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QL40-DEN Data Sheet

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The QL40-DEN dynamic probe allows the user to collect raw long/short cps and g/cc density data alongside caliper data, enabling compensated dual density measurements to be taken within multiple environments.

Precise density measurements can be acquired as the probe utilizes the Cs137 source and the two radiation detectors in order to obtain the compensated dual density values within the borehole. The Cs137 source emits 662keV gamma particles, which are detected by the two shielded CsI (Th) scintillator crystals (each coupled to a photomultiplier tube), are sensitive to > 200keV energy emissions. In terms of the measured data, the two crystal sensors detect the backscattered energy (via Compton scattering) from the surrounding lithological units in order to measure the electron density rather than the bulk density.

As this is a Quick link tool, this item can be stacked with any of the QL inline subs and it designed for optimal use in 2-12 inch boreholes as a standalone tool or can be stacked as a bottom sub tool beneath other subs.

Operating Conditions

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

S - Steel
P - PVC Borehole
UC- Uncased ?

*Tool is de-centralized

Product Dimensions

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

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)

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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)

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