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**ZERA**

**MT10**  
**Product Catalogue**

Doc.No: 100352709  
Version from: 01.01.2024

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## Device



### MT10 Three-Phase Reference Meter CAT III

Inclusive adjustment and factory calibration for one mains frequency.

Ord.No. **1016676xx**

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

The MT10 is a light weight and compact Reference Meter for on-site verification and calibration of single-phase domestic meters.

The MT10 is designed for testing of one test specimen.

#### Configuration:

- Direct current measurement up to 300 V / -- A \*
- Accuracy for power/energy measurement: <  $\pm 0.2$  %  
by using of MT3461 current clamp type
- Power supply via external unit
- Rechargeable battery operation (optional)

\* Current measurements only via current clamp



### MT10 Three-Phase Reference Meter CAT IV

Inclusive adjustment and factory calibration for one mains frequency.

Ord.No. **1016677xx**

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

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by using of MT3461 current clamp type
- Power supply via external unit
- Rechargeable battery operation (optional)

\* Current measurements only via current clamp

## Power Cords



### AC Power Supply for MT10/30

to operate and recharge internal batteries.  
 Input voltage 90...264 VAC  
 Output voltage 16 VDC  
 AC power cord for mains has to be ordered separately.

Ord.No. **100307130**



### AC Power Supply for MT10/30 with fuse

to operate and recharge internal batteries.  
 Input voltage 90...264 VAC  
 Output voltage 16 VDC  
 In case of overvoltage connection power supply will be protected by internal security circuit and fuse.  
 Fuse rating: 1,6 A / 440 V  
 AC power cord for mains and spare fuses has to be ordered separately.

Ord.No. **101097300**



### Power cord "Plug type A to figure-of-eight", 2.0 m

For supply via mains supply.

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

Ord.No. **100277201**



### Power cord "Euro plug type C to figure-of-eight", 2.0 m

For supply via mains supply.

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

Ord.No. **100067700**



### Power cord "Plug type G to figure-of-eight", 2.0 m

For supply via mains supply.

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

Ord.No. **100277200**



### 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**

## Battery Pack and Accessories



### Li-Ion Battery, set of 3 (M00400491)

- 3,7 V/2200 mAh

Ord.No. **100619500**

**Please remark that Li-Ion batteries are classified as "Dangerous Good for Shipment". Sending Li-Ion batteries as spare part by air requires a lot of strict security procedures. Therefore, ZERA can only offer this spare part batteries as EXW (Incoterms). The purchaser will be responsible for the transportation.**

## Current Clamps (see also Special Accessories)



### MT3461, AC current clamp 120 A

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

Ord.No. **1016712xx**

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 mm
- Output: 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

## 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, 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**



**CAT IV Laboratory cable max. 12 A, 2.0 m**

- 2x 4 mm plugs (non-stackable) with rigid insulating sleeve
- Lead cross section: 1 qmm
- Phase colours: Please specify the colour code when ordering

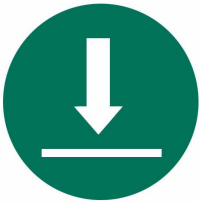
The cables will get a corresponding coloured marking.

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

Ord.No. **1014308xx**

xx please select the colour

**Software**



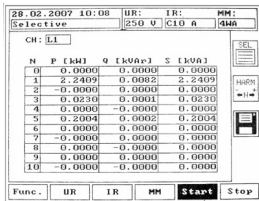
**Software SSM3000 / MTVis**

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 selective power measurement, MT10 / MT30**

3 additional measuring modes for only fundamental power in 4W active, 4W reactive and 4W apparent are available

Ord.No. **100078811**

**Impulse Sensor (see also Special Accessories)**



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

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

Ord.No. **101091620**



**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.

Ord.No. **100201900**

**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.	<b>101064901</b>
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**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.	<b>100319600</b>
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**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.	<b>100004210</b>
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**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.	<b>Z10353027</b>
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## Connectors (see also Special Accessories)

**Accessories bag with connection adapters**

- 1x Accessories bag (100214400)
- 1x Spring clip (100606750)
- 2x 4 mm plug adapter (banana plug) (X00004962)
- 2x Adapter for terminal blocks (101584400)
- 1x 4 mm test clips (crocodile clips), slim (X00009329)
- 1x 4 mm test clips (crocodile clips), wide (X00010059)

Ord.No.	<b>100023725</b>
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## Transport (see also Special Accessories)



### Transport Case for MT10 / MT30, large

Aluminum case with inlet from rigid foam, designed for

- 1 Instrument
- Accessories

Overall dimensions:

47 cm x 53,5 cm x 18 cm (H x W x D)

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

Ord.No.

