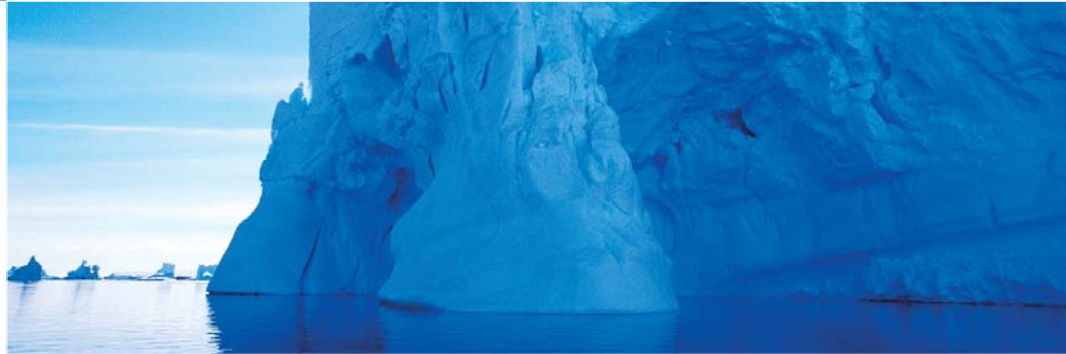




M3 Probe®



## PROCES M3 Probe

### Concrete Monitoring Probes

The PROCES M3 probe is a multi-element sensor used to monitor the corrosion rate and condition of reinforced concrete structures. The probe is designed for installation within the reinforcement cage prior to concreting. The C series probes are available for installation into existing structures.

This data sheet provides information on a standard probe configuration. Probes are designed and manufactured to suit the particular structure. Key factors taken into account in the design are the reinforcement density and cover, type of form work, location of connecting socket or permanent monitoring equipment, access during and post construction, etc.

### Elements

The standard M3 probe comprises the following elements:

- WE** Carbon steel working electrode
- RE** Silver/silver chloride/potassium chloride (Ag/AgCl/KCl) reference electrode
- AE** 316SS auxiliary electrode
- GND** Flying lead connection (2 mm<sup>2</sup> csa single core cable) to main reinforcing steel with integral connection.
- T** Thermistor temperature sensor
- 10 core foil screened XLPE sheathed instrument cable (5 m standard length)

When connected to CAPCIS Concerto RCC monitoring instrumentation the probe provides the following standard set of measurements:

- Corrosion Potential (E<sub>corr</sub>) of the working electrode and the main reinforcement with respect to the reference electrode
- Corrosion Rate (I<sub>corr</sub>) of the working electrode and the main reinforcement using the Linear Polarisation Resistance (LPR) method
- Concrete resistivity
- Concrete temperature



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The probe also enables the following optional measurements:

- 'Macro-cell' measurements of coupling current between working electrode and main reinforcement (for use with cathodic protection systems)
- Potential between auxiliary electrode and working electrodes and/or main reinforcement

When used in conjunction with Concerto RCC monitoring equipment the maximum measurable corrosion rate is 52 mm/yr (2000 mpy), with a measurement resolution of better than 25 nm/yr (0.001 mpy).

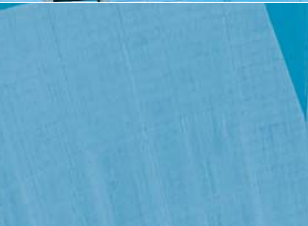
### Environmental

- Operating Temperature -10°C to +60°C
- Designed for direct burial in concrete

### Dimensions

Standard Probe:

Length (excluding all cables)	220 mm
Length of flying lead cable	300 mm
Depth	30 mm
Width	90 mm
Weight (excluding cable)	550 g



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