

TEST-330B

THREE PHASE SECONDARY CURRENT INJECTION TEST SET

The Test-330B three phase secondary current injection test set is the first choice for applications requiring very high accuracy more than 0.1%. This unit is not only an excellent test set for protection devices of all kinds but also a universal calibrator. This secondary injection tester can as a ac or dc current source and voltage, and output 2 to 21 times harmonics, max current 90A, max voltage 300V. TEST-330B injection test equipment with PC control software. Its unique accuracy and reliability make the Test-330B ideal for protection and measurement equipment manufacturers for research and development, production and electric power company type testing.

Application

1. Universities;
2. Power plant;
3. Research institutes;
4. Panel manufacturer;
5. Electrical laboratory;
6. Relay manufacturers;
7. Electrical testing center;
8. Electricity power bureau & power company;
9. Power engineering commissioning company;
10. Electrical Department of industrial and mining enterprises;



Test Item

- | | |
|------------------------------|-------------------------------|
| 1. I-T test | 2. U/I test |
| 3. DC test | 4. Special test |
| 5. Harmonic test | 6. Oscillation test |
| 7. State sequence | 8. Differential relay |
| 9. Fault Recurrence | 10. Setting group test |
| 11. Distance protection | 12. Power direction test |
| 13. Synchronization test | 14. Hardware checkout |
| 15. Frequency Protection | 16. Metering instrument |
| 17. Differential protection | 18. Low Voltage protection |
| 19. Zero sequence protection | 20. Impedance characteristics |

Features

1. 8 binary input, 4 binary output;
2. Intelligent self-protection function;
3. High-accuracy linear power amplifier;
4. Plentiful Binary and powerful software function;
5. Eight-path synchronous D/A output in a single machine;
6. 3 phase current output, 5 phase voltage output, Accuracy 0.1%;
7. Embedded host machine equipped with Complex Programmable Logic Device (CPLD);
8. Host machine integrated single cabinet structure with big LCD screen and complete interface has obtained appearance patent;
9. Synchronous output of five-phase voltage and three-phase current, Max AC current output is 90A, Max AC voltage output is 260V;
10. Easily complete the ABB, Siemens, AREVA, Schneider, GE, SEL, VAMP, Toshiba, NR, Sifang and other foreign manufacturers of protective device test;

Parameters

Electrical parameters	
Power voltage	AC220V \pm 10% or AC110V \pm 10%, 50/60Hz \pm 10%
AC current output	
Phase current output (effective value)	3 x 0-30A
Maximum power output	260VA/phase
Maximum parallel current output (effective value)	0-90A
Long-term allowable working value of phase current (effective value)	0-10A
Resolution	1mA
Allowable working time of maximum current	>11s
Accuracy class	< \pm 0.1% , Typital 0.05%
AC voltage output	
Phase voltage output (effective value)	5 x 0-130V
Line voltage output (effective value)	0-260V
Maximum power output	70VA/phase
Resolution	1mV
Accuracy class	< \pm 0.1% , Typital 0.05%
Power output	
Accuracy class	< \pm 0.1% , Typital 0.05%

Electrical parameters - continued
Frequency output

Output frequency	0-1050Hz
Frequency error	$\leq \pm 0.001\text{Hz}$

Phase angle output

Phase angle	-180.000°-0-180.000°, 0.000°-360.000°
Phase error	$\leq \pm 0.1^\circ$, Typital 0.05°

DC current output

Output range	-10 to 10A or 3 x 0 to $\pm 10\text{A}$
Maximum power output	200VA
Accuracy class	$\leq \pm 0.1\%$, Typital 0.05%

DC voltage output

Output range	0-300V or 5 x 0 to $\pm 130\text{V}$
Maximum output power	130VA
Accuracy class	$\leq \pm 0.1\%$, Typital 0.05%

Binary input

Idle contact	1-20mA, 24V (DC)
Electric potential contact	250V/0.5A (DC)
Binary input number	8PCS

Binary output

Idle contact	250V/0.5A (DC)
Binary output number	4PCS

Function

Waveform distortion	$\leq \pm 0.3\%$ (fundamental wave)
Time measurement	0.1ms-999999.999s
Time error	$< 40\mu\text{s}$
Superposed harmonic wave	0-21times
GPS	Optional
LCD	8 inch color TFT LCD
Key	24pcs key
Communication port	RS232, USB, VGA, 10/100M LAN
Standard	IEC 61010, IEC 61000, IEC 61326

Mechanical parameters

Dimensions (L×W×H) (mm)	360x195x375
Weight (kg)	16.6

Environmental conditions

Operation temperature	0°C to 50°C
Storage temperature	-25°C to 70°C
Humidity range	Relative humidity 5 ... 95 %, non-condensing

Testing ANSI standard device

ANSI Standard Device		
List of Device Numbers	Relay or Circuit Breaker	FUNCTION
2	Time Delay Starting or Closing Relay	Yes
21	Distance Relay	Yes
24	Over-Excitation Relay	Yes
25	Synchronizing or Synchronism-Check Device	Yes
27/27N	Undervoltage Relay	Yes
30	Annunciator Relay	Yes
32	Directional Power Relay	Yes
36	Polarity or Polarizing Voltage Devices	Yes
37	Undercurrent or Underpower Relay	Yes
40	Field Relay	Yes
46	Reverse-phase or Phase-Balance Current Relay	Yes
47	Phase-Sequence Voltage Relay	Yes
50/50N	Instantaneous Overcurrent or Rate of Rise, Relay	Yes
51/51N	AC Time Overcurrent Relay	Yes
52	AC Circuit Breaker	Yes
53	Exciter or DC Generator Relay	Yes
55	Power Factor Relay	Yes
56	Field Application Relay	Yes
58	Rectification Failure Relay	Yes
59/59N	Overvoltage Relay	Yes
60	Voltage or Current Balance Relay	Yes
61	Machine Split Phase Current Balance	Yes
62	Time-Delay Stopping or Opening Relay	Yes
64	Ground (Earth) Detector Relay	Yes
67/67N	AC Directional Overcurrent Relay	Yes
68	Blocking Relay	Yes
74	Alarm Relay	Yes
76	DC Overcurrent Relay	Yes

ANSI Standard Device - continued

List of Device Numbers	Relay or Circuit Rreaker	FUNCTION
78	Phase-Angle Measuring or Out-of-Step Protective Relay	Yes
79	AC Reclosing Relay	Yes
81/81U/O/R	Frequency Relay	Yes
82	DC Reclosing Relay	Yes
85	Carrier or Pilot-Wire Receiver Relay	Yes
86	Lockout Relay	Yes
87	Differential Protective Relay	Yes
91	Voltage Directional Relay	Yes
92	Voltage and Power Directional Relay	Yes
94	Tripping Relay	Yes

Accessory

