

QL40-HM Data Sheet

The QL40-HM borehole magnetic susceptibility tool operates with the Mount Sopris MATRIX Console and is typically used in mining applications. All electronic circuitry resides in a high strength non-magnetic enclosure and features a wide measuring range from 10⁻² to 0.5 SI units and will resolve strata down to 25 mm. The probe can be used in uncased or PVC cases boreholes, but not steel casing. The probe is not restricted by the type of borehole fluid.

Measurements can be obtained in complex igneous and metamorphic environments due to the probes extended range, allowing the user to define the magnetite layers (0.005-100%) amongst with other iron rich minerals in the rock; a valuable tool for economic projects.

With standard range, extended range, dual range magnetic susceptibility options the QL40-HM is a versatile tool for delineation of kimberlite deposits, and other mining applications where large contrasting ferrous mineral deposits are likely. The QL40-HM is typically combined with the QL40-IND dual induction probe to provide complimentary datasets for lithology and Geomorphological studies.

Applications

- Delineation of kimberlite deposits
- Economic evaluation of deposits
- Mineral exploration and characterization
- Lithology studies
- Extended range used in complex igneous or metamorphic rocks up to high magnetite rocks
- Ore Identification and quality correlation

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)	150 cm x 4.5cm x 4.5cm	7 kg

Technical Specifications

Pressure Rating:	200 Bar (2900 PSI)
Sensor:	Focused Dual Coil (1.4KHz). AC-induced frequency discrimination.
Resolution:	Standard – 10 ⁻² to 0.5 SI units Extended – 10 ⁻² to 2 SI units

Accuracy:	< 3% F.S.
Intercoil Spacing:	Standard – 25 cm Extended – 30 cm
Operating Frequency:	~2 kHz
Zero Drift:	Standard – < 2.10 ⁻⁵ SI units/ 10°C Extended – < 1.10 ⁻⁴ SI units/ 10°C
Maximum Temperature:	70 °C