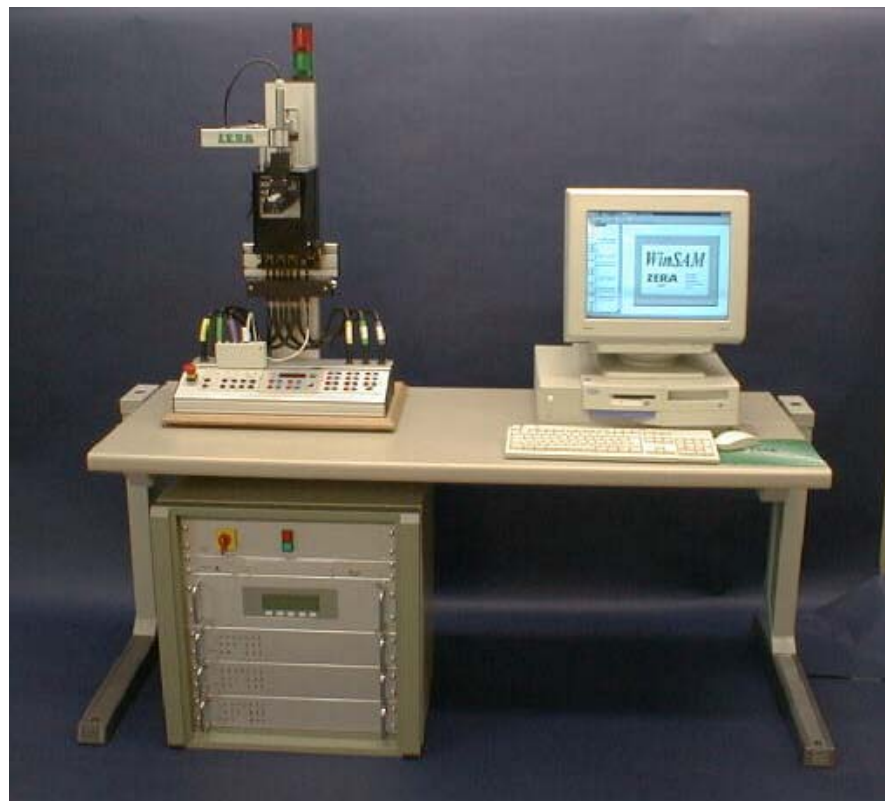


Single position meter testing system MTS 301

The design of the MTS 301 is based on modern state of art and wide experience of ZERA in Meter testing equipment manufacturing. This is designed for flexible and efficient testing of energy meters simple as well complex, sophisticated & multifunctional in small quantities, for research & design, quality testing purposes.



- This provide great assistance in
 - metrological testing
 - unusual, special testing
 - type testing

MTS 301

- Reduce dependency of R&D or quality testing on big production bench.
- Reduce dependency of other test laboratory.
- Improve production efficiency by well tested test sequences & routines on small test bench, than transfer to production test bench.

Application

- testing of electromechanical as well as static meters with:
 - accuracy classes 0.2, 0.5, 1 and 2,
 - 2 wire, 3 wire and 4 wire meters for active, reactive and apparent,
 - Loadprofil registers,
 - up to 8 energy and maximum demand register,
 - up to 11 impuls transmitters and 11 impuls receivers,
 - Flag-port-, CL-, RS485-, RS232-interface

Additional features

- Controllable via Windows® application software WinSAM,
- The modular design provide the opportunity to upgrade the system very easily,
- Only single phase input power is required,
- Fully automatic calibration of the system with ZERA COM3000,
- Closed link meter single- or threephase can be tested without additional equipment.

The Single position meter test system comprises:

- Power source MTS 301
- Measuring system mounted on a table
- Control PC with WinSAM application software

MTS 301

Power source



- high efficiency ($\eta \geq 80\%$),
- DDC control by signal processors,
- high stability at inductive-, capacitive- and non-linear loads,
- very good quality of the output signals, low THD

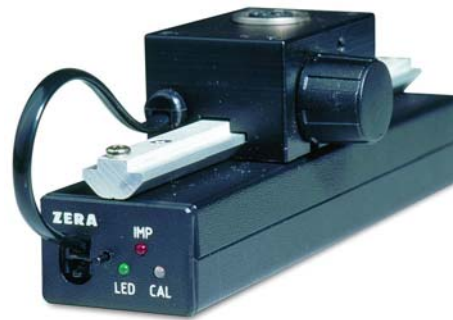
Measuring system



- error calculation and display of the meter error,
- up to 11 impulse transmitter and 11 impuls receiver can be tested,
- control of the dosage operation for the register test,
- data transfer according to IEC 1107,

MTS 301

Scanning head unit



Self adjusting scanning head TK311 (Option)

- detection of rotor marks of inductive type meters and LED pulses of static meters,
- quick height- and fine height adjustment,
- the scanning head can be swivelled over a joint.

MTS 301

Technical specification

Power supply	100 ... 240 VAC, +/-10%
Number of meters to be supplied	1
Current outputs <ul style="list-style-type: none"> - AC test current - DC test current - Current ranges - Output power - Resolution of amplitude - Resolution of phase angle - Efficiency - Distortion factor - Stability of the amplitude* - Stability of the phase* - Accuracy of the amplitude* - Accuracy of the phase* <p>* measured with integration time of 60s / mains synchron.</p>	1mA 120A 12mA 12A 0.12A – 1.2 A – 12 A – 120 A 200 VA per phase better than 0.01% of full scale value of range 0.01° > 80% < 0.5%, for linear resistance loads better than 0.01% 0.02° 0.05% 0.03°
Voltage outputs <ul style="list-style-type: none"> - AC test voltage - Voltage ranges - Output power - Resolution of amplitude - Resolution of phase angle - Efficiency - Distortion factor - Stability of the amplitude* - Stability of the phase* - Accuracy of the amplitude* - Accuracy of the phase* <p>* measured with integration time of 60s / mains synchron.</p>	0 320 V 80 V – 160 V – 320 V 30 VA per phase better than 0.01% of full scale value of range 0.01° > 80% < 0.5%, for linear resistance loads better than 0.01% 0.02° 0.05% 0.03°
Ripple control transmitter	Integrated (3 phase)
Superposition of harmonics	Up to 10th

Frequency - Range	40 .. 70 Hz quartz controlled
Reference standard - Measuring modes - Accuracy	4-wire active, reactive, apparent, 3-wire active, reactive (cc & true), apparent, 2-wire active, reactive < 0,02% at final range (I > 50mA)
Dimensions L x W x H	500 x 600 x 612 mm
Wheight	About 80 kg