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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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Your Power Testing Solution

IT7900 Regenerative Grid Simulator

Applications

Solar and Energy Storage

Grid-connected inverter, electronic power regulating system, PCS, home energy storage devices

Electric Vehicles

OBC, AC charging pile, EV power supply equipment, BOBC(V2X)

Research Institute and Universities

AC-DC power adapter, EMC test

Power Electronics

Transformer, AC fan, UPS, AC motor



Electric
Transportation



Model	Voltage range		Current range		Power	Phase	Height	Front panel
	V L-N	V L-L	Arms(1Φ)	Arms(3Φ)				
IT7902-350-10U-ATE New!	350V	—	10A	—	2kVA	1Φ	1U	—
IT7902-350-10U New!	350V	—	10A	—	2kVA	1Φ	2U	Touch screen
IT7904-350-20U-ATE New!	350V	—	20A	—	4kVA	1&2Φ	1U	—
IT7904-350-20U New!	350V	—	20A	—	4kVA	1&2Φ	2U	Touch screen
IT7905-350-30U	350V	—	30A	—	5kVA	1Φ	3U	Touch screen
IT7906-350-30-ATE New!	350V	606V	30A	10A	6kVA	1Φ,3Φ,reversed phase	1U	—
IT7906-350-30 New!	350V	606V	30A	10A	6kVA	1Φ,3Φ,reversed phase	2U	Touch screen
IT7906-350-90	350V	606V	90A	30A	6kVA	1Φ,3Φ,reversed phase	3U	Touch screen
IT7909-350-90	350V	606V	90A	30A	9kVA	1Φ,3Φ,reversed phase	3U	Touch screen
IT7912-350-90	350V	606V	90A	30A	12kVA	1Φ,3Φ,reversed phase	3U	Touch screen
IT7915-350-90	350V	606V	90A	30A	15kVA	1Φ,3Φ,reversed phase	3U	Touch screen
IT7930-350-180	350V	606V	180A	60A	30kVA	1Φ,3Φ,reversed phase	6U	Touch screen
IT7945-350-270	350V	606V	270A	90A	45kVA	1Φ,3Φ,reversed phase	15U	Touch screen
IT7960-350-360	350V	606V	360A	120A	60kVA	1Φ,3Φ,reversed phase	27U	Touch screen
IT7975-350-450	350V	606V	450A	150A	75kVA	1Φ,3Φ,reversed phase	27U	Touch screen
IT7990-350-540	350V	606V	540A	180A	90kVA	1Φ,3Φ,reversed phase	27U	Touch screen
IT79105-350-630	350V	606V	630A	210A	105kVA	1Φ,3Φ,reversed phase	27U	Touch screen
IT79120-350-720	350V	606V	720A	240A	120kVA	1Φ,3Φ,reversed phase	37U	Touch screen
IT79135-350-810	350V	606V	810A	270A	135kVA	1Φ,3Φ,reversed phase	37U	Touch screen
IT79150-350-900	350V	606V	900A	300A	150kVA	1Φ,3Φ,reversed phase	37U	Touch screen
IT79165-350-990	350V	606V	990A	330A	165kVA	1Φ,3Φ,reversed phase	37U	Touch screen

* Reverse phase and phase-locking functions help to meet higher voltage testing requirements

