

# **ZERA**

# MT78x Product Catalogue

Doc.No: 100352716 Version from: 01.01.2024

### Device



# STANDARD SET MT786 Three Phase Test System Inclusive adjustment and factory calibration for one mains frequency.

Ord.No. **1016709xx** 

| Calibration   | Ord.No. |  |
|---------------|---------|--|
| Factory 50 Hz | xx → 00 |  |
| Factory 60 Hz | xx → 01 |  |
| DAkkS 50 Hz   | xx → 02 |  |
| DAkkS 60 Hz   | xx → 03 |  |

MT786 consists of a Reference Meter and a current and voltage source integrated <u>in one device</u>. Test voltage and test current are generated by the test system or measured directly from the mains when using the test system <u>without</u> a source.

MT786 is designed for testing of one test specimen.

#### Configuration:

- 3~ phase current generation up to 120 A (AC)
- 3~ phase voltage generation up to 500 V (AC)
- Direct current measurement up to 500 V / 120 A
- Accuracy for power/energy measurement: < ±0.05 %</li>
- · Software option for curve definition
- · Software option for selective power measurement

#### Inclusive the following accessories:

- Calibration for one mains frequency
- Power cord "Class I grounded plug type E/F to IEC 60320 C13", 2.5 m
- Laboratory cable with stackable plug, 2 m 3x red, 3x yellow, 3x blue, 1x black
- Accessories bag with connection adapters
- Current cable up to 120 A, on double-side socket, 2.0m 2x red, 2x yellow, 2x blue
- Plug-in adapter pin 4.2 mm, 6x
- TK326, scanning head with holding device and connection cable for scanning head input (SC)
- Interface cable, RS232
- USB flash drive (store customer data and measuring values)
- Complete documentation as pdf files on USB flash drive



#### MT786 Three Phase Test System

Inclusive adjustment and factory calibration for <u>one</u> mains frequency.

| Calibration   | Ord.No.             |  |
|---------------|---------------------|--|
| Factory 50 Hz | xx → 00             |  |
| Factory 60 Hz | xx → 01             |  |
| DAkkS 50 Hz   | $xx \rightarrow 02$ |  |

MT786 consists of a Reference Meter and a current and voltage source integrated in one device. MT786 is designed for testing of one test specimen.

#### **Configuration:**

DAkkS 60 Hz

- 3~ phase current generation up to 500 V / 120 A (AC)
- Direct current measurement up to 500 V / 120 A (AC)
- Accuracy for power/energy measurement: < ±0.05 %
- Software option for curve definition
- · Software option for selective power measurement



#### MT781 Three Phase Test System

Inclusive adjustment and factory calibration for <u>one</u> mains frequency.

| Calibration   | Ord.No.             |  |
|---------------|---------------------|--|
| Factory 50 Hz | xx → 00             |  |
| Factory 60 Hz | xx → 01             |  |
| DAkkS 50 Hz   | xx → 02             |  |
| DAkkS 60 Hz   | $xx \rightarrow 03$ |  |

MT781 consists of a Reference Meter and a current and voltage source integrated <u>in one device</u>. MT781 is designed for testing of one test specimen.

#### Configuration:

- 3~ phase generation up to 500 V / 120 A (AC)
- Direct current measurement up to 500 V / 120 A (AC)
- Accuracy for power/energy measurement: < ±0.1 %
- Software option for curve definition
- Software option for selective power measurement

| Ord.No. | 1016711xx |
|---------|-----------|
|---------|-----------|

Ord.No.

1016710xx

#### **Power Cords**



#### Power cord "Plug type B to IEC 60320 C13", 2.5 m

For supply via power socket.

- 1x plug type B
- 1x socket IEC 60320 C13

Ord.No. **X00006459** 



#### Power cord "Plug type I to IEC 60320 C13", 2.5 m

For supply via power socket.

- 1x plug type I (AS/NZS 3112, 3-pin)
- 1x socket IEC 60320 C13

Ord.No. **X00006460** 



# Power cord "Plug type G (BS 1363) to IEC 60320 C13", 2.5 m

For supply via power socket.

