



ZERA

COM3003, COM1003
Product Catalog

Doc.No: 100352712
Version from:18.11.2010

Device



Three phase comparator COM3003

Including adjustment and standard factory calibration. Acts as a reference instrument for testing ammeter and voltmeter as well as single and multi phase power and energy meters. The instrument is used for example in metrological institutes as well as in test laboratories of power utility companies and electricity meter manufacturers.

- High accuracy, independent of measuring mode
- Excellent long-term stability
- Operation, evaluation and protocol generation via operator software SSM3000
- Error of measurement for power/energy: $< \pm 0,01 \%$

Note: The device has 3 separate inputs for neutral wire. Please bear in mind when ordering cables.

Ord.No. **100438302**



Three phase comparator COM3003 (DC-capable)

Including adjustment and standard factory calibration. Acts as a reference instrument for testing ammeter and voltmeter as well as single and multi phase power and energy meters. The instrument is used for example in metrological institutes as well as in test laboratories of power utility companies and electricity meter manufacturers.

- High accuracy, independent of measuring mode
- Excellent long-term stability
- Use of DC-capable current transformers
- Operation, evaluation and protocol generation via operator software SSM3000
- Error of measurement for power/energy: $< \pm 0,01 \%$

Note: The device has 3 separate inputs for neutral wire. Please bear in mind when ordering cables.

Ord.No. **100438502**



Single phase comparator COM1003

Including adjustment and standard factory calibration. Acts as a reference instrument for testing ammeter and voltmeter as well as single and multi phase power and energy meters. The instrument is used for example in metrological institutes as well as in test laboratories of power utility companies and electricity meter manufacturers.

- High accuracy, independent of measuring mode
- Excellent long-term stability
- Use of DC-capable current transformers
- Operation, evaluation and protocol generation via operator software SSM3000
- Error of measurement for power/energy: $< \pm 0,01 \%$

Ord.No. **100611901**



Single phase comparator COM1003 DC

Including adjustment and standard factory calibration. Acts as a reference instrument for testing ammeter and voltmeter as well as single and multi phase power and energy meters. The instrument is used for example in metrological institutes as well as in test laboratories of power utility companies and electricity meter manufacturers.

Ord.No. **100730501**

- High accuracy, independent of measuring mode
- Excellent long-term stability
- Use of DC-capable current transformers
- Operation, evaluation and protocol generation via operator software SSM3000
- Error of measurement for power/energy: $\pm 0,01\%$

Adjustment and Calibration / Device



AC-Readjustment of COM300x

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

Ord.No. **100033860**



AC-Factory calibration of a new instrument COM300x according to ZERA standard, 50 Hz

Note: This article only applies to a purchase of a new instrument COM300x.

- Including factory calibration certificate

Ord.No. **100007006**



AC-Factory re-calibration of COM300x 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. **100007096**



AC-DKD-Calibration 50 Hz for COM303, COM3000, COM3003

- Including DKD calibration certificate

Ord.No. **100006803**

Load points 240 V, 50 Hz, 4WA:

*cos φ*1, 0,5i, 0,5c: 120 A ($I_B=200$ A); 100 A; 80 A; 60 A; 50 A; 20 A; 10 A; 5 A; 1 A; 0,5 A; 0,25 A; 0,2 A; 0,1 A; 0,05 A; 0,02 A; 0,01 A; 0,005 A

Load points 320 V ($U_B=480$ V), 120 V, 60 V, 50 Hz, 4WA:

*cos φ*1, 0,5i, 0,5c: 5A

Load points U, 50 Hz:

480 V; 240 V; 120 V; 60 V

Load points I, 50 Hz:

120 A ($I_B=200$ A); 100 A; 80 A; 60 A; 50 A; 20 A; 10 A; 5 A; 1 A; 0,5 A; 0,25 A; 0,2 A; 0,1 A; 0,05 A; 0,02 A; 0,01 A; 0,005 A



AC-Factory calibration of a new instrument COM300x according to ZERA standard, 60 Hz

Note: This article only applies to a purchase of a new instrument COM300x.

