Mesh resistance measuring clamp EMCheck® MWMZ II

Applications

The mesh resistance measuring clamp **EMCheck® MWMZ II** is an essential measuring instrument for anybody for whom intuitive statements on the quality of the installed shield and earth measures are not enough.

The measuring clamp can be used for:

- Measuring shield loop resistances of bus cables or measuring system cables, for example. Good shield loop resistances should not exceed a value of 0.1 ohm per 10m cable length. An adequately low shield loop resistance is a basic requirement for a good shield effect.
- Measuring the PE cables laid pursuant to DIN EN 50310 to achieved good equipotential bonding. Good PE loop resistances should be in a range up to approx. 0.3 Ohm. An adequately low BN loop resistance is a basic requirement for ensuring a good signal reference potential.
- Measuring the quality of the shield on the motor cable of frequency controlled motors and the resistances in the reverse current path.

Measurement results

The clamp consists of two coils. The first coil induces a voltage of a defined level and with a defined frequency (50, 60, 128 or 2083 Hz).

The second coil measures the current induced by coil one in the adjusted frequency range. The ration of these two values can then be used to find and display the alternating current resistance (impedance). The measurement is made without interruption and can also be carried out on conductors which already carry current during normal operation. If the operating currents are in the frequency range of the clamp and thus falsify the measurement result, the clamp will indicate a “noise” warning.

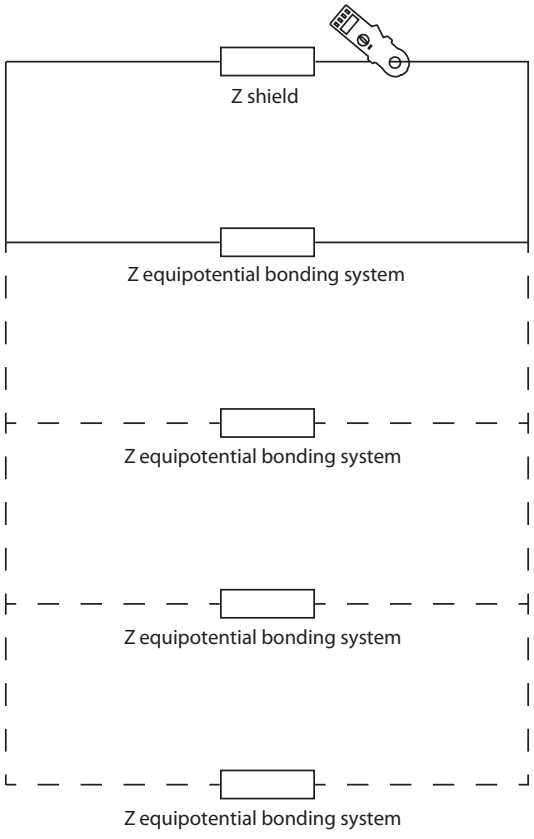
Technical data

• Display:	OLED 152 segments, active surface 48 x 39 mm
• Max. ø of the loop:	35 mm
• Data storage:	300 measurements with timestamp
• Power supply:	4x 1,5 V Alkaline batteries, LR6 (AA) or 4x Ni-MH batteries
• Interference emitter:	NF EN 61326-1: 2006
• Interference immunity:	NF EN 61326-1: 2006
• Max. overload capacity:	Maximum continuous current 100 A eff. (50/60 Hz), briefly (< 5 s) 200 A effectively (50/60 Hz)
• Dimensions (H x W x D):	262 x 95 x 55 mm
• Weight:	935 g (incl. batteries)
• Seal:	IP 40, Group III device
• Category:	IEC 61010 600 V CAT IV
• Measuring frequency:	50, 60, 128 or 2083 Hz

Measuring characteristics

• Room temperature:	23 ± 3 °C
• Relative humidity:	50 % r. h. ± 10 %
• Battery voltage:	6 V ± 0,2 V
• External magnetic field:	< 40 A/m, no AC field
• External electrical field:	< 1 V/m
• Measured current/ sinusoidal frequency:	50 Hz
• Distortion level:	< 0,5 %

EMCheck® MWMZ II



Example of a shield resistance measurement

Ordering details	Art. No.
EMCheck® MWMZ II	122010010
Measuring Clamp Set EMCheck® (MWMZ II & LSMZ I)	122010006
Measuring Clamp Set EMCheck® XL	122010007

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