400XAC

3 Phase AC Power Sources

With a unique feature set and competitive price point, our 400XAC Series provides 3Ø AC power in a single box. Our exclusive SmartCONFIG feature allows you to switch from 1Ø to 3Ø or DC output with the push of a button. This maximizes your investment while giving you the AC power that your application needs. The 400XAC Series consists of two models: the 430XAC is a 3 kVA AC power source and the 460XAC is a 6 kVA AC power source.



Features

- Exclusive SmartCONFIG feature allows for push button switch of 1Ø, 3Ø, or DC output.
- Single phase input power requirements.
- 50 built-in memory locations with 9 test steps.
- Built-in power factor correction (PFC).
- Advanced metering circuits monitor voltage, current, peak current, power, apparent power, reactive power, power factor, and crest factor.
- External voltage sensing for accurate metering.
- Transient feature simulates voltage variations, brownouts, and transient voltage conditions.
- Programmable starting and ending angle of the output sine wave.
- Rack mount handle kit included.







Applicable Industries





Aerospace

Appliance





Laboratory

EEC Benefits





Standard

USB/RS-232 Interface

Options

GPIB Interface

Ethernet Interface







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INPUT			430XAC	460XAC		
Phase			1Ø	1Ø or 3Ø		
Voltage			200 - 240 VAC	1Ø : 200~240 VAC ± 10% 3Ø3W : 200~240 VAC ± 10%		
				3Ø4W : 346~416 VAC ± 10%		
Frequency			4	7 - 63 Hz		
AC OUTPUT						
	1Ø2W		3000 VA	6000 VA		
Power Rating	1Ø3W		Total 2000 VA (1000 VA per phase)	Total 4000 VA (2000 VA per phase)		
	3Ø4W		Total 3000 VA (1000 VA per phase)	Total 6000 VA (2000 VA per phase)		
		DC	3000 VA	6000 VA		
	1Ø2W	5- 150 V	27.6 A @ ≤110 V	55.2 A @ ≤110 V		
		5 - 300 V	13.8 A @ ≤220 V	27.6 A @ ≤220 V		
Max. Current (RMS)	1Ø3W	5 - 150 V	9.2 A @ ≤110 V for per phase	18.4 A @ ≤110 V for per phase		
(11113)		5 - 300 V	4.6 A @ ≤220 V for per phase	9.2 A @ ≤220 V for per phase		
	3Ø4W	5 - 150 V	9.2 A @ ≤110 V for per phase	18.4 A @ ≤110 V for per phase		
		5 - 300 V	4.6 A @ ≤220 V for per phase	9.2 A @ ≤220 V for per phase		
	1Ø2W	5 - 150 V	110.4 A	220.8 A		
	-	5 - 300 V	55.2 A	110.4 A		
Inrush Current	1Ø3W	5 - 150 V	36.8 A for per phase	73.6 A for per phase		
(peak)		5 - 300 V	18.4 A for per phase	36.8 A for per phase		
	3Ø4W	5 - 150 V	36.8 A for per phase	73.6 A for per phase		
DI.		5 - 300 V	18.4 A for per phase	36.8 A for per phase		
Phase				3Ø4W, provided option		
THD (Total Harmor	nic Distorti	on)		Iz and output voltage within the 80~140 VAC 160~280 VAC at High Range.		
			<1% (Resistive Load) at 70.1~1000 Hz and output voltage with	in the 80~140 VAC at Low Range or the 160~280 VAC at High Range.		
Crest Factor				≥3		
Line Regulation			± 0.1 V			
Load Regul	lation (Hard	dware)	± (1% of output +1 V) at Resistive Load, <400 μS response time			
Load Regul	lation (Soft	tware)	± 0.2 V, <1 S response time			
DC offset			≤	≤ ± 5 mV		
