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**ZERA**

**MT400**  
**Product Catalogue**

Doc.No: 100352706  
Version from: 01.01.2024

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## Device



**MT400-20 Three Phase Current Source**  
Inclusive adjustment and factory calibration for one mains frequency.

Ord.No. **1016733xx**

Calibration	Ord.No.
Werk 50 Hz	xx → 00
Werk 60 Hz	xx → 01
DAkKS 50 Hz	xx → 02
DAkKS 60 Hz	xx → 03

MT400-20 is designed for generation of test current, synchronized to the mains voltage, for one test specimen.

### Configuration:

- Supply via test voltage or mains voltage
- 3~ phase current generation up to 20 A (AC)
- Synchronization of the test currents on the grid voltage phases of the meter under test
- Light and compact design

## Power Cords



**Power cord “Euro plug type C to figure-of-eight”, 2.0 m**

Ord.No. **100067700**

For supply via mains supply.

- 1x Euro plug type C (CEE 7/16)
- 1x Figure-of-eight socket (IEC 60320-1 C7)



**Power cord “Plug type A to figure-of-eight”, 2.0 m**

Ord.No. **100277201**

For supply via mains supply.

- 1x Plug type A
- 1x Figure-of-eight socket (IEC 60320-1 C7)



**Power cord “Plug type G to figure-of-eight”, 2.0 m**

Ord.No. **100277200**

For supply via mains supply.

- 1x Plug type G (BS1363)
- 1x Figure-of-eight socket (IEC 60320-1 C7)



### Power cord “Plug type I to figure-of-eight”, 2.0 m

For supply via mains supply.

- 1x Plug type I (AS/NZS 3112, 2-pin)
- 1x Figure-of-eight socket (IEC 60320-1 C7)

Ord.No. **100277202**



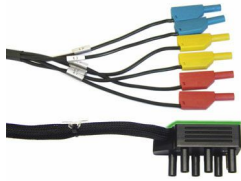
### Power cord “stackable safety plug (black) to figure-of-eight”, 2.0 m

For supply via test voltage.

- 2x stackable, spring-loaded 4 mm plugs with rigid insulating sleeve (2x black)
- 1x Figure-of-eight socket (IEC 60320-1 C7)

Ord.No. **100067608**

## Quick Connection Cable (see also Special Accessories)

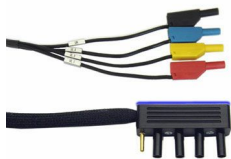


### Quick connection cable “current/rigid sleeve” for source, MT series, sloped, 2.5 m, phase colours: red/yellow/blue

To prevent connecting faults on the instrument’s side.

- Instrument’s side: 1x 6-pin connector with anti-twist safeguard, 30° sloped.
- Mains side: 6x stackable, spring-loaded 4 mm plugs with rigid insulating sleeve. 2x red, 2x yellow, 2x blue.
- Cable cross-section: 2.5 qmm

Ord.No. **100023452**

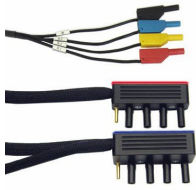


### Quick connection cable for “voltage/rigid sleeve” for MT series, 2.5 m, phase colours: red/yellow/blue/black

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 red, 1x yellow, 1x blue, 1x black
- Cable cross-section: 2.5 qmm

Ord.No. **100023454**



**Quick connection cable “voltage/rigid sleeve” for source-instrument, MT series, 2.5 m, phase colours: red/yellow/blue/black**

For the connection of source and reference standard if they are used as separate devices.

Cable length between the devices is 1.65 m.

- Reference standard's side :
  - 1x 4-pin connector with anti-twist safeguard.
  - 1x 4-pin connector (slim) without 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 qmm

Ord.No. **100023456**



**Quick connection cable “current/rigid sleeve” for source-instrument, MT series, 2.5 m, phase colours: red/yellow/blue**

For the connection of source and reference standard if they are used as separate devices.

Cable length between the devices is 1.65 m.

