

ONLY-AQ660 Relay Test System



Technical Data

Power supply	Power consumption	<2000VA
	AC power supply	220V±20% (47~63Hz)
	DC power supply	200~380 VDC
Voltage source	AC voltage range	6× (0~125) V
	AC voltage accuracy	Absolute error is less than 4mA for an output of lower than 2V. Relative error is less than 0.1% for an output ranging from 2V to the upper limit of the measurement range.
	Total harmonic distortion (THD)%	The total harmonic distortion is ≤0.2% for an output ranging from 2V to the upper limit of the measurement range.
	AC voltage power	In case of output of rated voltage, the power is no less than 30VA; In case of output of maximum voltage, the power is no less than 60VA; Output can be realized in an on-load manner in all voltage phases.
	Output time	Continuous output
	DC voltage range	0~350V (L-L); -175~+175V (L-N)
	DC voltage power	The output power is >100W for an output of ±350VDC. The output power is >60W for an output of ±125VDC. Output can be realized in an on-load manner in all voltage phases.
Current source	AC current range	6× (0~35)A, output can be realized in multiple phases in parallel.
	AC current accuracy	The absolute error is less than 1Ma for an output of less than 0.5A; The relative error is less than 0.1% for an output ranging from 0.5A to the upper limit of the measurement range.
	Total harmonic	The total harmonic distortion is ≤0.2% for an output ranging from 0.5A to

	distortion (THD)%	the upper limit of the measurement range.
	AC current power	0.5A: the maximum load is higher than 18.0Ω; 30A: the maximum load is higher than 0.30Ω (meeting all relay protection secondary CT loads) and output can be realized in an on-load manner in all current phases.
	AC output time	For a current output ≤10A, continuous output; For a current output of 10-20A, output time is no less than 60s; For a current output >20A, output time is no less than 10s.
	DC current range	6× (0~20)A
	DC current accuracy	For an output of less than 0.5A, the absolute error is less than 1mA; For an output ranging from 0.5A to the upper limit of the measurement range, the relative error is less than 0.2%.
	DC current power	The single-phase power is >200W and output can be realized in an on-load manner in all current phases.
Output frequency		Range: 10-1000Hz; resolution: 0.001 Hz Error: if 10 Hz < f ≤ 65 Hz, error does not exceed ±0.001 Hz; If 65 Hz < f ≤ 450 Hz, error does not exceed ±0.01 Hz; If 450 Hz < f ≤ 1000 Hz, error does not exceed ±0.02Hz;
Phase		Range: ±360°; error: <0.2°; resolution: 0.1°
Independent auxiliary direct current		Switchable between 110/220VDC, the power is no less than 100W, accuracy: 0.5%
Time measurement		Maximum measurement time: 1.000×10 ⁸ s; Timing error: ±1ms (0.001s~1s); ±0.1% (1s~1.000×10 ⁸ s) Anti-jitter time range (set by software): 0ms~20s
Binary inputs		8 pairs: input feature (0~250VDC) or idle contact (automatic recognition)
Binary outputs (software control)		6 pairs; Type: 2 pairs of idle contacts are polarity free (electrical isolation) 4 pairs of quick output contacts (response time <100μs) DC capacity: Vmax: 250VDC/I _{max} : 0.3A
Synchronous interfaces	Built-in GPS interface	1 (SMA adapter)
	IRIG-B interfaces	2 optical interfaces (IN/OUT) and 2 electric interfaces (IN/OUT)
	IEEE-1588 interface	1 pair (LC optical interface)
Wireless function		The built-in Wi-Fi module can be used for controlling the test in a wireless

	manner.
Case dimensions and weight	Total weight: <15.8Kg Dimensions: 390mm×200mm×380mm (Length×width×height)

Function Description

- “Built-in industrial control computer + 10.4-inch touch screen”, supporting offline operation and having a small size providing ease of carriage;
- 6 125V voltage + 6 35A current power amplifier outputs. Output can be realized in all voltage and current phases in an on-load manner;
- Support for up to 50 harmonic outputs and capability of superposing inter-harmonics with subharmonics facilitating the testing of such protective devices as DC high-voltage filter, etc.;
- Multiple synchronous timing functions based on GPS, IRIG-B, IEEE-1588, etc.;
- Built-in Wi-Fi access which is pioneered in China so that this tester can be controlled by a computer via a wireless network to greatly facilitate the operation by on-site personnel;
- Simulation of electrical isolation between the current ground In and voltage ground Un of the output. Such simulation provides greater compliance with wiring requirements on the test field;
- Abundant software testing functions so that line protection, bus protection, transformer protection, generator-transformer unit protection, etc. and spare power automatic switching device can be tested;
- Support for replay of waveform data in the standard COMTRADE format;
- The software can be upgraded to the latest version free of charge at any time without changing the hardware.