

3282

POWER FACTOR RLC LOAD



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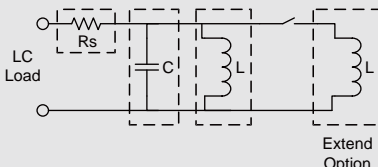


MODEL	3282
Power	1875W / 3700VA
Reactive Power (With Extend OPTION)	C : 900 VARmax @ 110V / 60Hz L : 400 (1200) VARmax @ 110V / 60Hz C : 3785 VARmax @ 220V / 60Hz L : 800 (3200) VARmax @ 220V / 60Hz
Current (Ampere)	18.75 Arms / 46.875 Apeak
Reactive Current (With Extend OPTION)	C : 8.6 Amax @ 110V / 60Hz L : 3.6 (10.8) Amax @ 110V / 60Hz C : 17.2 Amax @ 220V / 60Hz L : 3.6 (14.4) Amax @ 220V / 60Hz
Voltage (Volt)	50~280 Vrms / 400Vdc

Features

- 4 digit V / A/W Meter , display the Voltage (Vrms, Vpeak, Vmax., Vmin) , Current (Irms, Ipeak, Imax., Imin.) , Watt, Voltampere (VA) , Frequency , Crest Factor , Power Factor , Total Harmonic Distortion of Voltage (VTHD) , Voltage Harmonic (VH) , Total Harmonic Distortion of Current (ITHD) , Current Harmonic (IH)
- CC, Linear CC, CR, CV, CP and AC Rectifier Load mode
- Crest factor range : 1.414~5.0
- Power factor (PF) range : 0~1 lead or (-1~0) lag
- Inductive / capacitive load power factor range: 0 ~ 1 Current waveform leads or lags against voltage waveform
- Built-in function test modes include UPS Efficiency, PV Inverter Efficiency, UPS Back-up time, Battery Discharge time, UPS transfer time, Fuse/Breaker Trip/Non-Trip, Short circuit , OCP, OPP test modes
- Turbo mode is able to increase to 2 times the current and power of electronic load in a short period which is the most suitable for Fuse / Breaker test and short circuit, OCP, OPP test of AC power supply
- Time measurement can be applied to batteries, UPS, fuses and circuit breakers and other tests
- Eight units parallel up to 15KW and three-phase Δ or Y load connection can be synchronized control by onemaster unit
- For inductive or capacitive loads of general household and industrial electrical equipment, various electrical equipment that require load currents lagging or leading voltage, such as electric fans with motors, air conditioners with compressors, refrigerators, etc., 3282 RLC power factor AC load provided the power factor load of household and industrial electrical appliances can be simulated, and the anti-islanding test is provided for the grid-connected function of solar inverters, electric vehicle inverters and energy storage devices. The required real power and virtual inductive power and capacitive power can be set independently. 3282 single 280V/18.75A capacity can reach 1.875KW/3200VA max, as long as the load parameters of various electrical equipment and inverters are input into 3282, the inverter/UPS AC power output to be verified is connected to 3282 The AC load can simulate various electrical equipment with inductive/capacitive power factor loads.
- Support on-load boot; at first set Load ON to support on-load boot, inverter or uninterruptible power supply is turned on directly with the set load current, used to verify whether the starter is stable when the Inverter is connected.
- Supports the loading and unloading angle control; the loading and unloading angle control, the full range of 0-359 degrees can be set to verify whether the Inverter output voltage transient response is stable when the actual electrical plugging and unplugging, and whether Overshoot/Undershoot is within the allowable range.
- Support positive half-cycle or negative half-cycle loading; used to verify whether the Inverter output voltage remains stable when the actual appliance has only positive half-cycle or negative half-cycle load current.
- Supports SCR/TRIAC current phase modulation waveforms, 90 degree Trailing edge and Leading Edge.
- Supports the Inrush Current of the inverter at startup and the Surge Current test when the load is suddenly plugged in (Hot Plug-in) during testing.
- Frequency Range : DC, 40~70Hz
- Voltage and current monitoring
- Can be controlled by external voltage for CC, Linear CC, CR, CV, CP operating modes
- Protection against V, I, W, and °C
- Optional interface : GPIB , RS232 , USB , LAN
- The most complete measurement capabilities

3282 power Factor RLC Load built-in 16-bit A/D and DSP precision measurement circuit, provides accurate measurements, measurement items have Vrms, Arms, Watt, VA, CF, PF, THD, VTHD, ITHD, Ipeak, Amax, Amin, Vmax, and Vmin. In addition to these measurement functions, it also provides time measurement , products such as UPS, fuses and circuit breakers etc. trip or blow time and transfer time for Off-line UPS

