



BIC-01 INDUCTION CONDUCTIVITY BOREHOLE PROBE

DESCRIPTION

The BIC-01 is a digital probes that measures the conductivity of the surrounding rock formation in a borehole at a rate of 2 times per second. The sensor design is a single induction coil operating at a frequency of 40 kHz. The sensors response has been optimized for the measurement of the conductivity signal and minimized for the magnetic susceptibility interference.

The probe scales and converts the values to engineering units before transmitting the information. The data is then send over a serial current loop link to the surface.

The conductivity probe interfaces to all IFG logging systems. A system consists of a wire line winch equipped with a four conductor logging cable and a digital data interface (BIN-04). The interface console supplies the power to the probe and receives the digital data from the probe. The data is then converted to a standard ASCII format.

Additional information like the depth of the probe and other external data inputs are appended to the data string. This addition of data is added to every reading the BIC-01 probe reports. The ASCII data string is then transmitted via an RS-232 data interface to a laptop or pen computer for the display and the storage of the data on a disk drive.

The data acquisition software allows up to 20 columns of ASII data to be displayed and recorded during the logging process. The data can be collected in a continues, or incremental mode. Additional software is available for the post processing and plotting of the data.



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SPECIFICATION	
Sensor Design	Single AC induction coil
Measurement Size	10cm
Operating Frequency	40 kHz
Sensitivity	0.1 mS/m
Dynamic Range	0.1 mS to 10 S/m
Sample Period	2 samples per second
Probe Housing	High strength filawound tube
Maximum Depth	2000 m
Temperature Range	Storage: -35°C to +70°C Operating: 0°C to +70°C
Output	10mA current loop, 48 baud
Supply Voltage	24V dc @ 0.1A (at probe header)
Probe Dimensions	40mm diameter x 60cm long
Probe Weight	2 kg