- 1x Plug type G (BS 1363)
- 1x socket IEC 60320 C13

Ord.No. **X00009832** 



# Power cord "Class I grounded plug type E/F to IEC 60320 C13", 2.5 m

For supply via power socket.

- 1x class I grounded plug type E/F (CEE 7/7), straight
- 1x socket IEC 60320 C13

Ord.No. **M00481006** 



# Power cord with protective earth "stackable safety plug to IEC 60320 C13", 2,5 m

For supply via test voltage.

- 3x stackable, spring-loaded 4 mm plugs with rigid insulating sleeve
- (1x black, 1x blue, 1x yellow/green)
- 1x socket IEC 60320 C13



# Power cord "Plug type D (BS 546) to IEC 60320 C13", 1.8 m

For supply via power socket.

- 1x Plug type D (BS 546)
- 1x socket IEC 60320 C13

Ord.No. **100929900** 



# Power cord "Plug type H" to IEC 60320 C13", 1.8 m

For supply via power socket.

- 1x Plug type H
- 1x socket IEC 60320 C13

Ord.No. 100929903



#### **ZZ8625 Power connection box**

Connections: red, yellow, blue; black For supply via test voltage. Connecting the instrument via the power connection box fulfills the requirements of CAT IV. Ord.No. **101030410** 

### **Current Clamps (see also Special Accessories)**



#### MT3460, AC current clamp set 120 A

The CT set is electronically compensated. Calibration independent from the measuring standard inclusive adjustment and factory calibration for one mains frequency.

Ord.No. **1016683xx** 

| Calibration   | Ord.No. |  |
|---------------|---------|--|
| Factory 50 Hz | xx → 00 |  |
| Factory 60 Hz | xx → 01 |  |
| DAkkS 50 Hz   | xx → 02 |  |
| DAkkS 60 Hz   | xx → 03 |  |

# DAkkS calibrations are only performed together with the corresponding measuring standard.

Clamping diameter: 16 mmOutput: D-Sub plug 25-pin

• Measuring range: 5 mA ... 120 A

• Error of measurement:

< ±0.15% @ 500 mA ... 120 A < ±0.3% @ 100 mA ...< 500 mA

• Frequency range: 45 ... 65 Hz

Overvoltage Category: CAT III 600 V / CAT IV 300 V



#### MT3416, AC current clamp set 300 A

The CT set is electronically compensated. Calibration independent from the measuring standard inclusive adjustment and factory calibration for one mains frequency.

| Ord.No. | 1016692xx |
|---------|-----------|
|---------|-----------|

| Calibration   | Ord.No. |  |
|---------------|---------|--|
| Factory 50 Hz | xx → 00 |  |
| Factory 60 Hz | xx → 01 |  |
| DAkkS 50 Hz   | xx → 02 |  |
| DAkkS 60 Hz   | xx → 03 |  |

DAkkS calibrations are only performed together with the corresponding measuring standard.

Clamping diameter: 52 mmOutput: D-Sub plug 25-pin

Measuring range: 100 mA ... 300 A

• Error of measurement:

< ±0,15 % / < 0,1° (1 A ... 300 A) < ±0,3 % / < 0,1° (500 mA ... 1 A) < ±0,6 % / < 0,15° (200 mA ... 500 mA)

Frequency range: 45 ... 65 Hz

Overvoltage Category: CAT III 600 V / CAT IV 300 V

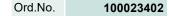
### **Quick Connection Cable (see also Special Accessories)**



Quick connection cable "voltage/rigid sleeve" for MT series, 2.5 m, phase colours: red/yellow/blue/black
To prevent connecting faults on the instrument's side.

Measurement category III (CAT III).

- Instrument's side: 1x 4-pin connector with anti-twist safeguard.
- Mains side: 4x stackable, spring-loaded 4 mm plug with rigid insulating sleeve - 1x red, 1x yellow, 1x blue, 1x black
- · Cable cross-section: 2.5 gmm





Quick connection cable for "current/rigid sleeve", 2.5 m, phase colours: red/yellow/blue (max. 24 A) for MT681, MT551, MT78x

To prevent connecting faults on the instrument's side.

