



ZERA

MT400
Product Catalogue

Doc.No: 100352706
Version from: 01.07.2024

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**



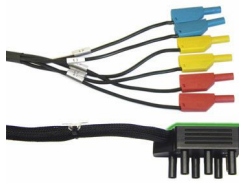
Power cord “stackable safety plug (black) to figure-of-eight”, 2.0 m

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)

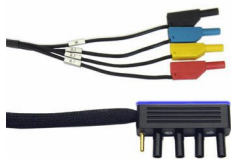


Quick connection cable “current/rigid sleeve” for source, MT series, sloped, 2.5 m, phase colours: red/yellow/blue

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**

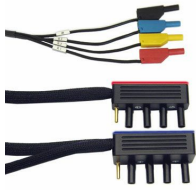


Quick connection cable for “voltage/rigid sleeve” for MT series, 2.5 m, phase colours: red/yellow/blue/black

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**



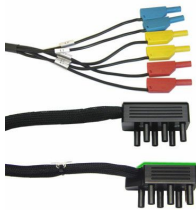
Quick connection cable “voltage/rigid sleeve” for source-instrument, MT series, 2.5 m, phase colours: red/yellow/blue/black

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

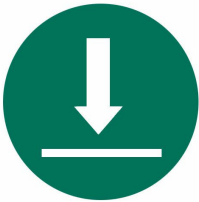
Ord.No. **X00007598**



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**

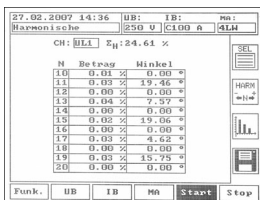
Software



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

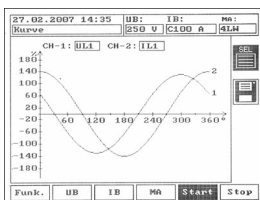
Ord.No. **100090720**

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



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 40th 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**

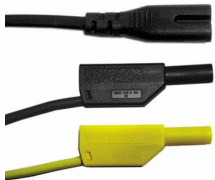
- 2x BNC plug

Ord.No. **Z09548320**

Documentation**Complete Documentation**

as pdf files on USB flash drive

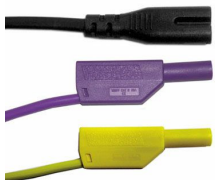
Ord.No. **100090716**

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**

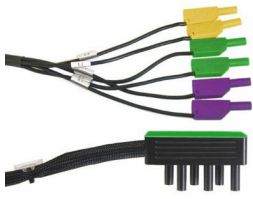
**Power cord "stackable safety plug (violet/yellow) to figure-of-eight", 2.0 m**

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

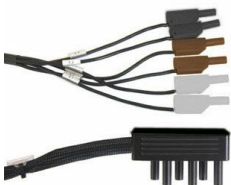


Quick connection cable for “voltage/rigid sleeve” for MT series, 2.5 m, phase colours: yellow/green/violet/black

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

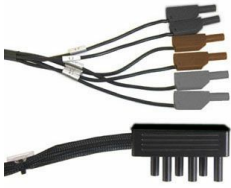


Quick connection cable “voltage/rigid sleeve” for MT series, 2.5 m, phase colours: brown/black/white/blue

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

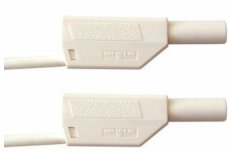
Ord.No. **100414100**



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 mm²
 - 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)

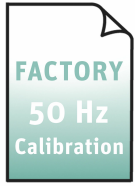


Adjustment of MT400

Note: Calibration and Calibration report are not included.

Ord.No. **100033898**

Calibration (for Service)

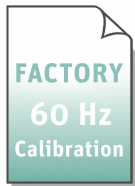


Factory Calibration for MT400, 50 Hz
incl. ZERA calibration report.

Ord.No. **100519712**

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

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.

Additional load points are subject to charges.



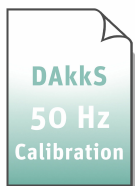
**Factory Calibration
for instrument, each additional
load point for power and energy**

Ord.No. **100007093**



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

Ord.No. **100007094**

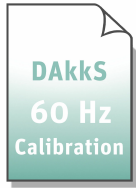


DAkkS DKD-Calibration for MT400, 50 Hz
incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. **100519612**

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

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.

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