

# AM-500-EUR Series Digital Multimeters

**AM-510-EUR, AM-520-EUR, AM-530-EUR, AM-540-EUR  
and AM-550-EUR**

Announcing the Amprobe AM-500-EUR Digital Multimeter Series, a full line of digital multimeters that offer functions for every application. These tough meters are designed to be a reliable, feature-rich, and rugged solution for taking critical measurements in residential, HVAC, electrical and industrial settings at breakthrough affordability.



AM-550-EUR



AM-510-EUR



AM-520-EUR



AM-530-EUR



AM-540-EUR

## AM-500-EUR SERIES SELECTION GUIDE

|           |                                             |                     | AM-510-EUR                                                                        | AM-520-EUR                                                                         | AM-530-EUR                                                                          | AM-540-EUR                                                                          | AM-550-EUR                                                                          |
|-----------|---------------------------------------------|---------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|           |                                             |                     |  |  |  |  |  |
| Functions | Measurement Category                        |                     | CAT III 600V                                                                      | CAT III 600V<br>CAT II 1000V                                                       | CAT III 600V<br>CAT II 1000V                                                        | CAT IV 600V<br>CAT III 1000V                                                        | CAT IV 600V<br>CAT III 1000V                                                        |
|           | Measure voltage in noisy environments       | True-rms            |                                                                                   |                                                                                    | ■                                                                                   |                                                                                     | ■                                                                                   |
|           | Electrical panels, AC outlets               | AC Voltage (V)      | 600                                                                               | 750                                                                                | 750                                                                                 | 1000                                                                                | 1000                                                                                |
|           | DC systems, auto/marine batteries           | DC Voltage (V)      | 600                                                                               | 1000                                                                               | 1000                                                                                | 1000                                                                                | 1000                                                                                |
|           | AC Current - electrical panels, appliances  | AC Current (A)      | 10                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  |
|           | DC Current - electronics, DC motors         | DC Current (A)      | 10                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  |
|           | Specified resistance and continuity         | Resistance (MOhms)  | 40                                                                                | 40                                                                                 | 40                                                                                  | 60                                                                                  | 60                                                                                  |
|           | Flame sensors                               | Microamps           | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Diodes in ac to dc converters               | Diode test          | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Fuses, lightbulbs, wire connections         | Continuity          | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Household batteries                         | Battery test        | ■                                                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
|           | Motor startup or run capacitors             | Capacitance         | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Frequency verification                      | Frequency           | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | VolTect Plus™ Non-contact voltage detection | Non-contact voltage | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Electrical load-time on vs. time off        | Duty cycle          | ■                                                                                 |                                                                                    |                                                                                     | ■                                                                                   | ■                                                                                   |
| Features  | Temp of air vents, fuses, transformers      | Temperature inputs  |                                                                                   | 1                                                                                  | 1                                                                                   | 2                                                                                   | 2                                                                                   |
|           | Automatically selects measurement range     | Autorangeing        | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Manually select measurement range           | Manual ranging      | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Voltage on variable frequency drives        | Low pass filter     |                                                                                   |                                                                                    |                                                                                     | ■                                                                                   | ■                                                                                   |
|           | Detect stray voltages                       | Low Z               |                                                                                   |                                                                                    |                                                                                     |                                                                                     | ■                                                                                   |
| Display   | Dimly lit areas                             | Built-in flashlight | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Meter resolution                            | LCD Counts          | 4,000                                                                             | 4,000                                                                              | 4,000                                                                               | 6,000                                                                               | 6,000                                                                               |
|           | Dimly lit areas                             | Backlight           | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Monitoring fast changing signals            | Bar graph           |                                                                                   | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
| Events    | Two relative measurements on one screen     | Dual display        |                                                                                   |                                                                                    |                                                                                     | ■                                                                                   | ■                                                                                   |
|           | Data memory                                 | Data hold           | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Difference between two measurements         | Relative reading    | ■                                                                                 | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Max/min peak measurement                    | Max/min hold        |                                                                                   | ■                                                                                  | ■                                                                                   | ■                                                                                   | ■                                                                                   |
|           | Specialized signal measurements             | Peak hold (crest)   |                                                                                   |                                                                                    |                                                                                     | ■                                                                                   | ■                                                                                   |