- Instrument's side: 1x 6-pin connector with anti-twist safeguard.
- Mains side: 6x stackable, spring-loaded 4 mm plug with rigid insulating sleeve
- 2x red, 2x yellow, 2x blue
- Cable cross-section: 2.5 qmm

### **Current and Voltage Cables (see also Special Accessories)**



# Laboratory cable with stackable plug, red, 2.0 m Measurement category III (CAT III).

- 2x stackable 4 mm plugs with rigid insulating sleeve
- Lead cross section: 2.5 qmm

Ord.No. **X00007597** 



# Laboratory cable with stackable plug, yellow, 2.0 m Measurement category III (CAT III).

- 2x stackable 4 mm plugs with rigid insulating sleeve
- Lead cross section: 2.5 qmm

Ord.No. **X00006907** 



# Laboratory cable with stackable plug, blue, 2.0 m Measurement category III (CAT III).

- 2x stackable 4 mm plugs with rigid insulating sleeve
- Lead cross section: 2.5 qmm

Ord.No. **X00007598** 



### Laboratory cable with stackable plug, black, 2.0 m Measurement category III (CAT III).

- 2x stackable 4 mm plugs with rigid insulating sleeve
- Lead cross section: 2.5 qmm

Ord.No. **X00006910** 



### Current cable up to 120 A, on double-side socket, 2.0

m,

- 2x 6 mm socket
- · Lead cross section: 35 qmm
- Phase colours: Please specify the colour code when ordering. The cables will get a corresponding coloured marking.

**21=black**, **22=red**, **23=blue**, **24= yellow**, **25=green**, **26=violet**, **27=brown**, **28=grey**, **29=white** 

xx please select the colour

Ord.No. **1011979xx** 

#### Plug-in Adapter Pin 3 mm

For meter connection via terminal, realised as brass silver plated. The two sides of the pin has different diameters and functions.

- 1 Side 6 mm pin for test leads
- 1 Side 3 mm-pin for meter terminals

The 6 mm pin is special designed for ZERA 6 mm socket system used with current test leads.

Ord.No. **Z10120115** 

#### Plug-in Adapter Pin 4,2 mm

For meter connection via terminal, realised as brass silver plated.
The two sides of the pin has different diameters and functions.

- 1 Side 6 mm pin for test leads
- 1 Side 4,2 mm-pin for meter terminals

The 6 mm pin is special designed for ZERA 6 mm socket system used with current test leads.

Ord.No. **Z10120112** 

### Plug-in Adapter Pin 5,5 mm

For meter connection via terminal, realised as brass silver plated. The two sides of the pin has different diameters and functions.

- 1 Side 6 mm pin for test leads
- 1 Side 5,5 mm-pin for meter terminals

The 6 mm pin is special designed for ZERA 6 mm socket system used with current test leads.

Ord.No. **Z10120108** 

#### Plug-in Adapter Pin 6 mm

The adapter is realized in brass silver plated. The two sides of the pin have the same dimensions (6 mm) and are special designed for ZERA 6 mm socket system used with current test leads and/or connection to modern ZERA meter test system (MTS).

Ord.No. **Z10120109** 



#### Plug-in Adapter cable lug 8,5 mm closed

For current connection via screw terminals, realised as brass silver plated. The two sides of the pin has different connectors and functions.

- 1 Side 6 mm pin for test leads
- 1 Side 8,5 mm-cable lug closed in for screw terminals

The 6 mm pin is special designed for ZERA 6 mm socket system used with current test leads.

Ord.No. **100640906** 



#### Plug-in Adapter cable lug 10,5 mm closed

For current connection via screw terminals, realised as brass silver plated. The two sides of the pin has different connectors and functions.

- 1 Side 6 mm pin for test leads
- 1 Side 10,5 mm-cable lug closed in for screw terminals

The 6 mm pin is special designed for ZERA 6 mm socket system used with current test leads.

Ord.No. 100640907

#### Software



#### Software SSM3000 / MTVis

The software runs under Windows 7 or 10.

• SSM3000: For external control via PC.

• MTVis: To readout and display saved data.

The software can be downloaded at www.zera.de.