100023990



### Transport Case for MT10 / MT30, Standard

Aluminum case with inlet from rigid foam, designed for

- 1 Instrument
- Accessories

Overall dimensions:

36 cm x 45 cm x 17 cm (H x W x D)

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

Ord.No.

100023981

## 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

## 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

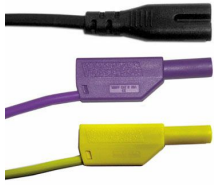
For supply via test voltage.

- 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 (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



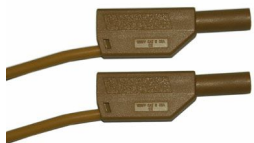
**Laboratory cable with stackable plug, violet, 2.0 m**

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



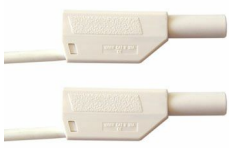
**Laboratory cable with stackable plug, grey, 2.0 m**

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**

- 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**

## Special Accessories (Connectors)

**Fuse, 1.6 A / 440 V, 6.3 mm x 32 mm, time-lag**

Ord.No. **m00460183**

**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**

### Special Accessories (Transport)



#### Carrying strap for reference meter, black, width 25 mm

Belt length: 700 - 1,400 mm, adjustable by sliding buckle, metal snap hooks on both sides.

Ord.No. **100170000**

### 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**

**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 ( $\pm 1^\circ$  C)

Resolution: 0,1° C

Cable length: 3 m

Ord.No. **100904000**

## Readjustment (for Service)

**Adjustment of MT10**

*Note:* Calibration and Calibration report are not included.

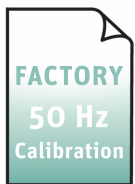
Ord.No. **100033857**

**Adjustment of current clamp MT3461**

*Note:* Calibration and Calibration report are not included.

Ord.No. **100033855**

## Calibration (for Service)



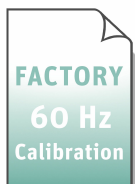
**Factory Calibration for MT10, 50 Hz**  
incl. ZERA calibration report.

Ord.No. **100519714**

**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.



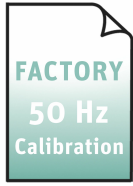
**Factory Calibration for MT10, 60 Hz**  
incl. ZERA calibration report.

Ord.No. **100519716**

**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.

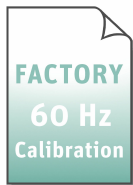


**Factory Calibration for MT10**  
incl. current clamp MT3461, 50 Hz  
incl. ZERA calibration report.

Ord.No. **100890849**

**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.

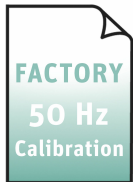


**Factory Calibration for MT10**  
incl. current clamp MT3461, 60 Hz  
incl. ZERA calibration report.

Ord.No. **100890850**

**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.

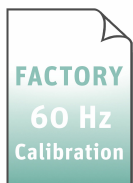


**Factory Calibration for MT3461 50Hz**  
incl. ZERA calibration report.

Ord.No. **101242306**

**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 MT3461 60Hz**  
incl. ZERA calibration report.

Ord.No. **101242307**

**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**

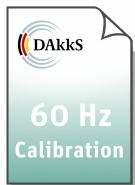


**DAkkS DKD-Calibration for MT10, 50 Hz**  
incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. **100519614**

**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 MT10, 60 Hz**  
incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. **100519616**

**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 for MT3461, 50 Hz**  
incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. **101173910**

**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 for MT3461, 60 Hz**  
incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. **101173911**

**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 for MT10**  
**incl. current clamp MT3461, 50 Hz**  
incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. **101173914**

**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 for MT10**  
**incl. current clamp MT3461, 60 Hz**  
incl. DKD-Calibration Certificate acc. IEC 17025

Ord.No. **101173915**

**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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Kreissparkasse Köln  
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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)