

## Digital multimeter

### DM Series in detail



| Part No.<br>Catalogue No.            | 50120379<br>DM-20 | 50120395<br>DM-40 | 50120409<br>DM-60    | 50075454<br>DM-200    | 50075462<br>DM-210    | 50075470<br>DM-500    | 50075489<br>DM-510    |
|--------------------------------------|-------------------|-------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| True effective value                 |                   |                   |                      |                       |                       |                       | •                     |
| DC A (A max.)                        | 200 mA            | 200 mA            | 10                   | 10                    | 10                    | 10                    | 10                    |
| Maximum resolution (µA)              | 100               | 10                | 0,1                  | 0,1                   | 0,1                   | 0,01                  | 0,01                  |
| Greatest accuracy (%)                | 1,0               | 1,0               | 1,2                  | 0,8                   | 0,8                   | 0,2                   | 0,2                   |
| AC A (A max.)                        |                   |                   | 10                   | 10                    | 10                    | 10                    | 10                    |
| Maximum resolution (µA)              |                   |                   | 0,1                  | 0,1                   | 0,1                   | 0,1                   | 0,1                   |
| Greatest accuracy (%)                |                   |                   | 1,5                  | 1,0                   | 1,0                   | 1,0                   | 1,2                   |
| DC V (V max.)                        | 300               | 600               | 600                  | 1000                  | 1000                  | 1000                  | 1000                  |
| Maximum resolution (µV)              | 100               | 100               | 100                  | 100                   | 100                   | 100                   | 100                   |
| Greatest accuracy (%)                | 1,5               | 0,54              | 0,5                  | 0,3                   | 0,3                   | 0,2                   | 0,2                   |
| AC V (V max.)                        | 300               | 600               | 600                  | 750                   | 750                   | 750                   | 750                   |
| Maximum resolution (µV)              | 100 mV            | 100 mV            | 100                  | 100                   | 100                   | 100                   | 100                   |
| Greatest accuracy (%)                | 2,5               | 1,2               | 1,0                  | 1,0                   | 1,0                   | 1,1                   | 1,3                   |
| Resistance (MΩ)                      | 2                 | 20                | 20                   | 25                    | 25                    | 40                    | 40                    |
| Maximum resolution (mΩ)              | 100               | 100               | 100                  | 100                   | 100                   | 100                   | 100                   |
| Greatest accuracy (%)                | 2,5               | 0,8               | 0,8                  | 0,4                   | 0,4                   | 0,5                   | 0,5                   |
| Continuity and beeper                | •                 | •                 | •                    | •                     | •                     | •                     | •                     |
| Diode test                           | •                 | •                 | •                    | •                     | •                     | •                     | •                     |
| Capacity                             |                   |                   |                      |                       | •                     | •                     | •                     |
| Frequency measurement                |                   |                   | •                    |                       | •                     | •                     | •                     |
| Frequency threshold value (Hz)       | 45-400            | 40-400            | 40-400               | 50-500                | 50-500                | 40-500                | 40-500                |
| Temperature (T1)                     |                   | •                 |                      |                       | •                     |                       |                       |
| Temperature (twin conduit T1, T2)    |                   |                   |                      |                       |                       | •                     | •                     |
| Display type                         | Digital           | Digital           | Digital              | Digital               | Digital               | Digital               | Digital               |
| Display of updating rate (x/s)       | 2,5               | 2,5               | 2,5                  | 3                     | 3                     | 4                     | 4                     |
| Capacity                             | 2000              | 2000              | 2000                 | 2500                  | 2500                  | 9999                  | 9999                  |
| Analogue bar chart                   |                   |                   |                      |                       |                       | 42 Segmente           | 42 Segmente           |
| Updating rate analogue (x/s)         |                   |                   |                      |                       |                       | 20                    | 20                    |
| Optical RS-232 interface             |                   |                   |                      | •                     | •                     |                       |                       |
| Automatic and manual range selection |                   |                   |                      | •                     | •                     | •                     | •                     |
| Automatic stop                       |                   |                   | Sleep                | Yes                   | Yes                   | Yes                   | Yes                   |
| Contactless voltage testing (EF)     |                   |                   |                      | •                     | •                     |                       |                       |
| Data Hold (measured data memory)     |                   | •                 | •                    | •                     | •                     | •                     | •                     |
| Minimum value / maximum value        |                   |                   | only Max.            |                       |                       | Yes                   | Yes                   |
| Relative compensation function       |                   |                   |                      |                       | •                     | •                     | •                     |
| Processing loopback                  |                   |                   |                      |                       |                       | •                     | •                     |
| Harmonics (HAR)                      |                   |                   |                      |                       |                       |                       | •                     |
| Safety category classification       | II, 300 V         | III, 300 V        | III, 300 V II, 600 V | III, 600 V II, 1000 V | III, 600 V II, 1000 V | III, 600 V II, 1000 V | III, 600 V II, 1000 V |
| CE                                   | •                 | •                 | •                    | •                     | •                     | •                     | •                     |
| Limited lifetime warranty            | •                 | •                 | •                    | •                     | •                     | •                     | •                     |

**DM-20**

Digital multimeter 300 V AC/DC

**Characteristics**

- AC/DC Voltage measurement
- Current measurement in electrical circuits
- Battery test for 1.5 V and 9 V batteries
- Acoustic continuity check, diode test, resistance measurement

**Detail info**

- More detailed technical information can be found on page 624

| Technical Data       |  |
|----------------------|--|
| Voltage measurement: | AC V - 200.0 V, 300 V-DC V - 200.0, 2000 mV; 20.00, 200.0, 300 V |
| Current measurement: | DC A - 2000 $\mu$ A; 20.00, 200.0 mA                             |
| Resistance:          | 200.0, 2000 $\Omega$ ; 20.00, 200.0, 2000 k $\Omega$             |
| Measuring category:  | CAT II, 300 V  |

| Item                                 | Part No.            |          |      |
|--------------------------------------|---------------------|----------|------|
| DM-20 Digital multimeter 300 V AC/DC | <b>50120379</b>     |          |      |
| Scope of supply                      | Description         | Part No. | Page |
| Test leads                           | Fixed to the device |          |      |
|                                      | Battery 9 V         |          |      |
|                                      | Protective covering |          |      |