Ord.No. 100090720

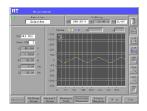


### **Software Option for Curve Definition**

Software module for generation of harmonic signals:

- Voltage up to 40<sup>th</sup> max. amplitude 40% from fundamental
- Current up to 40<sup>th</sup> max. amplitude 40% from fundamental

The module included also defining of programmable wave forms in current and/or voltage line.



### Software option for selective power measurement MT681/MT680s/MT78x/MT36x

To determine and display active, reactive and apparent power on each harmonic value up to 40<sup>th</sup>.

Ord.No. 100078860



#### MT3703 WinSAM software

The MT3703 WinSAM control software is used to create test sequences and for carrying out automatic tests. The software will be installed and configured on an external control computer/Laptop (PC).

The software package contains:

- 1 x USB memory stick with the MT3703 WinSAM Setup file
- 1 x USB-Dongle with the WinSAM license

The installation and configuration of the WinSAM software on the customer's PC can be carried out either at ZERA or remotely via an internet remote session. A customer PC with administrator rights and a stable internet connection are mandatory for remote session.

100061700

Ord.No.



#### **Installation and Configuration**

Installation and configuration of WinSAM software on customer PC, if required.

Only valid with a bundle purchase of the MT3703 WinSAM or WinSAM-EMOB software.

Max. duration of the Internet remote session approx. 4 hours.

Ord.No. 100005646

### Impulse Sensor (see also Special Accessories)



#### TK118, scanning head

For detection of LED signals of electronic meters.

 Fixing: Via provided suction cup or via optionally available stretchable holding device for scanning heads TK326/TK118.



#### TK326, scanning head without holding device

For detection of rotor disc markings on Ferraris meters and LED signals on electronic meters.

• Fixing: Via stretchable holding device for scanning heads TK326/TK118.

Ord.No. **101064901** 



#### Holding device for scanning head TK326/ TK118

Stretchable holding device to fix the scanning head TK326 or TK118 at the electricity meter.

• Maximum wingspan: 19.0 cm.

Ord.No. 100319600



#### K121, S0 pulse converter with measuring leads

For pulse detection of floating contacts as well as of S0 pulse output on electricity meters. Including two laboratory cables with safety plug/connection pin.

Ord.No. 100004210



#### Connection cable for RJ10 socket input (SC)

The spiral cable for connecting of TKxxx or K121 to the ZERA instrument.

- 2x Modular connector RJ10
- Length: 1.00 m / expanded: 6.00 m

Ord.No. **Z10353027** 



#### ZZ8636 Start-stop pushbutton for signal entry

The start-stop pushbutton is used for manual pulse entry when testing electricity meters.

### Connectors (see also Special Accessories)



#### Accessories bag with connection adapters

| 01 | Accessories bag                  | 100214400 |
|----|----------------------------------|-----------|
| 03 | Spring clip                      | 100606750 |
| 04 | 4 mm plug adapter (banana plug)  | X00004962 |
| 10 | Adapter for terminal blocks      | 101584400 |
| 10 | Connecting terminals for current | X00011923 |
| 03 | 4 mm test clips                  | X00009329 |
|    | (crocodile clips), slim          |           |

(crocodile clips), slim
03 4 mm test clips X00010059

(crocodile clips), wide

10 Fuse, 5 A / 500 V AC, M00460187

6.3 mm x 32 mm, time-lag

### Transport (see also Special Accessories)



# Trolley transportation system for MT78x, pneumatic tires Ø180mm

3-stages extendable pull-out handle with wheels for comfortable transport. Via a snap-lock system the device case can be securely fixed and easily released.

Ord.No. **100425102** 

Ord.No.

100023730



#### **Accessories case**

Aluminum case with inlet from rigid foam, designed for

- · Test leads
- Scanning head
- Current clamps
- Etc.

Overall dimensions:

42 cm x 50 cm × 16 cm (H x W x D)

Please clarify whether the case size is suitable for the ordered accessories.

### Standard Accessories (see also Special Accessories)



#### **USB Flash Drive**

To store customer data and measuring values. Provides easy data transfer from the instrument to the PC. This flash drive is special formated for ZERA instruments. Ord.No.

