ZERA

Precision starts with us

We are the preferred and independent partner for energy meter testing worldwide

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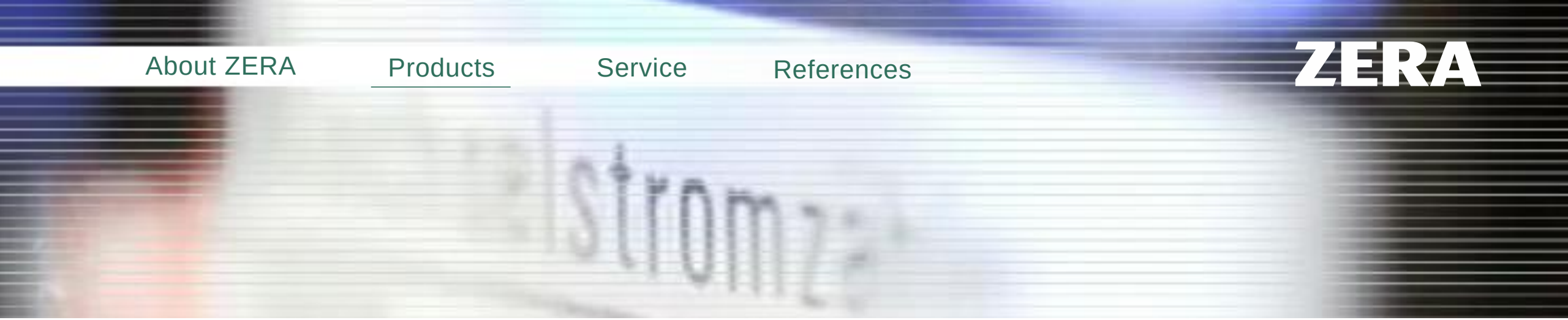
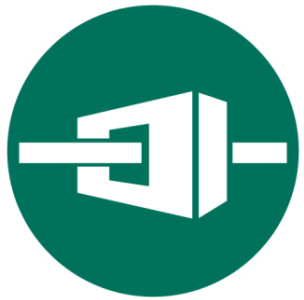
ZERA develops and manufactures systems for producing, measuring, testing and calibrating electrical quantities and sells them worldwide.

Renowned utilities as well as meter and instrument transformer manufacturers are among our customers.
ZERA is an independent company, led by its employees.

Click here for more information about ZERA



Meter Test Systems



Instrument Transformer Test Systems

Precision Laboratory Systems

Software

Product Overview Meter Test Systems

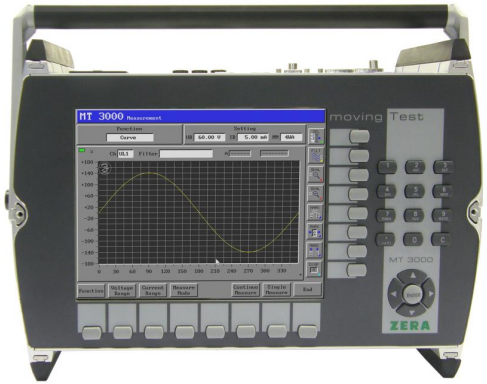
- Portable
  - Reference Meters & accessories
  - Test Systems
  - Sources
- Stationary
  - Sources
  - Components sources
  - Test benches
  - Components test benches

Testing of energy meters

MTx0
Reference Meter
Class 0.1

MT3x0
Reference Meter
Class 0.1 (0.05)

MT3x0s2
Reference Meter
Class 0.1



MT3000
Reference Meter
Class 0.02 (0.05)

MTx0 Reference Meter

Accuracy class

- MT10: 0.2 (single-phase)
- MT30: 0.2 (three-phase)

Main functions

- Current measurement via AC current clamps up to 30000 A
- Voltage measurement up to 300 V
- Actual value, vector, curve display
- Harmonics up to 40th
- Error measurement

Scope of application

On-site measurement with system load

Specials

- Supply via external power supply unit or via internal rechargeable battery (optional)
- Selective measurement (optional)
- Also available as CAT IV device

MT3x0 Reference Meter

Accuracy class

- MT310: 0.1
- MT320: 0.05

Main functions

- Direct measurement up to 12 A / 300 V
- Current measurement via AC current clamps up to 30000 A
- Actual value, vector, curve display
- Harmonics up to 40th
- Error measurement

Scope of application

On-site measurement with system load

Specials

- Burden measurement for CT / VT
- I-transformer testing (optional)
- Selective measurement (optional)
- Energy dosage (optional)
- Also available as CAT IV device

MT3x0s2 Reference Meter

- **Accuracy class**
- MT310s2: 0.1
- MT320s2: 0.05

Main functions

- Direct measurement up to 12 A / 300 V
- CAT IV
- Current measurement via AC current clamps up to 300 A
- Actual value, vector, curve display
- Harmonics up to 40th
- Error measurement

Scope of application

On-site measurement with system load or battery pack

Specials

- Supply via mains plug or battery pack
- Non-sensitive against interferences (e.g. 150 kHz)
- Additional channels for measuring $U_{(PE-PN)}$ or I_N
- Burden measurement for CT/VT
- I-transformer testing
- Selective power measurement
- Hardware can be extended modularly
- Exchangeable battery pack

MT36x Reference Meter

Accuracy class

- MT360: 0.1
- MT365: 0.05

Scope of application

On-site measurement with system load

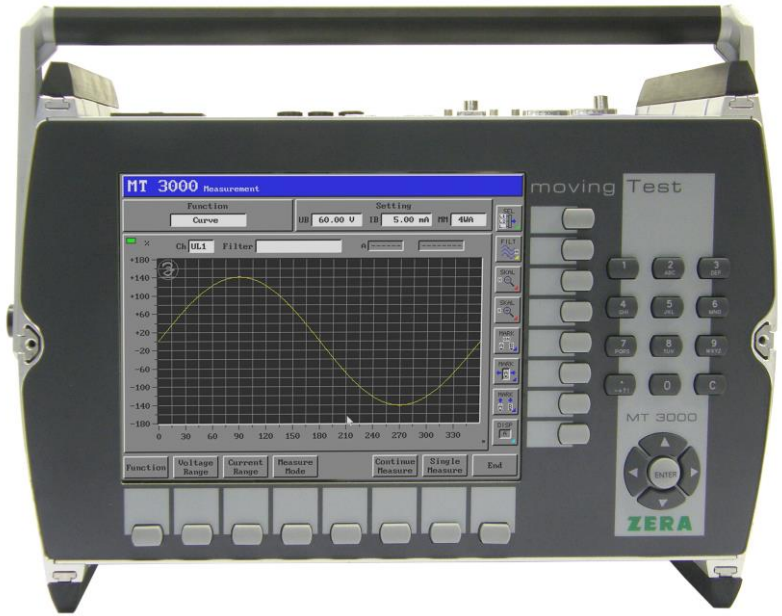
Main functions

- Direct measurement up to 12 A / 300 V
- Current measurement via AC current clamps up to 30000 A
- Actual value, vector, curve display
- Harmonics up to 40th
- Error measurement

