The Total Organic Carbon Analyzer F08 is a high-performance testing specifically designed for online detection of total organic carbon content in pharmaceutical water, electronic ultrapure water, and other fields. The instrument utilizes electrical conductivity differential detection technology, offering high detection accuracy and fast response speed. Its wall-mounted design facilitates on-site sampling, while the embedded touchscreen system supports English operation, significantly enhancing the user experience.

Product Feature :

1.High Detection Accuracy and Fast Response Speed

The Total Organic Carbon (TOC) Analyzer utilizes advanced electrical conductivity differential detection technology, combined with precision sensors and intelligent algorithms, achieving a measurement range of 0.1 µg/L to 1600 µg/L and a minimum detection limit of 0.001 mg/L. It fully meets the

online detection requirements for high-purity water quality, such as pharmaceutical water and electronic-grade ultrapure water. The instrument features an optimized temperature control system and fluid design, ensuring each test is completed in just 3 minutes, significantly improving detection efficiency. Additionally, the built-in automatic calibration function performs regular baseline corrections, guaranteeing long-term data accuracy. With a measurement precision of ±3% and a repeatability error of ≤3%, it serves as an ideal choice for laboratory quality control and production line monitoring.

2.Intelligent Operation, Simplified Management

The analyzer is equipped with a 7-inch high-sensitivity color touchscreen and features a fully Chinese graphical interface, enabling even first-time users to operate it with ease. With a built-in 32GB large storage capacity, it can store over 1 million test records and supports data retrieval by time, project, and other criteria. Data can be directly exported via the USB interface or automatically uploaded to a LIMS system through the Ethernet port. The instrument comes standard with a thermal printer, which can directly generate Chinese reports containing complete test parameters, results, and QR codes, meeting GMP requirements for data integrity. Additionally, users have the option to equip a dedicated APP for remote monitoring and data analysis.

3.Designed for Use On the Go, Suitable for Multiple Applications

Featuring an integrated compact design with light overall weight and a wall-mounted structure, the instrument saves space and facilitates easy movement between different sampling points. The innovative detection system eliminates the need for any chemical reagents or carrier gas, reducing both operational costs and the management issues associated with hazardous chemicals. With a modular design, key components can be quickly replaced, significantly cutting down maintenance time. The dustproof and waterproof 316 stainless steel housing allows it to adapt to various environments such as laboratories and workshops.

4.Compliant and Secure, Meets Pharmacopoeia Requirements

The instrument strictly adheres to the 2025 edition of the Chinese Pharmacopoeia and incorporates comprehensive data integrity safeguards. A four-level access control system allows for setting different operation permissions to prevent unauthorized use. A complete audit trail function records all critical operations, including modifications to testing parameters and data deletion. The electronic signature feature ensures the legal validity of test reports. The built-in over-limit alarm triggers audible and visual alerts, along with relay output control signals when detected values exceed preset

limits. Users can also opt for a professional software version compliant with 21 CFR Part 11 to meet FDA certification requirements.

5.Regulatory Compliance Set

Chinese Pharmacopoeia 2020 Edition, Part IV, 0682 Total Organic Carbon Determination Method for Water for Injection

USP 40 <643> TOTAL ORGANIC CARBON

21 CFR PART 11

Electronic Signature Law of the People's Republic of China

GMP Appendix: Validation of Computerized Systems

GMP Appendix: Qualification and Validation

JJG 821-2005 National Metrological Verification Regulation for Total Organic Carbon Analyzers

6.Wide Industry Applicability and Strong Scalability

In the pharmaceutical sector, the instrument is particularly suitable for routine online monitoring of pharmaceutical water (purified water, water for injection). In the electronics industry, its high sensitivity meets the stringent testing requirements for ultrapure water used in semiconductor manufacturing. In the food and beverage industry, it can be applied for quality control of process water and finished product water. Supporting multiple communication protocols, the instrument can be easily integrated into various automation systems. For specialized application scenarios, customized testing solutions and accessories—such as high-temperature sample adapters and automatic sampling systems—are also available.

7.Application Fields:

Can be used for online testing of purified water and water for injection in the pharmaceutical industry; applicable for testing purified water, electronic process water, boiler feedwater, and more in the pharmaceutical sector.

Technical data

Parameter	Specification
Measurement Range	0.1 μg/L – 1600 μg/L
Testing Principle	UV + Direct Conductivity
Conductivity Range	0 – 8.1 μS/cm
Resolution	0.0001 mg/L
Accuracy	±3%
Repeatability Error	≤3%
Sample Temperature	1 – 99 °C
Relative Humidity	≤100% RH
Analysis Time	3 minutes per test
Storage Capacity	32 GB
Data History	Stores 1,000,000 records (unlimited with USB export)
Data Backup	Supports USB export (including test curves)
External Interfaces	RS232 / RS485 / USB / Ethernet
Serial Connection	RS232 serial port, USB interface
Display	Color Touchscreen
Print Output	Dot Matrix Printer
Power Supply	AC 220V ±10%
Power Consumption	≤120 W
Certification Standards	CE, RoHS
Pharmacopoeia Compliance	ChP 2025, USP <643>, EP 2.2.44
Data Integrity	Complies with FDA 21 CFR Part 11
Calibration Cycle	Recommended 12 months
Dimensions (L × W × H)	36 × 20.6 × 25 cm (Wall-mounted)
Weight	5.8 kg (with standard accessories)
Housing Material	304 Stainless Steel
Audit Trail	≥5 years (Optional)

Online TOC Accessories

Water Connection Diagram