ARTES 460 | 560
SPECIFICATIONS

System concept

ARTES 460|560 are high-precision, portable relay test systems which allow three-phase tests on static relays, digital relays and differential protection relays without additional equipment. The particularly high power of the current outputs of the ARTES 560 also enables tests to be carried out on self-powered relays.
The signal characteristics are computed by a high-performance digital signal processor and output via high-accuracy electronic power amplifiers. The synthetic generation of the test values guarantees immunity to disturbances in the power supply.

Signal outputs

All signals can be set separately and independently of one another as regards phase, amplitude and frequency, even during output. All outputs have overload and short-circuit protection. 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.

General	THD	< 0.05% [1]
	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 x 0…300 V / 75 VA 1 x 0…600 V / 150 VA
	Resolution	13 mV
	Accuracy	Error < 0.05% [2]

		ARTES 460	**ARTES 560**
Current outputs		6 x 0…16 A / 40 VA 3 x 0…32 A / 80 VA	6 x 0…32 A / 100 VA 3 x 0…64 A / 200 VA
	Max. output voltage	4 V_{rms}, 6 V_{pk}	21 V_{rms}, 30 V_{pk}
	Resolution	1 mA	
	Accuracy	Error < 0.05%[2]	

Low-level signal outputs

All low-level signal outputs can be set separately and independently of one another as regards phase, amplitude and frequency. The outputs can also be used to control external current and voltage amplifiers.

Number	10 outputs in 3 groups
Output range	0…10 V_{pk}
Resolution	300 µV
THD	< 0.01%
Frequency range	DC…3 kHz
Transient signals	DC…4 kHz
Frequency resolution	0.001 Hz
Frequency accuracy	Error < 0.01%
Max. output current	20 mA
Accuracy	Error < 0.02%
Phase angle	0…360°
Phase resolution	0.001°
Phase accuracy	Error < 0.05°

DC output

Output range	12…260 V
Protection	Overload and short-circuit
Output power	50 W (across the entire output range)

[1] For the frequency range of 10...200 Hz
[2] Of range

Analog inputs		Frequency range	DC…4 kHz, linear frequency response
		Accuracy	0.1% [2]
		Protection	Galvanic isolation via opto-couplers or high-speed digital isolators
		Voltage range	4 x 0…±10 V / 600 V_{rms}
		Current range	4 x 0…±20 mA / 0…±10 V
Binary inputs	The binary inputs are arranged in groups. The groups can be configured for wet or dry contacts.		
		Number	8
		Groups	2
		Activation range	24…300 VDC without range switching for wet contacts
		Max. meas. duration	Unlimited
		Protection	Transient protection, polarity protection and galvanic isolation via opto-couplers
		Sampling rate	8 kHz
Binary outputs		Number	2
		Sw. capacity AC	0…250 V, 8 A, resistive load
		Sw. capacity DC	0…300 V, I_{max} = 8 A, 50 W resistive load
		Protection	Potential-free and galvanically isolated output relays
Operation		PC	ARTES testing software for Windows® XP/7/8/10
		Stand-alone	3.5"-touch screen, high-resolution, resistive, 2 function keys and jog wheel
Complete system		Measurement connections	4 mm safety sockets and multi-pole system sockets on the front panel
		Interfaces	USB-B, Ethernet (RJ 45)
		Multi-pole connections	2 measurement input sockets 3 low-level signal output sockets
	Power supply	Rated voltage	100…265 VAC / 120…265 VDC
		Rated frequency	47…63 Hz
			ARTES 460 / **ARTES 560**
		Wattage	1000 W / 2500 W
	Housing		Portable 19" housing, 3 U, the carrying handle can also be used as a stand
		Dimensions (W x H x D) mm without handle	470 x 162 x 326
			ARTES 460 / **ARTES 560**
		Weight	11.7 kg / 13.4 kg
Environment		Operating temperature	0…50°C
		Storage temperature	-20…60°C
		Relative humidity	5…90%, non-condensing
		Protection	IP20
		Safety standard	EN 61010-1: 2011 300V~CAT III
		EMC requirements	EN 61326-1: 2013

[2] Of range