Specials

- Burden measurement for CT / VT
- U/I-transformer testing
- Selective measurement
- Energy dosage
- Automatic measurement (optional - only if a ZERA source is connected)
- Also available as CAT IV device

MT3000 Reference Meter



Accuracy class

- MT3301/3305: 0.02
- MT3302/3307: 0.05

Scope of application

On-site measurement with system load

Main functions

- Direct measurement (depending on integrated module)
  MT3301/3302 bis 12 A / 300 V
  MT3305/3307 bis 120 A / 600 V
- Current measurement via AC current clamps up to 30000 A
- Actual value, vector, curve display
- Harmonics up to 40th
- Error measurement

Specials

- Burden measurement for CT / VT
- U/I-transformer testing
- Selective measurement
- Energy dosage
- Automatic measurement (optional - only if a ZERA source is connected)
- Accuracy class depends on the integrated module

EMOB32 Test case for charging stations

Phases: 3

Current/Voltage measurement

- 32 A (AC)
- 300 V (AC)

Accuracy class

- 0.05 (accuracy of the integrated transformer)

Main functions

- Direct connection to charging stations for electric vehicles
- Direct measurement up to 32 A (AC)
- Energy measurement during the charging process
- CAT II

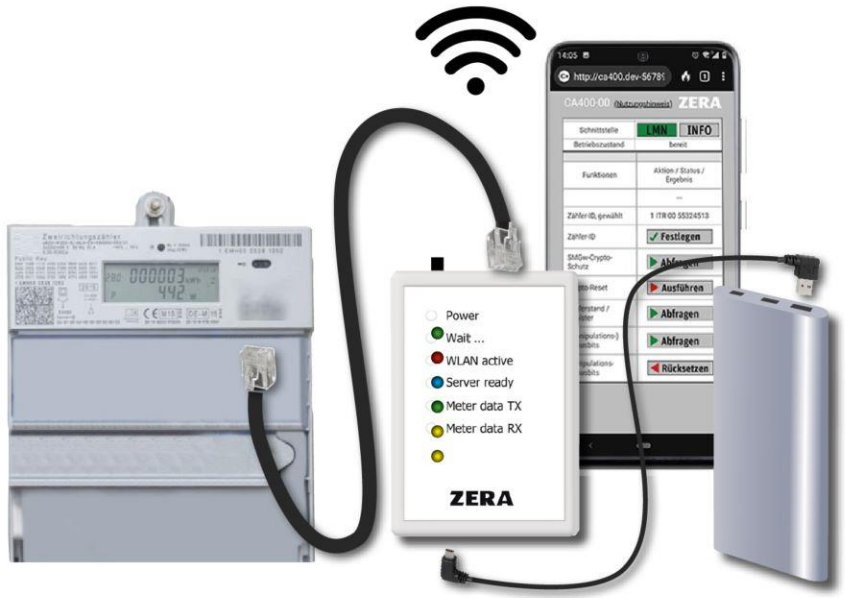
Scope of application

On-site measurement (without mains supply) of charging stations of electric vehicles

Specials

- Independent of the mains supply by battery operation of the connected reference meter (MT3x0s2)
- Comfortable control by guided test sequences via WinSAM and tablet
- Short set-up times
- Comprehensive range of accessories
- Charging cable with additional measuring line (sense)

CA400 Communication Adapter for Smart Meter



Main functions

- Communication with the meter via LMN interface
- Reset of cryptographical information
- Read-out of the energy register
- Read-out and interpreting of the status registers
- Detection of magnetical and mechanical manipulation
- Function test of meters
- Guaranteed communication of a meter via LMN interface
- Support of SML protocols

Scope of application

On-site testing of the most important meter values and preparation for further installations to a Smart Meter Gateway SMGw

Specials

- Read-out of registers, electrical energy meters (Basiszählern acc. to FNN and up to 10 modern measuring system (mME) via LMN bus
- Detection of starting and no-load of meters
- Detection of the energy direction per phase L1-L2-L3
- Detection of the rotating field and the phase voltage per phase L1-L2-L3

Generation of current and voltage

MT400
Current source

12 A

MT500
Current and voltage source
12 A / 300 V

MT551
Current and voltage source
120 A / 500 V

MT400 Current Source

Generation

12 A

Main functions

- Current generation up to 12 A
- Voltage supply via available voltage from the grid

Scope of application

Simulation of load while testing meter installations on-site

MT500 Current and Voltage Source

Generation
12 A / 300 V

Main functions
- Current generation up to 12 A
- Voltage generation up to 300 V

Scope of application
Simulation of load while testing meter installations on-site

Specials
Simulation of load by adjustable currents, voltages and angles

MT551 Current and Voltage Source

Generation

120 A / 500 V

Main functions

- Current generation up to 120 A
- Voltage generation up to 500 V

Scope of application

Simulation of load while testing meter installations on-site

Specials

- Touch screen
- Programmable wave form generation for voltage and current
- Generation (optional) of harmonics in current and voltage up to the 40th

Test and generation in one device

MT68x
Three-phase Test System
Class 0.1 (0.05)
100 A

MT68xs
Single-phase Test System
Class 0.1 (0.05)
120 A

MT78x
Three-phase Test System
Class 0.1 (0.05)
120 A / 500 V

MT68xs Test System

Accuracy class

- MT680s: 0.1
- MT686s: 0.05

Generation

120 A

Main functions

- Generation up to 120 A
- Direct measurement up to 120 A / 500 V
- Actual values, vector and curve display
- Harmonics up to 40th in the current
- Error measurement

Scope of application

On-site measurement with load simulation

Specials

- Selective measurement (optional)
- Energy dosage
- Automatic measurement
- Touch screen
- Compact design