- Instrument's side:
  - 1x 6-pin connector with anti-twist safeguard.
  - 1x 6-pin connector, 30° sloped, with anti-twist safeguard.
- Mains side: 6x stackable, spring-loaded 4 mm plugs with rigid insulating sleeve. 2x red, 2x yellow, 2x blue.
- Cable cross-section: 2.5 qmm

Ord.No. **100023455**

## 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**

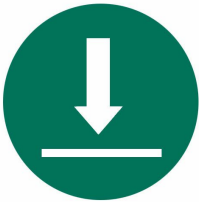


**Laboratory cable with stackable plug, black, 2.0 m**

- Measurement category III (CAT III).
- 2x stackable 4 mm plugs with rigid insulating sleeve
  - Lead cross section: 2.5 qmm

Ord.No. **X00006910**

**Software**

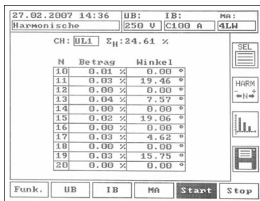


**Software SSM3000 / MTVis**

- The software runs under Windows 7 or 10.
- SSM3000: For external control via PC.
  - MTVis: To readout and display saved data.

Ord.No. **100090720**

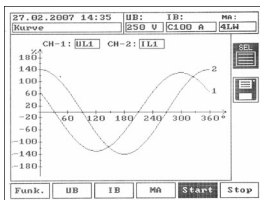
The software can be downloaded at [www.zera.de](http://www.zera.de).



**Software option for harmonic measurement, MT400/MT500**

The harmonic measurement displays the value and angle of each single harmonic (voltage and current) up to the 40<sup>th</sup> in a chart or a diagram. Additionally the sum of all harmonics is displayed.

Ord.No. **100078830**



**Software option for curve display, MT400/MT500**

For simultaneous display of two curves (voltage and/or current measurement channels). Via the curve display you can see at a glance if the fundamental frequency differs from the sinus curve.

Ord.No. **100078831**

## 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
06 Adapter for terminal blocks	101584400
10 Connecting terminals for current	X00011923
03 4 mm test clips (crocodile clips), slim	X00009329
10 Fuse, 16 A / 500 V, 6.3 mm x 32 mm, very fast acting	M00460189
10 Fuse, 6.3 A / 500 V, 6.3 mm x 32 mm, time-lag	100358600

Ord.No. **100023726**

## Transport (see also Special Accessories)



### Transport Case for MT400 / MT500, with cable case

Aluminum case with inlet from rigid foam, designed for

- 1 Instrument
- Accessories

Overall dimensions:

44 cm x 47 cm x 25 cm (H x W x D)

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

Ord.No. **100023960**



### Transport Bag for MT400 / MT500

Nylon bag which is special designed for the instrument.  
The bag protects against dust and scratches.

The bag is designed for 1 Instrument

Overall dimensions:

34 cm x 29 cm x 23,5 cm (H x W x D)

Ord.No. **100062802**

## Standard Accessories (see also Special Accessories)



### 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**

**Protection cover for MT series 3xx/400/500**

To protect the front plate against mechanical collision during transport without transport case.

Ord.No. **100466700**

**Coaxial cable with BNC plug, 2 m**

- 2x BNC plug

Ord.No. **Z09548320**

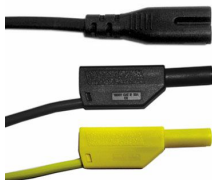
## Documentation

**Complete Documentation**

as pdf files on USB flash drive

Ord.No. **100090716**

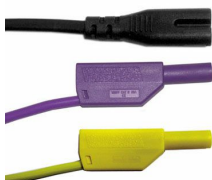
## Special Accessories

**Power cord "stackable safety plug (black/yellow) to figure-of-eight", 2.0 m**

For supply via test voltage.

- 2x stackable, spring-loaded 4 mm plugs with rigid insulating sleeve (1x black; 1x yellow)
- 1x Figure-of-eight socket (IEC 60320-1 C7)

Ord.No. **100067601**

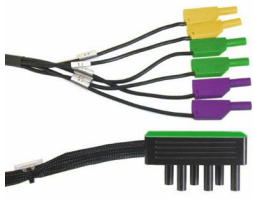
**Power cord "stackable safety plug (violet/yellow) to figure-of-eight", 2.0 m**

For supply via test voltage.

