TOMST®

TMS

ELSEVIER

Research article
Volume: 268
(15 April 2019)
Pages: 40-47

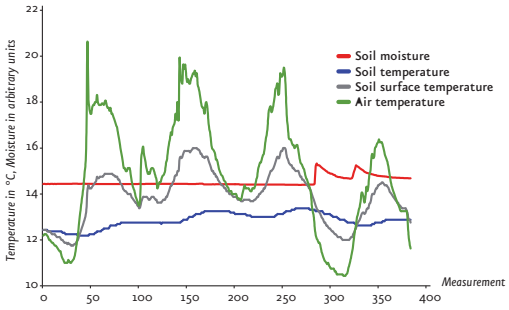
# TOMST® Dataloggers TMS

**Technical details:**

1. Temperature measured using temperature sensor MAXIM/ /DALLAS Semiconductor DS7505U+, with resolution of 0.0625 °C and with accuracy of ±0.5 °C.
2. The moisture sensor measures slowing down of a signal with changes in the permeability of the environment at a frequency of 100-200 MHz. This method (TDT) is largely independent of salinity and temperature. The measuring error in a similar environment does not exceed 1%.
3. Capacity of the data loggers is 32 MBit, i.e. over 500 000 values can be stored. Over 14 years of measurements every 15 minutes. Real time measured using a crystal of 32.768 kHz, with the accuracy of ±2 min./month.
4. Battery – LS 14500 Primary lithium-thionyl chloride cell with a capacity 3.6 V/2.6 Ah. The battery will last for at least 10 years.
5. Size: 29 cm / Weight: 108 g

The TMS dataloggers have a wide range of applications for **research** in the fields of biology, ecology, soil sciences, hydrology, climatology etc. It can also be used in **agriculture, horticulture and forestry** – monitoring growing conditions in the field, greenhouse, growth chambers etc. Other possible applications include monitoring conditions in **grain stores** and any other places where it is important to monitor the course of moisture and temperature. Currently, we have wide experience with their use in a range of field conditions within several research projects around the world - studies of climatic inversion in deep sandstone valleys, monitoring soil moisture and temperatures in wet meadows, sandy habitats and mountain forests.
It is also used for identification of optimal growth conditions at Energy Plantations.


TOMST® since 1995
TMS since 2009




*Course of temperature and soil moisture over 4 days measured every 30 minutes.*


TOMST® TMS

# TOMST® Dataloggers TMS



**Standard TMS unit**

is measuring temperature in 3 different levels in a depth of -6, +2 and +15 cm and measuring the soil moisture as well.

**TMS Long**

is a prolonged version of the standard TMS device. The upper pipe with thermosensor No.3 is manufactured in sizes 20, 30, 40 cm.

**Buriable TMS unit**

is built from 2 parts. The first part is soil moisture and two temperature meters and this part can be buried deep into the ground. Second part is a data downloading probe and the 3rd thermo meter. These two parts are connected by cables, mainly used for measuring in depths.
Standard length: 0,5 m / 1 m / 2 m.

**Thermologger**

is version of the TMS datalogger, designed for measuring air temperature. It consists of one thermosensor and it is possible to hang it on trees.

**Point Dendrometer**

measures stem diameter changes < 1 µm in user defined intervals (step by 0,27 µm). It can measure changes in wood and bark separately. Also, the dendrometer is able to measure air temperature.

**TMS dataloggers for measuring air and soil temperature and soil moisture.**
**Need to measure air and soil temperature and soil moisture in many locations over extended time periods?**

**TMS dataloggers:**

- Offer unique possibility to measure soil and air temperature and soil moisture in any extreme conditions.
- TMS loggers are durable, autonomous and require minimal maintenance. Can collect and store data for over 10 years without battery replacement and data extraction *(over 500 000 events ~ 14 years of measurements every 15 minutes).*
- No need for any additional special equipment - single measuring units are physically independent. The data will be stored in the logger even when e.g. moved by wild animals.
- The extraction of data is very easy and quick via a USB cable using our TMD adapter.
- Offers the possibility of added external sensor allowing measurements in any distance/height from the central logger or remote data download when buried in depth underground.
- Currently, we have wide experience with their use in several research projects in Europe, America, Africa, Australia and Asia.
- High precision of measurements, insensitive to soil conditions.
- Are cheap compared to other commercial dataloggers.
- The company TOMST® has operated on the market since 1995. Main activities of the company concern research, development and production of electronic equipment.

TOMST®

**TOMST® s.r.o.**
Michelská 964/78
141 00 Praha 4
Czech republic, EU

+420 222 518 033
tomst@tomst.com

tomst.com



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