



BTM-04 HIGH SENSE TEMPERATURE PROBE

DESCRIPTION

The BTM-04 is a probe that measures the fluid temperature within a borehole. The high sensitivity and the fast response of the sensor enable the measurement of fluid movement within the borehole. The probe has four temperature sensors, for the measurement of temperature gradients in the borehole fluid. The orientation of the sensors is registered with a fiber optic gyroscope. The gyro is sensitive to the roll component of the probe. Additionally in case with no water movement the thermal conductivity of the rock formation can be observed.

High sense temperature sensor.

The BTM-04 is controlled by an on-board microprocessor that samples the temperature sensor at a rate of two reading per second, with a 24 bit of resolution. Each reading is converted and calibrated to proper engineering units before transmitted to the surface. The temperature sensor is contained in a non-magnetic, stainless steel housing. The sensor is placed in the tip of the probe with a steel cage protector. Two versions of housings are available. The 40mm housing is rated to 1500m depth, and the 42mm housing that is rated to 3000m depth. This translates into a pressure rating of 2250 PSI and 4500 PSI respectively. The BTM-04 is compatible with the BIN-04 digital data interface and IFG Corporation's standard 4 conductor and mono cable.

The BTM-04 is a cost-effective way to obtain a geophysical temperature logs in a single survey run. The probe provides electrical and temperature logs for lithology mapping and other interpretations.

SENSOR SPECIFICATIONS

SENSOR	TYPE	RANGE	SENSITIVITY
Temperature	Thermistor	-10 to 50°C	0.0001°C
(Optional range)	Thermistor	-10 to 100°C	0.0002°C
Orientation	Gyro	+/-100°/sec	0.001°
Resistivity	Single point	0 to 100V	1mV

PROBE SPECIFICATIONS

ELECTRODES	Naval brass
HOUSING	High strength filawounds tube
MAXIMUM DEPTH	1500 or 3000m
CONNECTION	4-pin connector (Gearhardt Owen)
Optional	Mono cable.
TEMPERATURE RANGE	Storage; -35 to +70°C Operating: 0 to +70°C Extended: 0 to +120°C
SAMPLING RATE	2 Hz
OUTPUT	20mA current loop, 4800 baud
SUPPLY VOLTAGE	24VDC @ 5W (at probe header)
DIMENSIONS	40 mm diameter x 0.97m long
SENSOR	70mm diameter
WEIGHT	3.4 kg