

Control system



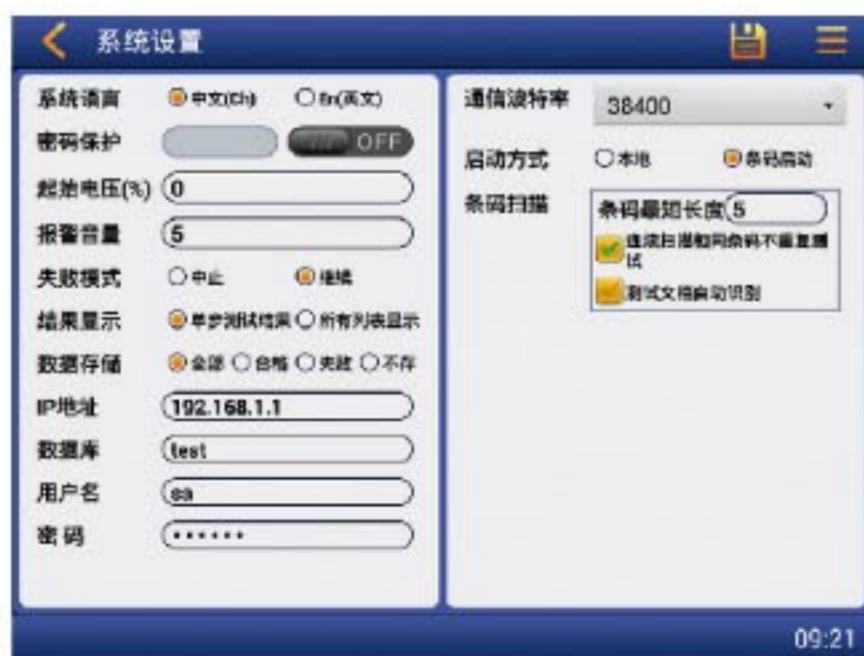
PAD test interface



PAD test interface



PAD edit interface



Setting interface of PAD system

Safety Comprehensive Tester

Electrical Safety Comprehensive Tester
AN9640B(F) (V3) / AN9651B(F) (V3) /
AN9651C(F) (V3)



Features

- High precision: Main safety precision 1%, industry first;
- High speed: Patent technology, faster speed, higher efficiency;
- Integrated: Integrated safety and electrical comprehensive test, one station, one key to start;
- Intelligent: Built-in 100 groups of test conditions memory;
- Automatic extension: It has RS232/RS485/GPIB/ network interface (four choose one), bar code scanning interface and frequency conversion power control interface to composing an automated analyzer.

Configuration information

Product model	Main functions				
	ACW	DCW	IR	GB	LC
AN9640B(F) (V3)	√	-	√	√	√
AN9651B(F) (V3)	√	-	√	√	√
AN9651C(F) (V3)	√	-	√	√	√

Product model	Main functions			
	POWER	START	WAIT	ARC
AN9640B(F) (V3)	√	√	√	√
AN9651B(F) (V3)	√	√	√	√
AN9651C(F) (V3)	√	√	√	√

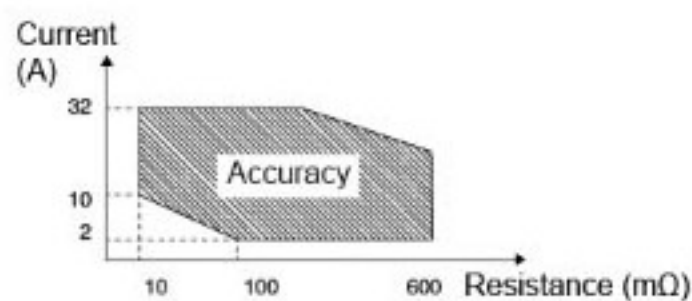
Product model	Features	
	Built-in power supply	IPC
AN9640B(F) (V3)	None	None
AN9651B(F) (V3)	√	None
AN9651C(F) (V3)	√	√

Product model	Features	
	Safety precision	Power parameter precision
AN9640B(F) (V3)	1%	0.2%
AN9651B(F) (V3)	1%	0.2%
AN9651C(F) (V3)	1%	0.2%

Specification of AN9640B(F) (V3) /AN9651B(F) (V3) /AN9651C(F) (V3)

