

TCOH-1380 COD Analyzer



RS485 Communication. All-in-One Compact Housing.

The Chemical Oxygen Demand (COD) Analyzer is connected directly via RS485 communication interface, providing simple, reliable, cost-saving process data with remote monitoring, calibration, configuration and diagnostic capabilities. Housing in a robust IP68 proof enclosure, 1500 N tensile strength Kevlar reinforced cable, up to 1.2 km digital data transmission, the transmitter is ideally used in water/wastewater industry.

Advantages

- All-in-One Compact Housing, Built-in Transmitter and Sensors
- Robust IP68 Water Submersible Protection, Directly Installed in the Field, No Cabinet Required
- Plug & Play, On-line Realtime Measurement
- Ultra Low Power Consumption, Ideal for Outdoor Applications
- 1500 N Tensile Strength Kevlar Reinforced Cable
- Surge Protection for Power and RS485 Communication
- RS485 Digital Communication, Minimize Cabling and Engineering Cost
- Standard Modbus RTU Protocol, Direct Connected with PLC, HMI
- Sapphire Glass Windows to Prevent Scratch
- Innovative Nano Coating to Remain Window Clean
- Auto Cleaning Wiper, Less Maintenance
- Dual Beam Light and Temperature Compensation
- Suspended Solids Measurement and Compensation
- Onboard Memory Allowing Users Easily Calibrate and Configure Sensor at Lab and Distribute to Various Fields and Sites
- TRCFG Software Tool for Data Monitoring, Calibration, Configuration and Diagnosis
- IECEx/ATEX Ex ia IIB T5 Ga Explosive Proof Certification

Applications

Drinking water, surface water, industry, water treatment, wastewater

Measurement Method

The analyzer consists of an UV 254 nm light source, a sample cell, and a light detector (photo detector). Incident light is absorbed by the sample, and the light is measured by the detector. The value depends on the amount of absorbance in the sample. The transmitter uses a long life LED and the 180° light method in accordance with International standard to assure accurate measurement values. An automated mechanical wiper is to remain surface clean and remove air bubbles of the optical window in order to maximize the accuracy and minimize the maintenance requirement.

Installation

Submersible, flow through, pipe insertion



Specifications

General	
Output Signal	RS485 (Modbus RTU protocol), 19,200 bps, 8 data bits, no parity, 1 stop bit; 4~20 mA (optional)
Data Resolution	16 bits (0.001% FS)
Surge Protection	1,500 VDC
Power	5~12 VDC, 53 mA (TCOH-1~4, TCOH-6, TCOH-7) ; 12 VDC, 500 mA (TCOH-5)
Protection	Polarity, Overload, Short circuit
Safety	CE, FCC
COD	
Measurement Range	TCOH-1 (20 mm) : 0~200 mg/L ; TCOH-2 (5 mm) : 0~1,000 mg/L ; TCOH-3 (1 mm) : 0~3,000 mg/L ; TCOH-4 (0.3 mm) : 0~7,000 mg/L ; TCOH-5 (1 mm) : 0~30,000 mg/L ; TCOH-6 (50 mm) : 0~50 mg/L ; TCOH-7 (100 mm) : 0~25 mg/L
Accuracy	±5% in standard solution(0~15,000 mg/L); ±10% in standard solution(15,000~30,000 mg/L)
Resolution	0.01 mg/L
Repeatability	±3% in standard solution
Light Source	LED 254 nm (TCOH-1~4, TCOH-6, TCOH-7) ; Xenon flash lamp (TCOH-5)
Beam Angle	180°
Light Path Length	0.3, 1, 5, 20, 50, 100 mm
Process Flow Rate	0.1~10 m/s
Operation Pressure	Max. 10 Kg/cm ²
Operating Temperature	0~50 °C
Response Time	3 secs
Calibration Interval	Typical 24 months
Protection	IP68
Electrical Connection	M16X1.5 plug fixed cable, M12 connector, 5 pin
Housing	SS316L; Titanium
Cable	Kevlar reinforced PUR cable, 1500N tensile strength
Dimensions	TCOH-1: ø 50X305 mm ; TCOH-2: ø 50X290 mm ; TCOH-3: ø 50X286 mm ; TCOH-4: ø 50X286 mm ; TCOH-5: ø 68X443 mm ; TCOH-6: ø 50X310 mm ; TCOH-7: ø 50X335 mm
Weight	analyzer: approx. 1 Kg ; (SS316L) ; 0.8 Kg (Titanium) ; Cable: 80 g/m
Suspended Solids	
Measurement Range	TCOH-1 (0~200 mg/L) ; TCOH-2 (0~1,000 mg/L) ; TCOH-3 (0~3,000 mg/L) ; TCOH-4 (0~7,000 mg/L) ; TCOH-5 (0~30,000 mg/L) ; TCOH-6 (0~50 mg/L) ; TCOH-7 (0~25 mg/L)
Accuracy	±5% measured value
Resolution	0.01 mg/L
Repeatability	±3% measured value

Ordering Codes

TCOH -

3

3

1

Measurement Range(mg/L)

0~200

0~1,000

0~3,000

0~7,000

0~30,000

0~50

0~25

Sensor

Suspended Solids (SS)+Temperature

Cable Length (m)

5

10

Custom

Cable Type

PUR

Housing

SS316L

Titanium

Wiper

Built-in

Wire Connection

Bare Wire

M12 Connector

Explosive Proof

None

Certificated

Analog Output

None

4~20 mA

Ordering Codes

1

2

3

4

5

6

7

005

010

001~999

1

2

0

1

0

1

Dimensions

