www.geomatrix.co.uk
sales@geomatrix.co.uk
Tel: 01525 383438

Syscal R1 Plus Data Sheet

The SYSCAL R1 Plus can be used to drive the Syscal Switch Pro external switching box for multi-electrode imaging, or can be fitted with internal switching circuitry. See the Syscal R1 Plus Switch 48 datasheet for further information.



Syscal R1 (Image Courtesy of Iris Instruments)

The SYSCAL R1 Plus resistivity meter, specifically designed for medium-depth exploration, can be used for civil engineering, groundwater and environmental projects, to solve problems such as depth-to-bedrock determination, localisation of weathered bedrock, clay-gravel determination, measurement of depth and thickness of aquifers, salinity control, pollution monitoring, etc.

The SYSCAL R1 Plus combines a power source, transmitter up to a 600 V output voltage, and receiver in a single unit; its compactness makes it an effective tool for intensive resistivity surveys.

The SYSCAL R1 Plus generates the current, measures the voltage between the receiving electrodes and displays the apparent resistivity value. Various electrode arrays are available: Schlumberger and Wenner soundings or profiling, gradient and dipole-dipole. IP chargeability measurements are performed on four predefined windows, allowing data quality control.

The measurement is made fully automatically, controlled by a microprocessor : automatic self-potential correction, automatic ranging, digital stacking for signal enhancement, error display in case of procedure troubles. The internal memory can store more than 800 measurements (3000 in multi-electrode mode) with full information on intensity, voltage, resistivity, IP Chargeability, geometrical parameters, station number. A serial link permits transfer of the data to a microcomputer for plotting and interpretation of the data.

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	31cm x 21cm x 21cm	10kg

Geomatrix Earth Science Limited, Unit 20 Eden Way, Pages Industrial Park, Leighton Buzzard, Bedfordshire, LU7 4TZ

www.geomatrix.co.uk
sales@geomatrix.co.uk
Tel: 01525 383438

Technical Specifications

Voltage:	Up to 600V
Current:	2.50A
Power:	175W off 12V battery
Pulse Duration:	0.25s, 0.5s, 1s, 2s, 4s, or 8s
Channels:	2 recording channels
Input Impedance:	100Mohm
Max Voltage (across recording channels):	15V
Protection:	Up to 1000V
Accuracy:	0.5%
Resolution:	1 microV
Readings:	Current, Voltage, standard deviation and 20 IP windows (pre-set or selectable)
Stacking:	User selectable stack threshold based off measurement standard deviation.
Noise Rejection Routines:	50 & 60Hz noise rejection. SP linear drift correction.
Memory:	21,000 readings, stored on solid state memory

Videos

Contact Resistance checks before an ERT survey
https://www.youtube.com/watch?v=VC-mEJQr3uU

Connecting Electrodes to an Electrical Resistivity Tomography system
https://www.youtube.com/watch?v=9C0Y2HF0xWU

Cable care for Electrical Resistivity Systems
https://www.youtube.com/watch?v=46OsR49IQU4

WennerSequence
https://www.youtube.com/watch?v=c5GgA2rk_ko

UniqueElectrodes
https://www.youtube.com/watch?v=hieXcIPq7yc

RollSequence
https://www.youtube.com/watch?v=T24KKYRWPOM

DipDipSequence
https://www.youtube.com/watch?v=LLmtb6hlo2k

Geomatrix Earth Science Limited, Unit 20 Eden Way, Pages Industrial Park, Leighton Buzzard, Bedfordshire, LU7 4TZ

www.geomatrix.co.uk
sales@geomatrix.co.uk
Tel: 01525 383438

AutoSequence
https://www.youtube.com/watch?v=QL5yFudmauE

Geomatrix Earth Science Limited, Unit 20 Eden Way, Pages Industrial Park, Leighton Buzzard, Bedfordshire, LU7 4TZ