MT68x Test System

Accuracy class

- MT681: 0.1
- MT686: 0.05

Generation

100 A

Main functions

- Generation and direct measurement up to 100 A / 300 V (mains)
- Current measurement (only via special current clamps) up to 30000 A
- Actual value, vector, curve display
- Error measurement

Scope of application

On-site measurement with load simulation

Specials

- Selective measurement (optional)
- Energy dosage
- Automatic measurement

MT78x Test System

Accuracy class

- MT781: 0.1
- MT786: 0.05

Generation

120 A / 500 V

Main functions

- Generation and direct measurement up to 120 A / 500 V
- Current measurement (only via special current clamps) up to 30000 A
- Actual values, vector and curve display
- Error measurement

Scope of application

On-site measurement with load simulation

Specials

- Selective measurement (optional)
- Energy dosage
- Automatic measurement
- Generation of harmonics in current and voltage up to 40th (optional)

Testing of energy meters

Sources
200 VA up to 5600 VA
Class 0.1 up to 0.005

Source components
Single components
for individual sources

Test benches
1 up to 40 test positions
Single- or three-phase

Test bench components
Single components
for individual test benches

Generation of test values

MTS140
U: 1 x 1500 VA
I: 1 x 1500 VA
Class 0.02 up to 0.005

MTS310
U: 3 x 500 VA
I: 3 x 600 VA
Class 0.02 up to 0.005

MTS320
U: 3 x 500 VA
I: 3 x 2000 VA
Class 0.02 up to 0.005

MTS340
U: 3 x 1500 VA
I: 3 x 2000 VA
Class 0.02 up to 0.005

MTS140 Source System

Main functions

- Generation of test values for max. 40 test positions

Scope of application

- Usage in ZERA Meter Test Systems

Design

48,26 cm (19“) cabinet

Accuracy class

0.02

Output power voltage

1 x 1500 VA

Test voltage (P-N)

40 ... 480 V (AC)

Output power current

1 x 1500 VA @120 A

Test current

0 … 120 A (AC)

MTS310 Source System

Main functions

- Generation of test values for max. 10 test positions
- Suitable for usage of ICT at 5 test positions

Scope of application

- Usage in ZERA Meter Test Systems

Design

48,26 cm (19“) cabinet

Accuracy class

0.005 up to 0.02

Output power voltage

3 x 500 VA

Test voltage (P-N)

40 ... 320 V (AC/DC)

Output power current

3 x 600 VA @ 120 A

Test current

0 … 120 A (AC) (up to 320 A via ICT)

Specials

Optional supply of 10 test positions including ICT with current amplifiers VI222

MTS320 Source System

Main functions

- Generation of test values for max. 20 test positions

Scope of application

- Usage in ZERA Meter Test Systems

Design

48,26 cm (19“) cabinet

Accuracy class

0.02

Output power voltage

3 x 500 VA

Test voltage (P-N)

40 ... 320 V (AC/DC)

Output power current

3 x 2000 VA*

Test current

0 … 160 A

Specials

*higher output power on request

MTS340 Source System

Main functions

- Generation of test values for max. 40 test positions

Scope of application

- Usage in ZERA Meter Test Systems

Design

48,26 cm (19“) cabinet

Accuracy class

0.02

Output power voltage

3 x 1500 VA

Test voltage (P-N)

40 ... 480 V (AC/DC)

Output power current

3 x 2000 VA*

Test current

0 … 160 A

Specials

*higher output power on request

MTS380 Source System

Main functions

- Generation of test values for max. 40 test positions

Scope of application

- Usage in ZERA Meter Test Systems

Design

48,26 cm (19“) cabinet

Accuracy class

0.02

Output power voltage

3 x 1500 VA

Test voltage (P-N)

40 ... 480 V (AC)

Output power current

3 x 5600 VA*

Test current

0 … 120 A (AC)

Specials

*higher output power on request

Source Components – Controlling, Testing

FG301
Frequency Generator
Central unit of the
test value generation

EPZ303-08
Reference Meter
Class 0.02

COM3003
Comparator/Reference Meter
Class 0.008

COM5003
Comparator/Reference Meter
Class 0.005

Source Components – Generation

VI20x
Current Amplifier
2000 VA / 2800 VA
160 A / 120 A (AC)

VU211
Voltage Amplifier
1000 VA / 1500 VA
480 V (AC)

VU221
Voltage Amplifier
500 VA
320 V (AC and DC)

VUI301
Current and Voltage Amplifier
Single-phase
320 V (AC), 30 VA
120 A (DC up to 12 A), 200 VA

Test Benches

Single-Position Test Bench
1 test position

Multi-Position Test Bench
5, 10, 20 or 40 test positions
different designs

Special Systems
5, 10, 20 or 40 test positions
different suspensions
for scanning heads

Standard Test Benches

Main functions

- Single-/three-phase meter testing including data management

Scope of application

Combined with a source system for example of the MTS series these test benches are used to as a single- or three-phase Meter Test System

Specials

Extendable individually by modular design

Test positions

1 up to 40

Accuracy class

0.005 up to 0.02

Semi-Automatic Test System – Quality Assurance

Main functions

- Quality testing of energy meters
- Testing of metrology

Design

- Integrated source system
- Compact design

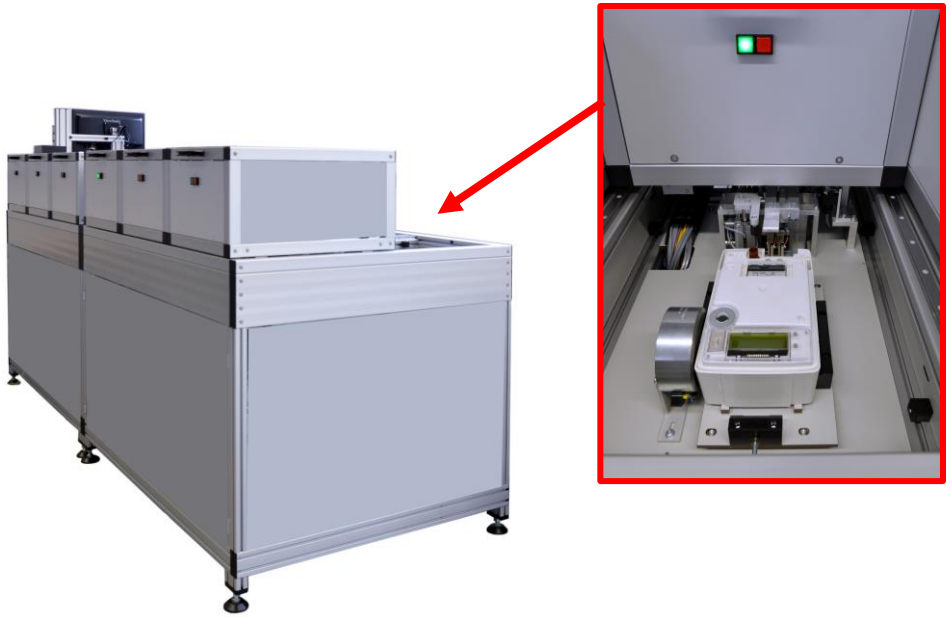
Specials

- Manual assembling
- Pneumatic meter-specific contacting
- Automatic positioning of the scanning heads
- Customized test procedures

