outputs, galv. separated  
4 x 0/4 ... 20 mA inputs

