

# ABMA

## Leakage Current Measuring Adapter

3-447-028-03  
2/6.19

- **Accessories for the measurement of**
  - leakage current
  - patient auxiliary current
- **Overload protection by means of a PTC**  
It resets itself automatically after tripping and disconnection of input current circuit – as opposed to a fuse



### Applications

The ABMA leakage current measuring adapter (article number Z237A) serves as an attachment for TRMS multimeters for the measurement of touch voltage per VDE 100-710 (replaces DIN VDE 0107, passage 10), and for the measurement of continuously flowing leakage current and patient auxiliary current per DIN EN 62353:2014 and IEC 60601-1:2005/A1:2012 (Medical electrical equipment – Part 1: General requirements for basic safety and essential performance).

### Applicable Regulations and Standards

<b>VDE 0100-710</b> (replaces DIN VDE 0107, passage 10)	Low-voltage electrical installations – Part 7-710: Requirements for special installations or locations – Medical locations
<b>IEC 62353</b> <b>DIN EN 62353:2015</b>	Medical electrical equipment - Recurrent test and test after repair of medical electrical equipment
<b>IEC 60601-1:2005 / +A1:2012</b> <b>VDE 0750-1:2013-12</b>	Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
<b>IEC 61010-1</b> <b>DIN EN 61010-1</b> <b>VDE 0411-1</b>	Safety requirements for electrical equipment for measurement, control and laboratory use – General requirements

### Measuring Instrument Requirements

You'll need a measuring instrument that's capable of measuring TRMS values for direct and alternating voltages of up to 30 V. The lowest measuring range should have a resolution of at least 0.1 mV, so that the smallest permissible values for leakage current and patient auxiliary current, namely 10 µA (per DIN EN 60601-1 VDE 0750-1:2013-12), can still be detected with adequate accuracy. A measuring current of 10 µA corresponds to a display value of 10 mV.

Distance between the measuring instrument's input sockets should demonstrate the standardized value of 19 mm in order to ensure that the leakage current measuring adapter can be readily plugged in.

TRMS multimeters from GOSSEN METRAWATT are suitable for use as measuring instruments.

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### Technical Data

#### Input

Input current 0 ... 50 mA AC, DC  
Measuring shunt 1 k $\Omega$  1.0%  
Overload protection PTC  
Max. input current 150 mA AC, DC

#### Output

Output voltage 0 ... 50 V (1 V/mA) AC, DC  
Output resistance 10 k $\Omega$   
Frequency response Per EN 60601-1

#### Temperature

Ambient temperature 0 ... +40 °C  
Storage temperature -25 ... + 70 °C

#### Electrical Safety

Measuring category CAT III 300 V

### Standard Equipment

- 1 Leakage Current Measuring Adapter
- 1 Operating instructions
- 1 Calibration Protocol

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### Order Information

Description	Type	Article number
Leakage Current Measuring Adapter	ABMA	Z237A

For additional information regarding accessories please refer to

- our Measuring Instruments and Testers catalogue or
- our website [www.gossenmetrawatt.com](http://www.gossenmetrawatt.com)