

Stamolys CA 70 FE

Analyzer for Iron Measurement



The Stamolys Analyzer CA 70 FE is a compact analysis system for iron for use in drinking water and wastewater applications. Iron is determined using the photometric measuring principle.

Applications

- Phosphate elimination in wastewater plants
- Precipitant monitoring in wastewater and drinking water applications

Features and benefits

- Direct reaction in photometer at constant temperature
- Low system volume required due to short distances
- Low reagent requirement
- Small sample volume
- Sample heating system
- Compact instrument design
- User friendly user interface
- Sample stream monitoring and plain text error menu
- Measuring value storage using integrated data logger
- Automatic calibration

Quality made by
Endress+Hauser



ISO 9001

Endress+Hauser

The Power of Know How



Measuring system

The complete measuring system consists of

- StamoLys Analyzer CA 70 FE
- Sample treatment system

Complete measuring system

StamoLys Analyzer CA 70 FE with sampler



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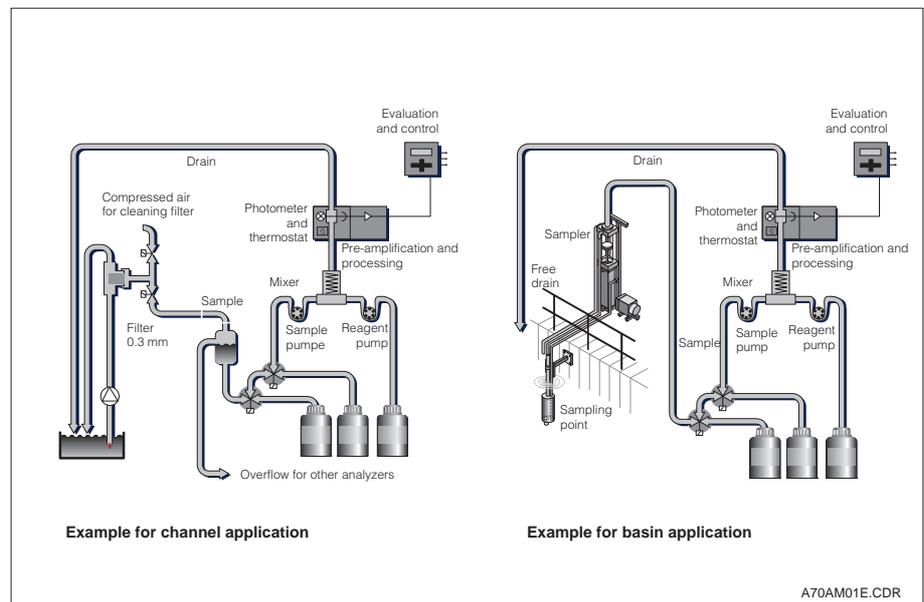
Measuring principle

Sample conditioning is not necessary if the sample is clean (particle size < 50 µm), the sample temperature is less than 45°C (115 °F) and the sample pressure less than 0.4 bar (5 psi).

After sample conditioning, the Analyzer sample pump conveys the permeate to a mixing vessel. The reagent pump adds reagent at a specific ratio. As a result of the reaction with the reagent, the sample turns a characteristic colour which is measured in the photometer. The temperature in the photometer is controlled thermostatically so that the reaction is reproducible and takes place within a short period of time (2 min).

The instrument works acc. to the ferrozine method. The ferrozine reagent incorporates an indicator dye which turns the sample from colourless into pink if iron is present. The colour intensity is proportional to the iron concentration.

The absorption of measuring light is measured quantitatively in the photometer at 565 nm. The measuring light is compared in the photometer with a reference light at a wavelength of 880 nm to prevent any effects on results due to turbidity.



Application examples of StamoLys CA 70 FE

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Scope of features

An **analogue output at 0/4 ... 20 mA** and **programmable limit contactors** control the process directly.

A **serial interface** permits the digital recording and processing of measured values.

A **plain text error menu** facilitates diagnosis in case of operating trouble.

An extensive **self-monitoring function** prevents any malfunctioning.

An **automatic self-cleaning feature** prevents deposits and invalidation of measured values.

At programmable intervals, the system performs an **automatic calibration** and monitors the calibration parameters in order to ensure reliable measured values. At standard measuring cycles restocking of reagents is sufficient only once a month.

Technical data

| | | |
|------------------------------------|------------------------------------|---|
| General data | Manufacturer | Endress+Hauser |
| | Instrument designation | StamoLys Analyzer CA 70 FE |
| Mechanical construction | Dimensions of Analyzer (h x w x d) | 840 x 530 x 330 mm (non-cooled variant) 840 x 530 x 430 mm (cooled variant) |
| | Weight | approx. 40 kg (non-cooled variant) approx. 50 kg (cooled variant) |
| | Capacity of reagent tank | 2 x 1 l |
| | Capacity of standard liquid tank | 1 l |
| Materials | Enclosure | Stainless steel |
| | Front window | Plexiglass® |
| | Continuous tube | Norprene® |
| | Pump tube | Tygon®, Viton® |
| Input | Measuring parameter | Iron |
| | Measuring range | 10 500 ppb Fe (µg/l) 0.05 2.00 ppm Fe (mg/l) 0.1 5.00 ppm Fe (mg/l) |
| | Measuring light | 565 nm |
| | Reference light | 880 nm |
| | Measuring interval | 2 ... 120 min |
| | Accuracy | 1% of upper measuring range |
| | Sample requirements | 15 ml/measurement, 1 ml/min |
| | Reagent requirements | 1 x 0.2 ml/measurement, 1 x 1 l/month |
| Output | Analogue output | 0/4 ... 20 mA |
| | Permitted load | max. 500 Ω |
| | Data interface | RS 232 C |
| | Relay outputs | 2 limit contactors, 1 error signalling contactor |
| | Load rating | 30 VA, max. 48 V AC, 30 V DC at 0.5 A |
| Electrical data | Power supply | 115 V AC / 230 V AC ±10%, 50/60 Hz |
| | Power consumption | approx. 40 VA (non-cooled) approx. 200 VA (cooled) |
| | Current drain | approx. 0.15 A (non-cooled) approx. 0.9 A (cooled) |
| Maintenance and calibration | Calibration interval | 0 ... 72 h |
| | Maintenance interval | 3 months |
| | Maintenance requirements | 30 min/week |
| Ambient conditions | Temperature | 5 ... 40 °C |
| | Ingress protection | IP 43 |

Subject to modifications.

