MELDOR
Measure Systems For Gas and Oil Industry

ITON
Wireline logging inclinometer

Features

- The inclination and azimuth sensor manufactured in-house
- The inclination sensor is made using liquid capacitive sensor technology, it has high accuracy, impact resistance, and reliability
- High accuracy: ± 0.1 for inclination, ± 0.3 for azimuth
- High shock resistance
- High temperature : -5 to 125°C
- It comes in diameters of 42mm, 60mm, and 73mm

Applications

- Wireline logging
- Coiled tubing drilling mwd (CT)

The wireline logging inclinometer ITA is designed for continuous measurement of the azimuth, inclination, and toolface as a function of depth when working in the uncased of vertical or deviated wells, or through the non-magnetic pipes. Delivery of the inclinometer to the bottomhole is carried out on a wireline logging.
Inclinometer ITON represents a standard implementation scheme presented in the form of a 3-axis fluxgate magnetometer and a 3-axis capacitive tilt sensor. The output values of the inclinometer are azimuth, inclination, toolface (roll), three magnetic components, three gravitational components, and temperature readings.
The design of the inclination sensor is based on the principle of a liquid capacitive tilt sensor, which allows measurements at high temperatures and vibrations while showing results that are ahead of modern analogs of accelerometers.
Depending on the measurement conditions, the ITON inclinometer can be housed in casings with diameters of 42, 60, and 73 mm. Designed to operate with a cable length of up to 5000 meters, the borehole inclinometer operates in continuous data transmission mode.
High reliability and unpretentiousness in the operation of the inclinometer are ensured by the absence of moving parts in the device. The use of a liquid capacitive tilt sensor of in-house production, which has no analogs, allowed us to increase the accuracy and significantly reduce the cost.

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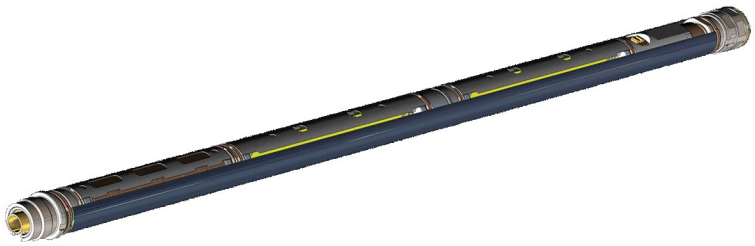

PHISICAL		
Outside Diameter (OD)	mm	42/60/73
Lenght	mm	2300
Weight	kg	10/18/22
Connecting thread		M33x1,5
ELECTRICAL		
Input current	mA	120
Power consuption	Wt	5
ENVIRONMENTAL		
Temperature Operating	°C	-5...125
Maximum Operating pressure	Mpa	60
Shock survival (0.5 ms, half sine)	g	3500
PERFOMANCE		
Measuring range of magnetic azimuth	deg	0-360
Measuring range of magnetic components	µT	±70
Measuring range of inclination	deg	0-180
Measuring range of toolface	deg	0-360
Measuring range of temperature	°C	0-125
Toolface (Roll) absolute accuracy	deg	±0.5°
Azimut absolute accuracy		
inclination 90°	deg	±0.3°
inclination 10°		±1.0°
inclination 5°		±2.0°
Inclination absolute accuracy	deg	±0.1°
Temperature absolute accuracy	°C	± 2°
Linearity error of measurement of magnetic components (over the entire temperature range)	%	<0.1
Maximum registration speed	m/h	1000

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