Test positions

- 1 up to 20

Semi-Automatic Test System – Functional Meter Test



Main functions

- Function test of energy meters
- Communication test of PLC, NFC, RF, BLE, IR
- General test as display check and voltage drop
- Anti-Tampering, sabotage protection:
- Testing of the electro-magnetic sensors, motion sensor, switch for terminal cover

Design

- Compact design

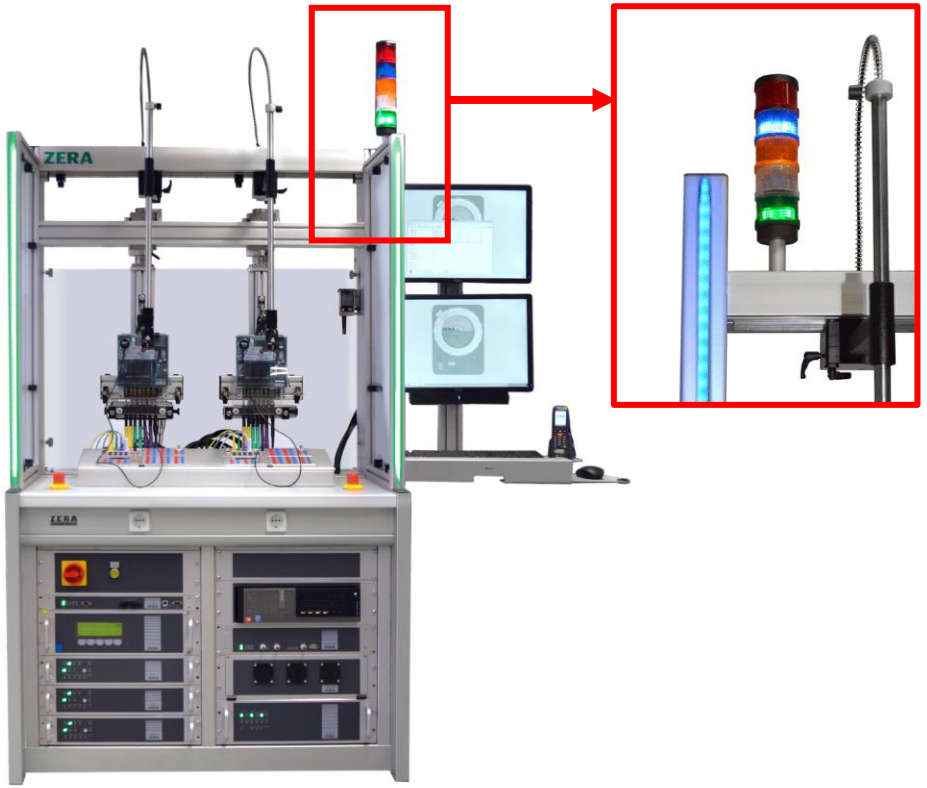
Specials

- Manual assembling
- Pneumatic meter-specific contacting
- Implementation of customized test procedures

Test positions

- 1 up to 9

Testing of Energy Meters – Special Designs



Main functions

- Complete range of available functionalities
- Smart metering data communication testing

Design

- Compact design on request

Specials

- Light barrier for safe operation
- Moveable meter rack
- Quick connecting devices
- Integrated source on request
- Stated measurement uncertainty in WinSAM

Specials

- Scanner for QR-codes, datamatrix codes etc.
- Integrated DELL-PC
- Side table for keypad
- Recessed roller system for flexible placement of the system

Test positions

- 1 bis 40

Test Bench Components — Measuring Systems

DS421
Multi-position Error Calculator

STM4000
Digital measuring system

STM6000
Digital measuring system

DS421 Multi-position Error Calculator

Main functions

- Single measurement
- Continuous measurement
- Counting pulse edges and resets
- Control of two auxiliary circuit relays

Scope of application

- Usage in stationary ZERA Meter Test Systems
- Testing of up to 20 electricity meters

Scope of application

- Several devices can be combined in one Meter Test System
- Error indication via additional display unit DSA400
- DSA400: Display of measuring values per test position/meter during the test procedure

STM4000 Series, Testing of Smart Meters

Main functions

- Testing of metrology and data communication
- Suitable for testing Smart Meters

Scope of application

- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter

Besonderheiten

- Modular design of the hardware
- Smart Meter testing
- Analysis of data communication
- Encrypted communication
- Adjustable light intensity for communication

Interfaces

RS232, RS485, M-Bus, IR etc.

Communication tests

IEC62056-21, IEC62056-42-46-53, DLMS/COSEM (HDLC, LLC, DLMS (auth. by LLS, HLS), COSEM), ABB (Elster) Vision

STM4000 Basic module

Main functions

- Base module for testing of metrology and communication
- Suitable for Smart Meter testing

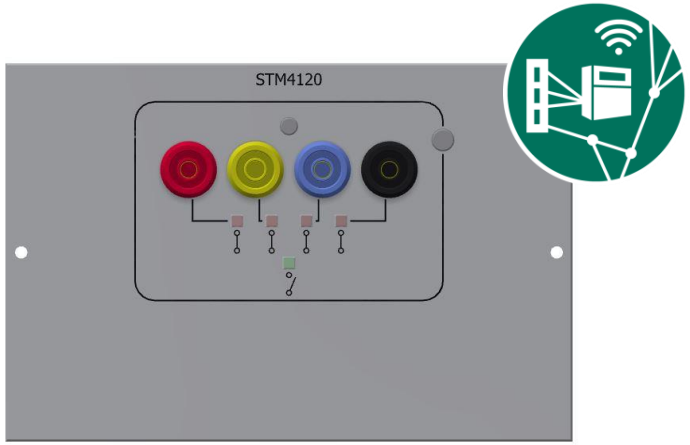
Scope of application

- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter
- Voltage supply occurs via SCR4000