			430XAC	460XAC		
\/ l	Range		5.0~300 VAC (phase), 8.6~520 VAC (line), 150/300 V Auto Range			
Voltage	_		4 7	± (0.2% of setting + 3 counts)		
Voltage	Accuracy	у		setting + 3 counts)		
		у	± (0.2% of s	setting + 3 counts) z Full Range Adjust		
Voltage	Accuracy		± (0.2% of s 40~1000 Hz	-		
Frequency Starting & Ending	Accuracy		± (0.2% of s 40~1000 Hz ± 0.00	z Full Range Adjust		
Frequency	Accuracy Range Accuracy	у	± (0.2% of s 40~1000 Hz ± 0.03	z Full Range Adjust 3% of setting		
Frequency Starting & Ending	Accuracy Range Accuracy Range	у	± (0.2% of s 40~1000 Hz ± 0.03	z Full Range Adjust 3% of setting 0~359°		
Frequency Starting & Ending	Accuracy Range Accuracy Range Accuracy	y y	$\pm (0.2\% \text{ of s})$ $40 \sim 1000 \text{ Hz}$ ± 0.03	z Full Range Adjust 3% of setting 0-359° (45-65 HZ)		
Frequency Starting & Ending Phase Angle	Accuracy Range Accuracy Range SV~150 V	y y v	± (0.2% of s 40~1000 Hz ± 0.03 ±1°(0.01~9.20 A 0.01~4.60 A	2 Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A		
Frequency Starting & Ending Phase Angle	Accuracy Range Accuracy Range Accuracy SV~150 \ 5V~300 \ Accuracy	y y / V y	± (0.2% of s 40~1000 Hz ± 0.03 ±1°(0.01~9.20 A 0.01~4.60 A	2 Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A		
Frequency Starting & Ending Phase Angle Current Hi Limit	Accuracy Range Accuracy Range Accuracy SV~150 \ 5V~300 \ Accuracy	y y / V y	± (0.2% of s 40~1000 Hz ± 0.03 ±1°(0.01~9.20 A 0.01~4.60 A ± (2.0% of s	2 Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts)		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp	Accuracy Range Accuracy Range Accuracy SV-150 V 5V-300 V Accuracy	y y v v	± (0.2% of s 40~1000 Hz ± 0.03 ±1°(0.01~9.20 A 0.01~4.60 A ± (2.0% of s	2 Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second) Ramp-Down	Accuracy Range Accuracy SV-150 \ 5V-300 \ Accuracy Range Range	y y v v	± (0.2% of s 40~1000 Hz ± 0.03 ±1°(0.01~9.20 A 0.01~4.60 A ± (2.0% of s 0.1	P Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second)	Accuracy Range Accuracy Range Accuracy 5V-150 V 5V-300 V Accuracy Range Accuracy	y y v v y	± (0.2% of s 40~1000 Hz ± 0.03 ±1°(0.01~9.20 A 0.01~4.60 A ± (2.0% of s 0.01 ± (0.1°	2 Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s % + 0.05 sec)		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second) Ramp-Down	Accuracy Range Accuracy Range Accuracy 5V-150 V 5V-300 V Accuracy Coonse Time Range Accuracy Range	y y v v y	± (0.2% of s 40~1000 Hz ± 0.03 ±1°(0.01~9.20 A 0.01~4.60 A ± (2.0% of s ± (0.1° 0.1 ± (0.1°	E Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s % + 0.05 sec) 0~999.9 s % + 0.05 sec) s~999.9 s ~+0.95 sec) s-999.9 s ~+0.95 sec)		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second) Ramp-Down Timer (second)	Accuracy Range Accuracy SV-150 \ 5V-300 \ Accuracy Range Accuracy Accuracy Range Accuracy Range Accuracy Range Accuracy Range	y y v v y e	± (0.2% of s 40~1000 Hz ± 0.03 ±1°(0.01~9.20 A 0.01~4.60 A ± (2.0% of s ± (0.1° 0.1 0.1 1.0.1 m 0.1 m	E Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s % + 0.05 sec) 0~999.9 s % + 0.05 sec) s~999.9 s n~999.9 min h~999.9 min		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second) Ramp-Down Timer (second)	Range Accuracy Range Accuracy SV-150 V 5V-300 V Accuracy Range Accuracy Range Accuracy Range Accuracy Range Accuracy Range Accuracy	y y v v y e	± (0.2% of s 40~1000 Hz ± 0.00 ±1°(0.01~9.20 A 0.01~4.60 A ± (2.0% of s 0.01 ± (0.1° 0.1 n 0.1 n 0.1 n 0.1 ± (0.1°	E Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s % + 0.05 sec) 0~999.9 s % + 0.05 sec) 5~999.9 s n~999.9 min h~999.9 min h~999.9 h 1% + 0.1 sec)		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp Ramp-Up Timer (second) Ramp-Down Timer (second) Delay Timer	Range Accuracy Range Accuracy SV-150 V SV-300 V Accuracy Range Accuracy Range Accuracy Range Accuracy Range Accuracy Range Accuracy Range	y y v v y y y y y y y y	± (0.2% of s 40~1000 Hz ± 0.00 ±1° 0 0.01~9.20 A 0.01~4.60 A ± (2.0% of s 0.01 ± (0.1° 0.1° 1.01 m 0.1 c ± (0.1° 0.1 c 0.1 c 1.01 m 0.1 c 0.1 c 0.1 c 1.01 m 0.1 c 0.1	E Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s % + 0.05 sec) 0~999.9 s % + 0.05 sec) s~999.9 min h~999.9 min h~999.9 min h~999.9 h 1% + 0.1 sec) Ph (0=continuous)		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp Ramp-Up Timer (second) Ramp-Down Timer (second) Delay Timer	Range Accuracy SV-150 \ 5V-300 \ Accuracy Range Accuracy Accuracy Range Accuracy	y y y y y y y y y y	± (0.2% of state of the state o	E Full Range Adjust 3% of setting 0-359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0-999.9 s % + 0.05 sec) 0-999.9 s % + 0.05 sec) s-999.9 min h-999.9 min h-999.9 h 1% + 0.1 sec) Ph (0=continuous) 1% + 0.1 sec)		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second) Ramp-Down Timer (second) Delay Timer	Range Accuracy SV-150 \ 5V-300 \ Accuracy Range Accuracy Accuracy Range Accuracy	y y y y y y y y y y	± (0.2% of s 40~1000 Hz ± 0.00 ±1° 0 0.01~9.20 A 0.01~4.60 A ± (2.0% of s 0.01 ± (0.1° 0.1° 1.01 m 0.1 c ± (0.1° 0.1 c 0.1 c 1.01 m 0.1 c 0.1 c 0.1 c 1.01 m 0.1 c 0.1	E Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s % + 0.05 sec) 0~999.9 s % + 0.05 sec) s~999.9 min h~999.9 min h~999.9 min h~999.9 h 1% + 0.1 sec) Ph (0=continuous)		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second) Ramp-Down Timer (second) Delay Timer Dwell Timer	Range Accuracy SV-150 \ 5V-300 \ Accuracy Range Accuracy Accuracy Range Accuracy	y y y y y y y y y y	± (0.2% of s 40~1000 Hz ± 0.03 ±1°0 0.01~9.20 A 0.01~4.60 A ± (2.0% of s 0.01 ± (0.1° 0.1 1 0.1 n 0.1 2 ± (0.1° 4 0.1° 4 0.1° 1 0.1 n 0.1 2 1 0.1 n 0.1 2 1 0.1 0 1	E Full Range Adjust 3% of setting 0-359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0-999.9 s % + 0.05 sec) 0-999.9 s % + 0.05 sec) s-999.9 min h-999.9 min h-999.9 h 1% + 0.1 sec) Ph (0=continuous) 1% + 0.1 sec)		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second) Ramp-Down Timer (second) Delay Timer Dwell Timer Poly-phase