GOSSEN METRAWATT

METRAmax 6
Analog Resistance Measuring Instrument
with Rough Capacitance Measurement

- **Resistance measurement:** 0.05 Ω ... 1 MΩ (5 measuring ranges)
- **Capacitance measurement** (rough): 0 ... 30000 µF
- **Continuity testing:** 0 ... 1.5 Ω by means of integrated buzzer

Range of application

Resistance measuring instrument with analog display for industrial, service and field applications.

Rugged housing design

The rugged plastic housing and the spring-loaded bearing jewels of the moving-coil mechanism protect the instrument against damage in the case of mechanical stress.

Applicable Standards and Regulations

IEC 61010-1/EN 61010-1/ VDE 0411-1	Safety requirements for electrical equipment for measurement, control and laboratory use – General requirements
EN 60529 VDE 0470 part 1	Test instruments and test methods Degrees of protection provided by enclosures (IP code)
DIN EN 61326 VDE 0843 part 20	Electrical equipment for measurement, control and laboratory use – EMC requirements

Characteristic Values

Measuring ranges

Resistance	Scope of measuring ranges	Value at mid-scale (R_i)	Max. Meas. current I_{max} [1] approx.
Ω x 1 (red scale)	0.05 Ω ... 50 Ω	1 Ω	75 mA
Ω x 1	1 Ω ... 1 kΩ	20 Ω	75 mA
Ω x 10	10 Ω ... 10 kΩ	200 Ω	7.5 mA
Ω x 100	100 Ω ... 100 kΩ	2 kΩ	0.75 mA
Ω x 1000	1 kΩ ... 1MΩ	20 kΩ	0.075 mA

Capacitance measuring range	Scope of measuring ranges	Max. meas. current $I_{max.}$ [1]
µF x 1	0 ... 30 µF	0.075 mA
µF x 10	0 ... 300 µF	0.75 mA
µF x 100	0 ... 3 000 µF	7.5 mA
µF x 1 000	0 ... 30 000 µF	75 mA

[1] at battery voltage of 1.5 V

Acoustic continuity testing

Response range	0 ... 1.5 Ω (integrated buzzer)
Response current	365 mA
Operating current	170 mA

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Display

Mechanism	Moving-coil mechanism with spring-loaded bearing jewels
Scale	mirror-backed
Scale length	approx. 90 mm
Pointer deflection	$\angle$ 0° ... 100°

Accuracy

Error limit	±1.5 % of scale length ± 8.2 % as a function of the actual resistance value in the display range, which is marked by the bold section of the scale curve.

Reference Conditions

Ambient temperature	+ 20 °C
Position of use	horizontal

Ambient Conditions

Storage temperatures	−25 ... 65 °C (without battery)
Relative humidity	max. 75%, no condensation allowed

Power Supply

Battery	1 mignon cell 1.5 V per IEC LR6 (AA), leak-proof

Overload Protection

Fusible link	F 6.3 H/250 V per DIN VDE 0820 Part 22/EN 60127-2, fitted as an integral part

Electrical Safety

Safety class	II per IEC 61010-1/EN 61010-1/ VDE 0411-1
Contamination degree	2
Test voltage	2 kV~

Electromagnetic Compatibility EMC

Interference Emission/ Interference Immunity	EN 61326-1: 2006 EN 61326-2-1: 2006

Mechanical Design

Protection	Housing IP 50, terminals IP 20 Extract from table on the meaning of IP codes

IP XY (1st digit X)	Protection against foreign object entry	IP XY (2nd digit Y)	Protection against the penetration of water
0	not protected	0	not protected
1	≥ 50.0 mm dia.	1	vertically falling drops
2	≥ 12.5 mm dia.	2	vertically falling drops with enclosure tilted 15°
3	≥ 2.5 mm dia.	3	spraying water
4	≥ 1.0 mm dia.	4	splashing water
5	dust protected	5	water jets
6	dust-tight	6	powerful water jets

Dimensions	100 x 140 x 35 mm
Weight	approx. 0.3 kg (without battery)

Standard Equipment

1 analog resistance measuring instrument (without cable set)
1 battery
1 operating instructions

Order Information

Description	Type	Article number
Analog resistance measuring instrument with operating instructions	METRAmax 6	GTM3060000R0001
Cable set (1 pair of measurement cables) 1.2 m, with VDE-GS symbol (600 V CAT III 16 A)	KS17-ONE	Z110K
Cable set (1 pair of measurement cables) 1.2 m, with VDE-GS symbol (1000 V CAT III / 600 V CAT IV 16 A)	KS17-2	GTY3620034P0002
Carrying pouch	F825	GTY3172100P01

For additional information concerning accessories please refer to

* *the catalog „Measuring Instruments and Testers"*
* *our website www.gossenmetrawatt.com*