Features		Technical indicator		
Rated output capacity		200VA(5000V/40mA), short-circuit current more than 200mA; (optional: 500VA(5000V/100mA), short-circuit current more than 200 mA)		
Output voltage	Range/ accuracy	100~5000V ±(1%×setting value+5V)		
Output frequency	Range/ accuracy	50Hz or 60Hz ±0.1Hz		
Alarm current setting	Upper limit range/ accuracy	0.10~40.00mA, ±(1%×setting +5 counts)		
	Lower limit range/ accuracy	0.000~9.999mA, ±(1%×setting +5 counts)		
Time setting	Range of test time	0.5~999.9s,0=infinite		
	Range of ramp-up time	0.1~999.9s		
	Range of ramp-down time	0.1~999.9s		
	Time setting accuracy	±(1%×reading value + 1 count)		
Measurement meter	Voltage range/ accuracy	0.01~5.00kV ±(1%×reading value +5 counts)		
	Current range/ accuracy	0.10~40.00mA ±(1%×reading value+5 counts)		
	Time range/ accuracy	0.1~999.9s ±(1%×reading value+1 count)		
Output voltage waveform/degree of distortion/ adjustment rate		Sine wave, less than 2% (pure resistive load), ±(1%×setting value +5V) (from empty load to full load)		
Initial voltage setting		(0%~50%)×output voltage setting		
Current compensation setting		0.000~10.00mA, automatic		
Arc detection		1~9 levels, level-9 corresponds to the most sensitive, 0 is Off		
DC withstand voltage test (Optional)	Output voltage	Range/ accuracy	100~6000Vdc ±(1%×setting value+5V)	
	Alarm current	Upper limit range/accuracy	0~10000μA ±(1%×setting value+5 counts)	
		Lower limit range/accuracy	0.0~999.9μA ±(1%×setting value+5 counts)	
	Time setting	Range of test time		0.5~999.9s,0=infinite
		Range of ramp-up time		0,0.4~999.9s,0=off
		Range of ramp-down time		0,1.0~999.9s,0=off
		Accuracy		±(1%×setting value +1 count)
	Measurement meter	Voltage range/accuracy		0.01~6.00Vdc ±(1%×reading value+5 counts)
		Current range/ accuracy		0.0~10000μA ±(1%×reading value+5 counts)
		Time range/ accuracy		0.1~999.9s ±(1%×reading value+1 count)
	Rated output capacity			60VA(6000Vdc/10mA)
	Output adjustment level			±(1%×setting value +5V), empty load to full load
	Compensating current setting			0~200.0μA,automatic, manual
	Initial voltage setting			(0%~50%)setting output voltage
Lower limit current for charging			(0 ~ 350.0)μA, Auto, manual	
Discharging time			200ms	
Arc detection			1~9 levels, level-9 corresponds to the most sensitive, 0 is Off	