**DM-40**

Digital multimeter 600 V AC/DC with temperature measurement

**Characteristics**

- AC/DC Voltage measurement
- DC current measuring
- Battery test for 1.5 V and 9 V batteries
- Acoustic continuity check, diode test, resistance measurement, temperature measurement

**Detail info**

- More detailed technical information can be found on page 624

| Technical Data          |  |
|-------------------------|--|
| Voltage measurement:    | AC V - 200.0 V, 600 V-DC V - 200.0, 2000 mV; 20.00, 200.0, 600 V |
| Current measurement:    | DC A - 20.0, 200.0 mA  |
| Temperature measurement | -40 to 400°C   |
| Frequency:              | 200.0, 2000 $\Omega$ ; 20.00, 200.0, 20.00 k $\Omega$            |
| Measuring category:     | CAT II, 600 V; CAT III, 300 V                                    |

| Item  | Part No.            |          |      |
|---|---------------------|----------|------|
| DM-40 Digital multimeter 600 V AC/DC with temperature measurement | <b>50120395</b>     |          |      |
| Scope of supply   | Description         | Part No. | Page |
| TSG-3   | Test leads          | 50120344 |      |
|   | Battery 9 V         |          |      |
|   | Protective covering |          |      |



Digital multimeter



**DM-60**

Digital multimeter 600 V AC/DC

**Characteristics**

- AC/DC Voltage and current measurement
- Frequency measurement in voltage mode
- Acoustic continuity check, diode test, resistance measurement
- Max Hold and Data Hold for recording measurement results

**Detail info**

- More detailed technical information can be found on page 624

| Technical Data       |  |
|----------------------|--|
| Voltage measurement: | 200.0 mV; 2.000, 20.00, 200.0, 600 V                                     |
| Current measurement: | 200.0 $\mu$ A; 2.000, 20.00, 200.0 mA; 10.00 A                           |
| Resistance:          | 200.0, 2000 $\Omega$ ; 20.00, 200.0 k $\Omega$ ; 2.000, 20.00 M $\Omega$ |
| Measuring category:  | CAT II, 600 V; CAT III, 300 V  |

| Item                                 | Part No.            |          |      |
|--------------------------------------|---------------------|----------|------|
| DM-60 Digital multimeter 600 V AC/DC | 50120409            |          |      |
| Scope of supply                      | Description         | Part No. | Page |
| TSG-3                                | Test leads          | 50120344 |      |
|                                      | Battery 9 V         |          |      |
|                                      | Protective covering |          |      |



**DM-200**

Digital multimeter

**Characteristics**

- Automatic range selection
- Data Hold function for recording measurement results
- RS-232 compliant for connecting to a PC

**Detail info**

- More detailed technical information can be found on page 624

| Technical Data          |   |
|-------------------------|---|
| Voltage measurement:    | AC V – 250.0 mV; 2.500, 25.00, 250.0, 750 V<br>DC V – 250.0 mV; 2.500, 25.00, 250.0, 1000 V |
| Current measurement:    | 250.0, 2500 $\mu$ A; 25.00, 250.0 mA; 2.500, 10.00 A  |
| Resistance:             | 250.0 $\Omega$ ; 2.500, 25.00, 250.0 k $\Omega$ ; 2.500, 25.00 M $\Omega$                   |
| Voltage response range  | 30 V - 500 V+   |
| Temperature measurement | K-type, -4 °F to 572 °F   |
| Frequency:              | 30 Hz-200 kHz   |
| Measuring category:     | CAT III, 600 V; CAT II, 750 V AC / 1000 V DC  |

| Item                      | Part No.            |          |      |
|---------------------------|---------------------|----------|------|
| DM-200 Digital multimeter | 50075454            |          |      |
| Scope of supply           | Description         | Part No. | Page |
| TSG-3                     | Test leads          | 50120344 |      |
|                           | Batteries 1.5 V     |          |      |
|                           | Protective covering |          |      |

| Accessories | Description                               | Part No. | Page |
|-------------|---|----------|------|
| TC-20       | Nylon carry bag with carrying strap       | 50075357 | 644  |
| DMSC-2      | Interface kit for downloading data DMSC-2 | 50075551 | 643  |

## DM-210

Digital multimeter

- Display of the relative measured value offset for checking the relative measured value changes
- Frequency, temperature and capacity measurements

### Characteristics

- Automatic range selection
- Data Hold function for recording measurement results
- Automatic shut-off and display of low battery charge
- RS-232 compliant for connecting to a PC

### Detail info

- More detailed technical information can be found on page 624

| Technical Data          |   |
|-------------------------|---|
| Voltage measurement:    | AC V – 250.0 mV; 2.500, 25.00, 250.0, 750 V<br>DC V – 250.0 mV; 2.500, 25.00, 250.0, 1000 V |
| Current measurement:    | 250.0, 2500 $\mu$ A; 25.00, 250.0 mA; 2.500, 10.00 A  |
| Resistance:             | 250.0 $\Omega$ ; 2.500, 25.00, 250.0 k $\Omega$ ; 2.500, 25.00 M $\Omega$                   |
| Voltage response range  | 31 V - 500 V+   |
| Capacity                | 2.500, 25.00, 250.0 nF; 2.500, 25.00 $\mu$ F  |
| Temperature measurement | K-type, -4 °F to 572 °F   |
| Frequency:              | 31 Hz-200 kHz   |
| Measuring category:     | CAT III, 600 V; CAT II, 750 V AC / 1000 V DC  |

| Item                      | Part No.        |
|---------------------------|-----------------|
| DM-210 Digital multimeter | <b>50075462</b> |

| Scope of supply | Description              | Part No. | Page |
|-----------------|--------------------------|----------|------|
| TSG-3           | Test leads               | 50120344 |      |
|                 | Batteries 1.5 V          |          |      |
|                 | Protective covering      |          |      |
|                 | Temperature probe, blank |          |      |

| Accessories | Description                               | Part No. | Page |
|-------------|---|----------|------|
| TC-20       | Nylon carry bag with carrying strap       | 50075357 | 644  |
| DMSC-2      | Interface kit for downloading data DMSC-2 | 50075551 | 643  |