Specials

- Coloured display, for indication of information e. g. measurement deviation
- Scanning head input internal 2x
- IR-Scanning head input internal 1x
- Pulse input BNC 1x
- Push-button

STM41x0 Test voltage module



Main functions

- Test voltage module for the supply of the meter under test

Scope of application

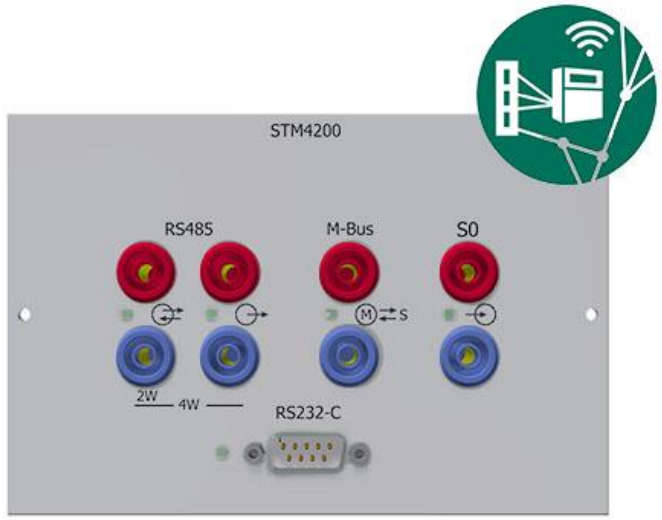
- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter

Specials

- Individually switchable test voltage per phase

Optional configuration levels:
- Relay circuits R1-R6 and N0-NC
- Auxiliary voltage U_{AUX} 2x

STM4200 Communication module



Main functions

- Extension module for testing of metrology and communication
- Suitable for Smart Meter testing

Scope of application

- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter

Specials

- Extension module for STM4000 for testing of communication via interfaces:
  - RS485 (operation mode 2-wire or 4-wire)
  - RS232
  - M-Bus
- Metrology input:
  - S0 (transmitter)

STM6000 Series, Testing of Smart Meters

Main functions

- Testing of metrology and data communication
- Suitable for testing Smart Meters and more

Scope of application

- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter

Specials

- Modular design of the hardware
- Individual equipment
- Smart Meter Gateway testing
- Analysis of data communication
- Encrypted communication
- Adjustable light intensity for communication

Interfaces

RS232, RS485, RF, 20mA, PLC, M-Bus, IR, ZigBee etc.

Communication tests

DLMS / COSEM, TLS, HDLC, IEC 62056-21, SML / COSEM etc.

STM6000 Base module

Main functions

- Base module for testing of metrology and communication
- Suitable for Smart Meter testing

Scope of application

- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter
- Voltage supply occurs via CR2020 resp. STR6000

Specials

- Coloured display, for indication of information e. g. measurement deviation
- Ethernet 3x
- Scanning head input external 2x
- Scanning head input internal 1x
- Pulse input BNC 1x
- Push-button

STM61x0 Test voltage module

Main functions

- Test voltage module for the supply of the meter under test

Scope of application

- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter

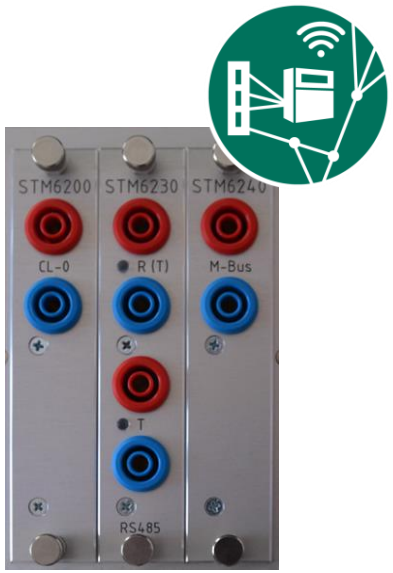
Specials

- Voltage switch-off per phase

Optional configuration levels:

- Relay circuits R1-R6 and N0-NC
- Auxiliary voltage U_{AUX} 2x

STM6200 … STM6260 Communication modules



Main functions

- Extension module for testing of communication
- Suitable for Smart Meter testing

Scope of application

- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter
- Max. 6 modules can be used per test position/meter

Specials

- Extension module for STM6000 for communication via interface:
  - CL0 resp. 20 mA
  - M-Bus
  - IR (infrared scanning head TK117)
  - RS485 (operation mode 2-wire or 4-wire)
  - RS232
  - EDL
  - Sym²

STM6290 Communication module for Basiszähler

Main functions

- Extension module for testing of communication
- Suitable for Smart Meter testing

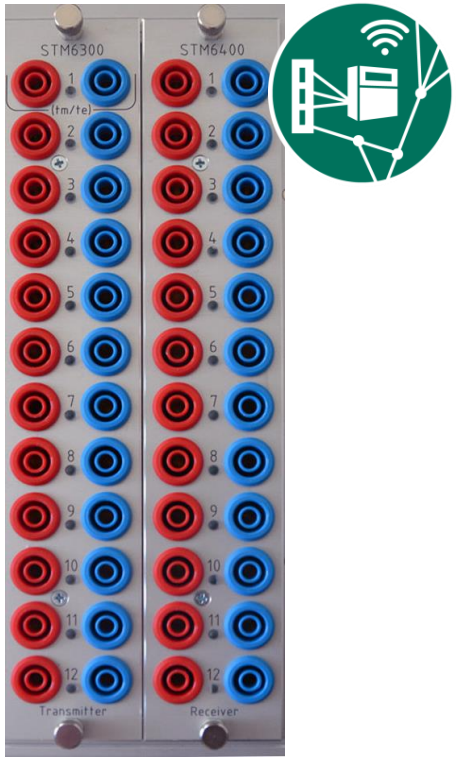
Scope of application

- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter

Specials

- Extension module for STM6000 for testing of communication of Basiszähler (electrical energy meter) according to FNN:
  - LMN wired 2x
  - LMN via IR/TK2020-00 1x
  - INFO via IR/TK2020-02 1x
  - 300 up to 921.600 Baud