Specifications		
MODEL		3282
Power		1875 W / 3700VA*6
Reactive Power (With Extend OPTION) *5		C : 900 VARmax @110V / 60Hz C : 3785 VARmax @ 220V / 60Hz L : 400 (1200) VARmax @110V / 60Hz L : 800 (3200) VARmax @ 220V / 60Hz
Current (Ampere)		18.75 Arms / 46.875 Apeak
Reactive Current (With Extend OPTION) *5		C : 8.6Amax @110V/60Hz C : 17.2Amax @ 220V/60Hz L : 3.6 (10.8) Amax @110V / 60Hz L : 3.6 (14.4) Amax @ 220V / 60Hz
Voltage(Volt)		50 ~ 280Vrms / 400Vdc
FREQUENCY Range		DC, 40~70Hz (CC, CP Mode) , DC~70Hz (LIN, CR, CV Mode)
PROTECTIONS		
Over Power Protection		≒ 1968.75Wrms or Programmable
Over Current Protection		≒ 19.687 Arms or Programmable
Over Voltage Protection		≒ 294 Vrms / 420Vdc
Over Temp. Protection		Yes, 90℃ ± 5℃
OPERATION MODE		
Constant Current Mode for Sine-Wave		
Range		0 ~ 18.75A
Resolution		0.3125mA / 16bits
Accuracy		± (0.1% of setting + 0.2% of range)
Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave		
Range		0 ~ 18.75A
Resolution		0.3125mA / 16bits
Accuracy		± (0.1% of setting + 0.2% of range)
Constant Resistance Mode		
Range		3.2 ohm ~ 64K ohm
Resolution*1		0.0052083mS / 16bits
Accuracy		±0.2% of (setting + range)
Constant Voltage Mode		
Range		50 ~ 280Vrms / 400Vdc
Resolution		0.1V
Accuracy		± (0.1% of setting + 0.1% of range)
Constant Power Mode		
Range		0 ~ 1875W
Resolution		0.1W
Accuracy		± (0.1% of setting + 0.1% of range)
RECTIFIER LOAD CREST FACTOR (CC & CP MODE ONLY)		
Range		√2 ~ 5
Resolution		0.1
Accuracy		(0.5% / Irms) + 1%F.S.
RECTIFIER LOAD POWER FACTOR (CC & CP MODE ONLY)		
Range*4		0 ~ 1 Lag or Lead
Resolution		0.01
Accuracy		1% F.S.
Plus LC Mode		
	RS	0Ω / 4.5Ω / 9Ω
	Accuracy	±5% of setting
	Capacitor	0.1μF / 0.22μF / 0.47μF / 0.82μF / 1.64μF / 3.3μF 6.6μF / 12.8μF / 25.6μF / 52μF / 104μF
	Accuracy	±20% of setting
	Inductance	32H / 16H / 8H / 4H / 2H / 1H / 0.5H / 0.25H / 41.6mH(Extend Option)
	Accuracy	±20% of setting

TEST MODE		
RLC LOAD SINE-WAVE POWER FACTOR(CF= $\sqrt{2}$)		
Current Range		0 ~ 18.75A
Resolution		0.3125mA / 16bits
PF Range		+/- 0.000 ~ 1.000
UPS Efficient Measurement		Non-Linear Mode
Operating Frequency		Auto ; 40 ~ 70Hz
Current Range		0 ~ 18.75A
PF Range		0~1
MEASURING EFFICIENCY FOR PV SYSTEMS, POWER CONDITIONERS for THD 80%		Resistive + Non-Linear Mode
Operating Frequency		Auto ; 40 ~ 70Hz
Current Range		0 ~ 18.75A
Resistive Range		3.2 ohm ~ 64K ohm
UPS Back-Up function(CC, LIN, CR, CP)		
UVP (V _{TH})		50 ~ 280Vrms / 400Vdc
UPS Back-Up Time		1 ~ 99999 Sec. (>27H)
Battery Discharge function(CC, LIN, CR, CP)		
UVP (V _{TH})		50 ~ 280Vrms / 400Vdc
Battery Discharge Time		1 ~ 99999 Sec. (>27H)
UPS Transfer Time		
Current Range		0 ~ 18.75A
UVP (V _{TH})		2.5V
Time range		0.15mS ~ 999.99mS
Fuse Test mode		
Max. Current	Turbo OFF	18.75Arms
	Turbo ON	37.5Arms (x2) *3
Trip & Non-Trip Time	Turbo OFF	0.1~9999.9sec.
	Turbo ON	0.1 ~ 1.0sec.
Meas. Accuracy		±0.003 Sec.
Repeat Cycle		0~255
Short / OPP / OCP Test Function		
Short Time	Turbo OFF	0.1S ~ 10Sec. Or Cont.
	Turbo ON	0.1S ~ 1Sec
OPP/OCP Step Time	Turbo OFF	100ms
	Turbo ON	100ms, up to 10 Steps
OCP Istop	Turbo OFF	18.75Arms
	Turbo ON	37.5Arms
OPP Pstop	Turbo OFF	1875W
	Turbo ON	3750W
Programmable Inrush current simulation: Istart - Istop / Tsep		
Istart, Inrush Start Current		0 ~ 37.5A
Inrush Step time		0.1mS ~ 100mS
Istop, Inrush stop current		0 ~ 18.75A
Programmable Surge current simulation: S1/T1 - S2/T2 - S3/T3		
S1 and S2 Current		0 ~ 37.5A
T1 and T2 Time		0.01S ~ 0.5Sec.
S3 Current		0 ~ 18.75A
T3 Time		0.01S ~ 9.99Sec. Or Cont.
MEASUREMENTS		
VOLTAGE READBACK A METER		
Range		400V
Resolution		0.01V
Accuracy		± 0.05% of (reading + range)
Parameter		Vrms, V Max / Min, +/-Vpk

