

Earth-/Ground-Tester

SATURN GEO *easy*

- Easy handling due to single button concept
 - Large display with 25mm digits and problem indicator
 - Extremely robust due to protective rubber holster
 - RA 2-Pole measurements - 20k Ω
 - RA 3-Pole measurements - 20k Ω
 - RA 4-Pole measurements - 20k Ω
 - Soil resistivity - 100k Ω m
 - Waterproof - IP 56
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Description

SATURN GEO *easy* is a versatile, easy to handle and very robust earth/ground-tester which covers all practical earth test procedures up to soil resistivity measurements.

It is designed for electricians, for people who plan or erect earthing or lightning protection systems, for day-to-day usage in rough environments. It has very large digits for optimal readability.

Applications:

- Earth resistance measurements of various installations (high voltage pylons, buildings, cell phone substations, RF transmitters, pipelines, tanks etc.)
- inspection and planning of lightning protection systems, soil resistivity measurement (e.g. for geological examinations).

This instrument has been manufactured to comply with quality assurance system DIN ISO 9001. The compliance with the actual EMC-regulations is documented by the attached CE-sign.

Suited for all earth/ground measurements including those complying to IEC 1024, ENV 61024, DIN VDE 0185, ÖVE-E 49 .

One touch system for ease of operation:

- Select function

- press **START**

- read **result**



Order reference - scope of delivery

SATURN GEO *easy* A185506611

- 1 SATURN GEO *easy* incl. rubber holster
- 6 alkaline AA - type (LR6) batteries
- 2 measuring leads 1,5 m with test prods
- 1 shorting jumper for 2-pole-measurements
- 2 alligator clips
- 1 carrying belt with hooks
- 1 operating instructions with CE-certificate
- 1 LEM NORMA test certificate

Recommended accessories:

Set for 3-pole measurements: A604510302

- 2 x 1 earth stake A604510350
- 1 cable reel with 25m wire..... A604505102
- 1 cable reel with 50m wire..... A604505103

Set for 4-pole measurements: A604510301

- 4 x 1 earth stake A604510350
- 2 x 1 cable reel with 25m wire..... A604505102
- 1 cable reel with 50m wire..... A604505103

Carrying case for SATURN GEO *easy* A 6030 00530

Applied regulations and standards

- IEC 61557
- IEC 61010
- EN 61326
- IEC 61000
- IEC 654
- DIN ISO 9001

**ELMES
GOERZ
HEME
NORMA**

LEM

SPECIFICATIONS

Robust instrument, designed for tough environmental conditions, waterproof (rubber protective cover, IP56).

General:

Display: 1999 digit LC-display with special symbols, digit height **25 mm**, fluorescent backlight

User interface: Instant measurement through **TURN and START - one button concept**. The only operating elements are rotary switch and START button.

Temperature ranges:

Working temp.: -10° C ...+50° C (+14° F ...+122° F)
Operating temp.: 0° C ...+35° C (+32° F ... +95° F)
Storage temp.: -20° C ...+60° C (-4° F ...+140° F)
Reference temp.: +23° C ± 2° C (+73° F ± 4° F)


Temp. coefficient: ± 0,1 % of reading / K

Intrinsic error: Refers to the reference temperature range and is guaranteed for 3 years.

Operating error: Refers to the operating temperature range and is guaranteed for 3 years.

Climatic class: C1 (IEC 654-1), -5° C...+45° C, 5%...95% RH

Protective type: IP56 according to EN 60529

Safety: Protection by double insulation 

EMC (Emission): IEC 61326-1:1997 Class B
CISPR16 (CISPR22), CISPR16-1

EMC (Immunity): IEC61326-1:1997
IEC 61000-4-2 8 kV (air) perf. criteria B,
IEC 61000-4-3 3 V/m perf. criteria A,
IEC 61000-4-4 0,5 kV perf. criteria B
IEC 61000-4-5 1 kV perf. criteria B
IEC 61000-4-6 3 V perf. criteria A
IEC 61000-4-8 Level 4, 30A/m perf. criteria A

Quality system: developed, designed and manufactured according to DIN ISO 9001

External voltage: Max. U_{ext} = 24 V (AC + DC), measurement inhibited for higher values

U_{ext} rejection: >120dB (16²/₃, 50, 60, 400Hz)

Measuring time: typical 6 sec

Max. overload: 250 Vrms

Auxiliary power: 6 x 1,5 V mignon cells alkali-manganese (type AA LR6)

Battery life span: typical > 3000 measurements

Dimensions: 240 x 180 x 110 mm

Weight: 1,1 kg (including batteries)

R_A 3-pole ground resistance measurement (IEC 1557-5)

Range	Intrinsic error	Operating error
0 Ω ... 20 kΩ	±(2% of rdg + 3 dig)	±(5% of rdg + 3 dig)

Measuring principle: Current/voltage

Measuring voltage: U_m = 48 Vac.

Short-circuit current: > 50 mA

Meas. frequency: 128 Hz (125 Hz on request)

Probe resistance (R_s): max. 100 kΩ

Auxiliary earth electrode resistance (R_h): max. 100 kΩ

Monitoring of R_s and R_h with error indicator.

Automatic range selection.

R_A 4-pole ground resistance measurement (IEC 1557-5)

Range	Intrinsic error	Operating error
0 Ω ... 20 kΩ	±(2% of rdg + 3 dig)	±(5% of rdg + 3 dig)

Measuring principle: Current/voltage

Measuring voltage: U_m = 48 Vac.

Short-circuit current: > 50 mA

Measuring frequency: 128 Hz (125 Hz on request)

Probe resistance (R_s + Res): max. 100 kΩ

Auxiliary earth electrode resistance (R_h): max. 100 kΩ

Monitoring of R_s and R_h with error indicator.

Automatic range selection.

Soil resistivity measurement (ρ)

Range	Intrinsic error	Operating error
0 Ωm...100 kΩm	±(2% of rdg + 3 dig)	±(5% of rdg + 3 dig)

Measuring principle: Current/voltage

Measuring voltage: U_m = 48 Vac.

Short-circuit current: > 50 mA

Measuring frequency: 128 Hz (125 Hz on request)

Probe resistance (R_s): max. 100 kΩ

Auxiliary earth electrode resistance (R_h): max. 100 kΩ

Monitoring of R_s and R_h with error indicator.

Automatic range selection.

Note: Measurement specifications relate to a stake distances of 4 m!



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