STM63xx/64xx Transmitter /Receiver module



Main functions

- Extension module for testing of metrology
- Connection of the pulse output/-input from the meter

Scope of application

- Usage in stationary ZERA Meter Test Systems
- One module is required per test position/meter

Specials

- Extension module for STM6000
- Metrological output (STM63xx): Transmitter 12x, 8x or 4x
- Pulse input (STM64xx): Receiver 12x, 8x or 4x

CAx000 Infrared communication adapter

Main functions

CA2000/CA4000/TK2020-02:

- Data communication with EDL meter and Basiszähler (electrical energy meter) to FNN requirement specification LMN
- Reading via INFO interface
- Selectable irradiation intensity during transmission
- Wavelengths of 850 nm, 890 nm or 940 nm during transmission

Scope of application

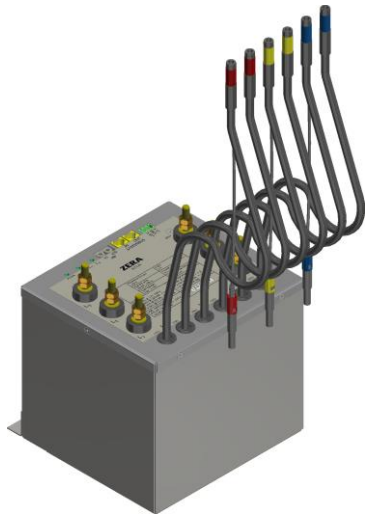
- Connection via STMx000

Specials

- There are different types resp. interface, cable length and communication available.
- CA4000: Meter operation via light impulses (torch)
- TK2020-02: Measurement of the irradiation intensity during data reception

Current and Voltage Transformers

MSVT
Multi-Secondary Voltage Transformer for galvanic isolation of the voltage of single-phase meters



ICT130
Isolated Current Transformers
Max. current range **120 A 1:1**

ICT123/ICT128
Isolated Current Transformers
Max. current range **240 A 1:1/1:2**
Burden measurement/Breaker test

Current Transformers

ICT125 / ICT126
Isolated Current Transformers
Max. current range **160 A 1:2 / 1:1**
Burden measurement / Breaker test

ICT127
Isolated Current Transformers
Max. current range **120 A 1:1 / 10:1**
Burden measurement / Breaker test

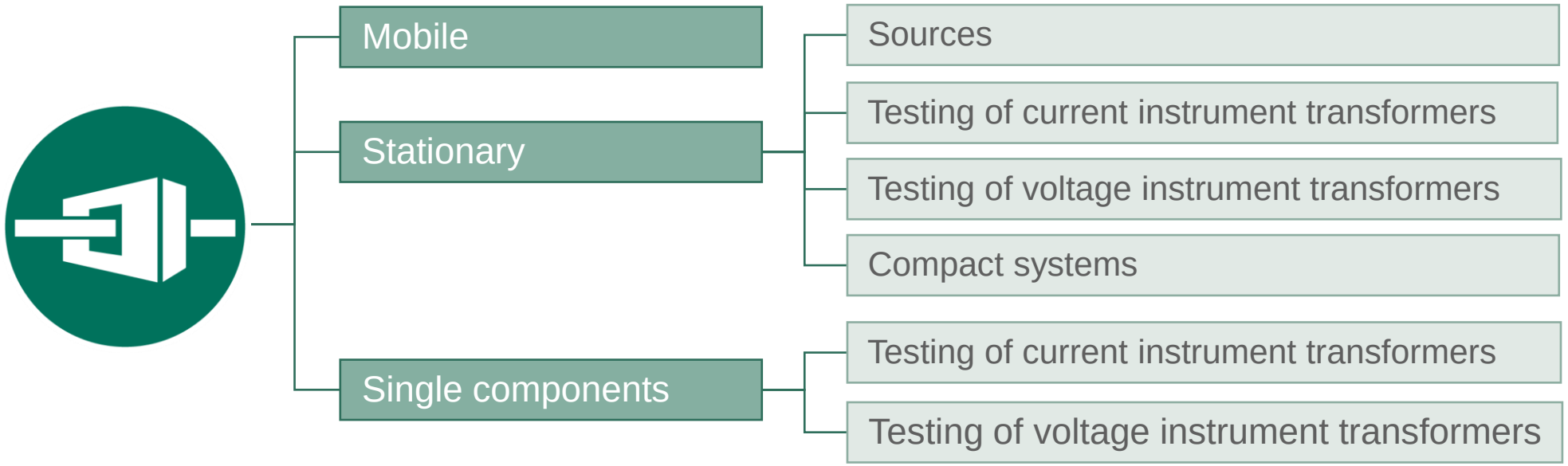
Test Bench Components — Mechanical parts

Basic scanning head suspension
Folding mechanism adjustable in all directions

Standard scanning head suspension
Ball-bearing mount suspension with quick height adjustment and fine adjustment

Rotating meter racks
Meter racks for
2 or 3 connection options
Quick and reliable positioning of different meter types

Product Overview Instrument Transformer Test Systems



VRT – Voltage Regulating Transformer

Output voltage

0 V … 400 V
(according to SCM / HVT)

Frequency

Mains frequency

Main functions

- **V**oltage **R**egulating **T**ransformer
- Supply of voltage or current transformer with a variable voltage for testing of CT or VT

Scope of application

- Manual control
- Testing of instrument transformers
- Using the mains frequency

Design

48,26 cm (19“) cabinet
1-4 fields

EVRMU – Electronic Voltage Regulating & Measuring Unit

Output voltage

0 V … 400 V
(according to SCM / HVT)

Frequency

50 Hz / 60 Hz

Main functions

- Electronic Voltage Regulating and Measuring Unit
- Supply of voltage or current transformer with a variable voltage for testing of CT or VT
- Control via PC

Scope of application

- Automatic control
- Testing of instrument transformers with 50 Hz / 60 Hz

SCM – Standard Current Module

Nominal current

Max. 10.000 A // 1 A / 5 A (CT)

Main functions

- Generation of test current

Components

- Combination of High Current Transformer (HCT) and Standard Current Transformer (SCT)

Scope of application

- Testing of current transformers (CT)

Specials

- Cost-effective, space-saving and minimal inductive losses by combining two units (HCT and SCT)
- Time-saving due to one-off connection

