Insulation Tester

NORMA HANDY ISO

Areas of application:

- Electrical trade
- service
- assembly (wiring test, start-up of new installations, repeat tests, troubleshooting)
- industry (test fields, domestic engineering, testing of materials, output tests, etc.)
- training

Description

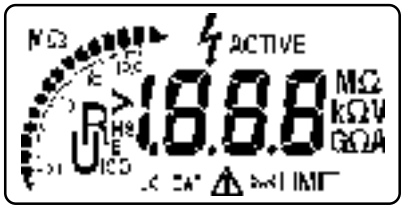
Insulation Tester NORMA Handy - a handy insulation measuring device with universal application possibilities, including RISO measurements with 100V (up to 20GOhm, very important for telecommunication applications), 250V, and 500V (standard measurement voltage for electrical installations with nominal mains voltages of 500V). Low-resistance measurements are performed pursuant to IEC 61557, or DIN VDE 0413 with a short-circuit current of >200mA, providing for standard-complying measurements regarding low-resistance of both non-fused earthed conductor connections and potential equalization. Testing of electrical loads subsequent to maintenance or extension according to DIN VDE 0701, and repeat tests according to DIN VDE 0702 is also possible: The user can directly read both RPE and RISO values.

The most important properties:

- Separate receptacles for R and R_{ISO} measurements for maximum safety even with incorrect operation
- Compensation of measuring line resistors (correction can be saved permanently!)
- Extremely wide measurement range for R_{ISO}: 20GOhm even with 100V measuring voltage
- Single and permanent measurements
- Voltage measurements up to 600V DC/AC
- Continuity check with fast-responding buzzer
- Slow increase of test current (>0.4 seconds) for PRCD testing, also important for testing large self-inductances
- Attractive design, very sturdy through protective cover made of rubber
- Easy operation with a wide range of functions
- Option: RS 232 interface with PC software WIN VIEW (calculates the polarization index and the dielectric absorption ratio)
- Probe with START button and illumination
- Illuminated display for work at non-accessible locations

Technical Data

Display:	3¹/2-digit (1999) 7 segment-liquid-crystal-display, 16 mm high, 16-part analog scale with over-, underflow and special display signs,display-lighting switchable



Climate class:	KGW as per DIN VDE 40040 KWJ at 10 GΩ
Working temp. range:	-10° C … +50° C
Operat. temp. range:	0° C … +35° C
Ref. temp. range:	21° C ... 23° C
Storage temp. range:	-20° C … +60° C
Safety:	Complies with safety class II, specified to IEC 1010-1 600 V CAT II, pollution 2
Protection type:	IP 40 as per DIN VDE 40050
Batterytype:	Alkaline 9V IEC 6LR61
Battery live time:	>1000 RISO-measurements specified to reference temperature range
Indrinsic error:	refers to the reference temperature range (is guaranteed for 3 years)
Operating measurement deviation:	considers influence of operating temperature. Position and supply voltage have no influence.
Dimensions:	113 (W) x 54 (D) x 216 (L) mm
Weight:	Basic unit with accessories 990 Gramm

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R_{ISO}-Measurement

Measuring method: Current and voltage measurement as per DIN VDE 0413 part 1/80 and DRAFT IEC 1557-2

Normal voltage: U_N = 100, 250, 500 V DC

Open circuit voltage: U_0 <1,1, U_N

Nominal current: I_N >1mA DC at U_N > 2.5mA at 250 V when R_{ISO} -100 kΩ and measuring voltage 250 / 500 V

Short circuit current: <10 mA DC

Range	Resolution	Display	Intrinsic error	Operat.meas.deviation
1.8...200kΩ 200 kΩ...2MΩ 2...20MΩ 20...200MΩ 200MΩ...2GΩ	0.1kΩ 1 kΩ 10 kΩ 100 kΩ 1 MΩ	0...199.9 kΩ 200...1999kΩ 2...19.99MΩ 20...199.9MΩ 200...1999MΩ	± (4% of mv + 3D)	± (8% of mv + 4D)
2GΩ..20GΩ*	100MΩ	2GΩ..19.9GΩ	±(6%ofmv+3D)	±(12%ofmv+3D)

* Display 3¹/2-digit

In case of external voltage >20V the measurement does not start.

Resistance R_{DC}-Measurement

Range	Resolution	Display	Intrinsic error	Operat.meas.deviation
20 Ω	0.01 Ω	0...19.99 Ω	± (5% of mv + 5D)	± (6% of mv + 5D)
200 Ω	0.1 Ω	0..199.9..300 Ω		

Measuring method: Current and voltage measurement

Open circuit voltage: >4.0 V

Short circuit current: >200 mA

Serial mode rejection (SMR): approx. 60 dB at 50 and 60 Hz

Common mode rejection (CMR): >80 dB at 50 and 60 Hz

Continuity check

Response time: <100ms

Response threshold: 8...12 MW

Display of external voltages AC / DC at R_{ISO}

U_{max} effective: at RISO 600 V
at R +, R - 250 V

CMR: Common mode rejection
>80 dB at 50 and 60 Hz

Internal resistance for R_{ISO}: for positive voltages: 550 kΩ
for negative voltages: 1.1 kΩ
input protection with PTC and serial diode (for >26V the PTC becomes high impentance)

Measuring deviation: < 10% for DC and sinusoidal AC-signals

Order Codes

Description	Order No.
NORMA Handy Insulation Tester (Set 1) Accessories supplied: 2 safety measuring leads with tips 1 protective cover + carrying belt + 2 hooks 1 alligator clip 1 operating instruction engl./germ./ french 1 Battery 9V Alkaline IEC 6LR61	A 1865 03211
NORMA Handy Insulation Tester (Set 2) Accessories supplied: 2 safety measuring leads with tips 1 protective cover + carrying belt + 2 hooks 1 alligator clip 1 operating instruction engl./germ./ french 1 Battery 9V Alkaline IEC 6LR61 installed RS 232C Interface, RS 232C cable for printer, PC-Software "WIN VIEW" (3¹/2" disk), PC adapter	A 1865 03212
Interface for **NORMA Handy Insulation / Earth Tester** (built in by service centers only) incl. cable for printer PC-Software "WIN VIEW" (3¹/2" disk),	A 6412 03111
Accuset for **NORMA Handy Insulation / Earth Tester** accu with plug in power supply and 2-pole line plug	A 6403 03111
Probe with **START** and **LIGHT**-function	A 6914 40210
Thermal printer RS 232C Seiko DPU-201GS	A 6413 06111
Paper for Thermal Printer (20 rolls)	A 6202 46111

Distributor

Printed in Austria.
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Publication A 99403 E (03.99 · 6 · GD)

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