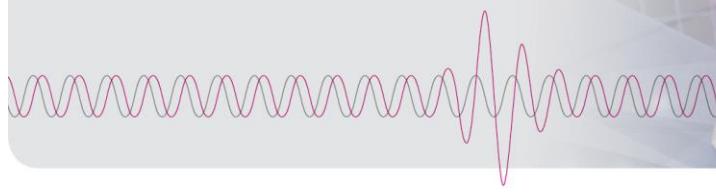


ARTES 600

SPECIFICATIONS



Applications Highly precise, portable measuring system for functional tests on various types of protection equipment. Four voltage outputs and six current outputs which can provide particularly high output power allow three-phase tests on static, digital and self-powered relays as well as differential protection relays. Analog measurement inputs also make it possible to test and calibrate transducers. The device can be operated and controlled either with a PC and the ARTES testing software or alternatively by means of the built-in control panel equipped with a high-resolution, resistive 5" touch screen, function keys and a jog wheel.

Sources All signals can be set separately and independently of one another as regards phase, amplitude and frequency. The output values of the current and voltage amplifiers are monitored by means of internal feedback measurements. If the output values do not agree with the setpoint values, a warning is issued to this effect. All outputs also have overload and short-circuit protection.

General	Frequency range Transient signals	DC...3 kHz DC...4 kHz
	Frequency resolution	0.001 Hz
	Frequency accuracy	Error < 0.01%
	Phase angle	0...360°
	Phase resolution	0.001°
	Phase accuracy	Error < 0.05° ¹⁾
Voltage outputs	4-phase (L-N) 3-phase (L-N) 1-phase (L-L)	4 x 0...300 V / 75 VA ^{3), 4)} 3 x 0...300 V / 100 VA ^{3), 4)} 1 x 0...600 V / 150 VA ^{3), 4)}
	Resolution Accuracy THD	10 mV Error < 0.05% ^{1), 2)} < 0.05% ¹⁾
Current outputs	6-phase 3-phase 1-phase	6 x 0...32 A / 250 VA ^{3), 4)} 3 x 0...64 A / 500 VA ^{3), 4)} 1 x 0...96 A / 500 VA ⁴⁾
	Resolution Accuracy THD	1 mA Error < 0.05% ^{1), 2)} < 0.05% ¹⁾

Low-level signal outputs Special low-level outputs with very high accuracy make it possible to test protection devices with low-level signal inputs. All signals can be set separately and independently of one another as regards phase, amplitude and frequency. All outputs also have overload and short-circuit protection.

Number	10 outputs in 3 groups
Output range	0...10 V _{pk}
Max. output current	20 mA
Resolution Accuracy	300 µV Error < 0.05%
Frequency range Transient signals	DC...3 kHz DC...4 kHz
THD	< 0.05%
Frequency resolution	0.001 Hz
Frequency accuracy	Error < 0.01%
Phase angle Phase resolution Phase accuracy	0...360° 0.001° Error < 0.05°

¹⁾ For the frequency range of 10...100 Hz

²⁾ Of range

³⁾ For symmetrical output quantities

⁴⁾ Supply voltage 230 VAC, 50 Hz

DC output	Output range Output power Accuracy Protection	12...260 VDC 50 W, max. 2 A Error < 5% Overload and short-circuit protection
Analog inputs	Number Measuring range Accuracy Protection	2 0...±20 mA Error < 0.05% ²⁾ Galvanic isolation via digital high-speed isolators
Multi-function inputs	Multi-function inputs for the measurement of analog and binary signals. The trigger threshold and the trigger range can be freely configured for evaluation purposes. The inputs are also configurable for the measurement of potential-free contacts.	
	Number Measuring ranges Frequency range	12 2/10/300/600 VAC/DC DC...6 kHz
	Trigger threshold/range Accuracy Galvanic isolation	0...300 VDC, freely configurable, or potential-free contact Error < 0.05% ²⁾ 6 galvanically isolated groups with 2 measurement inputs each
	Safety class	150 V CAT IV; 300 V CAT III; 600 V CAT II
Binary outputs	Relay	Number AC switching capacity DC switching capacity Protection
	Transistor	Number Switching frequency Switching capacity
Complete system	All the connections required for linking up to the device under test can be found on the front panel of the device. The power supply, an Ethernet interface and a USB interface are also integrated in the front panel. This means that ARTES 600 can also be operated in an upright position.	
	Operation	PC Stand-alone
		ARTES testing software for Windows® 7/8/10/11 5" touch screen, high-resolution, resistive 3 function keys and a jog wheel
Connections/ interfaces	Measurement connections Low-level signal outputs	4 mm safety sockets 3 push-pull output sockets, U _{LS 1...4} , U _{LS 5...7} , U _{LS 8...10}
	Generator socket	The amplifier output signals U _{1...3} und I _{1...3} can be picked up via 4 mm safety sockets or via the generator socket.
	Interfaces	USB, 3 x Ethernet
	Time synchronisation	Internal GPS receiver with SMA antenna connection
	Status LEDs	Indication of active current and voltage outputs and of the status of the binary inputs and outputs by LEDs
Supply voltage	Rated voltage Wattage	100...265 VAC, 47...63 Hz / 120...265 VDC 2500 W
Construction	Housing Protection	Portable 19" housing, 4 U, the carrying handle can also be used as a stand IP20
	Dimensions (W x H x D) Weight	470 x 202 x 326 mm, without handle 15.9 kg
Environment	Operating temperature Storage temperature Relative humidity Vibration Shock	0...50°C -20...60°C 5...90%, non-condensing IEC 60068-2-6 IEC 60068-2-27
Generic standards	Safety EMC EMC emissions Susceptibility	EN 61010-1, 150 V CAT IV; 300 V CAT III; 600 V CAT II EN 61326-1 EN 61000-6-4 EN 61000-6-2

¹⁾ For the frequency range of 10...100 Hz

²⁾ Of range