



INSTORE- PROCESS -MEASUREMENT & ANALYTICS | DATA SHEET

# **OXYSERIES CLA-650**

## Chlorine meter and sensor



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## Measurement made easy

Chlorine measurement for regulatory  
Industrial water consent monitoring

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### Easy to use

- Automatic multi sensor recognition and set-up
- Advanced predictive maintenance diagnostics
- Supplied factory-calibrated ready for use

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### Accurate and reliable

- Robust construction in stainless steel or ABS
- Scratch-resistant sapphire windows
- Adaptive Chlorine, pH calibration feature for improved process control

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### Low cost-of-ownership

- Long lifetime of the sensor
- Easy maintenance
- Easy calibration and verification

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### Flexible installation options

- Suitable for pipe, tank, open channel or flow-cell installation
- Suitable for use in salt water



## The OXY CLA650 range

The OXY 650 range of advanced digital sensors are designed for monitoring the key parameters in municipal and industrial water / wastewater treatment / fresh water etc

Featuring InStore technology, the sensors offer plug-and-play measurement with InStore latest digital transmitters to create the easiest-to-use and maintain monitoring systems on the market today.

Analysis and signal conditioning is conducted within the robust sensor housing and transmitted digitally to the transmitter.

The OXY 650 range of digital sensors offer:

- Measurement of chlorine, hypo chloric acid, pH
- automatic sensor recognition and set-up
- advanced predictive maintenance diagnostics
- enhanced measurement accuracy due to minimal
- electrical noise interference

InStore latest range of digital transmitters offer:

- multiple sensor connection
- multiple parameter display
- RS 485 Communication Protocol
- flexible communications including Ethernet, PROFIBUS®, MODBUS® and analog outputs



## OXY CLA650/PH Monitor & Sensor

The OXY 650PH is a compact, yet extremely robust PH controller & sensor capable of measuring PH & temperature in industrial water & fresh water

Available in Plastic, Glass, stainless steel, ABS sensors are suitable for use in a wide range of process control applications. The stainless steel version with optional integral cleaning is ideal for general water and wastewater applications, whereas the other version can be used in Pharma, Fresh water environments, including brine, seawater or high salinity media.

Featuring latest technology, simplified calibration and service-free design, users of this system benefit from simple operation, enhanced accuracy and the lowest cost-of-ownership.

### Applications

Typical applications for the OXY SERIES CLA-650/PH transmitter & sensor include:

- Circulating water
- Municipal / industrial wastewater treatment
- food and beverage process control
- Pulp & Paper process control
- Electronic semiconductor waste water



Figure 1 ISE CL-650 transmitter



## Accurate and reliable measurement

The OXYCLA650 Chlorine sensor uses the latest advancements in measurement technology to provide an extremely stable and accurate measurement system that maintains calibration and operates without drift.

### Measurement principle

The online residual chlorine electrode consists of cathode and anode, cathode is gold electrode, anode is silver/silver chloride electrode, cathode and anode are immersed in electrolyte chamber filled with electrolyte, through film and measurement environment isolation, film can prevent electrolyte leakage or contaminant infiltration, but hypochlorous acid can pass through the film, the measured hypochlorous acid concentration and the measured current proportional relationship, through pH compensation, to obtain the residual chlorine concentration..



## Easy-to-use and maintain

The OXYCLA650 Chlorine sensor features latest technology to provide communication measurement with latest digital transmitters which supports advanced communication Protocol

### Easy connectivity

Simple wiring, no complicated sensor set-up or configuration; simply connect the sensor connection and the transmitter can configures the sensor set-up manually & automatically

### Factory-calibrated

Each sensor is precisely calibrated at the factory so it is ready to use straight out of the box.

### No servicing for the lifetime of the sensor

The OXYCLA650 features less maintenance to the sensors As due to the technology implemented and the make of standard of the sensors, the sensors life cycle is also depends upon the physical environmental of water.

### Rugged design

The robust OXYCLA650 sensors are available in polished stainless steel and feature scratch-resistant windows to withstand harsh environments up to 60 °C (140 °F) and pressures up to 10 bar (145 psi).



Figure 2 SS Sensor for residual chlorine analysis





## Mounting options

InStore offer a range of mounting options for the OXYCLA650 sensor.