* For higher power, please call for availability

Your Power Testing Solution

IT7900 Regenerative Grid Simulator

IT7915-350-90			
Input Parameters			
AC input	Wiring connection	3 phase 3wire + ground(PE)	
	Line voltage	RMS	(200 ~ 220V) ±10% *1/ (380 ~ 480V) ±10%
	Line current	RMS	< 34A
	Power factor	typ	0.98
Output Parameters			
AC output	Output voltage	VLN	0 ~ 350V
		VLL	0 ~ 606V (3phase) / 0 ~ 700V (reverse)
	Output current	RMS	90A(1phase) / 30A(3phase/multichannel/reverse)
		Peak	270A(1phase) / 90A(3phase/multichannel/reverse)
		Crest Factor*2	6
	Output power	Per Phase	5kVA
		Max. Power	10kVA (reverse phase)/15kVA (1phase/3phase/multichannel)
	Voltage setting		
	Range	0 ~ 350V(1phase/3phase/multichannel)/0 ~ 700V(reverse)	
	Resolution	0.01V	
	Accuracy	16Hz ~ 150Hz	0.1%+0.1% F.S
	Current setting		
	Range	RMS	90A(1phase)/30A(3phase/multichannel/reverse)
	Resolution	0.01A	
	Accuracy	16Hz ~ 150Hz	0.1%+0.2% F.S
	Frequency		
	Range setting	16 ~ 150Hz	
	Resolution setting	0.01Hz	
	Accuracy setting	0.01%	
	Waveform Synthesis	50/60Hz	up to 50th-order
	Phase		
	Range setting	0 ~ 360°	
	Resolution setting	0.01°	
DC output	Voltage setting		
	Range	-499 ~ 499Vdc(1phase/multichannel)/-998 ~ 998Vdc(reverse)	
	Resolution	0.01V	
	Accuracy	< 0.1%+0.1% F.S	
	Current setting		
	Range	-30 ~ 30Adc(multichannel/reverse)/-90 ~ 90Adc(1phase)	
	Resolution	0.01A	
	Accuracy	< 0.1%+0.2% F.S.	
Max. Power			
Phase power	Per Phase	5kW	
Output power	Max. Power	10kW(reverse phase)/15kW(1phase/multichannel)	
Anti-islanding (R,L,C)	P Range	0 ~ 5kW(3phase/multichannel) / 0 ~ 15kW(1phase) / 0 ~ 10kW(reverse)	
	QL Range	0 ~ 5kVar(3phase/multichannel) / 0 ~ 15kVar(1phase) / 0 ~ 10kVar(reverse)	
	QC Range	0 ~ 5kVar(3phase/multichannel) / 0 ~ 15kVar(1phase) / 0 ~ 10kVar(reverse)	
	R Range	1 ~ 1000Ω(3phase/multichannel) / 0.333 ~ 333.333Ω(1phase) / 2 ~ 2000Ω(reverse)	
	L Range	1 ~ 5000mH(3phase/multichannel) / 0.333 ~ 1666.667mH(1phase) / 2 ~ 10000mH(reverse)	
	C Range	0.001 ~ 5mF(3phase/multichannel) / 0.003 ~ 15mF(1phase) / 0.001 ~ 2.5mF(reverse)	
	Voltage Slew Rate, Typical	≥2 V/μs with full-scale programmed voltage step	
Regenerative			
Max. Regenerative power		15kVA	
THD (current)		< 5%	

*1 (200 ~ 220) $\pm 10\%$, the power of 12kw and above is 60% of the rated

*2 Under the output frequency of 50Hz/60Hz, the maximum CF is 6 without exceeding the peak current; under the condition of full current and full power, the maximum CF is 3

* This information is subject to change without notice

settable impedance	R Range	0 ~ 1Ω(3phase/multichannel) / 0 ~ 0.333Ω(1phase) / 0 ~ 2Ω(reverse)	
	L Range	0 ~ 1000uH(3phase/multichannel) / 0 ~ 333.333uH(1phase) / 0 ~ 2000uH(reverse)	
Voltage Stability	Line regulation*3	< 0.05% F.S.	
	Load regulation	DC, 16Hz ~ 150Hz	< 0.05% + 0.05% F.S.
	THD*4	16Hz ~ 150Hz	< 0.5%
	Voltage ripple	RMS	< 0.4V
	Dynamic response*5	typ	200us
Measurement parameters			
Voltage RMS		0.01V (resolution) / < 0.1%+0.1% F.S.(Accuracy DC, 16 ~ 150Hz)	
Current RMS		0.01A (resolution) / < 0.1%+0.2% F.S.(Accuracy DC, 16 ~ 150Hz)	
Peak current		0.01A (resolution) / < 0.4%+0.6% F.S.(Accuracy 16 ~ 150Hz)	
Output power		0.001kW (resolution) / < 0.4%+0.4% F.S.(Accuracy DC, 16 ~ 150Hz)	
Harmonic measurement	Max.harmonic analysis	50/60Hz	up to 50th-order
		Others	
Efficiency	typ *6	91%	
Protection		OVP, OCP, OPP, OTP, FAN, ECP, Sense	
Working temperature		0 C ~ 50 C	
Programming response time		2ms	
Maximum Working Isolation Voltage		±1000Vdc	
Withstand Voltage	Input to Ground	3000Vdc/1min	
	Input to Output	2250Vdc/1min	
	Output to Ground	2100Vdc/1min	

*3 For models of 30kW and above, it needs the sense remote measurement mode for testing

*4 Test condition: pure resistive load, under full power condition

*5 Test under DC mode, high speed level, DUT capacity is less than 10uf

*6 Test conditions: input 380VLL/50Hz, output three phases, each phase 350Vrms/50Hz/5kW

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