Ord.No.

101198310

X00004823



### Interface cable, RS232, crossed wired (null modem cable)

Connection cable for communication

- 2x D-Sub socket, 9-pin
- Cable length: 3.00 m

Ord.No. **X00010844** 

#### **Documentation**



# **Complete Documentation** as pdf files on USB flash drive

Ord.No.

100090716

#### **Special Accessories**



# Power cord with protective earth "stackable safety plug to IEC 60320 C13", 2,5 m

For supply via test voltage.

- 3x stackable, spring-loaded 4 mm plugs with rigid insulating sleeve (1x brown, 1x blue, 1x yellow/green)
- 1x socket IEC 60320 C13

Ord.No. 100067610



# Power cord with protective earth "stackable safety plug to IEC 60320 C13", 2,5 m

For supply via test voltage.

- 3x stackable, spring-loaded 4 mm plugs with rigid insulating sleeve (1x red, 1x black, 1x yellow/green)
- 1x socket IEC 60320 C13

#### Ord.No. 100067611

#### **Special Accessories (Current Clamps and Probes)**



#### MT3403, AC current clamp 1200 A

- Clamping diameter: 52 mm
- Output: 2x 4 mm safety sockets
- Measuring range: 10 mA ... 1200 A (1200 A for 40 min max. and a pause between measurement > 20 min)
- Error of measurement:
  - < ±0.3 % / 0.7° (100 A ... 1200 A)
  - < ±0.5 % / 1.0° (10 A ... 100 A)
  - < ±1.0 % / 2.0° (1 A ... 10 A)
- Frequency range: 48 ... 65 Hz
- Rated voltage: 600 V, CAT III / 300 V, CAT IV

Note: Connection to the MT device via input for direct current measurement.

Ord.No.



#### MT3413, AC current clamp 1800 A

Clamping of round or square conductors.

- Clamping diameter: 64 mm or busbar from 50 x 135 mm up to 64 x 100 mm
- Output: 2x 4 mm safety sockets
- Measuring range: 1 A ... 1800 A (1800 A measurement for max. 10 min)
- Switchable ranges: 500 A, 1000 A, 1500 A
- Error of measurement in 1500 A range:
  - < ±1.5 % / 1.5° (75 A)
  - < ±0.75 % / 0.75° (300 A)
  - < ±0.5 % / 0.5° (1500 A)
- Frequency range: 48 ... 65 Hz
- Rated voltage: 600 V, CAT III / 300 V, CAT IV

Note: Connection to the MT device via input for direct current measurement.



#### MT3470, flexible AC current probes 3000 A, 0.45 m

Flexible clamping adapter for enclosing conductors of any shape and in areas difficult to access.

- Diameter: ca. 14 cm
- Output: 2x 4 mm safety plug connection via adapter MT3423
- Measuring range: 500 mA ... 3000 A
- Switchable ranges: 3 A, 30 A, 300 A, 3000 A
- Error of measurement with optimal range selection: 3-A-range: <= ±1,0 % / typ. 0,5° (0,5 A ... 3 A)

30-A-range: <= ±1,0 % / typ. 0,5° (2 A ... 30 A)

300-A-range: <= ±1,0 % / typ. 0,5° (30 A ... 300 A)

3000-A-range:  $\leq \pm 1.0 \% / \text{typ. } 0.5^{\circ} (300 \text{ A} \dots 3000 \text{ A})$ 

- Frequency range: 30 Hz ... 440 Hz
- Rated voltage: 1000 V, CAT IV

Note: Connection to the instrument is via adapter MT3423.

The adapter has to be ordered separately.

Ord.No. **100032401** 

Ord.No.



#### MT3471, flexible AC current probes 3000 A, 0.8 m

Flexible clamping adapter for enclosing conductors of any shape and in areas difficult to access.

