

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	DC...3 kHz
	Transient signals	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)	4 x 0...300 V / 75 VA ^{3), 4)}
	3-phase (L-N)	3 x 0...300 V / 100 VA ^{3), 4)}
	1-phase (L-L)	1 x 0...600 V / 150 VA ^{3), 4)}
	Resolution	13 mV
	Accuracy	Error < 0.05% ^{1), 2)}
Current outputs	6-phase	6 x 0...32 A / 250 VA ^{3), 4)}
	3-phase	3 x 0...64 A / 500 VA ^{3), 4)}
	1-phase	1 x 0...96 A / 500 VA ⁴⁾
	Resolution	1 mA
	Accuracy	Error < 0.05% ^{1), 2)}
Low-level signal outputs	THD	< 0.05% ¹⁾
	Number	10 outputs in 3 groups
	Output range	0...10 V _{pk}
	Max. output current	20 mA
	Resolution	300 µV
Low-level signal outputs	Accuracy	Error < 0.05%
	Frequency range	DC...3 kHz
	Transient signals	DC...4 kHz
	THD	< 0.05%
	Frequency resolution	0.001 Hz
	Frequency accuracy	Error < 0.01%
	Phase angle	0...360°
	Phase resolution	0.001°
	Phase accuracy	Error < 0.05°

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.

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	12...260 VDC		
	Output power	50 W, max. 2 A		
	Accuracy	Error < 5%		
	Protection	Overload and short-circuit protection		
Analog inputs	Number	2		
	Measuring range	0...±20 mA		
	Accuracy	Error < 0.05% ²⁾		
	Protection	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	12		
	Measuring ranges	2/10/300/600 VAC/DC		
	Frequency range	DC...6 kHz		
	Trigger threshold/range	0...300 VDC, freely configurable, or potential-free contact		
	Accuracy	Error < 0.05% ²⁾		
	Galvanic isolation	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	2
			AC switching capacity	0...250 VAC, 8 A, resistive load
DC switching capacity			0...300 VDC, I _{max} = 8 A, 50 W	
Transistor		Protection	Potential-free and galvanically isolated output relays	
		Number	2	
		Switching frequency	1 kHz	
	Switching capacity	0...300 VDC, 50 mA		
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	ARTES testing software for Windows® XP/7/8/10	
		Stand-alone	5" touch screen, high-resolution, resistive 3 function keys and a jog wheel	
	Connections/ interfaces	Measurement connections	4 mm safety sockets	
		Low-level signal outputs	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} and I _{1...3} can be picked up via 4 mm safety sockets or via the generator socket.	
		Interfaces	USB, 3 x Ethernet, Wi-Fi	
		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	100...265 VAC, 47...63 Hz / 120...265 VDC	
		Wattage	2500 W	
	Construction	Housing	Portable 19" housing, 4 U, the carrying handle can also be used as a stand	
		Protection	IP20	
		Dimensions (W x H x D)	470 x 202 x 326 mm, without handle	
		Weight	15.9 kg	
	Environment	Operating temperature	0...50°C	
		Storage temperature	-20...60°C	
Relative humidity		5...90%, non-condensing		
Vibration		IEC 60068-2-6		
Shock		IEC 60068-2-27		
Generic standards	Safety	EN 61010-1, 150 V CAT IV; 300 V CAT III; 600 V CAT II		
	EMC	EN 61326-1		
	EMC emissions	EN 61000-6-4		
	Susceptibility	EN 61000-6-2		

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²⁾ Of range