Item	Mounting option
A	Open channel mounting kit: suitable for floor/wall (surface) mounting
B	Wall mounting
C	Dip pole assembly
D	Open tank flanged dip mount:
E	Flow cell pipeline mount

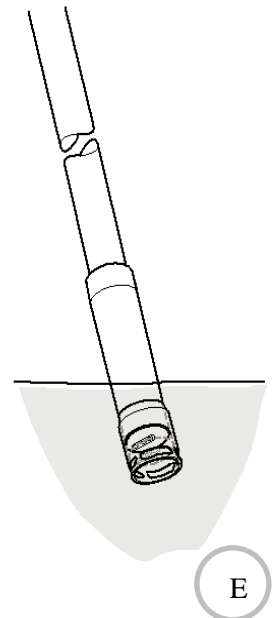
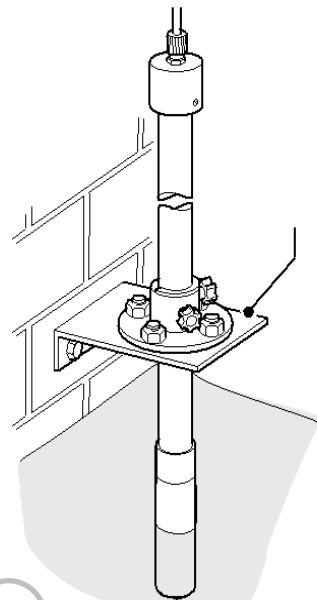
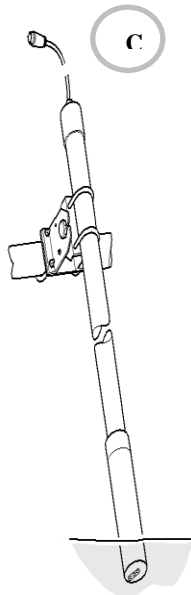
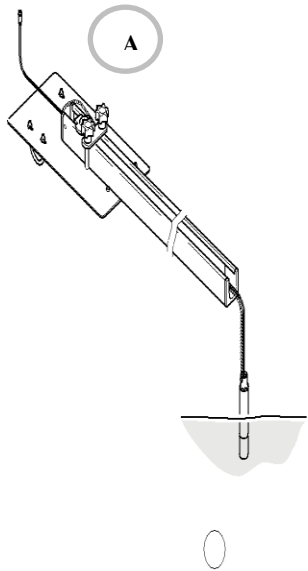
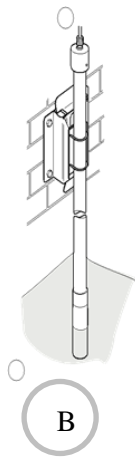


Figure 3 Mounting options



## Specification:

1. **Measuring range:** residual Chlorine: 0-20.00 mg/L, the pH
2. **Value:** 0-14pH, temperature: 0~60 °C
3. **Resolution :** 0.01mg/L,0.01pH,0.1°C
4. **Accuracy:** Better than $\pm 1\%$ or $\pm 0.01$  mg/L,  $\pm 1\%$ or $\pm 0.01$  mg/L,  $\pm 0.02$ pH,  $\pm 0.5^\circ\text{C}$
5. Manual/automatic pH compensation feature (0-14) and temperature compensation (0~60°C)。
6. **Control interfaces:** two sets of ON / OFF relay contact, divided into high point, low alarm signal is Opto-isolated outputs.
7. **Signal output isolation:** optocoupler isolation protection 4~20mA signal output.
8. **Relay:** Relay amount of hysteresis arbitrarily set the relay load 10A 220VAC
9. **Working conditions:** ambient temperature 0 ~60 °C, relative humidity  $\leq 90\%$ .
10. **Output load:** load  $< 500\Omega$  (0-10mA) load  $< 750\Omega$  (4-20mA).
11. **Operating voltage :** 220VAC $\square 10\%$ , 50/60Hz
12. **Size :** 96x96x115 mm
13. **Hole size :** 91x91mm



## Meter installation

### Host installation

The meter should be installed in a clean, dry, well ventilated, vibration-free location around should be no corrosive gases. Out a rectangular cutout in the instrument cabinet or panel installation. The instrument is inserted into the instrument cabinet and tighten the locking bar.

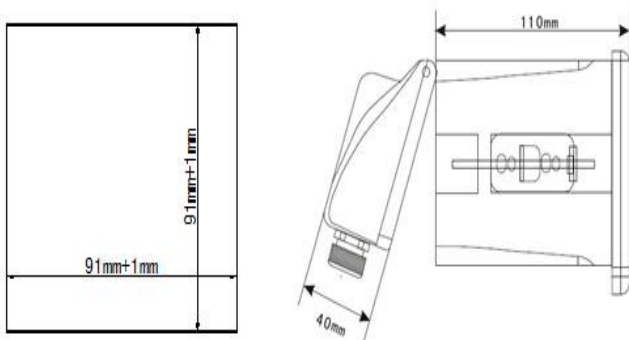


Figure 4 meter dimensions

### Electrode installation

Residual chlorine electrode, pH electrode loaded flow cell is shown in Fig. Such as the use of sinking into the (insertion) type installation, an electrode without the flow measuring chamber, directly, respectively, the residual chlorine electrode and pH electrode is connected to the connecting rod (water) to prevent the electrode cable can be fixed after inserted into the water, with the fixing bracket. Before installation, be sure to use the raw material with the (threaded Department) good waterproof closed. The measured media should be kept online monitoring and constant flow rate, the minimum flow rate of 15cm<sup>3</sup>/S, (Between **15cm<sup>3</sup>/s - 30cm<sup>3</sup>/s** or 0.054m<sup>3</sup>/h-0.108m<sup>3</sup>/h),