### DM-500

Digital multimeter

#### Characteristics

- Automatic range selection
- AC/DC Voltage and current measurement
- Diode test and continuity check (also acoustic)
- Frequency measurement, capacity measurement, resistance measurement
- Data Hold for recording the measured values
- Min / Max function
- Relative value mode for reference and differential measurements
- Automatic shut-off and display of low battery charge

#### Detail info

- More detailed technical information can be found on page 624

| Technical Data          |   |
|-------------------------|---|
| Voltage measurement:    | AC V – 999.9 mV; 9.999, 99.99, 750.0 V<br>DC V – 999.9 mV; 9.999, 99.99, 999.9 V                          |
| Current measurement:    | AC A – 400.0 $\mu$ A; 40.00 mA; 10.0 A;<br>DC A – 40.00, 400.0 $\mu$ A; 4.000, 40.00 mA; 4.000 A, 10.00 A |
| Resistance:             | 9.999 $\Omega$ ; 9.999, 99.99, 999.9 k $\Omega$ ; 4,000, 40.00 M $\Omega$                                 |
| Capacity                | 1.000, 10.00, 100.0 nF; 1.000, 10.00 mF   |
| Temperature measurement | K-type, -20°C to 500°C (-4°F to 932°F)  |
| Frequency:              | 9.999, 99.99, 999.9 Hz; 9.999, 50.00 kHz  |
| Measuring category:     | CAT III, 600 V; CAT II, 750 V AC / 1000 V DC  |

| Item                      | Part No.                 |          |      |
|---------------------------|--------------------------|----------|------|
| DM-500 Digital multimeter | <b>50075470</b>          |          |      |
| Scope of supply           | Description              | Part No. | Page |
| TSG-3                     | Test leads               | 50120344 |      |
|                           | Battery 9 V              |          |      |
|                           | Temperature probe, blank |          |      |

| Accessories | Description                         | Part No. | Page |
|-------------|-------------------------------------|----------|------|
| TC-20       | Nylon carry bag with carrying strap | 50075357 | 644  |

**DM-510**

Digital multimeter, True RMS

- HAR Harmonics
- True RMS measurement

**Characteristics**

- Automatic range selection
- AC/DC Voltage and current measurement
- Diode test and continuity check (also acoustic)
- Frequency measurement, capacity measurement, resistance measurement
- Data Hold for recording the measured values
- Min / Max function
- Relative value mode for reference and differential measurements
- Automatic shut-off and display of low battery charge

**Detail info**

- More detailed technical information can be found on page 624



| Technical Data          |   |
|-------------------------|---|
| Voltage measurement:    | AC V – 999.9 mV; 9.999, 99.99, 750.0 V<br>DC V – 999.9 mV; 9.999, 99.99, 999.9 V                          |
| Current measurement:    | AC A – 400.0 $\mu$ A; 40.00 mA; 10.0 A;<br>DC A – 40.00, 400.0 $\mu$ A; 4.000, 40.00 mA; 4.000 A, 10.00 A |
| Resistance:             | 9.999 $\Omega$ ; 9.999, 99.99, 999.9 k $\Omega$ ; 4,000, 40.00 M $\Omega$                                 |
| Capacity                | 1.000, 10.00, 100.0 nF; 1.000, 10.00 mF   |
| Temperature measurement | K-type, -20°C to 500°C (-4°F to 932°F)  |
| Frequency:              | 9.999, 99.99, 999.9 Hz; 9.999, 50.00 kHz  |
| Measuring category:     | CAT III, 600 V; CAT II, 750 V AC / 1000 V DC  |

| Item                                | Part No.                 |          |      |
|-------------------------------------|--------------------------|----------|------|
| DM-510 Digital multimeter, True RMS | <b>50075489</b>          |          |      |
| Scope of supply                     | Description              | Part No. | Page |
| TSG-3                               | Test leads               | 50120344 |      |
|                                     | Battery 9 V              |          |      |
|                                     | Temperature probe, blank |          |      |

| Accessories | Description                         | Part No. | Page |
|-------------|-------------------------------------|----------|------|
| TC-20       | Nylon carry bag with carrying strap | 50075357 | 644  |



