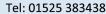


QL40-DEN Data Sheet







The **QL40-DEN** Dynamic Probe is an advanced tool for acquiring high-resolution compensated density measurements across a variety of borehole environments.

Key Features and Functionality:

- Dual Density Data Collection: Captures raw long/short counts per second (cps) and g/cc density data, alongside caliper measurements, for precise compensated dual-density readings.
- High-Precision Detection: Utilizes a Cs137 source, which emits 662 keV gamma particles. Two shielded CsI
 (Th) scintillator crystals, each coupled to a photomultiplier tube, detect backscattered gamma radiation,
 sensitive to energy levels >200 keV.
- Electron Density Measurement: The system measures backscattered energy through Compton scattering, enabling accurate determination of electron density rather than bulk density, which is ideal for lithological studies.

Compatibility and Usage:

- Quick Link (QL) Integration: As part of the Quick Link system, the probe can be seamlessly combined with other QL inline subs or used as a standalone tool. It is optimized for 2 to 12-inch boreholes, providing flexibility for diverse applications.
- Stackable Design: Can be deployed as a bottom sub-tool, enabling streamlined operations when paired with other geophysical tools.

Applications:

- Geological and Lithological Analysis: Ideal for assessing subsurface electron densities and identifying variations in rock composition.
- Environmental Studies: Useful for mapping contaminant plumes or soil characterization.
- Mining and Exploration: Provides critical data for evaluating ore densities and deposit quality.

The **QL40-DEN** probe's precise measurement capabilities, combined with its robust integration and adaptability, make it an indispensable tool for modern geophysical investigations.

Operating Conditions

W - Water ?

M - Mud ?

D- Dry ?

S - Steel

P - PVC Borehole

UC- Uncased?

Product Dimensions

Physical	Dimensions (L x W x H)	Weight	
(instrument only)	185 cm x 5.08 cm x	19.2 kg	

^{*}Tool is de-centralized



Tel: 01525 383438



Technical Specifications

Maximum Temperature (°C): 85 °C

Maximum Pressure: 206 bar (3000 PSI)

Source Detectors: 20 cm (Short Spaced Source) 35 cm (Long Spaced Source)

Cable Type: Mono, coaxial, 4 or 7 conductor

Digital Data Transmission: 500 Kbits/sec (depends on the wireline)

Caliper: 30 cm (Size), 2.54 mm (Accuracy), 0.64 mm (Resolution)

Density Range: 1 - 4 g/cc (depending on the source)

Density Source: 100-250 mCurie (Cs-137 or Co-60)

Density Accuracy and

Resolution:

0.1 g/cc (100 mC Cs-137); 0.05 g/cc (100 mC Cs-137)

Power: 80 VDC (Min), 160VDC (Max) 120VDC (nominal) 25mA (nominal current)