- Diameter: ca. 25 cm
- Output: 2x 4 mm safety plug connection via adapter MT3423
- Measuring range: 500 mA ... 3000 A
- Switchable ranges: 3 A, 30 A, 300 A, 3000 A
- Error of measurement with optimal range selection:
  3-A-range: <= ±1,0 % / typ. 0,5° (0,5 A ... 3 A)</li>
  30-A-range: <= ±1,0 % / typ. 0,5° (2 A ... 30 A)</li>
  300-A-range: <= ±1,0 % / typ. 0,5° (30 A ... 3000 A)</li>
  3000-A-range: <= ±1,0 % / typ. 0,5° (300 A ... 3000 A)</li>
- Frequency range: 30 Hz ... 440 Hz
- · Rated voltage: 1000 V, CAT IV

Note: Connection to the instrument is via adapter **MT3423**. The adapter has to be ordered separately.



#### MT3472, flexible AC current probes 30000 A, 1.2 m

Flexible clamping adapter for enclosing conductors of any shape and in areas difficult to access.

- Diameter: ca. 38 cm
- Output: 2x 4 mm safety plug connection via adapter MT3424
- Measuring range: 500 mA ... 30000 A
- Switchable ranges: 30 A, 300 A, 3000 A, 30000 A
- Error of measurement with optimal range selection:
   30-A-range: <= ±1,0 % / typ. 0,5° (0,5 A ... 30 A)
   300-A-range: <= ±1,0 % / typ. 0,5° (10 A ... 300 A)
   3000-A-range: <= ±1,0 % / typ. 0,5° (300 A ... 30000 A)
   30000-A-range: <= ±1,0 % / typ. 0,5° (300 A ... 30000 A)</li>
- Frequency range: 30 Hz ... 440 Hz
- Rated voltage: 1000 V, CAT IV

Note: Connection to the instrument is via adapter MT3424.

The adapter has to be ordered separately.



# MT3423, adapter "4 mm safety plug to D-Sub plug 25-pin", 1.0 m.

For connecting max. three flexible current probes of the same type to the instrument.
Suitable for the types MT3470 and MT3471.
Equipped with:

- 3x socket for two 4 mm safety plugs
- 1x D-Sub plug, 25-pin

Ord.No.

100061321

Ord.No.

100061322

Ord.No.



# MT3424, adapter "4 mm safety plug to D-Sub plug 25-pin", 1.0 m.

For connecting max. three flexible current probes of the same type to the instrument. Suitable for the types MT3472. Equipped with:

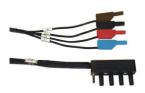
- 3x socket for two 4 mm safety plugs
- 1x D-Sub plug, 25-pin

Ord.No. 100032221

100023410

Ord.No.

#### **Special Accessories (Quick Connection Cable)**



# Quick connection cable "voltage/rigid sleeve" for MT series, 2.5 m, phase colours: brown/black/red/blue

To prevent connecting faults on the instrument's side.

- Instrument's side: 1x 4-pin connector with anti-twist safeguard.
- Mains side: 4x stackable, spring-loaded 4 mm plug with rigid insulating sleeve - 1x brown, 1x black, 1x red, 1x blue
- · Cable cross-section: 2.5 gmm



# Quick connection cable for "voltage/rigid sleeve" for MT series, 2.5 m, phase colours: yellow/green/violet/black

To prevent connecting faults on the instrument's side. Measurement category III (CAT III).

- Instrument's side: 1x 4-pin connector with anti-twist safeguard.
- Mains side: 4x stackable, spring-loaded 4 mm plug with rigid insulating sleeve - 1x yellow, 1x green, 1x violet, 1x black
- Cable cross-section: 2.5 qmm





#### Quick Acting Connection Cable for Current / 24A

The Quick connection cable set consists of a fixed detachable block for the MT system and 4mm safety plugs for the connection at the unit under test. (brown, black, red)



### Quick connection cable "current/rigid sleeve", 12 A, 2.5 m

Ord.No.

Ord.No.

100023494

100023424

phase colours: brown/black/white for MT681, MT78x

To prevent connecting faults on the instrument's side.

- Instrument's side: 1x 6-pin connector with anti-twist safeguard.
- Mains side: 6x stackable, spring-loaded 4 mm plugs with rigid insulating sleeve. 2x brown, 2x black, 2x white
- · Cable cross-section: 2.5 qmm



Quick connection cable for "current/rigid sleeve", 2.5 m

phase colours: yellow/green/violet (max. 24 A)

for MT68x, MT551, MT78x

To prevent connecting faults on the instrument's side.

