

An accurate and highly reliable device for measuring of snow water equivalent (SWE) on the weighting principle. The device is accompanied by a mechanism minimizing the possibility of measurement errors by snow bridging. It can be easily completed by measurement of snowmelt seepage and many other characteristics of environment.



High accuracy of measurement resolution 0.1 mm of SWE, accuracy of the weight sensors 0.2 % FS



Preventing of snow bridging reliable prevents

formation of snow bridges



Simplicity

simple installation in any landscape, simple and quick user operation



GSM/GPRS

integrated GSM/GPRS module enabling online access to data



Low power consumption

due to integration of modern technologies in the processors - SLEEP mode



Environmentally friendly

minimal risk of of environmental pollution (without pillows filled with antifreeze liquids)



Increased resistance

robust design ensures extremely long service life, high resistancex of the entire device against overvoltage and noise



Sensors and probes

facility to connect plenty of other sensors including snowmelt seepage measurement, high data logger modularity

LDSMS2014 is an accurate and reliable system measuring snow water equivalent on the principle of weighting, which is accompanied by a device preventing snow bridging. It is primarily designed for continuous measurement of snow water equivalent and snow depth, but it can be easily supplemented by a number of other sensors. Also snowmelt seepage measurement can be integrated during installation.





Basic features

- · easy to install in any landscape
- dimension of really weighted area 200 x 200 cm
- · robust design ensures extremely long life
- variable measurement range depending on the target locality (up to 3000 mm of SWE)
- resolution 0.1 mm of SWE, accuracy of the sensors 0.2 % FS
- high precision of the measurement during snow accumulation as well as melting

- reliable preventing formation of snow bridges
- easy and guick user operation
- low power consumption (by integration of modern technologies in the processors - SLEEP mode)
- · integrated GSM/GPRS module
- possibility to connect many other sensors, data logger modularity
- high resistance of the entire device against overvoltage and noise

The results of field testing were presented e.g. at:

- the international workshop/conference called "XIX.
 Meeting of snow measuring staff" (Stretnutie sne-hárov) held from 26th to 28th of March 2014 in the Krkonoše Mts. (Pec pod Sněžkou)
- the conference "Hydrology of a small watershed 2014" (Hydrologie malého povodí 2014) held from 22nd to 24th of April 2014 in Prague

Snow measurement system LDSMS2014 was developed under the grant "Development of apparatus and methodology for field continuous measurement of snow water equivalent" supported by the Technological Agency of the Czech Republic, which was solved in the years of 2012-14. The development was realized in cooperation of T. G. Masaryk Water Research Institute (TGM WRI) and Opočno Research Station of the Forestry and Game Management Research Institute (FGMRI).



