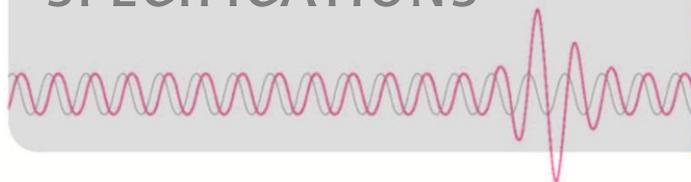


# METES 320.

## SPECIFICATIONS



**System concept** Three-phase reference meter for testing electricity meters and meter installation. Current can be measured directly or via error-compensated current clamps (KoCoS *SmartProbe* technology). The devices are operated and controlled using just four function keys. Clear displays and easy operation with the large, backlit LCD screen. All the measurement data and necessary parameters are saved in an internal memory. The measurement electronics are accommodated in a robust, waterproof housing.

<b>Analog inputs</b>	<b>Current measurement: direct</b>	Range	0 to 5 AAC
		Int. measuring ranges	100 mA – 1 A – 5 A
	<b>Current measurement: with current clamps</b>	Range	various models
		<b>Voltage measurement</b>	Range
	<b>Phase angle</b>	Resolution	0.01°
		<b>Frequency</b>	Range
	Resolution		0.01 Hz
<b>Measurement error</b>	Power and energy	≤ ± 0.2%	
<b>Binary channels</b>	<b>Impulse input</b>	Number	1
		Activation range Supply	5 to 15 VDC 5 VDC and 15 VDC
	<b>Impulse output</b>	Number Function	1 Power-proportional
<b>Functions</b>	<b>Measurement functions</b>	Test modes	Determination of the accuracy of electricity meters, with direct error display Current transducer tests: ratio, burden Voltage transducer tests: ratio, burden, voltage drop
		Measured quantities	Voltages and currents per phase, phase angle, frequency Active, reactive and apparent power, total power values, power factor, Active, reactive and apparent energy, total energy values Harmonics and THD
	Measuring modes	2-, 3- and 4-wire (active, apparent and reactive power)	
	Measuring principles	Real reactive power measurement Reactive power measurement with cross-connection Vectorial or arithmetic power calculation	
	<b>Display</b>	Display of measured values in table form Vector diagrams for voltages, currents and power values Bar charts for harmonics up to the 31st THD for voltages and currents per phase Oscilloscope function for displaying the signal shapes of the voltages and currents	
	<b>Data storage</b>	Measured values and test results are stored in an internal database. Using the METES 320 software, the test data can be read out by an external PC. Data saved in this way can be analysed and compiled in a test report.	

<b>Complete system</b>	<b>Power supply</b>	Rated voltage 85 to 265 VAC, 45 to 65 Hz 12 VDC	
	<b>Connections</b>	4 mm safety sockets or multi-pole system sockets located on the front panel.	
	<b>Interfaces</b>	RS232	
	<b>Display</b>	Alpha-numeric LCD screen, resolution 320 x 240	
	<b>Operation</b>	3 x 4 key matrix and 4 function keys	
	<b>Memory</b>	32 MB flash	
	<b>Housing</b>	Waterproof polycarbonate case Dimensions (W x H x D) without handle: 355x150x265 mm Weight: 3.8 kg	
	<b>Environment</b>	Operating temperature	0 to 50°C
	Storage temperature	-20 to 60°C	
	Relative humidity	5 to 90%, non-condensing	
	Protection	IP20	
	Safety standard	EN 61010-1 300 V~CAT II	
	EMC emissions	EN 50081-2 industrial	
	Susceptibility	EN 50082-2 industrial	
	<b>Scope of delivery</b>	Power cord RS232 data cable Leads for direct measurement Scanning head for electronic meters Transport bag	
<b>Options</b>	<b>Current clamps</b>	Amplitude- and phase-error-compensated current clamps with KoCoS SmartProbe technology, various models	
		SP100	1 – 5 – 100 AAC
		SP1000	300 – 1000 AAC
		SP3000	1000 – 3000 AAC
		SPHVA	10 kV – 40 kV
		<b>EP04 scanning head</b>	Scanning head for scanning meter disc marks or optical impulse outputs
	<b>Data logger</b>	External module for making long-term recordings of the electrical parameters of up to 8 wiring systems with adjustable recording intervals	
	<b>GSM module</b>	Control module for external data logger	
	<b>GPS module</b>	External GPS module for determining the geographical location of the meter.	