Insulation resistance test	Output voltage	Range/accuracy	100~2500Vdc $\pm(1\% \times \text{setting value} + 5V)$	
	Alarm resistance setting	Range of upper/lower limit	Range: 1M Ω ~50000 M Ω , the upper limit includes no upper setting	
		Accuracy	100V~499V: 1 M Ω ~2.000G Ω , $\pm(5\% \times \text{setting value} + 2 \text{ counts})$ 500V~2500V: 1 M Ω ~999.9 M Ω , $\pm(2\% \times \text{setting value} + 2 \text{ counts})$ 1.000G Ω ~9.999 G Ω : $\pm(5\% \times \text{setting value} + 2 \text{ counts})$ 10.000 G Ω ~50.00 G Ω : $\pm(15\% \times \text{setting value} + 2 \text{ counts})$	
	Time setting	Range of ramp-up time	0,0.1~999.9s(0=off)	
		Range of delay time	0,0.5~999.9s,0=infinite	
		Range of test time	0,0.5~999.9s,0=infinite	
		Range of ramp-down time	0,1.0~999.9s,0=off	
		Setting accuracy	$\pm(1\% \times \text{setting value} + 1 \text{ count})$	
	Measurement meter	Voltage range/accuracy	100~2500Vdc $\pm(1\% \times \text{reading value} + 5 \text{ counts})$	
		Resistance range/accuracy	Range: 0.100M Ω ~50.00G Ω resolution: 0.001M Ω /0.01M Ω /0.1m Ω /0.001M Ω /0.01G Ω Error: 100V~499V: 0.100M Ω ~2.000G Ω , $\pm(5\% \times \text{reading value} + 2 \text{ counts})$ 500V~2500V: 0.100M Ω ~999.9M Ω , $\pm(2\% \times \text{reading value} + 2 \text{ counts})$ 1.000G Ω ~9.999G Ω : $\pm(5\% \times \text{reading value} + 2 \text{ counts})$ 10.00G Ω ~50.00G Ω : $\pm(15\% \times \text{reading value} + 2 \text{ counts})$	
Time range/accuracy		0.1~999.9s $\pm(1\% \times \text{reading value} + 1 \text{ count})$		
Lower limit current for charging		0~3.500 μ A, Auto/manual		
Nominal output		Maximum output current 32A, maximum test resistance 600m Ω , open circuit voltage less than 12V		
Grounding resistance test	Output current	Range/accuracy	2.0~32.0A $\pm(1\% \times \text{setting value} + 2 \text{ counts})$	
	Output voltage	Range/accuracy	3.0~10.0V $\pm(1\% \times \text{setting value} + 2 \text{ counts})$	
	Output frequency	Range/accuracy	Sine wave, 50Hz or 60Hz $\pm 0.1\% \times \text{setting value}$	
	Alarm limit setting	Range of resistance upper/lower limit	3A \leq output current \leq 10A: 10~600m Ω 11A \leq output current \leq 25A: 10~300m Ω 26A \leq output current \leq 32A: 10~200m Ω	
		Error	<100m Ω , $\pm(1\% \times \text{setting value} + 1m\Omega)$ $\geq 100m\Omega$, $\pm(1\% \times \text{setting value} + 2 \text{ counts})$	
	Compensation resistance range		0~200m Ω , automatic measurement, compensation on/off	
	Test time setting	Range/accuracy	0.5~999.9s(0=infinite) $\pm(1\% \times \text{setting value} + 1 \text{ count})$	
	Measurement meter	Current range/accuracy	2.0~32.0A, $\pm(1\% \times \text{setting value} + 2 \text{ counts})$	
		Voltage range/accuracy	3.0~7.5V, $(1\% \times \text{setting value} + 2 \text{ counts})$	
		Resistance range/accuracy	10.0~99.9~100~600m Ω <100m Ω , $\pm(1\% \times \text{setting value} + 1m\Omega)$ $\geq 100m\Omega$, $\pm(1\% \times \text{setting value} + 2 \text{ counts})$	
Time range/accuracy		0.5~999.9s(0=infinite) $\pm(1\% \times \text{setting value} + 1 \text{ count})$		



Leakage Current Test	Leakage test body network (MD card)	Standard network, GB/T 12113 Fig. 4; (Optional: other leakage test network)
	Probe position	Leakage current to ground: G-L, G-N, AUTO(G-L, G-N)
	Test power status	Polarity switch: on, off;
	Test voltage output	Single-phase, with external isolation transformer or variable frequency power supply to provide the required test voltage and frequency.
	Test voltage upper/lower limit	Upper/Lower limits range: 0.0V~300.0V AC Resolution: 0.1V, 45Hz~65Hz, Determine error: $\pm(0.4\% \times \text{setting value} + 0.1 \times \text{range})$
	Test voltage measurement	Range: 0.0V~300.0V, 45Hz~65Hz Resolution: 0.1V, 45Hz~65Hz, Measurement accuracy: 20.0V~300.0V: $\pm(0.4\% \times \text{reading value} + 0.1\% \times \text{range})$
	Load current	Current >30A more than 5s will be in protection
	Current upper/lower limits range (effective value)	Range: 0.0 μ A~12.00mA, resolution: 0.1 μ A/1 μ A/0.01mA Determine error: DC, 15Hz $\leq f \leq$ 100kHz: $\pm(1.5\% \times \text{setting value} + 10 \text{ counts})$ 100kHz <math>f \leq 1000kHz: $\pm 5\% \times \text{setting value}$
	Current measurement (RMS)	0.0 μ A~999.9 μ A: DC, 15Hz $\leq f \leq$ 100kHz: $\pm(1.5\% \times \text{setting value} + 10 \text{ counts})$ 100kHz <math>f \leq 1000kHz, 10.0 μ A~999.9 μ A: $\pm 5\% \times \text{reading value}$ 1000 μ A~7999 μ A: DC, 15Hz $\leq f \leq$ 100kHz: $\pm(1.5\% \times \text{reading value} + 10 \text{ counts})$ 100kHz <math>f \leq 1000kHz, 10.0 μ A~7999 μ A: $\pm 5\% \times \text{reading value}$ 8.00mA~12.00mA: DC, 15Hz $\leq f \leq$ 100kHz: $\pm(1.5\% \times \text{reading value} + 10 \text{ counts})$
	Current compensation	Range: 0.000~1.000mA, auto measurement, it can be turned on or off
Test time	Range: 0, (1~999.9), 0=infinite Resolution: 0.1s, accuracy: $\pm(1\% \times \text{setting value} + 1 \text{ count})$, when test mode is AUTO (G-L, G-N), half of time for each	
Power parameter measurement	Alarm function	Power upper/lower limit alarm
	Active power measurement	Range: 0.10W~6.000kW, Resolution: 0.01W/0.01W/0.1W/0.001kW Error: PF>0.5: $\pm(0.1\% \times \text{reading value} + 0.1\% \times \text{range})$ PF \leq 0.5: $\pm(0.4\% \times \text{reading value} + 0.1\% \times \text{range})$
	Voltage measurement	Range: 5.00V~300.0V, peak factor: ≤ 1.6 , Resolution: 0.01V/0.1V; Error: $\pm(0.1\% \times \text{reading value} + 0.1\% \times \text{range})$ 45Hz $\leq f \leq$ 65Hz
	Current measurement	Range: AC, 0.030~3.999A, 4.00~25.00A, Peak factor: ≤ 1.6 Resolution: 0.01mA/0.1 mA/0.001A/0.01A Error: $\pm(0.1\% \times \text{reading value} + 0.1\% \times \text{range})$ 45Hz $\leq f \leq$ 65Hz
	Power factor measurement	Range: $\pm(0.100 \sim 1.000)$, resolution: 0.001, Error: ± 0.01 (amplitudes of voltage/current are more than the corresponding range 10%)
	Frequency measurement	Range: 45.00 Hz~65.00 Hz, resolution: 0.01 Hz, Error: $\pm(0.1\% \times \text{reading value})$
	Test time	Range: 0, (0.5~999.9)s, 0 is infinite, Resolution: 0.1s, error: $\pm 1\% \times \text{setting value} + 1 \text{ count}$
	Over-current protection	Current >30A more than 5s will be in protection

