

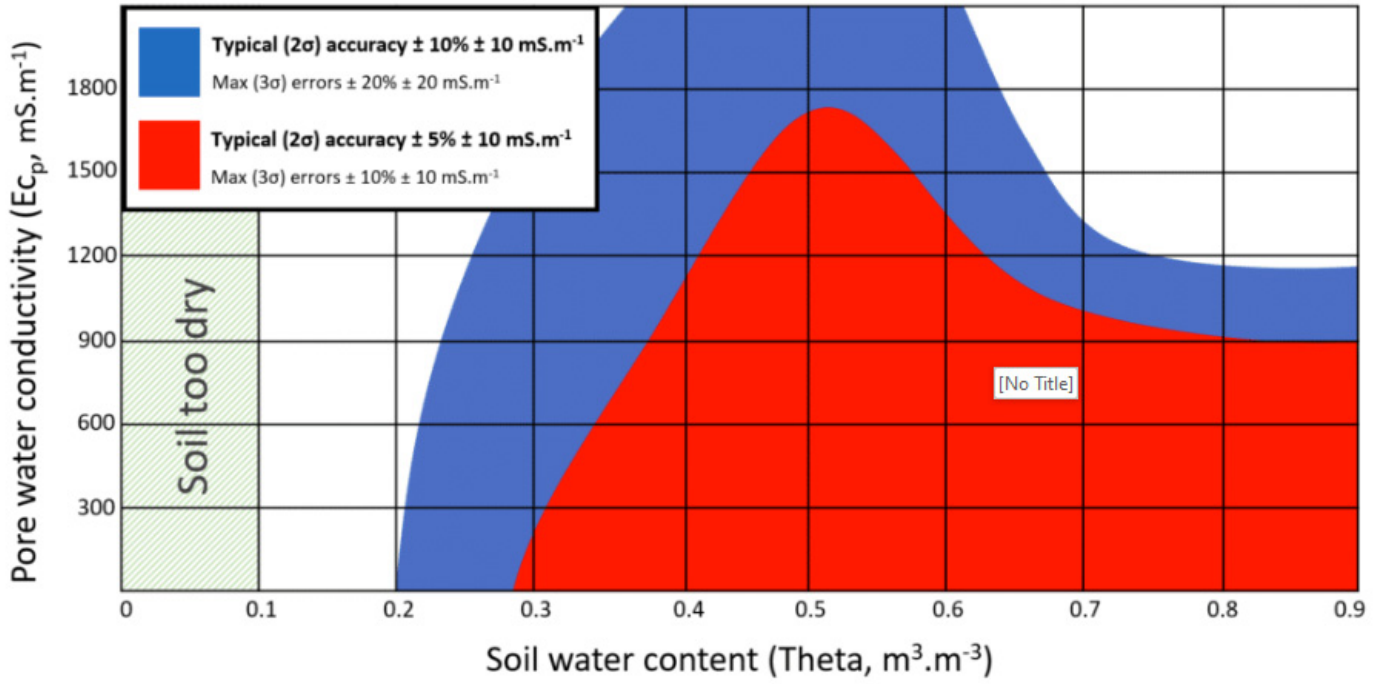
Specification

WET150 Sensor

| | VOLUMETRIC WATER CONTENT | PORE WATER CONDUCTIVITY (EC _p) | PERMITTIVITY | BULK CONDUCTIVITY (EC _b) | TEMPERATURE |
|---------------------|---|--|---|--------------------------------------|--|
| ACCURACY | ± 0.03 m ³ .m ⁻³ (3%) | See graph below this table | ± (3% of reading + 0.8 ε') 1 → 40 ± 5% of reading 40 → 80 | ± (10mS.m ⁻¹ + 6%) | ± 0.5°C (0°C to +40°C range) ± 0.7°C (-20°C to +60°C range) |
| RANGE | Full range: 0 to 1.0 m ³ .m ⁻³ Accurate range: 0.05 to 1.0 m ³ .m ⁻³ EC _b 0 to 500 mS.m ⁻¹ | See graph below this table | for EC _p ≤ 800 mS.m ⁻¹ 1 → 40 for EC _p ≤ 500 mS.m ⁻¹ 40 → 80 | from 0 to 1200 mS.m ⁻¹ | Full range: -20°C to +60°C Accurate range: 0°C to +40°C |
| OUTPUT | SDI-12 protocol 1.3 (www.sdi-12.org) Providing water content, pore water conductivity, and temperature - together with base readings of permittivity and bulk conductivity. Outputs are exceptionally configurable. | | | | |
| POWER REQUIREMENT | Operating voltage: 6 to 20 Volts Current consumption (typical values powered from 12 Volts): Active sensing: 22 mA average over 12 ms (average includes short peaks at 45 mA) Active results computation: 2 mA over 188 ms Idle: <0.5mA | | | | |
| ENVIRONMENTAL | IP68, - 20 to + 60°C | | | | |
| SAMPLE VOLUME | ~55 x 70 mm diameter Sample volume is weighted towards soil immediately surrounding the rods | | | | |
| DIMENSIONS | Overall: 143 x 40 mm dia Rods: 51 mm x 2.5 mm dia | | | | |
| WEIGHT | Weight: 77g (excl. cable) | | | | |
| SENSOR CALIBRATIONS | Individual sensors are interchangeable Recalibration advised every 5 years (depending on use) | | | | |
| SOIL CALIBRATIONS | The WET150 Sensor comes complete with calibrations for mineral and organic soils plus coir, peat, and mineral wool substrates | | | | |

Accuracy and range chart on next page

Pore water conductivity accuracy



Notes: [1] The WET150 has been carefully optimised to provide accurate readings in soils and substrates - readings taken in water or air may not meet the full specification. [2] The $E_{c,p}$ contour map is based on measurements from 30 sensors at 20°C in NPL* traceable media. Calculated $E_{c,p}$ readings are derived from the Hillhorst equation, using the generalised "mineral" soil calibration and the default soil parameter = $4.1 * NPL$ is the UK's National Metrology Institute, developing and maintaining the national primary measurement standards.