- Including factory calibration certificate

Ord.No. **100007097**



AC-Factory re-calibration of COM300x 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. **100519700**



AC-DKD-Calibration 60 Hz for COM303, COM3000, COM3003

- Including DKD calibration certificate

Ord.No. **100519634**

Load points 240 V, 60 Hz, 4WA:

*cos φ*1, 0,5i, 0,5c: 120 A(I_B=200 A); 100 A; 80 A; 60 A; 50 A; 20 A; 10 A; 5 A; 1 A; 0,5 A; 0,25 A; 0,2 A; 0,1 A; 0,05 A; 0,02 A; 0,01 A; 0,005 A

Load points 320 V(U_B=480 V), 120 V, 60 V, 50 Hz, 4WA:

*cos φ*1, 0,5i, 0,5c: 5A

Load points U, 60 Hz:

480 V; 240 V; 120 V; 60 V

Load points I, 60 Hz:

120 A(I_B=200 A); 100 A; 80 A; 60 A; 50 A; 20 A; 10 A; 5 A; 1 A; 0,5 A; 0,25 A; 0,2 A; 0,1 A; 0,05 A; 0,02 A; 0,01 A; 0,005 A



AC-Readjustment of COM100x

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

Ord.No. **100033861**



AC-Factory calibration of a new instrument COM100x according to ZERA standard, 50 Hz

Note: This article only applies to a purchase of a new instrument COM100x.

- Including factory calibration certificate

Ord.No. **100007004**



AC-Factory re-calibration of COM100x 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. **100007095**



AC-DKD calibration of COM100x, 50 Hz
 • Including DKD calibration certificate

Ord.No. **100006804**



AC-Factory calibration of a new instrument COM100x according to ZERA standard, 60 Hz
Note: This article only applies to a purchase of a new instrument COM100x.
 • Including factory calibration certificate

Ord.No. **100007098**



AC-Factory re-calibration of COM100x 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. **100007099**



AC-DKD calibration of COM100x, 60 Hz
 • Including DKD calibration certificate

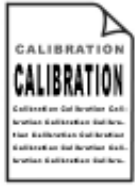
Ord.No. **100519635**



DC DKD calibration COM
 For all DC-capable COM devices required add-on of the DKD calibration.

Ord.No. **100519636**

For COM3003DC:
Load points U, DC:
 480 V; 240 V; 120 V; 60 V
Load points I, DC:
 10 A; 5 A; 2 A; 1 A; 0,5 A



DC factory calibration (initial purchase) COM
 With initial purchase required add-on (DC) for factory calibration (AC) of a DC-capable COM device.

Ord.No. **100519740**



DC factory re-calibration COM
 Required add-on (DC) for factory re-calibration (AC) of a DC-capable COM device.

Ord.No. **100519741**



DC readjustment COM
 Required add-on (DC) for readjustment (AC) of a DC-capable COM device.

Ord.No. **100638201**



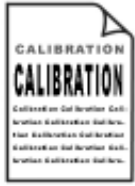
Calibration, each additional load point for power and energy, DKD

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

Ord.No. **M00481006**

For supply via power socket.

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



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

Ord.No. **M00481004**

For supply via power socket.

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



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

Ord.No. **X00006459**

For supply via power socket.

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

**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****Laboratory Cables****Current cable set up to 160 A for RMM3000, COM300x, cable lug/cable lug, 2.0 m**

- 2x 8.5 mm cable lug, open
- 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**Ord.No. **1006648xx****Current cable set up to 160 A for RMM3000, COM300x, cable lug/cable lug, 2.0 m**

- 1x 8.5 mm cable lug, open
- 1x 10.5 mm cable lug, open
- 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**Ord.No. **1006852xx**



Current cable set up to 160 A for RMM3000, COM300x, cable lug/pin, 2.0 m

- 1x 8.5 mm cable lug, open
- 1x 5.8 mm pin
- 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

Ord.No. **1006853xx**



Current cable set up to 120 A for RMM3000, COM300x, cable lug/socket, 1.2 m

- 1x 8.5 mm cable lug, open
- 1x 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

