



TURBIDITY AND SUSPENDED SOLIDS TRANSMITTER



®
SIX
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HIGH-TECH SENSOR WITH ADVANCED OPTICS



One Sensor - Dual Function

Six optical windows and a patented measuring system enable the SuSix® sensor to measure both turbidity in clear water and suspended solids in thick sludge.

Turbidity measurements comply with ISO 7027.

Easy Installation For All Applications

The sensor's digital signal processing capability and the new communication protocol allow for up to 300 meters of cable between the sensor and the converter.

Ideal For Measurements In Aggressive Liquids

The SuSix® sensor is manufactured from acid-proof, full gloss steel coated with chrome-dioxide. Consequently particle adhesion to the surface is

minimal. The optical windows are manufactured from scratch-resistant sapphire glass. These advanced materials greatly reduce the need for cleaning in many applications. For extremely dirty applications where fouling from material build-up cannot be avoided, a mechanical self-cleaning system is available.

Calibration Simplicity

SuSix® sensors are calibrated from factory. Turbidity measurements do not require any user calibration at all, and zero-point factory calibration is provided for suspended solids measurements. Embedded algorithms ensure that 90% of all applications only require zero-point calibration.



Top: Open tank measurement

Left: Tube measurement

Right: Sensor w/ self-cleaning system

EASY ACCESS TO MEASUREMENT INFORMATION

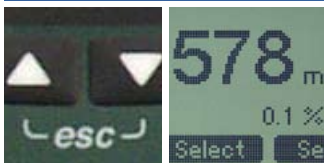
The MJK Converter covers a huge range of measurements

All measurements are instantly displayed in the required units.

Turbidity is measured from 0.001 to 9999 FNU/NTU, and suspended solids from 0.001 to 400 g/l.

SuSix® has a built-in data logger capable of 20,000 time-stamped logs and graphing.

Data and graphs can be transferred to a PC in csv format via a USB connection.



CONVERTER WITH COMMUNICATION

SuSix® has a logical menu structure with intuitive navigation. The user interface is mobile phone-like, and several different languages can be selected from the display.

With a USB connection you can transfer configurations, data from the data logger, and software upgrades from a PC.

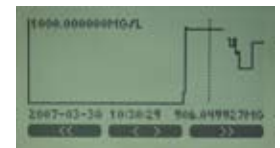
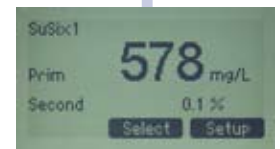
The SuSix® converter has one 4-20 mA output, two relays for control and alarms, and one digital input for change of range, linearization and alarm cancellation.

Alarms are displayed as pop-up windows and saved in the alarm log.

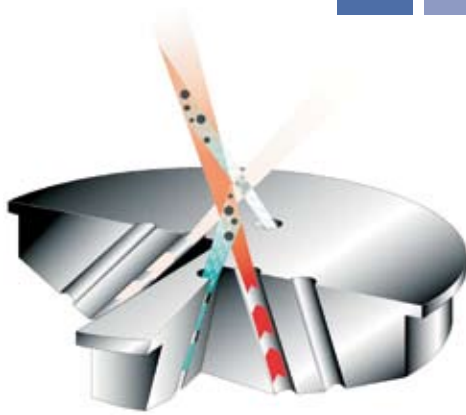
The SuSix® display can be user-configured to show any required values.

SuSix® can be part of a network consisting of other SuSix® and MJK units, and can function as a shared display for up to 4 units.

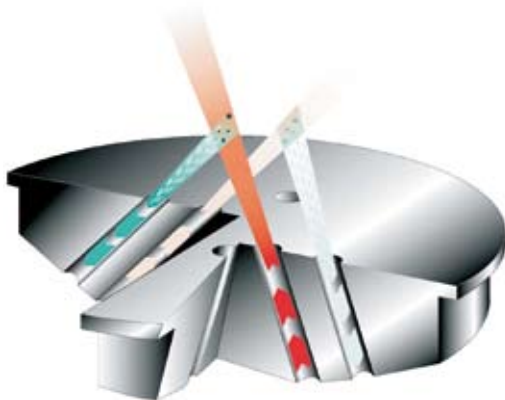
A Modbus® communication protocol enables direct connection to PLC units, SCADA and telemetry systems.



OPTICS FOR MULTI CROSS-BEAM DETECTION



Suspended solids mode



Turbidity mode

High Quality and High Reliability

The SuSix® has special directionally polished optics that controls and steers the infrared beams in selected patterns for measurement of turbidity and suspended solids.

The advanced optical system with patented algorithms employ neural logic to ensure reliable and stable measurements.

The sensor has a built-in diagnostics function to maintain continuous high quality and accurate readings.

The algorithms even compensate for the unavoidable deposits on the optics and gas bubbles in the liquid.

Full Range Using Only One Sensor And Transmitter

The full, wide range provides for using only one sensor for measurements in clean drinking water, surface water, effluent, and measurements of suspended solids in activated sludge or return sludge from sewage plants.

SuSix® Sensor	
Measuring range	Turbidity Suspended solids
Measuring principle	Six-channel optics with pulsed, infrared light with modified absorption measurement
Cleaning system	Resists build-up. For demanding applications an optional mechanical wiper is available
Transmitter output	RS 485
Power supply	From converter
Enclosure materials	IP 68
Cleaning	Optional mechanical wiper controlled by the transmitter

SuSix® Converter	
Input	RS 485
Analog output	One active 4 - 20 mA, galvanically isolated (max. 800 Ω)
Digital output	One voltage-free electro-mechanical relay (max. 50 V DC / 1 A) One optically isolated MOSFET relay (max. 50 VAC / V DC / 120 mA)
Digital input	For change of range, linearization and alarm cancellation
Communication	Modbus® RTU-mode, 9600 baud, 2-wire RS 485, slave-mode
Interface	RS 485 for connection to display unit or PLC
Power supply	24 V AC, 50 / 60 Hz ± 10 % or 115 V AC, 50 / 60 Hz ± 10 % or 230 V AC, 50 / 60 Hz ± 10 % Power consumption max. 10 W
Cabinet materials	Polycarbonate, glass reinforced
Enclosure rating	IP 67



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