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**ZERA**

**MT10**  
**Product Catalog**

Doc.No: 100352709  
Version from:02.05.2011

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## Device



### Portable single phase reference standard MT10

- Including adjustment and standard factory calibration.
- Internal memory area for up to of 1000 measured values.
  - Double insulated plastic housing
  - Default: Supply via external power supply unit.
  - Optional: Supply via internal rechargeable battery.
  - Accuracy for power/energy measurement:  $< \pm 0.2 \%$

Ord.No. **100435401**

## Adjustment and Calibration / Device



### Readjustment of MT10

*Note:* With initial purchase of an instrument the adjustment is included. This article only applies to a readjustment.

Ord.No. **100033857**



### Factory calibration of a new instrument MT10 according to ZERA standard, 50 Hz

*Note:* This article only applies to a purchase of a new instrument MT10.

- Including factory calibration certificate

Ord.No. **100519715**



### Factory re-calibration of MT10 according to ZERA standard, 50 Hz

*Note:* With initial purchase of an instrument the factory calibration is included. This article only applies to a re-calibration.

- Including factory calibration certificate

Ord.No. **100519714**



### Factory re-calibration of MT10 according to ZERA standard incl. current clamp MT3431, 50 Hz

*Note:* With initial purchase of an instrument the factory calibration is included. This article only applies to a re-calibration.

- Including factory calibration certificate

Ord.No. **100519772**

### **MT3431**

#### **load points 240 V, 50 Hz, 2 WA:**

*cos*  $\varphi$  1, 0,5i, 0,5c; 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A

**DKD calibration of MT10, 50 Hz**

- Including DKD calibration certificate

Ord.No. **100519614****DKD-Calibration for MT10 incl. current clamp MT3431, 50 Hz**

Incl. DKD-Calibration Certificate

Ord.No. **100519655****MT3431****load points 240 V, 50 Hz, 2 WA:**

*cos*  $\varphi$  1, 0,5i, 0,5c; 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A

**Factory calibration of a new instrument MT10 according to ZERA standard, 60 Hz**

*Note:* This article only applies to a purchase of a new instrument MT10.

- Including factory calibration certificate

Ord.No. **100519717****Factory re-calibration of MT10 according to ZERA standard, 60 Hz**

*Note:* With initial purchase of an instrument the factory calibration is included. This article only applies to a re-calibration.

- Including factory calibration certificate

Ord.No. **100519716**



**Factory re-calibration of MT10 according to ZERA standard incl. current clamp MT3431, 60 Hz**

Note: With initial purchase of an instrument the factory calibration is included. This article only applies to a re-calibration.

- Including factory calibration certificate

Ord.No. **100519773**

**MT3431**

**load points 240 V, 60 Hz, 2 WA:**

*cosj 1, 0,5i, 0,5c*; 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A



**DKD calibration of MT10, 60 Hz**

- Including DKD calibration certificate

Ord.No. **100519616**



**DKD-Calibration for MT10 incl. current clamp MT3431, 60 Hz**

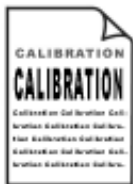
Incl. DKD-Calibration Certificate

Ord.No. **100519656**

**MT3431**

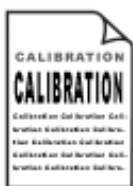
**load points 240 V, 60 Hz, 2 WA:**

*cosj 1, 0,5i, 0,5c*; 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A



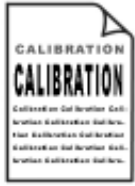
**Calibration, each additional load point for power and energy, DKD**

Ord.No. **100006893**



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

Ord.No. **100006894**



**Calibration, each additional load point for power and energy, factory calibration**

Ord.No. **100007093**



**Calibration, each additional load point for current and/or voltage, factory calibration**

Ord.No. **100007094**

## Power Cords



**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 “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 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****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**

## Sensors

**MT3431, AC current clamp 120 A**

Electronically compensated, calibration independent from the instrument.

- Clamping diameter: 12 mm
- Output: D-Sub plug 25-pin
- Measuring range: 5 mA ... 120 A
- Error of measurement:
  - <  $\pm 0.15\%$  / <  $0.1^\circ$  (500 mA ... 120 A)
  - <  $\pm 0.3\%$  / <  $0.1^\circ$  (50 mA ... 500 mA)
  - <  $\pm 0.6\%$  / <  $0.1^\circ$  (25 mA ... 50 mA)
- Frequency range: 45 ... 65 Hz
- Rated voltage: 30 V, CAT III (only for insulated leads)

Ord.No. **Z10301904**

## Adjustment and Calibration / Sensors



### Readjustment of current clamp MT3431

*Note:* With initial purchase of one of the current clamps named above the adjustment is included. This article only applies to a readjustment.