- 2x stackable, spring-loaded 4 mm plugs with rigid insulating sleeve (1x violet/1x yellow)
- 1x Figure-of-eight socket (IEC 60320-1 C7)

Ord.No. **100067602**

## Special Accessories (Quick Connection Cable)



**Quick connection cable for “current/rigid sleeve” for MT series, 12 A, 2.5 m, phase colours: yellow/green/violet**

Ord.No. **100023476**

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 yellow, 2x green, 2x violet.
- Cable cross-section: 2.5 qmm

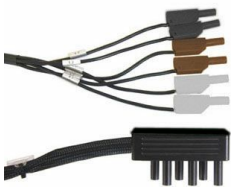


**Quick connection cable for “voltage/rigid sleeve” for MT series, 2.5 m, phase colours: yellow/green/violet/black**

Ord.No. **100023418**

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 yellow, 1x green, 1x violet, 1x black
- Cable cross-section: 2.5 qmm



**Quick connection cable “current/rigid sleeve” for MT series, 12 A, 2.5 m, phase colours: black/brown/white**

Ord.No. **100023493**

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 black, 2x brown, 2x white
- Cable cross-section: 2.5 qmm



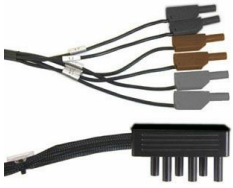
**Quick connection cable “voltage/rigid sleeve” for MT series, 2.5 m, phase colours: brown/black/white/blue**

Ord.No. **100023492**

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 white, 1x blue
- Cable cross-section: 2.5 qmm





**Quick connection cable “current/rigid sleeve” for MT series, 12 A, 2.5 m, phase colours: black/brown/grey**

**Reference meter > Unit under test.**

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 black, 2x brown, 2x grey
- Cable cross-section: 2.5 qmm

Ord.No. **100023474**

## 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

Ord.No. **100414100**



**Laboratory cable with stackable plug, grey, 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. **100414103**



- Laboratory cable with stackable plug, white, 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. **100662500**

## Special Accessories (Connectors)



- Connecting terminals for current**
- Insulating 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.

Ord.No. **X00011923**

- 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.
  - Socket: 4 mm rigid socket in insulator accepting spring-loaded 4 mm plugs with rigid insulating sleeve.

Ord.No. **X00004962**

- 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 spring-loaded 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 spring-loaded 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 spring-loaded 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, 16 A / 500 V, 6.3 mm x 32 mm, very fast acting**Ord.No. **M00460189****Fuse, 6.3 A / 500 V, 6.3 mm x 32 mm, time-lag**Ord.No. **100358600****Special Accessories (Transport)****Accessories bag**

Nylon bag with inlet from rigid foam, designed for

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

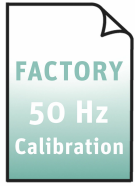
Overall dimensions: 41 cm x 31 cm x 16 cm (H x W x D)

*Please clarify whether the bag size is suitable for the ordered accessories.*Ord.No. **100148209****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. **101421801****Readjustment (for Service)****Adjustment of MT400***Note:* Calibration and Calibration report are not included.Ord.No. **100033898**

## Calibration (for Service)

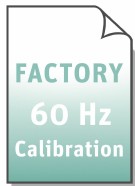


**Factory Calibration for MT400, 50 Hz**  
incl. ZERA calibration report.

Ord.No. **100519712**

**Load points according to ZERA regulations.**  
Summary of used load points  
can be downloaded at [www.zera.de](http://www.zera.de).

Additional load points are subject to charges.



**Factory Calibration for MT400, 60 Hz**  
incl. ZERA calibration report.

Ord.No. **100519713**

**Load points according to ZERA regulations.**  
Summary of used load points  
can be downloaded at [www.zera.de](http://www.zera.de).

Additional load points are subject to charges.



**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**



**DAKKS DKD-Calibration for MT400, 50 Hz**  
incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. **100519612**

**Load points according to ZERA regulations.**  
Summary of used load points  
can be downloaded at [www.zera.de](http://www.zera.de).

Additional load points are subject to charges.



**DAkkS DKD-Calibration of MT400, 60 Hz**  
incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. **100519613**

**Load points according to ZERA regulations.**  
Summary of used load points  
can be downloaded at [www.zera.de](http://www.zera.de).

Additional load points are subject to charges.



**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**

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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](http://www.zera.de)