mode measurement	Range Accuracy SV-150 V SV-300 V Accuracy Range	y y y y y y y y y y y r per phase	± (0.2% of s 40~1000 Hz ± 0.03 ±1° 0.01~9.20 A 0.01~4.60 A ± (2.0% of s ± (0.1° 0.1 ± (0.1° 0.1 n 0.1 ± (0.1° 430XAC	E Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s % + 0.05 sec) 0~999.9 s % + 0.05 sec) s~999.9 s ~10.9 + 0.1 sec) Ph (0=continuous) 1% + 0.1 sec) 460XAC		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second) Ramp-Down Timer (second) Delay Timer Dwell Timer Poly-phase mode measurement	Accuracy Range Accuracy SV-150 \ 5V-300 \ Accuracy Range Accuracy Accuracy Range	y y y y y y y y y y y y r per phase	± (0.2% of s 40~1000 Hz ± 0.03 ±1° 0.01~9.20 A 0.01~4.60 A ± (2.0% of s ± (0.1° 0.1 1.0.1 n 0.1 ± (0.1° 430XAC	z Full Range Adjust 3% of setting 0-359° (45-65 HZ) 0.01-18.40 A 0.01-9.20 A setting + 2 counts) <1.4 s 0-999.9 s % + 0.05 sec) 0-999.9 s % + 0.05 sec) s-999.9 s min h-999.9 min h-999.9 h 1% + 0.1 sec) 20 h (0=continuous) 19% + 0.1 sec) 460XAC		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp. Ramp-Up Timer (second) Ramp-Down Timer (second) Delay Timer Dwell Timer Poly-phase mode measurement	Accuracy Range Accuracy SV-150 \ 5V-300 \ Accuracy Range Accuracy	y y y y y y y y y y y y r per phase	± (0.2% of s 40~1000 Hz ± 0.00 ±1°0 0.01~9.20 A 0.01~4.60 A ± (2.0% of s 0.01 ± (0.1° 0.1 n 0.1 n 0.1 c 0.1 s-999.5 ± (0.1° 430XAC	z Full Range Adjust 3% of setting 0-359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0-999.9 s % + 0.05 sec) 0-999.9 s % + 0.05 sec) s-999.9 min h-999.9 h 1% + 0.1 sec) 2 h (0=continuous) 1% + 0.1 sec) 460XAC 0-1000 Hz 0.1 Hz		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp Ramp-Up Timer (second) Ramp-Down Timer (second) Delay Timer Dwell Timer Poly-phase mode measurement Frequency	Accuracy Range Accuracy SV-150 V 5V-300 V Accuracy Range Accuracy	y y y y y y y y y y r per phase	± (0.2% of s 40~1000 Hz ± 0.00 ±1°0 0.01~9.20 A 0.01~4.60 A ± (2.0% of s 0.01 ± (0.1° 0.1 n 0.1 n 0.1 c 0.1 s-999.5 ± (0.1° 430XAC	E Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s % + 0.05 sec) 0~999.9 s % + 0.05 sec) s~999.9 s n~999.9 min h~999.9 min h~999.9 h 1% + 0.1 sec) 0 (0=continuous) 1% + 0.1 sec) 460XAC 0.1 Hz 0.1 Hz 0.0 Hz Accuracy ± 0.2 Hz)		
Frequency Starting & Ending Phase Angle Current Hi Limit OC Fold Back Resp Ramp-Up Timer (second) Ramp-Down Timer (second) Delay Timer Dwell Timer Poly-phase mode measurement Frequency	Range Accuracy Range Accuracy SV-150 V 5V-300 V Accuracy Range Resolution Accuracy Range	y y y y y y y y y y y y y y y y y y y	± (0.2% of s 40~1000 Hz ± 0.01 ±1°0 0.01~9.20 A 0.01~4.60 A ± (2.0% of s 0.01 ± (0.1° 0.1 1 0.1 n 0.1 1 0.1 c 1 (0.1° 430XAC	z Full Range Adjust 3% of setting 0~359° (45~65 HZ) 0.01~18.40 A 0.01~9.20 A setting + 2 counts) <1.4 s 0~999.9 s % + 0.05 sec) 0~999.9 s % + 0.05 sec) s~999.9 s n~999.9 min h~999.9 h 1% + 0.1 sec) 2h (0=continuous) 1% + 0.1 sec) 460XAC 0.11000 Hz 0.1 Hz 00 Hz Accuracy ± 0.2 Hz) 0.0-420.0 V		