## Digital multimeter

### DM-300 Series in detail



| Part No.<br>Catalogue No.            | 50118684<br>DM-300   | 50118692<br>DM-310   | 50118706<br>DM-330   | 50118714<br>DM-350   |
|--------------------------------------|----------------------|----------------------|----------------------|----------------------|
| True effective value                 | •                    |                      | •                    | •                    |
| DC A (A max.)                        |                      | 10                   | 10                   | 10                   |
| Maximum resolution (µA)              |                      | 1000                 | 1000                 | 1000                 |
| Greatest accuracy (%)                |                      | 0,9                  | 0,9                  | 0,9                  |
| AC A (A max.)                        |                      | 10                   | 10                   | 10                   |
| Maximum resolution (µA)              |                      | 1000                 | 1000                 | 1000                 |
| Greatest accuracy (%)                |                      | 1,2                  | 1,2                  | 1,2                  |
| DC V (V max.)                        | 1000                 | 1000                 | 1000                 | 1000                 |
| Maximum resolution (µV)              | 100                  | 100                  | 100                  | 100                  |
| Greatest accuracy (%)                | 0,5                  | 0,5                  | 0,5                  | 0,5                  |
| AC V (V max.)                        | 1000                 | 1000                 | 1000                 | 1000                 |
| Maximum resolution (µV)              | 100                  | 100                  | 100                  | 100                  |
| Greatest accuracy (%)                | 1                    | 1                    | 1                    | 1                    |
| Resistance (MΩ)                      | 60                   | 60                   | 60                   | 60                   |
| Maximum resolution (mΩ)              | 100                  | 100                  | 100                  | 100                  |
| Greatest accuracy (%)                | 0,7                  | 0,7                  | 0,7                  | 0,7                  |
| Continuity and beeper                | •                    | •                    | •                    | •                    |
| Diode test                           | •                    | •                    | •                    | •                    |
| Capacity                             |                      | •                    | •                    | •                    |
| Frequency measurement                | •                    | •                    | •                    | •                    |
| Frequency threshold value (Hz)       | 50-500               | 50-500               | 50-500               | 50-500               |
| Display type                         | Digital              | Digital              | Digital              | Digital              |
| Display of updating rate (x/s)       | 5                    | 5                    | 5                    | 5                    |
| Capacity                             | 6000                 | 6000                 | 6000                 | 6000                 |
| Backlighting                         |                      |                      |                      | •                    |
| Automatic and manual range selection |                      | •                    | •                    | •                    |
| Automatic stop                       | Yes                  | Yes                  | Yes                  | Yes                  |
| Contactless voltage testing (EF)     | •                    | •                    | •                    | •                    |
| Data Hold (measured data memory)     | •                    | •                    | •                    | •                    |
| Minimum value / maximum value        | Yes                  | Yes                  | Yes                  | Yes                  |
| Safety category classification       | IV 600 V, III 1000 V | IV 600 V, III 1000 V | IV 600 V, III 1000 V | IV 600 V, III 1000 V |
| CE                                   | •                    | •                    | •                    | •                    |
| Limited lifetime warranty            | •                    | •                    | •                    | •                    |

**DM-300**

Digital multimeter, TRUE RMS

**Frequency measurement**

**Characteristics**

- True RMS measuring device
- Large display
- AC/DC Voltage measurement
- EF Function for contactless voltage testing
- Automatic shut-off and display of low battery charge
- Resistance measurement
- Diode test and continuity check (also acoustic)
- Data Hold for recording the measured values
- Min / Max function

**Detail info**

- More detailed technical information can be found on page 630

| Technical Data       |   |
|----------------------|---|
| Voltage measurement: | 600.0 mV; 6,000, 60.00, 600.0, 1,000 V  |
| Current measurement: | 6.000, 10.00A (only DM-310 / DM-330 / DM-350)                                   |
| Resistance:          | 600.0 Ω; 6,000, 60.00, 600.0 kΩ; 6,000, 60.00 MΩ                                |
| Frequency:           | 40 Hz minimum, 100 Hz to 60 kHz maximum depending on the set function and range |
| Measuring category:  | CAT IV, 600 V; CAT III, 1000 V  |

| Item                                | Part No.                            |          |      |
|-------------------------------------|-------------------------------------|----------|------|
| DM-300 Digital multimeter, TRUE RMS | <b>50118684</b>                     |          |      |
| Scope of supply                     | Description                         | Part No. | Page |
| TSG-3                               | Test leads                          | 50120344 |      |
| TC-20                               | Nylon carry bag with carrying strap | 50075357 | 644  |
|                                     | Battery 9 V                         |          |      |







### DM-310

Digital multimeter

- AC/DC current measurement
- Frequency measurement
- Capacity measurement
- An audio signal warns the user if the measuring cable is incorrectly positioned

#### Characteristics

- Large display
- AC/DC Voltage measurement
- EF Function for contactless voltage testing
- Automatic shut-off and display of low battery charge
- Resistance measurement
- Diode test and continuity check (also acoustic)
- Data Hold for recording the measured values
- Min / Max function

#### Detail info

- More detailed technical information can be found on page 630

| Technical Data       |   |
|----------------------|---|
| Voltage measurement: | 600.0 mV; 6,000, 60.00, 600.0, 1,000 V  |
| Current measurement: | 6,000, 10.00A   |
| Resistance:          | 600.0 Ω; 6,000, 60.00, 600.0 kΩ; 6,000, 60.00 MΩ                                |
| Capacity             | 600.0 nF; 6,000, 60.00, 600.0, 2000 μF  |
| Frequency:           | 40 Hz minimum, 100 Hz to 60 kHz maximum depending on the set function and range |
| Measuring category:  | CAT IV, 600 V; CAT III, 1000 V  |

| Item                      | Part No.                            |          |      |
|---------------------------|-------------------------------------|----------|------|
| DM-310 Digital multimeter | <b>50118692</b>                     |          |      |
| Scope of supply           | Description                         | Part No. | Page |
| TSG-3                     | Test leads                          | 50120344 |      |
| TC-20                     | Nylon carry bag with carrying strap | 50075357 | 644  |
|                           | Battery 9 V                         |          |      |

**DM-330**

Digital multimeter, TRUE RMS

- AC/DC current measurement
- Frequency measurement
- Capacity measurement
- An audio signal warns the user if the measuring cable is incorrectly positioned

**Characteristics**

- True RMS measuring device
- Large display
- AC/DC Voltage measurement
- EF Function for contactless voltage testing
- Automatic shut-off and display of low battery charge
- Resistance measurement
- Diode test and continuity check (also acoustic)
- Data Hold for recording the measured values
- Min / Max function

