**SM150T**

Soil Moisture and Temperature Sensor

- **Accurate and stable measurement**
  ± 3% for 0-70% VWC* range

- **Robust and burable**
  UV resistant cable with IP68 connector

- **Simple 0-1 V output (moisture)**

- **Low power: 18 mA for 1 second**
  Supply 5-14 V

Based on over 40 years’ experience in the design and manufacture of field instrumentation, the SM150T from Delta-T Devices makes the ideal soil moisture sensor for system integration.

Patented sensor electronics produce research grade measurement accuracy with exceptional salinity and temperature stability - essential for critical control and irrigation decisions.

Industrial rated, UV resistant cable fitted with a waterproof IP68 connector allows the sensor to be buried indefinitely, whilst still permitting easy cable exchange or extension if necessary.

**Applications:** Soil calibrations are provided for general soils and substrates, or a specific soil calibration can be determined if necessary. The sensor can be installed at depth in augered holes, or buried in substrate containers.

* Volumetric water content

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**DATASHEET - SYSTEM INTEGRATOR EDITION**
SM150T

Soil Moisture and Temperature Sensor

Specifications

- **Accuracy**
  - ± 0.03 m³.m⁻³ (3%) volumetric water content (VWC)
  - ± 0.5°C (0 to 40°C for temp sensor)

- **Soil moisture measurement range**
  - 0 to 1.0 m³.m⁻³ (100%)
  - but less accurate above 70% VWC

- **Salinity range**
  - 50 to 1000 mS.m⁻¹
  - ± 5% vol over 100 to 1000 mS.m⁻¹ and 0-60% VWC

- **Temperature range**
  - Full accuracy over: 0 to 60°C

- **Output**
  - 0 to 1.0 V differential
  - Corresponding to 0 to ~0.6 m³.m⁻³

- **Power requirement**
  - 5-14 V, ~18 mA for 1s
  - Minimum 5 V with 100 m cable

- **Environmental**
  - IP68 with Delta-T supplied cables

- **Sample volume**
  - ~55x70 mm diameter
  - Sample volume is weighted towards soil immediately surrounding the rods

- **Dimensions and weight**
  - Overall: 143 x 40 mm diameter
  - Rods: 51 mm x 2.5 mm diameter
  - Weight: 0.1 kg (exc. cable)

- **Sensor calibrations**
  - Individual sensors are interchangeable
  - Recalibration advised every 3 years (depending on use)

- **Soil calibrations**
  - Generalised Mineral and Organic soil calibrations are supplied

Temperature dependence of SM150T readings in a clay soil

Ordering information

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>SM150T</td>
<td>Soil moisture sensor with built-in temperature sensor. NB cable must be ordered separately.</td>
</tr>
<tr>
<td>SMSC/lw-05</td>
<td>5 m cable terminating in bare wires for connection to data loggers and controllers.</td>
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<tr>
<td>SM150T</td>
<td>Accessories for burial at depth</td>
</tr>
<tr>
<td>ML/EX50</td>
<td>0.5 m extension tube</td>
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<tr>
<td>ML/EX100</td>
<td>1.0 m extension tube</td>
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</tbody>
</table>

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Also available separately