Poly-phase mode	e (3Ø4W) for p	er phase measurement	430XAC	460XAC	
	Range	L	0.005 A~1.200 A	0.005 A~2.400 A	
		Н	1.00 A~13.00 A	2.00 A~26.00 A	
	Accuracy		± (1% of reading +5 counts) at 40.0-500 Hz	\pm (1% of reading +5 counts) at 40.0-500 Hz	
Current (RMS)		L	\pm (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) \leq 3.6 A	± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤7.2 A	
			± (1% of reading +5 counts) at 40.0-500 Hz	± (1% of reading +5 counts) at 40.0-500 Hz	
		Н	± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤27.6 A	± (1% of reading +5 counts) at 501-1000 Hz CF < 1.5 and Current (peak) ≤55.2 A	
	Range	ı	0.0 A~38.0 A	0.0 A~76.0 A	
			± (1% of reading + 5 counts) at 40.0-70.0 Hz		
Current (peak)	Accuracy		± (1.5% of reading + 10 counts) at 70.1 - 500 Hz		
			± (1.5% of reading + 10 counts) at 501 - 1000 Hz and CF <1.5		
	Range	L	0.0 W~120.0 W	0.0 W~240.0 W	
	3.	Н	100 W~1300 W	200 W~2600 W	
	Accuracy				
ower	recuracy	L	± (2% of reading +15 counts) at 40.0-500 Hz and PF ≥0.2 ± (2% of reading +30 counts) at 501-1000 Hz and PF ≥0.5		
			± (2% of reading +50 counts) at 501-1000 H2 and FF ≥0.5 ± (2% of reading +5 counts) at 40.0-500 Hz and PF ≥0.2		
		Н	± (2% of reading +5 counts) at 40.0-500 Hz and PF ≥0.2 ± (2% of reading +15 counts) at 501-1000 Hz and PF ≥0.5		
ower Factor	Range		0 - 1.000		
OWELL ACTOL	Accuracy		W / VA, Calculated and displayed to	three significant digits	
Power Appears		L			
'ower Apparent VA)	Range		0.0 VA~120.0 VA	0.0 VA~240.0 VA	
	A co	Н	100 VA~1300 VA	200 VA~2600 VA	
Power	Accuracy		V×A, Calculated v		
Power Reactive (Q)	Range	L	0.0 VAR ~ ± 120.0 VAR	0.0 VAR ~ ± 240.0 VAR	
	A	Н	0 VAR ~ ± 1300 VAR	0 VAR ~ ± 2600 VAR	
	Accuracy		√(VA)² - (W)², Calculated value		
Crest Factor	Range		0 - 10.00		
	Accuracy		Ap / A, Calculated and displayed to two significant digits		
Poly-phase mode	e (3Ø4W) for 2	measurement	430XAC	460XAC	
requency	Range		0.0-1000.0 Hz		
	Accuracy		± 0.1 Hz (501-1000 Hz Accuracy ±0.2 Hz)		
oltage/	Range		0.0-727.5 V		
	Calculated Fo	ormula	(A+B+C)/√3, Calculated and displayed	d to one significant digits	
Current (RMS)	Range	L	0.005A~1.200A	0.005A~2.400A	
		Н	1.00A~13.00A	2.00A~26.00A	
	Calculated	L	$\frac{\sum VA}{\sum V}/\sqrt{3}$		
	Formula	Н	$\sum V$		
Power					
ower	Range	L	0.0W~360.0W	0.0W~720.0W	
ower	Range	L H	0.0W~360.0W 300W~3900W	0.0W~720.0W 600W~7800W	
ower	Range		300W~3900W	600W~7800W	
ower		Н		600W~7800W	
		H L	300W~3900W	600W-7800W	
	Accuracy	H L	$\frac{\Sigma^p}{\Sigma^M}$ A Power + B Power + C Power	600W-7800W	
	Accuracy	H L	$\frac{\Sigma^{P}}{\Sigma^{VA}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$	600W-7800W Calculated value	
ower Factor	Accuracy Range Resolution Accuracy	H L H	$300W\sim3900W$ $\frac{\Sigma^{P}}{\Sigma^{PA}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$ 0.001 $\text{Calculated and displayed to}$	600W-7800W Calculated value three significant digits	
lower Factor	Accuracy Range Resolution	H L H	$\frac{\Sigma^{P}}{\Sigma^{Pd}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$ 0.001 $\text{Calculated and displayed to}$ $0.0VA~360.0VA$	600W~7800W Calculated value three significant digits 0.0VA~720.0VA	