Exceeding & Trustworthy

Low voltage starting test	Current upper/lower limit	Range:(0.00~25.00)A Resolution 0.01A Determine error: $\pm(0.1\% \times \text{reading value} + 0.1\% \times \text{range})$	
	Current measurement	(0.03~25.00)A, peak factor: ≤ 1.6 Resolution: 0.01A Error: $\pm(0.1\% \times \text{reading value} + 0.1\% \times \text{range})$ 45Hz $\leq f \leq$ 65Hz	
	Voltage measurement	Range:5.00V~300.0V, peak factor: ≤ 1.6 resolution:0.01V/0.1V; Error: $\pm(0.1\% \times \text{reading value} + 0.1\% \times \text{range})$ 45Hz $\leq f \leq$ 65Hz	
	Test time	Range: 0, (0.5-999.9)s, 0 is infinite, Resolution: 0.1s, error: $\pm 1\% \times \text{setting value} + 1$ count	
AN9651B(F) V3/built-in isolated transformer	Input voltage/ frequency of isolated transformer	Determined by input voltage and frequency	
	Isolated transformer	During testing the leakage current Output voltage is 1.06 time input voltage	
	Device output	Output voltage is 1.00 time input voltage	
	Voltage transformation ratio	Output voltage is 0.85 time input voltage	
	Isolated transformer capacity	Single-phase load rated capacity 6000VA	
	Voltage regulation rate of isolated transformer	3%(from no-load to full-load)	
	Over-current protection	Maximum current 30A, in 5s after over-current, automatically cut off the isolated power supply	
	AN9651B(F) V3/ AN9651C(F) V3 built-in variable frequency current	Maximum output capacity of power supply	6000 VA
		Output voltage distortion	1%@47-63 Hz
		Output voltage stability	1%
		Programmable output voltage range	0-300V
		Output voltage accuracy	0.5%RD+0.5%F.S.
		Programmable output frequency range	47-63 Hz
		Output frequency stability	0.1%
		Maximum output current (0-300V)	200V or less, maximum 27A, more than 220V, current calculated by 6000W power
	AN9651C(F) V3 configured industrial computer (Yanhua)	CPU	Intel G1620 2.7GHZ dual core
		Storage	Samsung DDR3-1600; 4G(single bar); 2 storage bar slots
		Hard disk	120G kingston SSD
		Operating system	Windows 7 English Flagship version 32-bit operating system
		Test control software display	ESRS Safety test software DELL17 inch LCD(E1715SC)
Keyboard mouse		Wireless mouse keyboard kits--Luoji MK245 Nano(black)	
Interface configuration		10 RS232(common ports)4 USB2.0 ports, 2 Gigabit network port	
Display mounting frame		Yuege DLB502(black)	