**Detail info**

- More detailed technical information can be found on page 630

| Technical Data       |   |
|----------------------|---|
| Voltage measurement: | 600.0 mV; 6,000, 60.00, 600.0, 1,000 V  |
| Current measurement: | 6,000, 10.00A   |
| Resistance:          | 600.0 Ω; 6,000, 60.00, 600.0 kΩ; 6,000, 60.00 MΩ                                |
| Capacity             | 600.0 nF; 6,000, 60.00, 600.0, 2000 μF  |
| Frequency:           | 40 Hz minimum, 100 Hz to 60 kHz maximum depending on the set function and range |
| Measuring category:  | CAT IV, 600 V; CAT III, 1000 V  |

| Item                                | Part No.                            |          |      |
|-------------------------------------|-------------------------------------|----------|------|
| DM-330 Digital multimeter, TRUE RMS | <b>50118706</b>                     |          |      |
| Scope of supply                     | Description                         | Part No. | Page |
| TSG-3                               | Test leads                          | 50120344 |      |
| TC-20                               | Nylon carry bag with carrying strap | 50075357 | 644  |
|                                     | Battery 9 V                         |          |      |





### DM-350

Digital multimeter, TRUE RMS

- AC/DC current measurement
- Frequency measurement
- Capacity measurement
- An audio signal warns the user if the measuring cable is incorrectly positioned
- Backlit display

#### Characteristics

- True RMS measuring device
- Large display
- AC/DC Voltage measurement
- EF Function for contactless voltage testing
- Automatic shut-off and display of low battery charge
- Resistance measurement
- Diode test and continuity check (also acoustic)
- Data Hold for recording the measured values
- Min / Max function

#### Detail info

- More detailed technical information can be found on page 630

| Technical Data       |   |
|----------------------|---|
| Voltage measurement: | 600.0 mV; 6,000, 60.00, 600.0, 1,000 V  |
| Current measurement: | 6,000, 10.00A   |
| Resistance:          | 600.0 Ω; 6,000, 60.00, 600.0 kΩ; 6,000, 60.00 MΩ                                |
| Capacity             | 600.0 nF; 6,000, 60.00, 600.0, 2000 μF  |
| Frequency:           | 40 Hz minimum, 100 Hz to 60 kHz maximum depending on the set function and range |
| Measuring category:  | CAT IV, 600 V; CAT III, 1000 V  |

| Item                                | Part No.                            |          |      |
|-------------------------------------|-------------------------------------|----------|------|
| DM-350 Digital multimeter, TRUE RMS | <b>50118714</b>                     |          |      |
| Scope of supply                     | Description                         | Part No. | Page |
| TSG-3                               | Test leads                          | 50120344 |      |
| TC-20                               | Nylon carry bag with carrying strap | 50075357 | 644  |
|                                     | Battery 9 V                         |          |      |

**DM-800 Series in detail**


| Part No.                             | 50075497                 | 50075500                 | 50075519                 | 50077970                 |
|--------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Catalogue No.                        | DM-800                   | DM-810                   | DM-820                   | DM-860                   |
| True effective value                 |                          | •                        | •                        | •                        |
| DC A (A max.)                        | 10,00                    | 10,00                    | 10,00                    | 10,000                   |
| Maximum resolution (µA)              | 0,1                      | 0,1                      | 0,1                      | 0,01                     |
| Greatest accuracy (%)                | 0,2                      | 0,2                      | 0,2                      | 0,1                      |
| AC A (A max.)                        | 10,00                    | 10,00                    | 10,00                    | 10,000                   |
| Maximum resolution (µA)              | 0,1                      | 0,1                      | 0,1                      | 0,01                     |
| Greatest accuracy (%)                | 0,6                      | 0,6                      | 0,6                      | 0,5                      |
| DC V (V max.)                        | 1000                     | 1000                     | 1000                     | 1000,0                   |
| Maximum resolution (µV)              | 10                       | 10                       | 10                       | 1                        |
| Greatest accuracy (%)                | 0,06                     | 0,06                     | 0,06                     | 0,02                     |
| AC A (A max.)                        | 1000                     | 1000                     | 1000                     | 1000,0                   |
| Maximum resolution (µV)              | 10                       | 10                       | 10                       | 10                       |
| Greatest accuracy (%)                | 0,5                      | 0,5                      | 0,5                      | 0,3                      |
| Resistance (MΩ)                      | 50                       | 50                       | 50                       | 50                       |
| Maximum resolution (mΩ)              | 10                       | 10                       | 10                       | 10                       |
| Greatest accuracy (%)                | 0,1                      | 0,1                      | 0,1                      | 0,07                     |
| Continuity and beeper                | •                        | •                        | •                        | •                        |
| Diode test                           | •                        | •                        | •                        | •                        |
| Capacity                             | •                        | •                        | •                        | •                        |
| Frequency measurement                | •                        | •                        | •                        | •                        |
| Frequency threshold value (Hz)       | 40-500                   | 40-500                   | 40-500                   | 20-100 k                 |
| Temperature (T1)                     |                          |                          | •                        | •                        |
| Temperature (twin conduit T1, T2)    |                          |                          |                          | •                        |
| Display type                         | Digital                  | Digital                  | Digital                  | Digital                  |
| Display of updating rate (x/s)       | 5                        | 5                        | 5                        | 5                        |
| Capacity                             | 5000                     | 5000                     | 5000                     | 50.000/500.000           |
| Backlighting                         | •                        | •                        | •                        | •                        |
| Analogue bar chart                   | 52 Segmente              | 52 Segmente              | 52 Segmente              | 42 Segmente              |
| Updating rate analogue (x/s)         | 60                       | 60                       | 60                       | 60                       |
| Zoom analogue bar chart              |                          |                          | •                        |                          |
| Optical RS-232 interface             | •                        | •                        | •                        | •                        |
| Automatic and manual range selection | •                        | •                        | •                        | •                        |
| Automatic stop                       | Yes                      | Yes                      | Yes                      | Yes                      |
| Peak Hold                            |                          |                          | •                        | •                        |
| Data Hold (measured data memory)     | •                        | •                        | •                        | •                        |
| Minimum value / maximum value        |                          |                          | Yes                      | Yes                      |
| Relative compensation function       |                          |                          | •                        | •                        |
| Processing loopback                  |                          |                          |                          | •                        |
| Instrument lead calibration          | •                        | •                        | •                        |                          |
| Operating clearance                  |                          |                          |                          | •                        |
| Safety category classification       | IV, 600 V<br>III, 1000 V | IV, 600 V<br>III, 1000 V | IV, 600 V<br>III, 1000 V | IV, 600 V<br>III, 1000 V |
| CE                                   | •                        | •                        | •                        | •                        |
| Limited lifetime warranty            | •                        | •                        | •                        | •                        |



