

Automatic Square Wave Impulse Current Test System

LCG M series

Datasheet



In Compliance with

- > IEC 61643-1
- > GB 18802.1
- > GB 11032
- > UL1449
- > YD-T 1235.2
- > YD/T 5098
- > TB/T 3074

Introduction

LCG M series automatic square wave impulse current test system adopts two-path 10-level LC chain circuit to output square wave impulse current with 2ms duration. This system is mainly used for 2ms square wave impulse current withstand test for MOV. Controlled automatically, it is featured with high system integration and intelligence and easy operation. Setting test requirements on parameters setting page, test can be conducted with one button.

Features

- > color touch screen, easy operation
- > PLC control system, powerful and stable immunity system
- > controlled by manual, automatic or programmable to different test requirements
- > 10 level LC chain to consist square wave circuit, smooth waveform with little oscillatory
- > controlled silicon continuous current for charging to save energy
- > protection function, visual and audible alarm
- > measure and analyze waveform parameters automatically


Application Areas

- > Communication
- > Telecom
- > Medical
- > Broadcast
- > Railway
- > Technology
- > Military
- > Avionics
- > New energy

Technical Parameters	
Item	2 ms square wave current
Output peak	1 KA, 2 KA, 3 KA, 4 KA, 5 KA
Td duration	2 ms (-0% + 20%)
Attenuation time	<Td×1.5
Reversed overshoot	--
Wave-front oscillatory	<5%
Voltage polarity	+/-, (Switch automatically)
Waveform switch	Switch automatically
Charging time	10 s~999 s
Instability of charging voltage	Less than 1%
Trigger mode	Automatic or manual, single trigger available
Trigger malfunction rate	Less than 1%
Trigger range	100% rated charging voltage
Display screen	10 inch TFT color touch screen
Measurement display resolution	Better than 3%
Type of DUT	MOV, TVS, GDT, SPD or mains surge protection device
DUT residual voltage	<5 kV
Current measurement (optional)	Internal test box, Roosevelt coil measurement, BNC output
Voltage measurement (optional)	Internal test box, resistive voltage divider, BNC output
Oscilloscope	MDO3012, optional
Insulation strength	≤500 V RMS (common port COMMON to ground reference PE)

General Parameters	
Power supply	AC220V±10%, 50/60Hz, 10A
Temperature	15~35°C
Humidity	45%-75%
Ground resistance	No more than 0.5Ω
Construction	Open style, control system split base system
Size of test room	Depend on model (base system) +3M*5M (control system)
Operation table	1.8M(width)*1.1M(height)*1M(depth)
No conductive dust, no fire or explosion danger, no corrosive metal and insulation air. Waveform of mains voltage is sine wave. The THD is <5%.	

Technical Parameters of Standard Models					
Models	LCG 1M	LCG 2M	LCG 3M	LCG 4M	LCG 5M
Current peak	0.1~1 kA	0.2~2 kA	0.15~3 kA	0.2~4 kA	0.25~5 kA
Stored energy	30 kJ	60 kJ	100 kJ	200 kJ	300 kJ
Charging voltage	20 kV	20 kV	30 kV	40 kV	50 kV
Equivalent output impedance	20 Ω, 10 Ω	20 Ω, 10 Ω	20 Ω, 10 Ω	20 Ω, 10 Ω	20 Ω, 10 Ω
DUT residual voltage	6 kV, 20 kV	6 kV, 20 kV	6 kV, 20 kV	6 kV, 20 kV	6 kV, 20 kV
Supply mains	AC220 V 32 A	AC220 V 50 A	AC220 V 50 A	AC220V 100A	AC220 V 150 A
Installation	Frame style	Frame style	Frame style	Frame style	Frame style

Optional Accessories for LCG M-series Simulator			
Name	Model	Installation (connection) mode	Reference picture
Oscilloscope	MDO3012	external	
Current probe	TR1330, 100 kA	Internal	
Attenuator	A10, 10:1, 50 Ω	external	
Voltage probe	P6015 A, 40 kV Peak	external	
Differential probe	VCF 80, test up to 8 kV	external	
PC control software	MCS3000, programmable test from PC port, support Win xp, Win7	RS232	
Operating load mains	CDN 1500, 1500 A follow current	external	



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