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TECHNICAL PRODUCT INFORMATION

Test & measurement instruments

- high - quality
- moderate prices
- excellent precision

Your contact:

Technical support, services, demo & rental equipment, price information
& quotes, consulting:

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Shop: www.lxinstruments.com/shop

Your Power Testing Solution

IT7900 Regenerative Grid Simulator(HV)

Applications

Photovoltaic

Grid-connected inverters,
power conditioning systems

Electric Vehicle

Vehicle chargers, AC charging piles, EV
power supply, bidirectional vehicle
chargers (V2X)

Energy Storage

PCS energy storage converter,
home PV energy storage device

Research Institute

AC-DC Power Adapter, EMC Test

Power Electronics

Transformer, AC fan, UPS, AC motor



Electric
Transportation

PV Energy
Storage



Model	Output Voltage Vac		Output Amps	Output Power	Phase	Height
	V L-N	V L-L	Phs	Pac		
IT7990-700-90	700V	1200V	90A	90kVA	3Φ	27U
IT79180-700-180	700V	1200V	180A	180kVA	3Φ	27U*2
IT79270-700-270	700V	1200V	270A	270kVA	3Φ	27U*3
IT79360-700-360	700V	1200V	360A	360kVA	3Φ	27U*4
IT79450-700-450	700V	1200V	450A	450kVA	3Φ	27U*5
IT79540-700-540	700V	1200V	540A	540kVA	3Φ	27U*6
IT79630-700-630	700V	1200V	630A	630kVA	3Φ	27U*7
IT79720-700-720	700V	1200V	720A	720kVA	3Φ	27U*8
IT79810-700-810	700V	1200V	810A	810kVA	3Φ	27U*9
IT79900-700-900	700V	1200V	900A	900kVA	3Φ	27U*10
IT79135-1050-90	1050V	1818V	90A	135kVA	3Φ	37U
IT79270-1050-180	1050V	1818V	180A	270kVA	3Φ	37U*2
IT79405-1050-270	1050V	1818V	270A	405kVA	3Φ	37U*3
IT79540-1050-360	1050V	1818V	360A	540kVA	3Φ	37U*4
IT79675-1050-450	1050V	1818V	450A	675kVA	3Φ	37U*5
IT79810-1050-540	1050V	1818V	540A	810kVA	3Φ	37U*6

*For higher power, please call for availability

*Above specifications are subject to change without prior notice

Your Power Testing Solution

IT7900 Regenerative Grid Simulator(HV)

IT7990-700-90			
Input Parameters			
AC input	Wiring connection	3 phase 3wire + ground(PE)	
	Line voltage	RMS	(200 ~ 220V) ±10% *1 (380 ~ 480V) ±10%
	Line current	RMS	< 200A
	Apparent ower		< 104kVA
	Frequency range		45 ~ 65Hz
	Power factor	typ	0.98
Input Parameters			
AC output	Output voltage	VLN	0 ~ 700V
		VLL	0 ~ 1212V
	Output current	RMS (3phase)	90A
		Peak(3phase)	270A
	Output power	Max. Power(3phase)	90kVA
	Voltage setting		
	Range	0 ~ 700V(3phase)	
	Resolution	0.01V	
	Accuracy	< 0.1%+0.2% F.S.	
	Current setting		
	Range	RMS	90A
	Resolution	0.01A	
	Accuracy	< 0.2% + 0.3% F.S.	
	Frequency		
	Setting range	16 ~ 100Hz	
	Setting resolution	0.01Hz	
	Setting accuracy	0.01%	
	Waveform synthesis	50/60Hz	up to 50 orders
	Phase		
	Range setting	0 ~ 360°	
	Setting resolution	0.01°	
Voltage stability	Voltage setting		
	Line regulation	< 0.05% F.S.	
	Load regulation *2	< 0.1% + 0.1% F.S.	
	THD*3	< 1%	
	Voltage ripple	RMS	< 1.2V
	Dynamic response	typ	200μs
Voltage creepage	≥2 V/μs with full-scale programmed voltage step		
Output isolation	750Vac		
Measured parameters			
Voltage	Resolution	0.01V	
Effective value	Accuracy	< 0.1%+0.2% F.S.	
Current	Resolution	0.01A	
Effective value	Accuracy	< 0.2% + 0.3% F.S.	
Output power	Resolution	0.001kW	
	Accuracy	< 0.4% +0.6% F.S.	
Harmonics measurement	Analysis Limit	50/60Hz	up to 50 orders
Regenerative			
Maximum regenerative power		90kVA	
Output current THD		< 5%	
Other			
Efficiency		91% (typ*4)	
Protection		OVP, OCP, OPP, OTP, FAN, ECP, Sense	
Work temperature		0 C-50 C	
Programming response time		2ms	
Sense compensating voltage		20V	
Maximum Working Isolation Voltage		±1000Vdc	
Withstand Voltage	Input to Ground	3000Vdc/1min	
	Input to Output	2250Vdc/1min	
	Output to Ground	2100Vdc/1min	