HVT – High Voltage Transformer

Maximum voltage

500 kV

Main functions

- Generation of high voltage

Scope of application

- Testing of voltage transformers
- In combination with a Standard Voltage Transformer SVT, the HVT is used for accuracy testing of VT
- As a single unit the HVT can only be used for insulation testing

SVT – Standard Voltage Transformer

Nominal voltage

max. 500 kV / √3 kV (VT)

Main functions

- Usage as reference

Scope of application

- Testing voltage transformers with single and double-pole connections

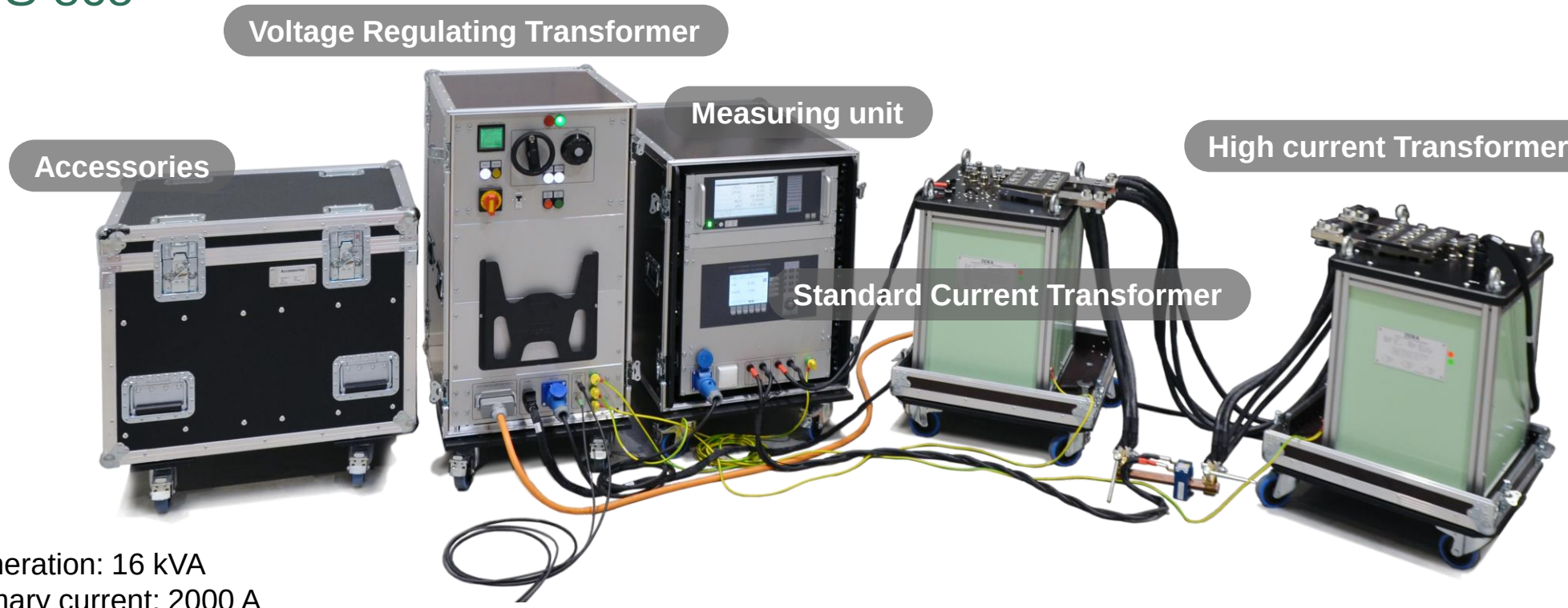
Complete Systems for CT & VT testing

ITTS compact
Compact CT Test System
Generation: 10 kVA

ITTS (CT, 32 kVA)
CT Test System
Generation: 32 kVA

ITTS (CT, VT, 16 kVA)
CT and VT Test System
Generation: 16 kVA

ITTS eco



Generation: 16 kVA
Primary current: 2000 A
Secondary current: 1 A and 5 A

Mobile/Stationary

Single components

ITTS eco, Testing of Current Transformers

Generation:

16 kVA

Frequency:

- 50 Hz or 60 Hz (depending on the mains frequency)

Primary current:

- I_N = 2000 A, I_{max} = 2400 A

Secondary current:

- 1 A and 5 A

Main functions

- Accuracy testing of current instrument transformers (CT)

Scope of application

- On-site testing of CT

Specials

- User-friendly
- On-site testing under real conditions
- High precision

Testing of Current Instrument Transformers

WM1000I
Current transformer measuring bridge
for conventional CTs

WM3000I
Current transformer measuring bridge
for all types of CTs

ESCB100
Electronic compensated Standard Current Burden
Fixed burden steps
Manual CT testing

ESCB200
Electronic compensated Standard Current Burden
Free selectable burden steps
Manual & automatic CT testing

Mobile/Stationary

Single components

Testing of Voltage Instrument Transformers

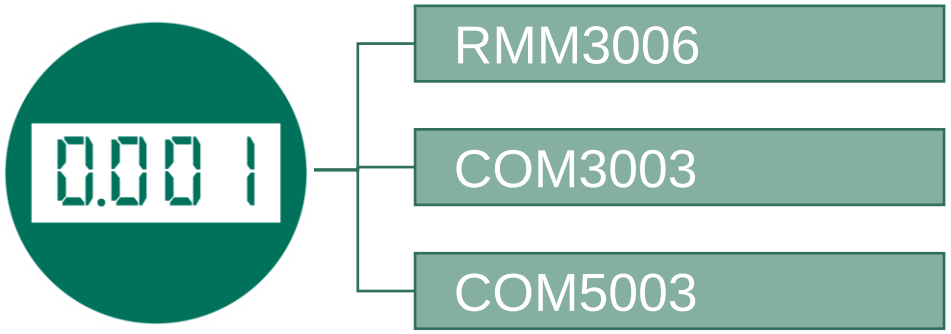
WM1000U
Voltage transformer measuring bridge
for conventional VTs

WM3000U
Voltage transformer measuring bridge
for all types of VTs

ESVB100
Electronic compensated Standard Voltage Burden
Fixed burden steps
Manual VT testing

ESVB200
Electronic compensated Standard Voltage Burden
Free selectable burden steps
Manual & automatic VT testing

