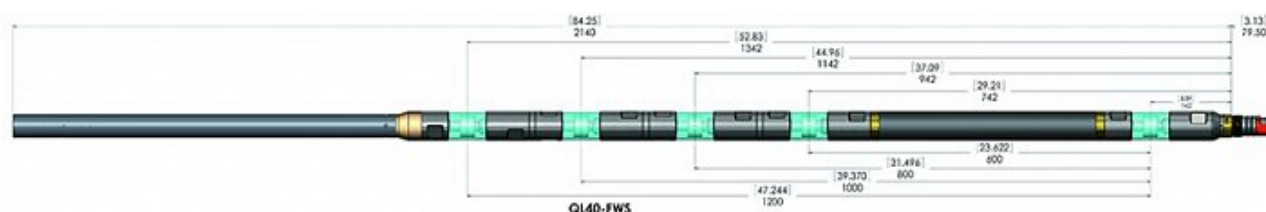


## QL40-FWSM Data Sheet

The QL40-FWS Full Waveform Sonic tool is specifically designed for the water, mining, and geotechnical industries. Its specification makes it ideal for cased-hole and open-hole applications, and for the identification of fractures.

Sonic logs are widely used, often in combination with other logs, to provide porosity, permeability and geomechanical properties of rocks. Under suitable borehole conditions and formations, Compressional (P), Shear (S), Stoneley and Tube wave arrivals can be detected.

The QL40-FWS is not restricted by borehole casing type but does require the borehole to be filled with fluid.



QL40-FWS Full Waveform Sonic tool schematic diagram. Image courtesy of Mt Sopris Instruments.

## Applications

### Cased-hole

- Cement bond logging (CBL)

### Open-hole

- Porosity evaluation
- Permeability
- Lithology identification
- Variation of rock strength
- Calculation of rock mechanical properties (Elastic moduli, Poisson's ratio, Shear modulus, Young modulus, Bulk modulus and compressibility)
- Identification and hydraulic characterization of fractures

## Operating Conditions

**W** - Water ?

**M** - Mud ?

**D** - Dry

**S** - Steel ?

**P** - PVC Borehole ?

**UC** - Uncased ?

\*This tool is centralized

## Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	214cm x 5cm x 5cm	18kg

## Technical Specifications

<b>Standard configuration:</b>	Can choose between a 3rx or 4rx receiver
<b>Tx-Rx1 spacing:</b>	60cm.
<b>Rx-Rx spacing:</b>	20cm.
<b>Max temp:</b>	70°C.
<b>Max pressure:</b>	200 bar.
<b>Transducer:</b>	Ceramic piezoelectric
<b>Sonic wave sampling rate:</b>	Normal mode - 4 ?sec. Extended mode - 20 ?sec.
<b>Sonic wave recording time:</b>	Normal mode - 4ms. Extended mode - 16 ms.
<b>Sonic wave dynamic range:</b>	16 bits.