## DM-800

Digital multimeter

### Characteristics

- Automatic range selection, 3 5/6-character display with a display range of 5000 for greater precision
- Carrying out frequency and capacity measurements as well as diode tests and continuity checks
- Data Hold function for recording the measurement results
- RS-232 compliant, for connection to a PC via an optional DMSC-8L interface
- Low-ohm range calibration, with the resistance of the test leads being subtracted
- Backlit display simplifies read-off

### Detail info

- More detailed technical information can be found on page 635

| Technical Data          |   |
|-------------------------|---|
| Voltage measurement:    | 50.00, 500.0 mV; 5.000, 50.00, 500.0 1000 V   |
| Current measurement:    | 500.0, 5000 $\mu$ A; 50.00, 500.0 mA; 5.000, 10.00 A                                  |
| Resistance:             | 50.00, 500.0 $\Omega$ ; 5.000, 50.00, 500.0 k $\Omega$ ; 5.000, 50.00 M $\Omega$      |
| Capacity                | 50.00, 500.0 nF; 5.000, 50.00, 500.0, 9999 $\mu$ F                                    |
| Temperature measurement | K-type, -50 $^{\circ}$ C to 1000 $^{\circ}$ C (-58 $^{\circ}$ F to 1832 $^{\circ}$ F) |
| Frequency:              | 10 Hz - 125 kHz   |
| Measuring category:     | CAT IV, 600 V; CAT III, 1000 V  |

| Item                      | Part No.        |          |      |
|---------------------------|-----------------|----------|------|
| DM-800 Digital multimeter | <b>50075497</b> |          |      |
| Scope of supply           | Description     | Part No. | Page |
| TSG-3                     | Test leads      | 50120344 |      |
|                           | Battery 9 V     |          |      |

| Accessories | Description                         | Part No. | Page |
|-------------|-------------------------------------|----------|------|
| TC-20       | Nylon carry bag with carrying strap | 50075357 | 644  |
| DMSC-8L     | Interface kit for downloading data  | 50075560 | 643  |

**DM-810**

Digital multimeter, True RMS

- TRUE RMS measurement for uncompromising accuracy

**Characteristics**

- Automatic range selection, 3 5/6-character display with a display range of 5000 for greater precision
- Carrying out frequency and capacity measurements as well as diode tests and continuity checks
- Data Hold function for recording the measurement results
- RS-232 compliant, for connection to a PC via an optional DMSC-8L interface
- Low-ohm range calibration, with the resistance of the test leads being subtracted
- Backlit display simplifies read-off

**Detail info**

- More detailed technical information can be found on page 635



| Technical Data          |   |
|-------------------------|---|
| Voltage measurement:    | 50.00, 500.0 mV; 5.000, 50.00, 500.0 1000 V   |
| Current measurement:    | 500.0, 5000 $\mu$ A; 50.00, 500.0 mA; 5.000, 10.00 A                                  |
| Resistance:             | 50.00, 500.0 $\Omega$ ; 5.000, 50.00, 500.0 k $\Omega$ ; 5.000, 50.00 M $\Omega$      |
| Capacity                | 50.00, 500.0 nF; 5.000, 50.00, 500.0, 9999 $\mu$ F                                    |
| Temperature measurement | K-type, -50 $^{\circ}$ C to 1000 $^{\circ}$ C (-58 $^{\circ}$ F to 1832 $^{\circ}$ F) |
| Frequency:              | 11 Hz - 125 kHz   |
| Measuring category:     | CAT IV, 600 V; CAT III, 1000 V  |

| Item                                | Part No.                            |          |      |
|-------------------------------------|-------------------------------------|----------|------|
| DM-810 Digital multimeter, True RMS | <b>50075500</b>                     |          |      |
| Scope of supply                     | Description                         | Part No. | Page |
| TSG-3                               | Test leads                          | 50120344 |      |
| TC-20                               | Nylon carry bag with carrying strap | 50075357 | 644  |
|                                     | Battery 9 V                         |          |      |

| Accessories | Description                        | Part No. | Page |
|-------------|------------------------------------|----------|------|
| DMSC-8L     | Interface kit for downloading data | 50075560 | 643  |



### DM-820

Digital multimeter, True RMS

- Recording of maximum, minimum and maximum/minimum results
- Recording of peak value (5 ms peak hold) max, min and max/min results
- Display of the relative measured value offset for checking the relative measured value changes
- Temperature measurement

#### Characteristics

- Automatic range selection, 3 5/6-character display with a display range of 5000 for greater precision
- Carrying out frequency and capacity measurements as well as diode tests and continuity checks
- Data Hold function for recording the measurement results
- RS-232 compliant, for connection to a PC via an optional DMSC-8L interface
- Low-ohm range calibration, with the resistance of the test leads being subtracted
- Backlit display simplifies read-off

