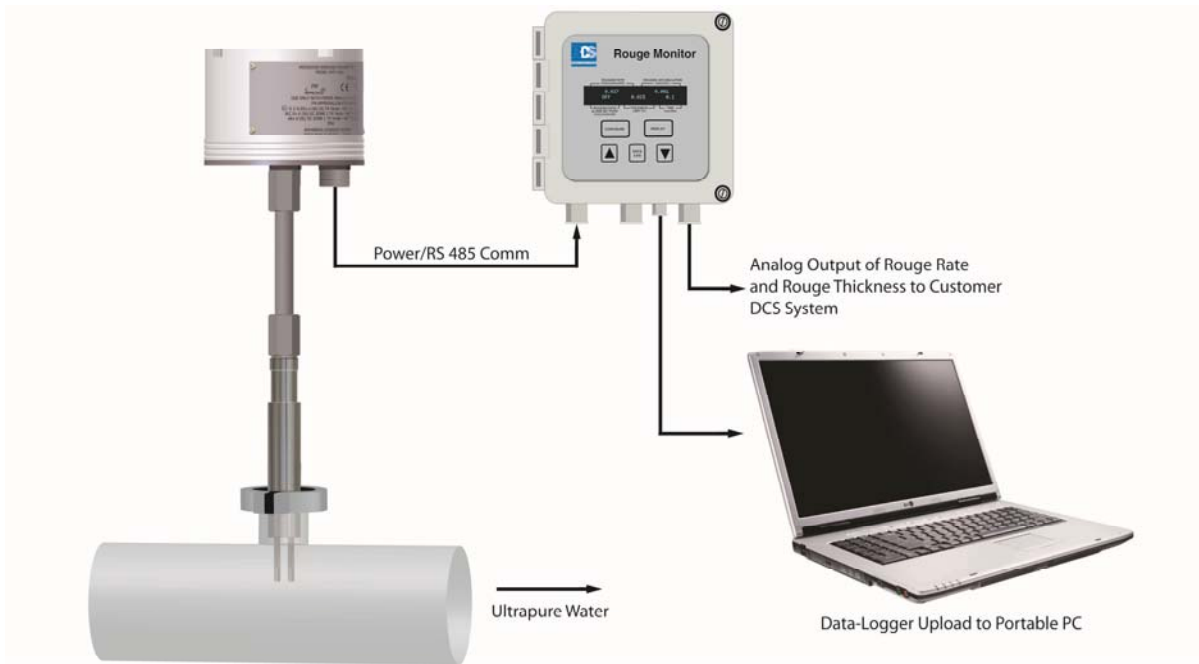


Rouge Monitor



The RCS Rouge Monitor – the advanced on-line rouge monitor for pharmaceutical water

The Rouge Monitor provides accurate measurement of ultra-low corrosion (rouging) rates in pharmaceutical water systems. The Rouge Monitor is ideal for Biotechnology, Pharmaceutical, and other industries where monitoring corrosion in metallic piping is critical.

Rouge can build up on internal surfaces of hot water and steam metallic piping systems, storage tanks, distribution systems, process vessels, and can be found on non-metallic surfaces including membranes, filters, and tubing. Particulate matter and sloughage from the build-up must be avoided to prevent contamination of downstream products. Monitoring the rouging (corrosion) rate of typical ions of ferric oxide, chromium oxide, and nickel oxides in the water assists the determination of derouging and passivation frequency. Typically, derouging and passivation frequency is subjectively determined by periodic inspection of the piping or a definitive time increment, without regard to rouge rate or rouge deposition thickness. The installation and use of a Rouge Monitor unit presents a scientific approach to derouging and passivation frequency with absolute measurements for rouge rate and rouge accumulation (thickness). Derouging and passivation frequency can be based on data rather than subjective opinions and prophylactic approaches.

The Rouge Monitor system consists of a highly-sensitive front end probe/transmitter assembly, a remote data display/controller, data logger, analog output, and a serial communication port for computer data uploads. The remote display unit provides on screen displays of rouging rate in microns/month and rouge accumulation in microns. A wide range of Analog outputs may also be set separately. Measurement ranges from 0.001 – 10 μ (1 to 10,000 nanometer). The unit can be easily configured for connection to a SCADA, BMS, data highway, or process control system. The data logger allows independent accumulation of all readings and measurement for direct transfer to a computer at the user's discretion. The display unit/controller provides power to the transmitter/probe assembly.

Applications:

Hot Water Systems
WFI Systems
SS and Metallic Storage Tanks
SS and metallic equipment and accessories
Clean-in-Place systems

Industries:

Pharmaceutical
Biotechnology
Research Labs
Clinical production
API production

Features:

Ultra-sensitive
Alarm for abnormal conditions
Rapid measurements for rouging rates and accumulation
Low cost of ownership
Remote monitoring with data logging

Specifications:

Probe:

316L stainless steel probe body with electropolished stainless steel (or other alloy) electrodes with Tri-Clover Flange Mounting

Temperature range: 0-200° C

Deposition rate:

0.000-3.000 μ/month at 1.3 μS/cm (0.7 MΩ-cm)
0.000-0.100 μ/month at 0.054 μS/cm (18 MΩ-cm)

Operating Range: 100-0.025 μS/cm conductivity
0.01-40 MΩ-cm resistivity

Transmitter:

Model E-9020 Corratrator® Transmitter with connecting adapter for direct mounting to monitoring probe. (Separate mounting bracket available if required)

Enclosure: IP 67

Dimensions: 4.5" diameter by 3" high excluding connectors (114.3mm diameter x 76.2 mm height)

Weight: 3.5 lbs (1.6 Kg)

Display Unit:

Display of Rouging rate: 0 to 9.999 microns/month

Rouge thickness: 0 to 9.999 microns

Alarm setpoint: 0 to 2.000 microns/month

Running time: 0 to 50 months

Analog outputs: Loop 1 Rouging Rate: 4-20 mA
Loop 2 Rouge thickness 4-20mA
Loops are self-powered internally with 24 VDC

Selectable Ranges:

Rouge Rate Current loop ranges [nm/month]: 10, 20, 50, 100, 200, 500, 1000, and 2000

Rouge Thickness Current loop ranges [nm]: 100, 200, 500, 1000, 2000, and 5000

Measurement Cycle Time: 20 minutes

Integration Time: Adjustable 3 to 120 minutes-default 60 min

Datalogging Interval: Settable from 30 minutes to 24 hours

Datalogging capacity: latest 2048 readings—non-volatile memory

4.25 days at Cycle Time set to 3 minutes

28 days at Cycle Time set to 20 minutes

84 days at Cycle Time set to 60 minutes

170 days at Cycle Time set to 120 minutes

Datalogged Parameters: Date and time stamp for all readings

Enclosure: NEMA 4X

Power Requirements: 115/240 VAC Hz Supply at 15 watts

Alarm output relay: 1 SPDT 1 amp at 230 VAC

Weight: 3 lbs (1.4 Kg.)

Ordering Information

Model	Rouge Monitor Kit	
710696	Corratrator® Transmitter Display Unit, E-9020, and Probe	
	Code	Instrument Voltage
	115	115 V
	230	230 V
	Code	Instrument to Transmitter Cable Length (ft)
	L	Cable Length in Feet
	Code	Probe Flange Size (in)
	FF	1.5" or 2.0"
710696	— 115	— 5 — 1.5
← Example		



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