Product Overview Precision Laboratory Systems



Test Equipment for Laboratories and Metrological Institutes

RMM3006
Reference Multimeter
Class 0.02

COM3003
Comparator
Class 0.008

COM5003
Comparator
Class 0.005

RMM3006 Referenz Multimeter

Phases

3

Voltage measurement

10 V … 480 V

Current measurement

1 mA … 160 A

Accuracy class

0.02

Scope of application

Application as reference standard for metrological institutes or as transfer standard for test laboratories of power utilities and electricity meter manufacturers

Main functions

- Testing of current and voltage test devices as well as single- or polyphase power and energy testing systems
- Actual values
- Meter accuracy testing
- Energy comparison measurement

Specials

- Measurement of DC components
- High accuracy, independent from measurement mode

COM3003 Comparator

Phases

3

Voltage measurement

30 V … 500 V

Reference voltage ranges

1 V DC, 10 V DC

Current measurement

1 mA … 160 A

Accuracy class

0.008

Scope of application

Application as primary standard for metrological institutes and test laboratories

Main functions

- Testing of current and voltage test devices as well as single- or polyphase power and energy testing systems
- Actual value, vectorial and curve display
- Harmonic, error and reference measurement

Specials

- Using of DC-capable current transformers
- Automatic measuring range selection
- Verification and direct traceability of measuring accuracy by connection of DC- and frequency standard devices

COM5003 Comparator

Phases

3

Voltage measurement

100 mV … 600 V

Reference voltage ranges

10 V DC

Current measurement

0.5 mA … 160 A (AC)

Main functions

- Testing of current and voltage test devices as well as single- or polyphase power and energy testing systems
- Actual values, vectorial and curve display
- Harmonic, error and reference measurement
- Easy implementation of further measuring tasks

COM5003 Comparator

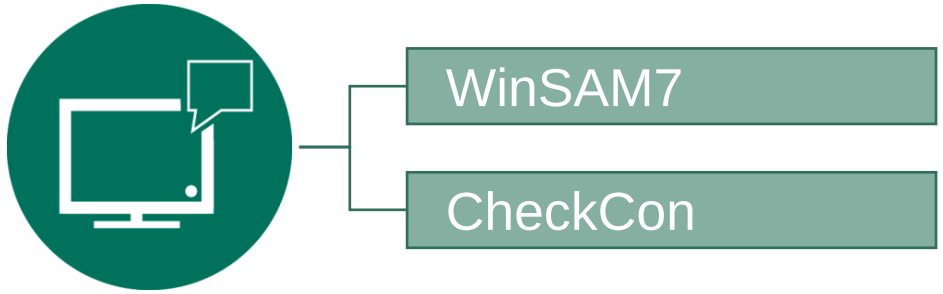
Specials

- Simultaneous energy measurement in four measurement modes
- Power measurement at alternating energy direction
- Simultaneous error measurement with up to four pulses of DUT
- Active impedance compensation at currents ≤100 mA
- Operation via capacitive touchscreen
- Traceability of measurement accuracy by connection of DC- and frequency standard
- Remote control

Scope of application

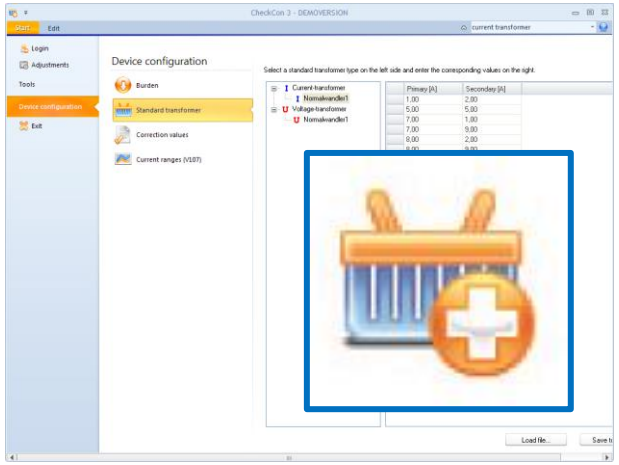
Application as primary standard for metrological institutes and test laboratories

Product Overview Software



WinSAM7

Software for Meter Testing
Controlling and testing of
Meter Test Systems



CheckCon3

Software for Instrument
Transformer Testing
Control of Instrument Transformer
Test Systems

The ZERA Service+

Diversified. Precise. Binding. Guaranteed.

ZERA Service+

- First class quality work
- Binding commitments
- Transparent costs
- Constant further development
- Complete freedom of choice
- Expandability of your service package at any time

Support

- Accessibility & Support Level 1-3

Safety

- Spare part
- Rental units
- Maintenance & reliability check
- Warranty extension
- DAkkS calibration

Software

- WinSAM Update/ Upgrade
- WinSAM test sequence
- Measurement uncertainty budget

Training

- Training courses
- Consulting

Service package *Support level 1-3*

Offer

- We offer flexible support according to your needs:
- Different levels of availability
- Status tracking
- Quick on-site-support
- Possibility for remote control for best operator support
- Immediate help in the event of a breakdown

Level 1

- Service hotline flat rate during our regular opening hours

Level 2

- Extended availability in the evening plus extras

Level 3

- Additional availability at the weekend plus extras.

Service package *Safety*

Spare parts

- Better planning and direct availability of required spare parts.
- Standard components will be stored free of charge

Rental units

- Quick replacement of your on-site test equipment, measuring bridges, burden or amplifier. Within guarantee period this service is offered free of charge.

Maintenance

- Increase the security of your systems by regular maintenance and extensive reliability check.

Warranty extension

- Extend the regular warranty for max. 3 further years and save costs in case of repair.

DAkkS calibration

- Benefit from an extra price reduction on annual calibration of your test equipment, measuring bridges or burden.

Service package *Software**

WinSAM-Update/Upgrade

- WinSAM Update (free of charge) for permanent operating effectively. Benefit from an extra price reduction on the next WinSAM Upgrade.
- Contract period: 1-3 years

WinSAM test sequence

- Save time by using a test sequence especially determined to your measuring task and the meters to be tested.

Measurement uncertainty budget

- We are offering advice and training for creating your measurement uncertainty budget so that your work is according to the standards.

* Only applies for Meter Test Systems

** Is assigned to service package „Safety“ in case of an Instrument Transformer Test System

Service package *Training*

Training courses

- Choose two training courses per year from our offers and increase your knowledge about your soft- and hardware.

Consulting

- Individual on-site-training and consulting in order to optimize your testing time.

Utilities, test laboratories as well as meter and transformer manufacturers from all over world

www.zera.de