- Instrument's side: 1x 6-pin connector with anti-twist safeguard.
- Mains side: 6x stackable, spring-loaded 4 mm plug with rigid insulating sleeve - 2x yellow, 2x green, 2x violet
- Cable cross-section: 2.5 qmm

### Special Accessories (Current and Voltage Cables)



Laboratory cable with stackable plug, green, 2.0 m Measurement category III (CAT III).

- 2x stackable 4 mm plugs with rigid insulating sleeve
- · Lead cross section: 2.5 qmm

Ord.No. **X00006908** 



Laboratory cable with stackable plug, violet, 2.0 m Measurement category III (CAT III).

- 2x stackable 4 mm plugs with rigid insulating sleeve
- · Lead cross section: 2.5 qmm

Ord.No. **X00006909** 



Laboratory cable with stackable plug, brown, 2.0 m Measurement category III (CAT III).

- 2x stackable 4 mm plugs with rigid insulating sleeve
- · Lead cross section: 2.5 qmm



# Laboratory cable with stackable plug, grey, 2.0 m Measurement category III (CAT III).

100414103

- 2x stackable 4 mm plugs with rigid insulating sleeve
- Lead cross section: 2.5 qmm



# Laboratory cable with stackable plug, white, 2.0 m Measurement category III (CAT III).

Ord.No.

Ord.No.

100662500

- 2x stackable 4 mm plugs with rigid insulating sleeve
- Lead cross section: 2.5 qmm

### **Special Accessories (Connectors)**

#### Connecting terminals for current

Ord.No.

X00011923

- Isulating screw joint for flexible wire connection max cable size 1,5 ... 16 mm<sup>2</sup>
- Socket: 4 mm rigid socket in insulator accepting spring-loaded 4 mm plugs with rigid insulating sleeve.



#### Adapter for terminal blocks

- Connection via insulated flexible copper conductor.
- Socket: 4 mm rigid socket in insulator, made of brass, accepting spring-loaded 4 mm plugs with rigid insulating sleeve.

Ord.No.

101584400

#### 4 mm plug adapter (banana plug)

• Plug: 4 mm spring-loaded plug, made of brass.

Ord.No.

X00004962

 Socket: 4 mm rigid socket in insulator accepting springloaded 4 mm plugs with rigid insulating sleeve.



#### 4 mm cable lug adapters

 Cable lug adapter, made of brass for permanent installation, e. g. for connecting screw terminals.

 Socket: 4 mm rigid socket in insulator accepting springloaded 4 mm plugs with rigid insulating sleeve. Ord.No. **X00004963** 



#### Spring clip

- · Connection via spring clip.
- Socket: spring-loaded 4 mm plugs with rigid insulating sleeve

Ord.No. **100606750** 



#### Test plugs for terminal blocks

- Plug: 4 mm test plug, made of brass with spring-loaded plug for connecting into rail mounted terminals with 4 mm sockets.
- Socket: 4 mm rigid socket in insulator accepting springloaded 4 mm plugs with rigid insulating sleeve.

Ord.No. **100102400** 



#### 4 mm test clips (crocodile clips), wide

- Crocodile clip made of brass with all-round insulation. Toothed jaws for wide grip with surface for fine wire.
- Socket: 4 mm rigid socket in insulator accepting springloaded 4 mm plugs with rigid insulating sleeve.

Ord.No. **X00010059** 



#### 4 mm test clips (crocodile clips), slim

- Small, slim crocodile clip made of brass with all-round insulation. Toothed jaws for wide grip with surface for fine wire.
- 4 mm rigid socket in insulator accepting spring-loaded 4 mm plugs with rigid insulating sleeve.

Ord.No. **X00009329** 



### Accessories bag without content

DIN A6, material: polypropylene

Ord.No.

100214400

Fuse, 5 A / 500 V AC, 6.3 mm x 32 mm, time-lag

Ord.No.

m00460187



### **Special Accessories (Transport)**



#### Accessories bag

Nylon bag with inlet from rigid foam, designed for

Ord.No.

