



ASTeL STATIONARY METER TEST EQUIPMENT

- ❑ Fully automatic procedures for meter testing
- ❑ Automatic meter adjustment routines
- ❑ Accuracy classes of the reference standard: 0.01, 0.02, 0.04
- ❑ Wide range of voltages up to 480 V and currents up to 240 A
- ❑ Independent operation of voltage and current signals
- ❑ Harmonics generation capability up to the 41st
- ❑ Comprehensive range of safety features
- ❑ Flexible and extensive number of testing positions
- ❑ Simultaneous testing of meters with different constants
- ❑ Feature-rich Windows® based control software
- ❑ Special features and extensions available on request

INTRODUCTION

ASTeL family of meter test equipment is a fully automatic system that enables simultaneous, multi-position calibration and verification of electric energy meters. ASTeL offers full compatibility with IEC 60736. Thanks to excellent parameters, superior functionality and outstanding flexibility, ASTeL is an ideal solution for utility companies, energy meter manufacturers, governmental institutes of metrology, metrological laboratories, and other customers interested in electricity meters testing.

ASTeL 3.2 is intended for testing both single and three phase meters whereas ASTeL 1.2 is intended for testing single phase meters only.

SUPPORTED METERS

ASTeL is designed for testing a diverse range of electric energy meters. Those include but are not limited to:

- active and reactive energy
- electromechanical (also with impulse outputs) and electronic
- with closed I-P links
- multi-tariff, up to 16 tariffs
- multifunctional and multi-quadrant with active/reactive energy/power registers
- prepaid meters
- smart meters with data communication
- reference standards, portable and stationary multifunction multimeters etc.

Support for customer's specific meters can be added upon request.

SUPPORTED TESTS

ASTeL enables performing tests as required by international standards. Those include but are not limited to:

- basic error (accuracy test)
- starting current
- no-load run
- testing energy registers (dial test) and maximum demand indicator
- constant test
- checking the maximum demand registers (electromechanical or electronic)
- checking the pulse outputs

- pre-heating
- testing the influence of frequency, harmonic distortion, voltage, current and other parameters on meter under test error

Customer's specific tests can be added upon request.

GENERAL COMPOSITION

ASTeL is a modular construction. Major parts of the system include:

- power source PS
- reference standard RD
- suspension rack SR
- Windows® based executive AsTest software

POWER SOURCE

Single and three phase power sources with different output powers and different harmonics ability are available.

REFERENCE STANDARD

Single and three phase reference standards with accuracy 0.04, 0.02 and 0.01 are available.

SUSPENSION RACK

Single and three phase suspension racks with different number of test positions, different test positions arrangement, manual or pneumatic meter clamping, optional IP separating transformers and a vast range of accessories and options are available.

SOFTWARE

Windows® base operating software with wizards, rich libraries, automatic meter adjustment routines, reporting and scripting is available in many languages. Customer's specific features can be added upon request.

HARMONICS ABILITY

Standard versions of the ASTeL family of meter test equipment are able to generate harmonics up to the 21st order. Enhanced harmonics versions marked with H are able to generate harmonics up to the 41st order.

ON ORDER SOLUTIONS

In addition to highly customizable ASTeL meter test equipment, fully customized, made on order meter test equipment is available.

ASTeL model	3.24(H) ⁽¹⁾	3.22(H) ⁽¹⁾	3.21(H) ⁽¹⁾	1.24(H) ⁽¹⁾	1.22(H) ⁽¹⁾	1.21(H) ⁽¹⁾
Number of phases	Three phase			Single phase		
Accuracy	@ PF=1	±0.02%	±0.01%	±0.005%	±0.02%	±0.01%
	@ PF≥0.5	±0.04%	±0.02%	±0.01%	±0.04%	±0.02%
Power Source	Type	PS3(H) ⁽¹⁾			PS1(H) ⁽¹⁾	
	Voltage source	400VA, 1200VA, 2600VA				
	Operating voltage range	3 x 30 ... 350 (480)V (Phase-Neutral) ⁽²⁾			1 x 30 ... 350 (480)V (Phase-Neutral) ⁽²⁾	
	Current source	600VA, 1600VA, 2400VA, 3000VA, 3600VA				
	Operating current range	3 x 1mA ... 120 (240)A ⁽²⁾			1 x 1mA ... 120 (240)A ⁽²⁾	
	Frequency	40 ... 70Hz ⁽³⁾				
Reference standard	Std. harmonics version	up to the 21 st , user programmable				
	H harmonics version	up to the 41 st , user programmable ⁽⁴⁾				
Reference standard	RD-30	RD-31	RD-33	RD-20	RD-21	RD-23
Suspension rack	Type	SR-3			SR-1	
	Number of positions	1 ... 60 (as per customer requirements)			1 ... 80 (as per customer requirements)	
	IP separation	Current separating transformer CTS			Multisecundary voltage separating transformer MSVT Voltage separating transformer VTS Current separating transformer CTS-D1	
Software	AsTest software for Windows®					
Other accessories	Optical port reader OPTO, Hand-held terminal HHT					

(1) Notation (H) means that optional H version is available, e.g. ASTeL 3.24(H) means two versions are available ASTeL 3.24 and ASTeL 3.24H.

(2) Other values are available upon request.

(3) Operating range. Specified range from 45 to 65 Hz.

(4) Fulfills Chinese standard JJG 597-2005.

For additional technical details, please contact our sales department (sales@metertest.eu)

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Having in mind the care about continuous improvement of the product operational qualities, the producer reserves the right to introduce possible modifications in the construction and workmanship. That is why some of the dimensions, drawings, parameters or descriptions may differ from these shown in this catalogue.