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Syscal Pro Deep Marine Data Sheet

In fresh water environments the standard Syscal Pro can be used for marine resistivity profiling however in highly conductive environments the instruments a modified variant with higher current output is required.



Syscal Pro Deep Marine console (image courtesy of Iris Instruments)

Thanks to its 10 reception channels the Syscal Pro allows simultaneous collection of 10 resistivity data points corresponding to 10 depth levels.

The short current injection time allows recording of a set of 10 resistivity's at about every 2 seconds; this makes this tool very efficient for this type of survey.

A ruggedised streamer with 13 graphite takeouts can be supplied. Typical electrode spacings are 5, 10 and 15m. Depending on the depth of the water column the streamer can either be floated near the water's surface for submerged near the seabed.

GPS systems can be directly connected to the SYSCAL Pro unit thanks to a serial/USB data port; thus, the position of the electrodes for each measurement point will be known accurately. Specific GPS also offer an echo sounder transducer which can be directly connected to the PC; in that case, the software will integrate the resistivity data with the GPS coordinates and bathymetry.

The data, recorded by the SYSCAL Pro, are continuously transferred to a laptop by serial/USB communication. Simultaneously, the resistivity values are displayed in real time, numerically and graphically (2D section of resistivity).

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	31cm x 23cm x 28cm	10kg

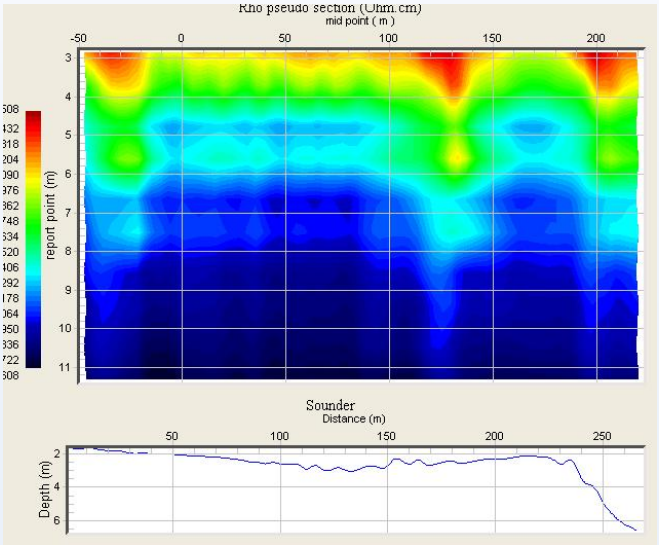
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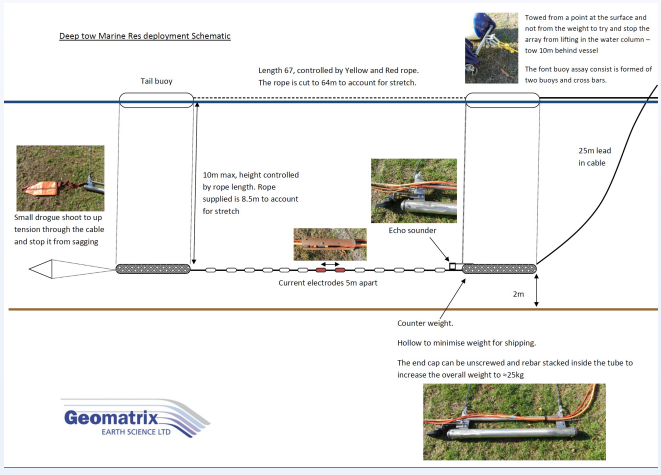
Technical Specifications

Current:	up to 40A
Voltage:	up to 56 V (typically 48VDC using 4 x 12VDC batteries connected in series)
Power:	2500W
Channels:	10 or 20 (must be selected at time of purchase)
Pulse duration:	from 150 ms to 8 s
Current precision:	2%
Input impedance:	100M?
Max Voltage across channels:	15V
Voltage measurement:	0.2% typical
Resolution:	1 microV
Noise Rejection Routines:	50 & 60Hz noise rejection. SP linear drift correction
Internal Memory:	21,000 readings, stored on solid state memory
Power supply:	1 internal rechargeable 12V, 7.2Ah battery for electronics power supply; 1 to 4 external 12V standard car batteries for transmitter.
Operating temperature:	-20 to +70°C

Gallery



Example Marine Resistivity dataset from a fresh water lake.



Syscal Deep Marine deep tow deployment

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Videos

https://www.youtube.com/watch?v=GjfskNZlRJc&t=73s
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