Ord.No. **1006854xx**



Current cable set up to 120 A for RMM3000, COM300x, cable lug/plug, 1.2 m

- 1x 8.5 mm cable lug, open
- 1x 6 mm plug
- 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

Ord.No. **1006855xx**



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 is 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****Documentation****Documentation COM3003**

- | | |
|---|-----------|
| 01 Operation manual COM3003 (german) | Z10315802 |
| 01 Interface description (english) | 100335021 |
| 01 Interface description SCPI (english) | 100335031 |
| 01 Software description MTvis (german) | 100322291 |

Ord.No. **100334930****Documentation COM3003**

- | | |
|---|-----------|
| 01 Operation manual (english) | Z10315801 |
| 01 Interface description (english) | 100335021 |
| 01 Interface description SCPI (english) | 100335031 |
| 01 Software description MTvis (english) | 100322291 |

Ord.No. **100334931**

**Documentation COM3003**

01 Operation manual (french)	Z10315803
01 Interface description (english)	100335021
01 Interface description SCPI (english)	100335031

Ord.No. **100334932****Documentation COM1003**

01 Operation manual (german)	Z10315602
01 Interface description (english)	100335021
01 Interface description SCPI (english)	100335031

Ord.No. **100334935****Documentation COM1003**

01 Operation manual (english)	Z10315601
01 Interface description (english)	100335021
01 Interface description SCPI (english)	100335031

Ord.No. **100334936**

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**

**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**

Small Parts and Accessories Bag for Small Parts

Fuse time-lag 3,15A, 5x20mm

Ord.No. **M00460252**

Cable bridge, black, 0.25 cm

Ord.No. **X00003092**

Connecting terminals for currentOrd.No. **X00011923****Adapter for terminal blocks**Ord.No. **X00004961**

- 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.

4 mm plug adapter (banana plug)Ord.No. **X00004962**

- 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.

4 mm cable lug adaptersOrd.No. **X00004963**

- 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.

Spring clipOrd.No. **Z09508700**

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



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



Transportation case for COM3003/1003

For secure transportation of the measuring instrument.
H 652 mm x B 445 mm x T 175 mm

Ord.No. **X00010008**

**Movable transportation case for COM3003/1003**

For secure transportation of the measuring instrument.
With extra space for accessories.
H 808 mm x W 587 mm x D 484 mm

Ord.No. **100023907**

Additional Accessories for The Device

**Coaxial cable with BNC plug, 3 m**

- 2x BNC plug

Ord.No. **Z09548330****Adapter UHF-BNC**

To connect cables with UHF plug to the RMM300x or COMx003.

- 1x BNC-Stecker
- 1x UHF-Buchse

Ord.No. **M00466008****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****V.24 connection cable**

- 1x D-Sub socket, 9-pin
- 1x D-Sub plug, 25-pin
- Cable length: 3.00 m

Ord.No. **Z08460530**

**Compact-Flash Card, 32 MB**

To store customer data and measuring values. Provides easy data transfer from the instrument to the PC.

Ord.No. **Z10310404**

**Compact-Flash card reader**

For connecting to the PC and reading the Compact-Flash card.

Ord.No. **X00011897**

**Pulse shaper K 129**

The adapter K129 can be connected between the TTL-output and the Fin-input. The TTL-level will be converted into an Open-Collector-output. The necessary power supply (> 3.4 V / approx. 40 μ A) will be provided by the input, resp. output signal.

Ord.No. **100311100**

**Pulse Scaler K133**

The adaptor K133 is for the reduction ratio (1000:1, 100:1, 10:1, 1:1) of working standard pulses. Input pulse active 2 ... 24 V or open collector, max 350 kHz. Output open Collector with pullup to 12 V.

Ord.No. **100453200**

ZERA GmbH
Hauptstraße 392
D-53639 Königswinter
Phone: +49 (0)2223 704-0
Fax: +49 (0)2223 704-70
E-mail: zera@zera.de
Internet: www.zera.de
Managing Directors:
Dr. Prosper Suwelack / Rainer Otto
Headquarter: Königswinter



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

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
