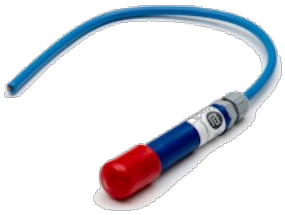
MODEL RB15

RB15 Manganese Dioxide Reference Electrode



ELEMENT
Manganese dioxide

INTERFACE
> 250 mm² (3-D)

DIMENSIONS
75mm long x 16mm dia

EXPECTED LIFE
50 year design life

GENERAL DESCRIPTION

The Castle RB15 Reference Electrode comprises a manganese oxide core containing an alkaline environment. This is contained in a blue nylatron casing with a cementitious mortar cap. The electrode is conditioned to provide a very stable reference electrical potential. The mortar cap ensures good contact with the parent concrete and eliminates errors due to ion diffusion.

Castle RB15 manganese dioxide reference electrodes are connected to a data logger to monitor readings which may be manually downloaded or transmitted remotely via modem to an external ‘off site’ office. Measurements may also be performed by use of a handheld volt meter with high input impedance (>10 MΩ).

The RB15 reference electrode functions as a solid state electrode (no internal gels) and does not require aggressive materials, for example chloride ions, to function.

SPECIFICATIONS

DIMENSIONS	Nominally **75mm long × 16mm diameter**.
POTENTIAL	**Nominally +170mV ±20mV** wrt SCE at 20°C.
DRIFT	**<3mV in 24 hours**; typically less than **±10mV** expected over 20 years.
CABLE	**XLPE/XLPE or XLPE/PVC 2.5mm²**, blue/blue.
EXPECTED LIFE	**50 year design life**.
SHELF LIFE	Nominally **12 months**.
STORAGE	Dry and at constant temperature (**5°–45°C**).
CALIBRATION	Each electrode is calibrated before delivery to site and a calibration certificate issued. It is not feasible to check this calibration on site.