



CATHODIC PROTECTION

PATENT
PENDING

SMC10 Smart Mitigation Cell

Mitigate the effects of DC interference and Telluric currents with Variable Resistance Grounding



SMC10 is a Smart Mitigation Cell which allows controlled DC current drain to ground in the situations where AC, DC interference or **telluric effect** cause over protection on a cathodically protected structure.

The structure to reference value is constantly compared to the desired set value by monitoring a reference electrode. When the reference value exceeds the set value, SMC10 drains appropriate current to the ground so that the protection potential is exactly at the desired point. Variable Resistance Grounding provides precise adjustment of the drained current within a very large range. SMC10 drains AC interferences directly to ground continuously to minimize the AC influence on the protection. SMC10 can also be used to drain excessive current caused by large AC interference between Anode to Cathode connections of the CP rectifiers.

SMC10 becomes open-circuit for the DC currents when the protection potential is below the desired point and behaves in just the same manner as a normal polarization cell.

SMC10 includes an industry standard RS485 MODBUS port for connection to SCADA systems. AC, DC currents, Reference to Structure potentials can be monitored over SCADA.



Variable Resistance Grounding provides precise adjustment of the drained current.



Technical Specifications

Supply Voltage Range	15- 80 VDC
Reverse Polarity Protection	Var
Operating Temperature Range	-20, +50C
Continuous AC Current	20A
Continuous DC Current	10A
AC Fault Current (0.1 sec)	500A
Internal Impedance (AC)	40mOhm
Internal Impedance Range(DC)	0.1 Ohm – 100kOhm
Structure to Earth Threshold	1.3V
Analog Input	1 Bipolar
Analog Input Voltage Range	±10V
Input Impedance	10MOhm
Galvanic Isolation	2500V AC 1 min
LCD Display	3 Lines, total 48 Characters
Information Shown on Display	Reference to Structure Set Value, Reference to Structure DC value, Reference to Structure AC Value, Drained AC Current, Drained DC Current, Modbus ID
Reference to Structure Voltage Adjustment Range	800-1600mV
Over Temperature Protection	Yes
Scada	RS485 Modbus RTU

* Please note that all products, product specifications and data presented in this datasheet or web site are believed to be free of errors and subject to change without prior notification for continued improvement. It is the users responsibility to ensure the suitability of the product for a specific application.