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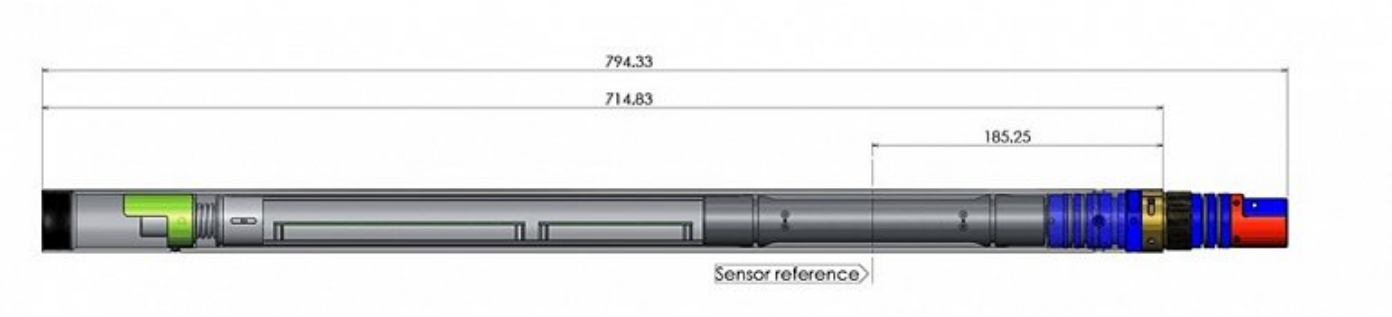
QL40-DEV Data Sheet

The **QL40-DEV** Borehole Deviation Probe is a highly accurate tool designed to measure key borehole parameters such as Azimuth, Tilt, and Trajectometry. It utilizes a three-axis magnetometer and three accelerometers to capture the necessary data. These sensors work in real-time to calculate the borehole's orientation and trajectory, providing critical information for accurate borehole navigation and analysis. The probe is essential for applications where precise borehole deviation data is required, ensuring that operations are carried out with confidence in challenging geological environments.



Schematic drawing of QL40-DEV. Image courtesy of Mount Sopris Instruments.

The **QL40-DEV** Borehole Deviation Probe measures the magnetic field and acceleration along the three axes of a right-handed Cartesian coordinate system, allowing for precise tracking of borehole orientation. The deviation parameters, such as Azimuth, Tilt, and Trajectometry, are calculated in real time, providing continuous log data during the measurement process.

The deviation data can be further processed using the WellCAD software and its deviation module, which offers a range of 2D and 3D display options. These include classic views such as the bull's eye, projection, and closure in 2D, as well as advanced 3D displays in cubic and cylindrical formats, enhancing the interpretation and visualization of borehole deviation.

Applications

- **Borehole True Vertical Depth (TVD):** Accurately measures the vertical depth of the borehole, critical for precise geological interpretation.
- **Borehole Trajectory:** Tracks the borehole's trajectory, including direction, inclination, and drift, enabling accurate borehole path analysis.
- **True Bed Thickness:** Helps determine the actual thickness of geological layers, enhancing formation analysis.
- **Magnetic Bed or Steel Pile Location:** Utilizes the z-component of the magnetometer to detect the presence of magnetic beds or steel piles near the borehole, providing valuable data for infrastructure assessments.

Operating Conditions

W - Water ?
M - Mud ?
D- Dry ?

S - Steel
P - PVC Borehole ?
UC- Uncased ?

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*Requires non-magnetic centralizers

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	71cm x 4.2cm x 4.2cm	3.4kg

Technical Specifications

Sensor:	APS 544.
Orientation:	3-Axis Magnetometer, 3-Axis Accelerometer.
Inclination Range:	0-180º.
Inclination Accuracy:	± 0.5º.
Azimuth Range:	0-360º.
Azimuth Accuracy:	± 1.2º.
Max. Temperature:	70ºC
Max. Pressure:	200 bar.

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