## TECHNICAL DATA AM-500-EUR SERIES

| Model                  | AM-510-EUR                                             | AM-520-EUR                                                                                  | AM-530-EUR                                                                                  | AM-540-EUR                                                                                                             | AM-550-EUR                                                                                                             |
|------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| General Specifications |                                                        |                                                                                             |                                                                                             |                                                                                                                        |                                                                                                                        |
| Display                | 3999 Digits                                            | 3999 Digits                                                                                 | 3999 Digits                                                                                 | 5999 Digits                                                                                                            | 5999 Digits                                                                                                            |
| Measurement ranges     |                                                        |                                                                                             |                                                                                             |                                                                                                                        |                                                                                                                        |
| AC voltage             | 1 mV...600V                                            | 1 mV...750V                                                                                 | 1 mV...750V                                                                                 | 1 mV...1000 V                                                                                                          | 1 mV...1000 V                                                                                                          |
| Basic accuracy *       | ± (1.0 % rgd. + 3 digits)                              | ± (1.0 % rgd. + 3 digits)                                                                   | ± (1.0 % rgd. + 3 digits)                                                                   | ± (1.0 % rgd. + 3 digits)                                                                                              | ± (1.0 % rgd. + 3 digits)                                                                                              |
| Frequency range        | 45 Hz...400 Hz                                         | 45 Hz...400 Hz                                                                              | 45 Hz...400 Hz                                                                              | 45 Hz...1 kHz                                                                                                          | 45 Hz...1 kHz                                                                                                          |
| DC voltage             | 1 mV...600V                                            | 0.1 mV...1000 V                                                                             | 0.1 mV...1000 V                                                                             | 0.1 mV...1000 V                                                                                                        | 0.1 mV...1000 V                                                                                                        |
| Basic accuracy *       | ± (0.8 % rgd. + 1 digits)                              | ± (0.8 % rgd. + 1 digits)                                                                   | ± (0.8 % rgd. + 1 digits)                                                                   | ± (0.5 % rgd. + 2 digits)                                                                                              | ± (0.5 % rgd. + 2 digits)                                                                                              |
| Input resistance       | 10 MΩ                                                  | 10 MΩ                                                                                       | 10 MΩ                                                                                       | 10 MΩ                                                                                                                  | 10 MΩ                                                                                                                  |
| Current AC             | 0.1 μA...10A                                           | 0.1 μA...10A                                                                                | 0.1 μA...10A                                                                                | 0.1 μA...10A                                                                                                           | 0.1 μA...10A                                                                                                           |
| Basic accuracy *       | ± (1.2 % rgd. + 2 digits)                              | ± (1.2 % rgd. + 2 digits)                                                                   | ± (1.2 % rgd. + 2 digits)                                                                   | ± (1.2 % rgd. + 2 digits)                                                                                              | ± (1.2 % rgd. + 2 digits)                                                                                              |
| Frequency range        | 45 Hz...400 Hz                                         | 45 Hz...400 Hz                                                                              | 45 Hz...400 Hz                                                                              | 45 Hz...1 kHz                                                                                                          | 45 Hz...1 kHz                                                                                                          |
| Current DC             | 0.1 μA...10A                                           | 0.1 μA...10A                                                                                | 0.1 μA...10A                                                                                | 0.1 μA...10A                                                                                                           | 0.1 μA...10A                                                                                                           |
| Basic accuracy *       | ± (1.0 % rgd + 2 digits)                               | ± (1.0 % rgd + 2 digits)                                                                    | ± (1.0 % rgd + 2 digits)                                                                    | ± (1.0 % rgd + 2 digits)                                                                                               | ± (1.0 % rgd + 2 digits)                                                                                               |
| Resistance             | 0.1 Ω...40 MΩ                                          | 0.1 Ω...40 MΩ                                                                               | 0.1 Ω...40 MΩ                                                                               | 0.1 Ω...60 MΩ                                                                                                          | 0.1 Ω...60 MΩ                                                                                                          |