05 IT7900 Regenerative Grid Simulator(HV)

*1 (200 to 220) $\pm 10\%$, 60% of rated output power output

*2 Cabinets need to be tested in sense remote measurement mode

*3 Test condition: purely resistive load, at full power

*4 Test condition: input 380VLL/50Hz, output three-phase 700Vrms/50Hz at full power

* Above information is subject to change without notice

Your Power Testing Solution

IT7900 Regenerative Grid Simulator(HV)

IT79135-1050-90			
Input Parameters			
AC input	Wiring connection	3 phase 3wire + ground(PE)	
	Line voltage	RMS	(200 ~ 220V) ±10% *1 (380 ~ 480V) ±10%
	Line current	RMS	< 299A
	Apparent power		< 157kVA
	Frequency range		45 ~ 65Hz
	Power factor	typ	0.98
Input Parameters			
AC output	Output voltage	VLN	0 ~ 1050V
		VLL	0 ~ 1818V
	Output current	RMS (3phase)	90A
		Peak(3phase)	270A
	Output power	Max. Power (3phase)	135kVA
	Voltage setting		
	Range	0 ~ 1050V(3phase)	
	Resolution	0.1V	
	Accuracy	< 0.1%+0.2% F.S.	
	Current setting		
	Range	RMS	90A
	Resolution	0.01A	
	Accuracy	< 0.2% + 0.3% F.S.	
	Frequency		
	Setting range	16 ~ 100Hz	
	Setting resolution	0.01Hz	
	Setting accuracy	0.01%	
	Waveform synthesis	50/60Hz	up to 50 orders
	Phase		
	Range setting	0 ~ 360°	
	Setting resolution	0.01°	
Voltage stability	Voltage setting		
	Line regulation	< 0.05% F.S.	
	Load regulation *2	< 0.1% + 0.1% F.S.	
	THD*3	< 1%	
	Voltage ripple	RMS	< 1.8V
	Dynamic response	typ	200μs
Voltage creepage	≥2 V/μs with full-scale programmed voltage step		
Output isolation	1100Vac		
Measured parameters			
Voltage	Resolution	0.1V	
Effective value	Accuracy	< 0.1%+0.2% F.S.	
Current	Resolution	0.01A	
Effective value	Accuracy	< 0.2% + 0.3% F.S.	
Output power	Resolution	0.1kW	
	Accuracy	< 0.4% + 0.6% F.S.	
Harmonics measurement	Analysis Limit	50/60Hz	up to 50 orders
Regenerative			
Maximum regenerative power		135kVA	
Output current THD		< 5%	
Other			
Efficiency		91% (typ*4)	
Protection		OVP, OCP, OPP, OTP, FAN, ECP, Sense	
Work temperature		0 C - 50 C	
Programming response time		2ms	
Sense compensating voltage		20V	
Maximum Working Isolation Voltage		±1500Vdc	
Withstand Voltage	Input to Ground	3000Vdc/1min	
	Input to Output	2250Vdc/1min	
	Output to Ground	2250Vdc/1min	

*1 (200 to 220) $\pm 10\%$, 60% of rated output power output

*2 Cabinets need to be tested in sense remote measurement mode

*3 Test condition: purely resistive load, at full power

*4 Test condition: input 380VLL/50Hz, output three-phase 1050Vrms/50Hz at full power

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