#### Detail info

- More detailed technical information can be found on page 635

| Technical Data          |   |
|-------------------------|---|
| Voltage measurement:    | 50.00, 500.0 mV; 5.000, 50.00, 500.0 1000 V             |
| Current measurement:    | 500.0, 5000 µA; 50.00, 500.0 mA; 5.000, 10.00 A         |
| Resistance:             | 50.00, 500.0 Ω; 5.000, 50.00, 500.0 kΩ; 5.000, 50.00 MΩ |
| Capacity                | 50.00, 500.0 nF; 5.000, 50.00, 500.0, 9999 µF           |
| Temperature measurement | K-type, -50 °C to 1000 °C (-58 °F to 1832 °F)           |
| Frequency:              | 12 Hz - 125 kHz   |
| Measuring category:     | CAT IV, 600 V; CAT III, 1000 V                          |

| Item                                | Part No.                            |          |      |
|-------------------------------------|-------------------------------------|----------|------|
| DM-820 Digital multimeter, True RMS | <b>50075519</b>                     |          |      |
| Scope of supply                     | Description                         | Part No. | Page |
| TSG-3                               | Test leads                          | 50120344 |      |
| TC-20                               | Nylon carry bag with carrying strap | 50075357 | 644  |
|                                     | Battery 9 V                         |          |      |
|                                     | Temperature probe, blank            |          |      |

| Accessories | Description                        | Part No. | Page |
|-------------|------------------------------------|----------|------|
| DMSC-8L     | Interface kit for downloading data | 50075560 | 643  |

**DM-860**

Industrial digital multimeter, True RMS

**Characteristics**

- TRUE RMS, 5 5/6-character display with a display range of 500,000 for greater precision
- Acoustic warning if the event of incorrectly connected test leads prevents damage to the measuring device
- Recording of maximum, minimum and maximum/minimum as well as data-hold values
- Recording of peak value (Peak Hold) max, min and max/min display
- Display of the relative measured value offset for checking the relative measured value changes
- Carrying out frequency, temperature and capacity measurements as well as diode tests and continuity checks
- Temperature measurements up to 1000°C
- Automatic range selection for effortless and time-saving operation
- RS-232-compliant, for connection to a PC via an optional DMSC-9 interface
- Analogue 42-segment bar chart display simplifies the checking of fast changes
- Clear backlit display simplifies read-off under all lighting conditions



**Detail info**

- More detailed technical information can be found on page 635

| Technical Data          |  |
|-------------------------|--|
| Voltage measurement:    | 500.00 mV; 5.0000, 50.000, 500.00, 1,000.0 V                   |
| Current measurement:    | 500.00, 5000.0 µA; 50.000, 500.00 mA; 5.0000, 10.000 A         |
| Resistance:             | 500.00 Ω; 5.0000, 50.000, 500.00 kΩ; 5.0000, 50.000 MΩ         |
| Capacity                | 50.00, 500.0 nF; 5.000, 50.00, 500.0, 9999 µF                  |
| Temperature measurement | K-type, -50 °C to 1000 °C (-58 °F to 1832 °F)                  |
| Frequency:              | 5 Hz - 200 kHz sine wave; 5 Hz - 2 MHz square wave logic level |
| Measuring category:     | CAT IV, 600 V; CAT III, 1000 V                                 |

| Item   | Part No.                            |          |      |
|--|-------------------------------------|----------|------|
| DM-860 Industrial digital multimeter, True RMS | <b>50077970</b>                     |          |      |
| Scope of supply                                | Description                         | Part No. | Page |
| TSG-3  | Test leads                          | 50120344 |      |
| TC-20  | Nylon carry bag with carrying strap | 50075357 | 644  |
|  | Battery 9 V                         |          |      |
|  | Temperature probe, blank            |          |      |

| Accessories | Description                        | Part No. | Page |
|-------------|------------------------------------|----------|------|
| DMSC-9      | Interface kit for downloading data | 50077554 | 644  |



## Digital multimeter

### GT-220, GT-540 Series in detail



| Part No.                                | 50077481   | 50077490   |
|---|------------|------------|
| Catalogue No.                           | GT-220     | GT-540     |
| DC V (V max.)                           | 1000       | 1000       |
| Maximum resolution (V)                  | 0,001      | 0,001      |
| Greatest accuracy (%)                   | 1,2        | 0,8        |
| AC A (A max.)                           | 1000       | 1000       |
| Maximum resolution (V)                  | 0,001      | 0,001      |
| Greatest accuracy (%)                   | 2,5        | 1,5        |
| Resistance ( $\Omega$ )                 | 6,000 M    | 6,000 M    |
| Maximum resolution ( $\Omega$ )         | 1          | 0,1        |
| Greatest accuracy (%)                   | 0,9        | 0,9        |
| Continuity and beeper                   | •          | •          |
| Diode test                              |            | •          |
| Capacity                                |            | •          |
| Frequency threshold value (Hz)          | 50-400     | 50-400     |
| Display type                            | Digital    | Digital    |
| Display of updating rate (x/s)          | 5          | 5          |
| Capacity                                | 6000       | 6000       |
| Display of low battery charge           | •          | •          |
| Automatic range selection               | •          | •          |
| Automatic stop                          | Yes        | Yes        |
| Data Hold (measured data memory)        | •          | •          |
| UL                                      | •          | •          |
| Measuring category classification       | IV, 1000 V | IV, 1000 V |
| CE                                      | •          | •          |
| Contactless determination of AC voltage | •          | •          |
| Limited lifetime warranty               | •          | •          |

**GT-220**

Electrical testing equipment

- **Trouble-free, automatic measurement of voltage and resistance**

**Characteristics**

- Low impedance rules out stray voltage (ghost voltage)
- Automatic range selection ensures fast measurements
- Measurement of direct and alternating voltage
- Contactless voltage check for determining current-carrying lines
- Longer battery service life due to automatic shut-off
- Display of low battery charge
- Resistance measurement
- Acoustic continuity check
- Data Hold function for recording the measurement results