100148209

- Test leads Scanning head
- Current clamps

Overall dimensions: 41 cm x 31 cm × 16 cm (H x W x D)

Please clarify whether the bag size is suitable for the ordered accessories.



#### Nylon bag

Nylon bag for transport of accessories. With smooth-rolling wheels and telescopic handle.

• Dimensions: H 490 mm × W 420 mm × D 250 mm

Please clarify whether the bag size is suitable for the ordered accessories.

Ord.No.

100148203

### **Special Accessories (General)**



Adapter "USB to RS232" (32/64 bit), 1.5 m For use with an external PC/Notebook (32/64 bit) with WINDOWS OS (7, 8, 10).

Ord.No.



#### MT3450, Temperature sensor

Sensor for measuring of the ambient temperature on site. The measured temperature value is displayed and saved in the MT device.

Temperature range: -20° C ... +60° C (± 1° C)

Resolution: 0,1° C Cable length: 3 m

### Readjustment (for Service)



#### Adjustment of MT78x series

Note: Calibration and Calibration report are not included.

Ord.No. 100033895



#### Adjustment of current clamp MT3430/3460 or MT3422/3465

Note: Calibration and Calibration report are not included.

Ord.No. 101243212



#### Adjustment of current clamp MT3416 / MT3417

Note: Calibration and Calibration report are not included.

100033894 Ord.No.

100519758

Ord.No.

### Calibration (for Service)



Factory Calibration for MT78x series, 50 Hz

incl. ZERA calibration report.

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.



# Factory Calibration for MT78x series, 60 Hz incl. ZERA calibration report.

Ord.No.

100519759

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.

Additional load points are subject to charges.



Factory Calibration for MT3460 / MT3465 50Hz incl. ZERA calibration report.

Ord.No.

101242304

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.

Additional load points are subject to charges.



**Factory Calibration for MT3460 / MT3465 60Hz** incl. ZERA calibration report.

Ord.No.

101242305

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.

Additional load points are subject to charges.



Factory Calibration for MT3416 / MT3417, 50 Hz incl. ZERA calibration report.

Ord.No.

100519701

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.

Additional load points are subject to charges.



Factory Calibration for MT3416 / MT3417, 60 Hz incl. ZERA calibration report.

Ord.No.

100519704

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.



Factory Calibration for instrument, each additional load point for power and energy

Ord.No. **100007093** 



Factory Calibration for instrument, each additional load point for current and/or voltage

Ord.No. **100007094** 



Factory Calibration for current clamps, each additional load point for for power and energy

Ord.No. 100007092



**DAkkS DKD-Calibration for MT78x, 50 Hz** incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. 100519639

Load points for the reference meter according to ZERA regulations.
Summary of used load points can be downloaded at www.zera.de.

Additional load points are subject to charges.

Additional load points are subject to charges



**DAkkS DKD-Calibration for MT78x, 60 Hz** incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. 100519640

Load points for the reference meter according to ZERA regulations.
Summary of used load points can be downloaded at www.zera.de.



### DAkkS DKD-Calibration for MT3460 / MT3465, 50 Hz incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No.

101173912

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.

Additional load points are subject to charges.



DAkkS DKD-Calibration for MT3460 / MT3465, 60 Hz incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No.

101173913

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.

Additional load points are subject to charges.



DAkkS DKD-Calibration for MT3416 / MT3417, 50 Hz Incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No.

100519600

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.

Additional load points are subject to charges.



**DAkkS DKD-Calibration for MT3416 / MT3417, 60 Hz** incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No.

100519603

Load points according to ZERA regulations.

Summary of used load points can be downloaded at www.zera.de.



DAkkS DKD-Calibration (acc. IEC 17025) for instrument, each additional load point for power and energy

Ord.No. **100006893** 



DAkkS DKD-Calibration (acc. IEC 17025) for instrument, each additional load point for current / voltage

Ord.No. 100006894



DAkkS DKD-Calibration (acc. IEC 17025) for current clamps, each additional load point for power and energy



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### Notes on using the product catalogue

When ordering, always state the order number.

Pictures can differ from original product.

We follow ZVEI terms of delivery, see on www.zera.de