

# SM-30 SHIRT POCKET-SIZE MAGNETIC SUSCEPTIBILITY METER

**A sensitive and accurate tool for field measurement  
of susceptibility of outcropping rocks, drill cores or  
rock samples**



**Sales, Support and Customisation**

**www.GeoResults.com.au**

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## FEATURES

- **HIGH SENSITIVITY  $1 \times 10^{-7}$  SI UNITS**  
The sensitivity is 100 times better than the competitive instruments.
- **SMALL SIZE AND LOW WEIGHT**  
The SM-30 is truly shirt pocket-sized instrument. With dimension 100 x 65 x 25 mm and weight 0.150 kg. SM-30 outperforms competitors 3 times.
- **LOW NOISE**  
Thanks to sophisticated signal processing the noise induced in pick-up coil is suppressed well under resolution  $1 \times 10^{-7}$  SI units.
- **DEEP PENETRATION OF THE SIGNAL**  
The sensor design enables to get 90 % of its signal from the first 20 mm of the rock. This feature allows more accurate readings on uneven surfaces of all rock types.

The SM-30 picture in actual size.



- **SIMPLE OPERATION**  
Autoranging and three-button control makes the meter the easiest to operate by one hand only. Internal memory can store 250 readings.
- **WARRANTY**  
One-year warranty is included in the price. We offer 48 hours turnaround support and repair service for any instrument sent from any location worldwide. Subsequent customer support is provided.

## GENERAL

- The SM-30 is small magnetic susceptibility meter. Thanks to the high sensitivity we can measure sediments and rocks with extremely low level of magnetic susceptibility. In addition, we can distinctly measure diamagnetic materials like limestone, quartz and also water.

The SM-30 is controlled by three push buttons. One of them serves to save up to 250 measured values into nonvolatile memory and to recall them later. The 251<sup>th</sup> value (the last measured one) is automatically displayed after SM-30 is switched on. If no button is pressed for 3 minutes, the instrument switches off automatically. The SM-30 has a beeper indicating intervals in which the information from the rock is picked-up. The SM-30 is powered from two coin lithium batteries CR2430. If the instruments is not used too extensively, the batteries may last for years thanks to their low self-discharge.

## ZH INSTRUMENTS

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## SENSOR

The SM-30 has 8 kHz LC oscillator with a large size pick-up coil as a sensor. The oscillation frequency is measured when

- ♦ the coil is put to the surface of measured rock
- ♦ the coil is removed tens of cm away.

The SM-30 offers six measuring modes. Two of them are basic, two are compensating the linear part of the thermal drift, one is for scanning and one is for averaging.

The large number of the memory registers (250) is useful especially when scanning mode is used.

Though the instrument is small, the pick-up coil is large enough in diameter to measure sufficiently high volume.

## SPECIFICATION

SENSITIVITY	1 x 10 <sup>-7</sup> SI units
OPERATING FREQUENCY	8 kHz
MEASUREMENT TIME	less than 5 s
DIGITAL DISPLAY	4 digits LCD
CONTROLS	3 push buttons
PICK-UP COIL	50 mm in diameter
OPERATING TEMPERATURE	-20°C to 50°C
BATTERY	2 lithium CR2430
BATTERY LIFE	approx. 80 hrs
DIMENSIONS	100 x 65 x 25 mm
WEIGHT	0.150 kg
PC INTERFACE	RS232C
STANDARD ACCESSORIES	leather case, operating manual, RS232 cable, PC software for data transmission and for external control

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