**Detail info**

- More detailed technical information can be found on page 640



| Technical Data       |                                  |
|----------------------|----------------------------------|
| Voltage measurement: | 6.000, 60.00, 600.0, 1000 V      |
| Resistance:          | 6.000, 60.00, 600.0 KΩ; 6.000 MΩ |
| Measuring category:  | CAT IV, 1,000 V                  |

| Item                                | Part No.                            |          |      |
|-------------------------------------|-------------------------------------|----------|------|
| GT-220 Electrical testing equipment | <b>50077481</b>                     |          |      |
| Scope of supply                     | Description                         | Part No. | Page |
| TC-20                               | Nylon carry bag with carrying strap | 50075357 | 644  |
|                                     | Test leads                          | 50113739 |      |
|                                     | Battery 9 V                         |          |      |





## GT-540

Electrical testing equipment

### Trouble-free, automatic measurement of voltage and resistance

#### Characteristics

- Low impedance rules out stray voltage (ghost voltage)
- Automatic range selection ensures fast measurements
- Measurement of direct and alternating voltage
- Contactless voltage check for determining current-carrying lines
- Longer battery service life due to automatic shut-off
- Display of low battery charge
- Resistance measurement
- Acoustic continuity check
- Data Hold function for recording the measurement results
- High-impedance measurement of direct and alternating voltage for load-sensitive circuits
- Capacity measurement
- Diode test
- Low-impedance range with fast continuity test
- Optimised measuring precision
- Automatic and manual range selection

#### Detail info

- More detailed technical information can be found on page 640

| Technical Data       |   |
|----------------------|---|
| Voltage measurement: | 6.000, 60.00, 600.0, 1000 V             |
| Resistance:          | 6.000, 60.00, 600.0 KΩ; 6.000 MΩ        |
| Capacity             | 100.0, 1000.0 nF; 10.00, 100.0, 2000 μF |
| Measuring category:  | CAT IV, 1,000 V                         |

| Item                                | Part No.                            |          |      |
|-------------------------------------|-------------------------------------|----------|------|
| GT-540 Electrical testing equipment | <b>50077490</b>                     |          |      |
| Scope of supply                     | Description                         | Part No. | Page |
| TC-20                               | Nylon carry bag with carrying strap | 50075357 | 644  |
|                                     | Test leads                          | 50113739 |      |
|                                     | Battery 9 V                         |          |      |

**DMSC-2**

Interface Kit for DM-200 / DM-210

**Characteristics**

- For connecting to a serial PC port for saving the data recorded by digital multimeters
- For recording and graphically representing data in real time
- For exporting data to diskette for analysis with every type of table calculation program

| Technical Data         |  |
|------------------------|--|
| Software requirements: | Windows ME/98/95 or Windows XP/2000/NT4  |
| Hardware requirements: | Processor and main memory must, as a minimum, satisfy the requirements for Windows |
| Monitor:               | Minimum resolution of 640 x 480, 800 x 600 recommended                             |
| Hard disc:             | Minimum 20 Megabyte of disc space  |
| Connection:            | Free serial COM connection with 9-pole plug.                                       |

| Item                                      | Part No.        |
|---|-----------------|
| Interface kit for downloading data DMSC-2 | <b>50075551</b> |



**DMSC-8L**

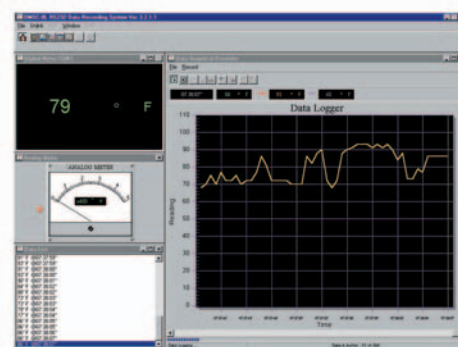
Interface Kit for DM-800 / DM-810 / DM-820

**Characteristics**

- For connecting to a serial PC port for saving the data recorded by digital multimeters
- For recording and graphically representing data in real time
- For exporting data to diskette for analysis with every type of table calculation program

| Technical Data         |  |
|------------------------|--|
| Software requirements: | Windows ME/98/95 or Windows XP/2000/NT4  |
| Hardware requirements: | Processor and main memory must, as a minimum, satisfy the requirements for Windows |
| Monitor:               | Minimum resolution of 640 x 480, 800 x 600 recommended.                            |
| Hard disc:             | Minimum 20 Megabyte of disc space  |
| Connection:            | Free serial COM port with 9-pole plug  |

| Item                               | Part No.        |
|------------------------------------|-----------------|
| Interface kit for downloading data | <b>50075560</b> |





**DMSC-9**

Interface Kit for DM-860

**Characteristics**

- For connecting to a serial PC port for saving the data recorded by digital multimeters
- For recording and graphically representing data in real time
- For exporting data to diskette for analysis with every type of table calculation program

| Technical Data         |  |
|------------------------|--|
| Software requirements: | Windows ME/98/95 or Windows XP/2000/NT4  |
| Hardware requirements: | Processor and main memory must, as a minimum, satisfy the requirements for Windows |
| Monitor:               | Minimum resolution of 640 x 480, 800 x 600 recommended                             |
| Hard disc:             | Minimum 20 Megabyte of disc space  |
| Connection:            | Free serial COM port with 9-pole plug  |

| Item                               | Part No.        |
|------------------------------------|-----------------|
| Interface kit for downloading data | <b>50077554</b> |



**TC-20**

Nylon carry bag with carrying strap

**Suitable for:**

- Series 200, Series 500 and Series 800 measuring instruments.

**Characteristics**

- With inner pocket for test leads

| Item                                | Part No.        |
|-------------------------------------|-----------------|
| Nylon carry bag with carrying strap | <b>50075357</b> |