

Metal Ion Concentration Monitor

CS-928[®]



- Customizable monitor for measuring metal ion concentrations in liquids, including Copper, Lead, Arsenic, Cobalt, Nickel, Mercury and others.
- Provides measurement from <50 ppb to >20 ppm with a response time of 10 seconds - without process intrusion or interruption
- Interfaces with 928-connect™, a PC-based graphical user interface software for data collection, analysis, and field calibration

The CS-928™ concentration monitor is a highly accurate, real-time monitoring system for industries requiring precision monitoring of metal ions in liquids. The CS-928™ is designed for industrial applications including water treatment and quality, power generation and environmental regulatory compliance.

Features

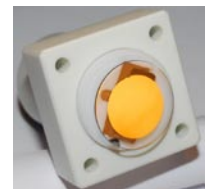
Sensor:

- Compact, ultrahigh-purity package
- Meets SEMI F57-0301
- Operation based on the principal of Surface Plasmon Resonance
- Fine-thread flare and Nippon Pillar Super 300 end connections standard; other end connections available.



Cable:

- Connects the sensor to the digital display unit
- FEP jacketed, EMC-shielded 10 ft. (3 m) instrumentation cable
- IP67-rated snap-on connector to HD 15 serial connector



Digital Display Unit (DDU):

- LCD Display
- 4-20 mA output for concentration and temp.
- (2) 5 Volt digital output channels
- Connects up 1-4 sensors per DDU
- RS-232 communication with computer software package, DB25/DB9 to USB 1.1 converter included
- Aluminum housing w/ mounting slots



928-connect™ Software Package:

- Windows based
- Interfaces into real-time processes
- Real-time concentration and temperature data logging
- Allows rapid field calibration to specific process fluid

Sensor Materials of Construction

Component	Material
<i>Body</i>	<i>DuPont Teflon (modified PTFE)</i>
<i>Optical Window</i>	<i>Semiconductor-grade Sapphire</i>
Cable Receptacle	Polyphenylene sulfide (PPS)
Screws	PTFE-coated Stainless Steel
Bonnet, mounting plate	Homopolymer polypropylene (PP)
Body-to-bonnet gasket	DuPont Teflon (modified PTFE)

Wetted components listed in *italics*.

Performance Data

Data based on operation within the calibrated range, +/- 10% of the refractive index range.

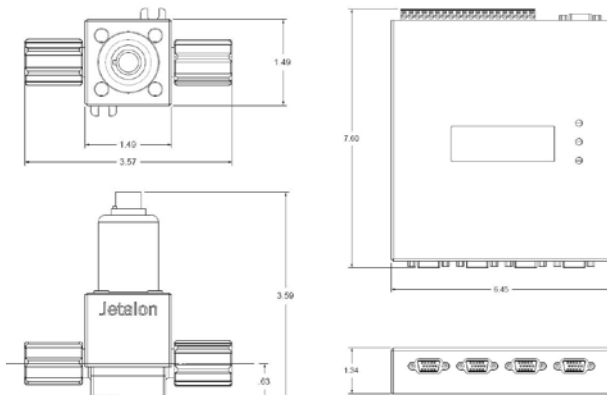
- Measurement Range: <20 ppb - >50 ppm for most metals
- Refractive Index Accuracy (Refractive Index Units, RIU): +/- 1×10^{-4}
- Refractive Index Repeatability: 1×10^{-5} R.I.U.
- Concentration Accuracy: +/- 0.1% *
- Concentration Repeatability: 0.01%
- Temperature Accuracy: 0.1° C
- Temperature Resolution and Repeatability: 0.01° C
- Response Time: 1.2 sec (undamped) - damping is user configurable

Cleaning and Packaging

Every CS-928® sensor is cleaned and packaged in accordance with SEMI Standard F57-301 for ultrahigh-purity fluid system components. Sensors are laser marked for traceability.

Testing and Calibration

Every CS-928® sensor is factory leak tested to meet SEMI Standard E49.3, Section 9.2 for allowable leak rate.



Technical Data

Sensor Operating Parameters

Fluid Pressure Rating	0 to 80 psig (0 to 5.5 bar)
Fluid Temperature Rating	60 to 149 F (16 to 65 C)
Process Fluid Index of Refraction Range	1.28000 to 1.46389

Digital Display Unit Operating Parameters

DDU Power Requirements	24V (DC) +/- 5%, 0.5A min
Power Supply Input Requirements	100/240 V (AC) 50/60 +/- 3 Hz
Analog Output	4 to 20 mA for temperature and concentration percentage per sensor; up to four sensors per DDU
Serial Port	RS-232
LCD Display	Backlit LCD with three LED status lights
Sensor Electrical Connector	IP67-compliant, 12-pole, 1 A, panel-mount type
Ambient Operating Environment	Room Temperature: 77 +/- 9 F (25 +/- 5 C)
Electromagnetic Compatibility	CE-conformity, EN61326, FCC part 15, IDES-001, SEMI E33-94

Software

Windows-based interface for user setup, calibration, monitoring and data-logging of up to four sensors. System Requirements: Windows 98 or higher, 128+MB RAM, CD-ROM

Warranty Information

CS-928® is backed by a Limited Lifetime Warranty. For more information, please contact Jetalon directly.

Purchasing Information

To purchase the CS-928® Concentration Monitor, please contact Jetalon directly:

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