Ord.No. **100033855**



### Factory calibration of a new current clamp MT3431, 50 Hz

*Note:* This article only applies to a purchase of a new current clamp of one of the types named above. incl. factory calibration certificate

Ord.No. **100519760**

#### load points 240 V, 50 Hz, 2 WA:

$\cos \varphi 1, 0,5i, 0,5c$ ; 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A



### Factory re-calibration of current clamp MT3431, 50 Hz

*Note:* With initial purchase of one of the current clamps named above the factory calibration is included. This article only applies to a re-calibration. incl. factory calibration certificate

Ord.No. **100519766**

#### load points 240 V, 50 Hz, 2 WA:

$\cos \varphi 1, 0,5i, 0,5c$ ; 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A



### DKD calibration of current clamp MT3431, 50 Hz

incl. DKD Calibration Certificate

Ord.No. **100519648**

#### load points 240 V, 50 Hz, 2 WA:

$\cos \varphi 1, 0,5i, 0,5c$ ; 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A



**Factory calibration of a new current clamp MT3431, 60 Hz**

*Note:* This article only applies to a purchase of a new current clamp of one of the types named above.  
incl. factory calibration certificate

Ord.No. **100519761**

**Load points 240 V, 60 Hz, 2 WA:**

*cos φ 1, 0,5i, 0,5c;* 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A



**Factory re-calibration of current clamp MT3431, 60 Hz**

*Note:* With initial purchase of one of the current clamps named above the factory calibration is included. This article only applies to a re-calibration.  
incl. factory calibration certificate

Ord.No. **100519767**

**load points 240 V, 60 Hz, 2 WA:**

*cos φ 1, 0,5i, 0,5c;* 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A



**DKD calibration of current clamp MT3431, 60 Hz**  
incl. DKD Calibration Certificate

Ord.No. **100519649**

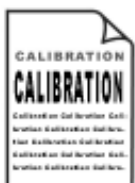
**load points 240 V, 60 Hz, 2 WA:**

*cos φ 1, 0,5i, 0,5c;* 100A; 50A; 10A; 5A; 1A; 0,5A; 0,1 A; 0,05A



**Calibration, each load point, DKD**

Ord.No. **100006892**



**Calibration, each load point, factory calibration**

Ord.No. **100007092**

## Laboratory Cables



### Laboratory cable with safety plug/connection pin, red, 0.45 m

Only suitable for voltage up to 60 V.

- 1x 2 mm pin for connection to screw terminals.
- 1x insulated in-line safety plug
- Lead cross section: 0.75 qmm

Ord.No. **Z09826311**



### Laboratory cable with safety plug/connection pin, blue, 0.45 m

Only suitable for voltage up to 60 V.

- 1x 2 mm pin for connection to screw terminals.
- 1x insulated in-line safety plug
- Lead cross section: 0.75 qmm

Ord.No. **Z09826312**



### 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**



**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. **100739800**

**Software**



**CD-ROM with software SSM3000 / MTVis / WM303 / MCS**  
 The software runs under Windows XP. The documentation in on CD (PDF or Online-Help).

- SSM3000: To control the instrument.
- MTVis: To readout and display data saved in the instrument.
- WM303: To control WM303-I and WM303-U.
- Demo Meter Check Simulation (MCS): For simulation of circuit errors.

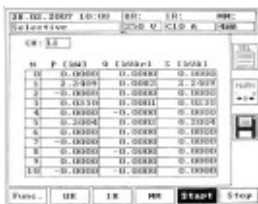
Ord.No. **100090705**



**License key for Meter Check Simulation (MCS)**

Via the license key, the demo version is transformed to a full version.

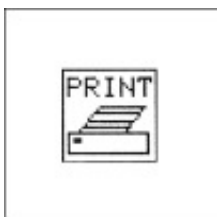
Ord.No. **100475650**



**Software option for selective power measurement, MT3xx series**

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

Ord.No. **100078801**



**Software option „Print“, MT10/MT30**

Option to trigger an externally connected printer of type DPU414 Seiko for printing the measured data. You cannot print the saved data via this option.

Ord.No. **100078814**

**Documentation**



**Operation manual for MT10/MT30, German**

Ord.No. **100432400**

**Operation manual for MT10/MT30, English**Ord.No. **100432401****Operation manual for MT10/MT30, French**Ord.No. **100432402****Operation manual for TK326, German**Ord.No. **100432500****Operation manual for TK326, English**Ord.No. **100432501****Operation manual for TK326, French**Ord.No. **100432502**



### Operation manual for TK118-05, German

Ord.No. **100432520**



### Operation manual for TK118-05, English

Ord.No. **100432521**



### Operation manual for TK118-05, French

Ord.No. **100432522**

## Impulse Sensors and Accessories



### TK 326-01, scanning head with holding device

For detection of rotor disc markings on Ferraris meters and LED signals on electronic meters. Fixing at the electricity meter via stretchable holding device, maximum wingspan 19.0 cm.