CURRENT READBACK A METER	
Range	9.375Arms / 18.75Arms
Resolution	0.2mA / 0.4mA
Accuracy	± 0.05% of (reading + range)
Parameter	I _{rms} , I _{Max} / Min, +/-I _{pk}
WATT READBACK W METER	
Range	1875W
Resolution	0.03125W
Accuracy	± 0.1% of (reading + range)
VA METER	V _{rms} ×Arms Correspond To V _{rms} and Arms
Power Factor METER	
Range	+/- 0.000 ~ 1.000
Accuracy	± (0.002 ± (0.001/PF) * F)
Frequency METER (V)	
Range	DC, 40 ~ 70Hz
Accuracy	0.1%
Other Parameter METER	
VA, VAR, CF_I, I _{peak} , I _{max.} , I _{min.} , V _{max.} , V _{min.} , I _{HD} , V _{HD} , I _{THD} , V _{THD}	
OTHERS	
Start up loading	Yes , Power on loading during Inverter / UPS start up
Load ON / OFF Angle	0 ~ 359 degree can be programmed for the angle of load ON and load OFF loading
Half cycle and SCR / TRIAC loading	Postive or Negative half cycle, 90° Trailing edge or Leading edge current waveform can be programmed
Master / Slave (3 phase or Parallel application)	Yes, 1 master and upto 7 slave units
External programming input (OPTION)	F.S / 10Vdc, Resulotion 0.1V
External SYNC input	TTL
V _{monitor} (Isolated)	± 500V / ±10V
I _{monitor} (Isolated)	± 56.25Apk / ±10Vpk
Interface (OPTION)	GPIOB : RS-232 : LAN : USB
MAX. Power consumption	150VA
Operation Temperature *2	0 ~ 40°C
Current of input impedance(mA)	~V x 0.3
Dimension(H x W x D)	177 x 440 x 558 mm
Weight	42Kg
OPTION	
Extend PF inductance to 3700VA	41.6mH
Dimension(H x W x D)	141 x 440 x 250 mm
Weight	34Kg

*1 ms (millisiemens) is the unit of conductance(G), one siemens equal to 1/Ω

*2 Operating temperature range is 0~40°C, all specification apply for 25°C ±5°C, Except as noted

*3 Turbo mode for up to 2X Current rating & Power rating support Fuse, Short/OCP/OPP test function

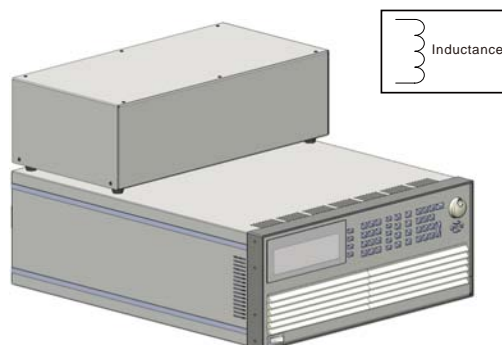
*4 The power factor range is limited on programmed current

*5 Extend PF Range to 3700VA Option (Inductance : 41.6mH)

*6 Specifications apply for 220V/60Hz and option inductance

* All specifications apply for 50/60Hz.

* All specifications subject to change without notice.



Extend PF Range Option

