

## S6/S10/S20 series compact impulse current simulator (Up to 40kA)



As per
> IEC 61643-1
> GB18802.1
> UL1449
> YD-T1235[1].2
> TB/T 3074

**Description**

S6/S10/S20 is based on the third generation of intelligent multi-function comprehensive simulator. Set the test requirements on the parameter page and all the test procedure can be done automatically with the advantages of integrated system, intelligent control, easy-operation and time-saving. It fully meet the requirements of IEC 61643-1, GB18802.1, UL1449, YD-T1235[1].2 and TB/T 3074 surge standards for MOV, TVS and GDT surge protection device test and for mains surge protection test or scientific research.

**Features**

- > single chip or PLC programmable controller with good reliability and intelligent control
- > integrate design for easy and safety system
- > color touch screen operation to monitor test operation
- > constant current charging, stable and accurate charging, stable output
- > flexible test setup for requirements of different tests
- > external CDN
  - > internal high-accuracy Roosevelt coil for data acquisition and panel output

**Industries**

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

Technical parameters			
Model	S 6	S 10	S 20
Output waveform	8/20 $\mu$ s (other waveform please see attached table)		
Front time T1	8 $\mu$ s $\pm$ 10%		
Wave tail time T2	20 $\mu$ s $\pm$ 10%		
Current peak Ip	100A, 1200A, 6kA, 10kA	10kA, 15kA, 20kA	20kA, 30kA, 40kA
Current output range	10%-100%	1kA~100%	1kA~100%
Equivalent output impedance	50 $\Omega$ , 5 $\Omega$ , 1 $\Omega$ , 0.5 $\Omega$	1 $\Omega$ , 0.75 $\Omega$ , 0.5 $\Omega$	1 $\Omega$ , 0.75 $\Omega$ , 0.5 $\Omega$
Charging voltage	Up to 6kV	Up to 10kV	Up to 20kV
Internal grade energy	I grade	III grade, automatic switch	III grade, manual switch
Voltage polarity	+/- (automatic switch)		
Impulse interval	10s~999s		
Number of continuous impulse	1~99		
Charging voltage instability	Less than 1%		
Trigger mode	Automatic or manual, single trigger available		
Trigger malfunction rate	Less than 1%		
Trigger range	100% rated charging voltage		
Measurement display resolution	Better than 3%		
Insulation strength	$\leq$ 500V RMS (common port COMMON to ground reference PE)		
General data			
Power supply	AC220V $\pm$ 10%, 50/60Hz, 10A		
Temperature	-10-+40 $^{\circ}$ C		
Humidity	35%-85%RH (no condensation)		
Ground resistance	No more than 0.5 $\Omega$		
Dimension	19 inch 6U	19 inch 22U	19 inch 35U
Weight	Approx. 35kg	Approx. 120kg	Approx. 200kg
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%.			

Attached table

Test waveform and output capacity					
No.	Waveform	Type	Max. Output peak		
			S 6	S 10	S 20
A	10/350	Current wave	200A	2kA	5kA
B	4/10	Current wave	2kA	5kA	10kA
C	8/20	Current wave	10kA	20kA	40kA
D	10/1000	Current wave	100A	1kA	2kA
E	100/1000	Current wave	100A	1kA	2kA
F	1/10	Current wave	1kA	5kA	10kA
G	2mS	Current wave	50A	200A	600A
P	Other waveform can be customized.				

Optional accessories for S10 series simulator:

Name	Model and description	Installation (connection) mode	Reference picture
Oscilloscope	MDO3012	External	
Current probe	TR5056,20kA	Internal	
Voltage probe	P6015A, 40kV Peak	External	
Peak acquisition system	Internal acquisition system for voltage and current touch screen display	Internal	
Test box	PA 350	External	

Technical parameters

Remote control software	MCS3000, programmable test from PC port, support Win xp, Win7	RS232	
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