Ord.No. **100102202**



### TK 326-01, 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. **100313300**



#### 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**



#### TK118-05, 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**



#### TK122-01, scanning head with holding device for Enel meters

Scanning head with holding device for detection of LED signals of meter types GEM, GET 1, GET 2A and GET 2D, GISM, GIST, GISS. Detection switchable between active and reactive LED signals.

Ord.No. **100148102**



#### TK122-01, scanning head without holding device

For detection of LED signals.

- Detection switchable between active and reactive LED signals.
- Fixing: Via holding device for TK122-01

Ord.No. **100147400**



#### Holding device for TK122-01

Holding device to fix the scanning head at the electricity meter of types GEM, GET 1, GET 2A and GET 2D, GISM, GIST, GISS.

Ord.No. **Z10142903**



#### Contact pin for TK122-01 holding device

To pick up the test voltage. The measuring lead is plugged onto the contact pin.

Ord.No. **100249400**



#### Start-stop pushbutton for signal entry

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

Ord.No. **Z09969204**



#### K121-01, 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. **100004200**



#### K121-01, S0 pulse converter without measuring leads

For pulse detection of floating contacts as well as of S0 pulse output on electricity meters.

Ord.No. **Z09894100**



#### Connection cable for scanning head input (SC) on ZERA instruments with RJ10 socket

The spiral cable connects TKxxx and K121 to the instrument.

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

Ord.No. **Z10353027**

## Printer and Accessories



### Thermal printer DPU414 Seiko

For printing the measured data while testing metering installations.

Ord.No.

100078900



### Interface cable, RS232, 1:1 wiring

Connection cable with 1:1 wiring.

- 1x D-Sub plug, 9-pin
- 1x D-Sub socket, 9-pin
- Cable length: 2.00 m

Ord.No.

X00010761



### AC adapter thermal printer DPU414, 230 V / 50 Hz

For connecting the DPU414 Seiko to the power supply. Euro plug (CEE 7/16)

Ord.No.

100087600



### Battery pack for thermal printer DPU414

Cell type: Ni-MH, 4.8 V, rechargeable

Ord.No.

100131300



### Paper for thermal printer

Width: 112 mm, length approx. 28 m

Ord.No.

100087400

## Small Parts and Accessories Bag for Small Parts



### Accessories bag with connection adapters

- 1x Accessories bag (100214400)
- 1x Spring clip (Z09508700)
- 2x 4 mm plug adapter (banana plug) (X00004962)
- 2x Adapter for terminal blocks (X00004961)
- 1x 4 mm test clips (crocodile clips), slim (X00009329)
- 1x 4 mm test clips (crocodile clips), wide (X00010059)

Ord.No. **100023725**



### Terminal strip

- With a wire protection guard inside the clamping body, which prevents damage to the connected wire
- Wire diameter: up to 6 qmm / fine-stranded 2.5 – 6 qmm

Ord.No. **M00410152**



### 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. **X00004961**



### 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: Stackable, spring-loaded 4 mm plugs with rigid insulating sleeve.

Ord.No. **Z09508700**



#### 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**

## Transport



### Aluminium case, for MT30/MT10 and accessories, standard

Hard-top case with inlet for transport of the measuring instrument and accessories.

- Dimensions: H 360 mm × W 450 mm × D 130 mm

Ord.No. **100023980**



### 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**

## Additional Accessories for The Device



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

Cross wired connection cable.

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

Ord.No. **X00010844**



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

- 3,7 V/ 2200 mAh

Ord.No. **100619500**

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Dr. Prosper Suwelack / Rainer Otto  
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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)

Deutsche Bank Bonn  
bank code: 380 700 59  
account: 005 705 150 0  
IBAN: DE16 3807 0059 0057 0515 00  
SWIFT: DEUTDEDK380

Commerzbank Bonn  
bank code: 380 400 07  
account: 113 313 100  
IBAN: DE29 3804 0007 0113 3131 00  
SWIFT: COBADEFF380

Kreissparkasse Köln  
bank code: 370 502 99  
account: 001 078 492  
IBAN: DE15 3705 0299 0001 07  
SWIFT: COKSDE33

HRB 7073 Siegburg  
VAT-IdNo. DE 218 515 479  
WEEE-Reg.Nr. DE 53879641

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