



CORROSION RATE MONITORING

Using ER Probes and SentraLink

Electrical resistance (ER) probes are widely used to determine metal loss and to provide corrosion rate measurements in casings, pipelines, soil, tanks, and many other applications. With the SentraLink Monitor and the Elecsys Connect web interface, the corrosion rate is measured remotely on a continual basis.

The Elecsys SentraLink unit energizes the ER probe and measures the electrical resistance. That data is transmitted to the Elecsys web interface and is automatically converted to a cumulative metal loss value, which enables the corrosion rate in mils-per-year to be displayed.

SPECIFICATIONS

Telemetry Options	Cellular, Satellite, or MODBUS
Voltage Measurement Channels, SentraLink CP	Channel 1 - Rectifier voltage $\pm 100\text{VDC}$ @ 1% of measurement accuracy and 10mV resolution OR (selectable) - Pipe to soil potential range $\pm 10\text{VDC}$ @ 1% of measurement accuracy and 1mV resolution (>10 M Ω input impedance) Channel 2 - Rectifier current $\pm 100\text{mVDC}$ @ 1% of measurement accuracy and 10uV resolution OR (selectable) - Pipe to soil potential range $\pm 10\text{VDC}$ @ 1% of measurement accuracy and 1mV resolution (>10 M Ω input impedance)
Sensor/Transducer channels, SentraLink CP & SentraLink DR	Channels 1-4 on SentraLink DR: Channels 3-4 on SentraLink CP: 1-5 Volt 3-wire sensor (1% of measurement accuracy and 1mV resolution) 1-10 Volt 3-wire sensor (1% of measurement accuracy and 1mV resolution) 4-20 mA 2-wire sensor (1% of measurement accuracy and 1uA resolution) 4-20 mA 3-wire sensor (1% of measurement accuracy and 1uA resolution)
Input Connection (digital)	Channel 5, SentraLink CP; Channels 5 & 6, SentraLink DR -- Digital input configurable for dry-contact alarm or status reporting (normally open or normally closed), or for pulse accumulation
Site Powered Model	Power required: 10-35VDC or 12-25VAC external power input Internal rechargeable NiCd battery pack provides backup power for alarm notification in the event of a power failure Power consumption: 1.8W @ 15V typical, 20W transmitting
Solar Powered Model	50w Solar Panel, 45 Ah battery, & Integrated Charge Controller in larger enclosure
Operating Environment	Temperature: -40°C to +85°C (-20°C to +70°C in battery backup power mode) Humidity: 0-95% non-condensing Enclosure: Lockable NEMA 4X polycarbonate
Installation	Universal brackets included for mounting inside a cabinet, pole mount, or post mount Connection cables: 1 ea. 7' (2.1m) power cable, 1 ea. 7' (2.1m) measurement cable