

## Fluid Temperature and Conductivity Probe

The inline Fluid Temperature and Conductivity Probe (TCIS) measures a continuous temperature and conductivity profile of borehole fluid.

The TCIS measures the fluid temperature using a platinum resistor, the resistance of which varies with temperature in a well characterised manner. The conductivity of the borehole fluid is measured with a series of electrodes. The fluid enters an inlet near the bottom of the sonde, travels up the centre, and then exits via an outlet higher up.

TCIS temperature data provide information on thermal anomalies, water movement, and the producing formations (feed zones). Under static, equilibrium conditions, temperature changes according to the local geothermal gradient. Where present, temperature anomalies can be associated with groundwater movement or some types of mineralisation (e.g., sulphide oxidisation), as well as radioactive minerals.

Conductivity logs provide information related to the concentration of dissolved solids in the fluid column from which an equivalent NaCl salt concentration can be determined. For meaningful values, a temperature sensor is always included with this sonde. Under conditions of vertical flow, the sonde can show the contribution of separate interstitial water bodies. Under static, equilibrium conditions, the probe can pick out the interface between brine and fresh water. The combinability with a flowmeter is particularly useful for pumping tests.

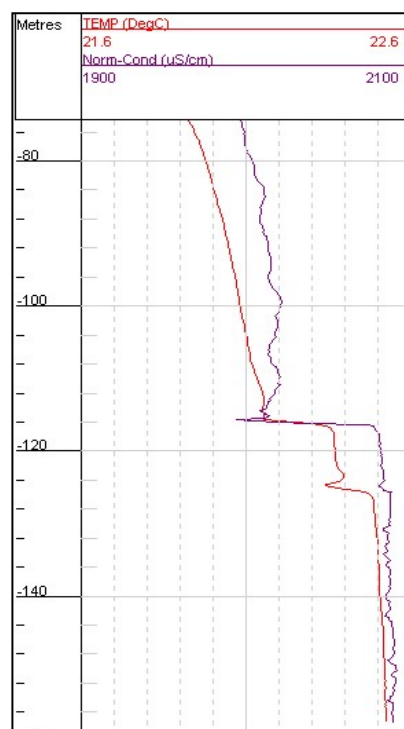


### KEY FEATURES

- Fully combinable digital probes (including with a flowmeter)
- Wide measuring range

### APPLICATIONS

- Temperature gradient and temperature anomalies
- Correction of electric logs.
- Groundwater salinity and salt water encroachment
- Groundwater movements
- Dewatering
- Groundwater contamination



### SPECIFICATIONS

	Temp. & Cond.
Weight (kg)	4.3
Length (m)	0.76
Diameter (mm)	38
Accuracy:	±0.15° to IEC
	60751:2008 Class
Std. Cond. Range (mS/cm)	0.05 - 50
Accuracy:	±0.1% @1 mS/cm
Ext. Cond. Range (mS/cm)	0.05 - 250
Max. Pressure (MPa)	20 or 35
Max. Temp. (°C)	80 or 125