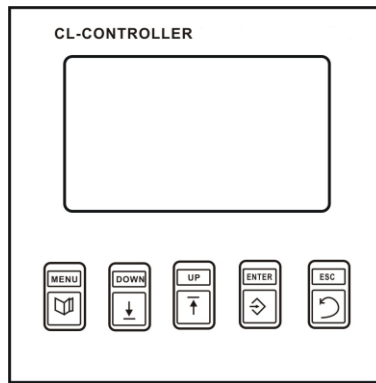
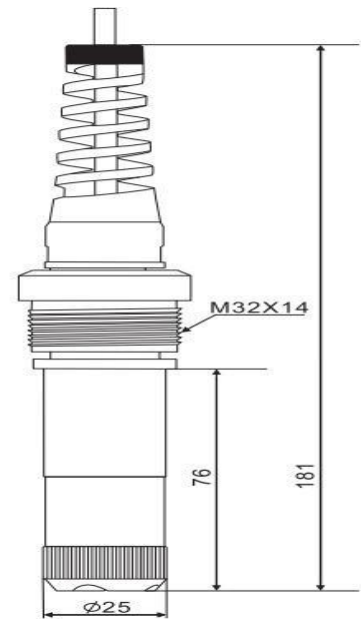
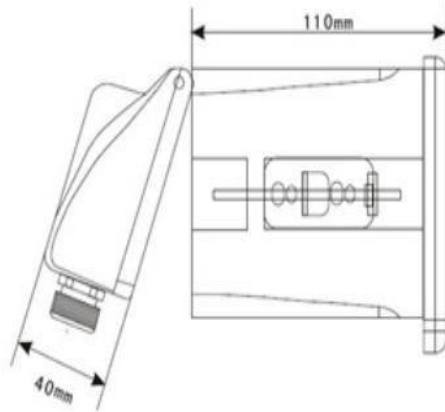
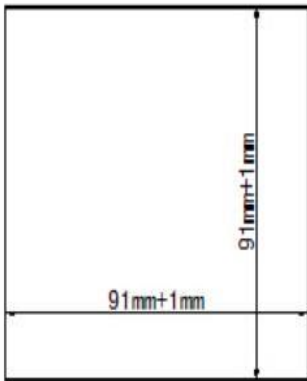


Figure 5 Flow Cell for PH & Chlorine measurement for inline measurement



## Dimensions

All dimensions in mm (in.)



## Instrument panel and wiring instructions

### Front panel buttons

1. MENU key or a selection key
2. DOWN menu down or values to reduce key (the key)
3. Move or numerical increase in the UP menu key (on key)
4. ENTER key
5. ESC to return or exit key (to return to the previous menu)

### The rear panel wiring instructions

1.NO : H2 relay normally opened terminal (nothing)	11. CL+ : CL positive A
2.COM : H2 relay common terminal (nothing)	12. CL- : CL Negative K
3.NO : High point relay working	13. TEMP : T
4.COM : High point relay common	14. TEMP : T
5.NC : High point normally closed	15. PH+ : PH positive Input
6.NO : Low point relay working	16. PH- : PH Negative Ref.
7.COM : Low point relay common	17. RS485 A
8.NC : Low point normally closed	18. RS485 B
9.L : 220V Fire wire	19. 4~20mA+
10.N : 0V Zero line	20. 4~20mA-



## Ordering information

### Product Configuration

CL-650 detector, please confirm your purchase is complete box, such as damaged packaging or any shortage of accessories, please contact your dealer as soon as possible, configuration is as follows:

#### Standard configuration

- A CL-650 instrument
- A residual chlorine electrode
- PH electrode one (Optional)
- Two fastening locking Article
- A manual

#### Optional

- Mounting bracket (1 meter)
- Communication interface 485 and 485 to 232 or 485 to USB connector

#### Manual

1. English
2. German
3. Spanish
4. Chinese

### Acknowledgements

PROFIBUS is a registered trademark of PROFIBUS and PROFINET International (PI).  
Communication protocol ,RS485





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