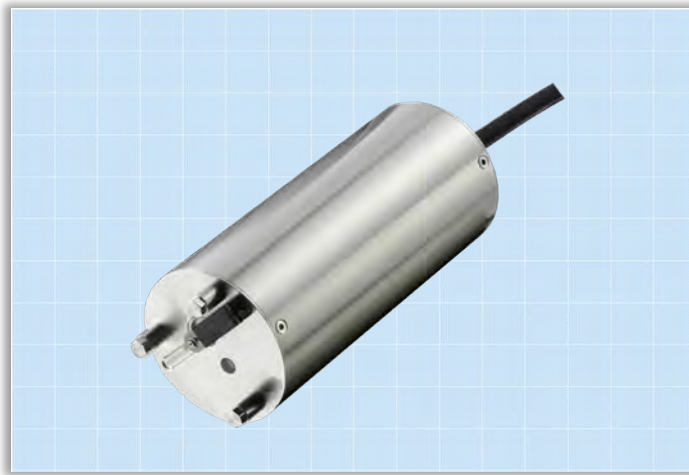


## CROSS SMART SENSOR

### TS7: Turbidity & Suspended Solid Sensor

DIGITAL TECHNOLOGY FOR OPTIMIZED MEASURES



#### GENERAL

The TS7 series Sensors are designed to measure the Turbidity and the concentration of Suspended Solid continuously and consistently in drinking water, surface water, ground water, sewage or industrial wastewater treatment facilities.

Using a measuring method that compares transmitted light with scattered light, TS7 sensors can do accurate, color-independent suspended solids and turbidity measurements. The outstanding optical designs make the sensors less susceptible to disturbing light too.

#### APPLICATIONS

- ☐ Urban wastewater treatment (inlet/outlet controls)
- ☐ Sanitation network
- ☐ Industrial effluent treatment
- ☐ Surface water monitoring
- ☐ Drinking Water

Conform to the following EU Directives & Standards:



|                                                    |
|----------------------------------------------------|
| Low Voltage Directive 2014/35/EU                   |
| Electromagnetic Compatibility Directive 2014/30/EU |
| RoHS 2 Directive 2011/65/EU                        |
| EN 61010-1:2010; EN 61326-1:2013                   |

# CROSS SMART SENSOR

## OPTICAL TECHNOLOGY

**A TS7** Sensor is composed of a light source and a light detector (photodetector). When the incident light is scattered by the particles in the sample, the detector collects the scattered light. The amount of scattering measured by the sensor is mainly determined by the concentration of particles in the sample, the size and physical characteristics of the particles, and the wavelength of the emitted light used.



The light source of the sensor adopts a near-infrared LED (880nm), and the 90 to 130° scattered light method is used for measurement, which complies with ISO 7027/EN 27027 standard to ensure accurate measurement of the turbidity value. In addition, the built-in automatic wiper can keep the surface clean and remove air bubbles that may be attached to the optical measurement window, thereby minimizing unplanned downtime and maintenance, and ensuring the effectiveness of the measurement.

## SPECIFICATIONS

|                   |                                                                                                                      |  |
|-------------------|----------------------------------------------------------------------------------------------------------------------|--|
| Principle         | Near infrared LED (880nm) and 90° scattered light method in accordance with ISO 7027/EN 27027                        |  |
| Range             | 0.00 to 1000 NTU, 4000NTU, 9999NTU<br>0.00 to 1300 mg/L, 50 g/L, 120 g/L                                             |  |
| Resolution        | 0.01 to 10 NTU or mg/L depends on model and measuring range                                                          |  |
| Unit              | ppm, mg/L, g/L, NTU, FNU                                                                                             |  |
| Accuracy          | Turbidity: <±3% of Reading; SS: <±5% of Reading                                                                      |  |
| Repeatability     | Turbidity: <±1% FS; SS: <±3% FS                                                                                      |  |
| Response time     | 1 to 300 s Adjustable                                                                                                |  |
| Operate Temp.     | 32 to 122 °F (0 to 50°C)                                                                                             |  |
| Protection        | Immersible, >IP68                                                                                                    |  |
| Pressure          | < 5 bar                                                                                                              |  |
| Weight            | 2.53 lbs. (1.15kg Sensor with 30' cable)                                                                             |  |
| Material          | 316L, Sapphire Glass, Optional Titanium                                                                              |  |
| Digital Interface | Modbus RTU                                                                                                           |  |
| Power             | 11-30VDC, usually from GDCs of Delta-Phase<br>At regular operation: 50mA (Max)    At cleaning operation: 240mA (Max) |  |
| Auto-Cleaning     | Built-in automatic Wiper cleaning system                                                                             |  |



## ORDER CODE

|            |                                                                                                                                                                                  |             |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>TS7</b> | Turbidity & Suspended Solid Sensor                                                                                                                                               |             |
|            | <b>Measuring Range</b><br><b>-1</b> 0 to 1000NTU (0 to 1250 mg/l) <b>-2</b> 0 to 4000NTU (0 to 50 g/l)<br><b>-3</b> 0 to 9999NTU (0 to 120 g/l)      Other range contact factory |             |
|            | <b>Cable Length</b><br><b>-C10</b> 10" Cable <b>-C20</b> 20" Cable <b>-C30</b> 30" Cable    More length please contact manufactory                                               |             |
| <b>TS7</b> | <b>-1</b>                                                                                                                                                                        | <b>-C30</b> |

*Specifications subject to change without notice.*



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**Represented by:**