

ARTES 500 SPECIFICATIONS



Applications Highly precise, portable measuring system for functional tests on various types of protection equipment. Four voltage and six current outputs allow three-phase tests on static and digital relays and on 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⁾
	1-phase (L-L)	1 x 0...600 V / 150 VA ³⁾
	Resolution	10 mV
	Accuracy	Error < 0.05% ^{1),2)}
	THD	< 0.05% ¹⁾
Current outputs	6-phase	6 x 0...20 A / 50 VA ³⁾
	3-phase	3 x 0...40 A / 100 VA ³⁾
	1-phase	1 x 0...60 A / 100 VA ³⁾
	Resolution	1 mA
	Accuracy	Error < 0.05% ^{1),2)}
	THD	< 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	300 µV
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°

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

²⁾ Of range

³⁾ For symmetrical output quantities, 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
Binary inputs The binary inputs are arranged in groups. The groups can be configured for wet or dry contacts.			
		Number	8
		Groups	2 with 4 measurement inputs each
		Response threshold	24...300 VDC, or potential-free contact
		Max. measurement duration	unlimited
		Sampling rate	8 kHz
		Protection	Transient protection, polarity protection and galvanic isolation via opto-couplers
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
		Protection	Potential-free and galvanically isolated output relays
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 500 can also be operated in an upright position.	
Operation		PC	ARTES testing software for Windows® 7/8/10/11
		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, $U_{LS\ 1...4}$, $U_{LS\ 5...7}$, $U_{LS\ 8...10}$
		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	100...265 VAC, 47...63 Hz / 120...265 VDC
		Wattage	1200 W
Construction		Housing	Portable 19" housing, 3 U, the carrying handle can also be used as a stand
		Protection	IP20
		Dimensions (W x H x D)	470 x 162 x 326 mm, without handle
		Weight	13.5 kg
Environment		Operating temperature	0...50°C
		Storage temperature	-20...60°C
		Relative humidity	5...90%, non-condensing
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