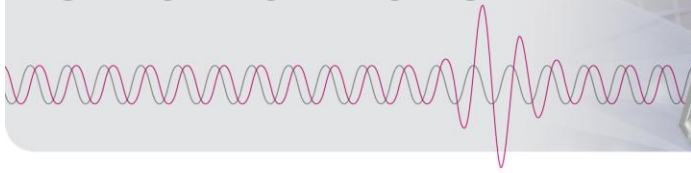


ARTES 460 II

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 3.5" 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	13 mV
	Accuracy	Error < 0.05% ^{1),2)}
	THD	< 0.05% ¹⁾
Current outputs	6-phase	6 x 0...16 A / 40 VA ³⁾
	3-phase	3 x 0...32 A / 80 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
Analog inputs	Number	8
	Frequency range	DC...4 kHz, linear frequency response
	Voltage range	4 x 0...±10 V / 600 V _{rms}
	Current range	4 x 0...±20 mA / 0...±10 V
	Accuracy	Error < 0.1% ²⁾
	Protection	Galvanic isolation via digital high-speed isolators
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 460 can also be operated in an upright position.	
	Operation	PC Stand-alone ARTES testing software for Windows® XP/7/8/10 3.5" touch screen, high-resolution, resistive 2 function keys and a jog wheel
	Connections/ interfaces	Measurement connections Low-level signal outputs Interfaces Time synchronisation Status LEDs 4 mm safety sockets 3 push-pull output sockets, U _{LS 1...4} , U _{LS 5...7} , U _{LS 8...10} USB, 3 x Ethernet, Wi-Fi Internal GPS receiver with SMA antenna connection 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 1000 W
	Construction	Housing Protection Dimensions (W x H x D) Weight Portable 19" housing, 3 U, the carrying handle can also be used as a stand IP20 470 x 162 x 326 mm, without handle 11.7 kg
	Environment	Operating temperature Storage temperature Relative humidity 0...50°C -20...60°C 5...90%, non-condensing
	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