| Basic accuracy *       | ± (1.2 % rgd. + 2 digits)                              | ± (1.2 % rgd. + 2 digits)                                                                   | ± (1.2 % rgd. + 2 digits)                                                                   | ± (1.2 % rgd. + 2 digits)                                                                                              | ± (1.2 % rgd. + 2 digits)                                                                                              |
| Continuity             | R < 10 Ω                                               | R < 10 Ω                                                                                    | R < 10 Ω                                                                                    | R < 10 Ω                                                                                                               | R < 10 Ω                                                                                                               |
| Capacitance            | 10 pF...100.0 μF                                       | 10 pF...4000 μF                                                                             | 10 pF...4000 μF                                                                             | 60.00 nF...60 mF                                                                                                       | 60.00 nF...60 mF                                                                                                       |
| Basic accuracy *       | ± (3 % rgd. + 5 digits)                                | ± (3 % rgd. + 5 digits)                                                                     | ± (3 % rgd. + 5 digits)                                                                     | ± (3 % rgd. + 5 digits)                                                                                                | ± (3 % rgd. + 5 digits)                                                                                                |
| Frequenz               | 1,00 Hz...10 MHz                                       | 1,00 Hz...10 MHz                                                                            | 1,00 Hz...10 MHz                                                                            | 1,00 Hz...60 MHz                                                                                                       | 1,00 Hz...60 MHz                                                                                                       |
| Basic accuracy *       | ± (0.1 % rgd. + 4 digits)                              | ± (0.1 % rgd. + 4 digits)                                                                   | ± (0.1 % rgd. + 4 digits)                                                                   | ± (0.1 % rgd. + 3 digits)                                                                                              | ± (0.1 % rgd. + 3 digits)                                                                                              |
| Temperature            | -                                                      | -40...1000 °C                                                                               | -40...1000 °C                                                                               | -40...1000 °C                                                                                                          | -40...1000 °C                                                                                                          |
| Basic accuracy *       | -                                                      | ± (1.0 % rgd. + 8 digits)                                                                   | ± (1.0 % rgd. + 8 digits)                                                                   | ± (1.0 % rgd. + 8 digits)                                                                                              | ± (1.0 % rgd. + 8 digits)                                                                                              |
| Measurement category   | CAT III / 600V                                         | CAT III / 600V,<br>CAT II / 1000V                                                           | CAT III / 600V,<br>CAT II / 1000V                                                           | CAT III / 600V,<br>CAT II / 1000V                                                                                      | CAT III / 600V,<br>CAT II / 1000V                                                                                      |
| Pollution degree       | 2                                                      |                                                                                             |                                                                                             |                                                                                                                        |                                                                                                                        |
| Safety                 | EN 61010, IEC 61010                                    |                                                                                             |                                                                                             |                                                                                                                        |                                                                                                                        |
| Power supply           | 9 V (6F22)                                             |                                                                                             |                                                                                             |                                                                                                                        |                                                                                                                        |
| Dimensions             | 182 x 90 x 45 mm                                       |                                                                                             |                                                                                             |                                                                                                                        |                                                                                                                        |
| Weight                 | approx. 354 g (incl. battery)                          |                                                                                             |                                                                                             |                                                                                                                        |                                                                                                                        |
| Scope of supply        | 2 x test leads,<br>1 x 9 V battery,<br>1 x user manual | 2 x test leads,<br>1 x temperature probe,<br>1 x strap, 1 x 9 V battery,<br>1 x user manual | 2 x test leads,<br>1 x temperature probe,<br>1 x strap, 1 x 9 V battery,<br>1 x user manual | 2 x test leads,<br>2 x temperature probe,<br>1 x temperature adaptor<br>1 x strap, 1 x 9 V battery,<br>1 x user manual | 2 x test leads,<br>2 x temperature probe,<br>1 x temperature adaptor<br>1 x strap, 1 x 9 V battery,<br>1 x user manual |

\* Basic accuracy refers to the best accuracy in the respective function

## ORDER INFORMATION

| Order number | Description             |
|--------------|-------------------------|
| AM-510-EUR   | Digital Multimeter      |
| AM-520-EUR   | Digital Multimeter      |
| AM-530-EUR   | Digital Multimeter TRMS |
| AM-540-EUR   | Digital Multimeter      |
| AM-550-EUR   | Digital Multimeter TRMS |