ower Factor	Range Resolution Accuracy Range	H L H	$\frac{\Sigma^P}{\Sigma^{PA}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$ 0.001 $\text{Calculated and displayed to}$ $0.0VA~360.0VA$ $300VA~3900VA$	600W-7800W Calculated value three significant digits	
ower Factor	Accuracy Range Resolution Accuracy	H L H	$\frac{\Sigma^{P}}{\Sigma^{Pd}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$ 0.001 $\text{Calculated and displayed to}$ $0.0VA~360.0VA$	600W~7800W Calculated value three significant digits 0.0VA~720.0VA	
ower Factor ower opparent (VA)	Range Resolution Accuracy Range Calculated Formula	H L H	$\frac{\sum^{P}}{\sum^{pd}}$ A Power + B Power + C Power, 0 - 1.000 0.001 Calculated and displayed to 0.0VA~360.0VA 300VA~3900VA $\sqrt{(\sum^{W})^{2} + (\sum^{Q})^{2}}$	three significant digits 0.0VA~720.0VA 600VA~7800VA	
ower Factor ower opparent (VA)	Accuracy Range Resolution Accuracy Range Calculated	H L H L	$\frac{\sum^{P}}{\sum^{Vd}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$ 0.001 $\text{Calculated and displayed to}$ $0.0VA~360.0VA$ $300VA~3900VA$ $\sqrt{(\sum^{W})^{2} + (\sum^{Q})^{2}}$ $0.0VAR~360.0VAR$	600W-7800W Calculated value three significant digits 0.0VA~720.0VA 600VA-7800VA	
ower Factor ower pparent (VA)	Range Resolution Accuracy Range Calculated Formula	H L H	$\frac{\sum^{P}}{\sum^{pd}}$ A Power + B Power + C Power, 0 - 1.000 0.001 Calculated and displayed to 0.0VA~360.0VA 300VA~3900VA $\sqrt{(\sum^{W})^{2} + (\sum^{Q})^{2}}$	three significant digits 0.0VA~720.0VA 600VA~7800VA	
Power Factor Power Apparent (VA)	Range Resolution Accuracy Range Calculated Formula	H L H L	$\frac{\sum^{P}}{\sum^{VA}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$ 0.001 $\text{Calculated and displayed to}$ $0.0VA~360.0VA$ $300VA~3900VA$ $\sqrt{(\sum^{W})^{2} + (\sum^{Q})^{2}}$ $0.0VAR~360.0VAR$ $300VAR~3900VAR$	600W-7800W Calculated value three significant digits 0.0VA~720.0VA 600VA~7800VA 0.0VAR~720.0VAR 600VAR~7800VAR	
Power Factor Power Apparent (VA)	Range Resolution Accuracy Range Calculated Formula Range	H L H L H L	$\frac{\sum^{P}}{\sum^{Vd}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$ 0.001 $\text{Calculated and displayed to}$ $0.0VA~360.0VA$ $300VA~3900VA$ $\sqrt{(\sum^{W})^{2} + (\sum^{Q})^{2}}$ $0.0VAR~360.0VAR$	600W~7800W Calculated value three significant digits 0.0VA~720.0VA 600VA~7800VA 0.0VAR~720.0VAR 600VAR~7800VAR	
Power Factor Power Apparent (VA) Power Reactive (Q)	Accuracy Range Resolution Accuracy Range Calculated Formula Range Accuracy	H L H L H L H L	$\frac{\sum^{P}}{\sum^{VA}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$ 0.001 $\text{Calculated and displayed to}$ $0.0VA~360.0VA$ $300VA~3900VA$ $\sqrt{(\sum^{W})^{2} + (\sum^{Q})^{2}}$ $0.0VAR~360.0VAR$ $300VAR~3900VAR$	600W-7800W Calculated value three significant digits 0.0VA~720.0VA 600VA~7800VA 0.0VAR~720.0VAR 600VAR~7800VAR	
Power Factor Power Apparent (VA) Power Reactive (Q)	Accuracy Range Resolution Accuracy Range Calculated Formula Range Accuracy	H L H L H L H L	$\frac{\sum^{P}}{\sum^{VA}} \qquad \text{A Power + B Power + C Power}$ $0 - 1.000$ 0.001 $\text{Calculated and displayed to}$ $0.0VA~360.0VA$ $300VA~3900VA$ $\sqrt{(\sum^{W})^{2} + (\sum^{Q})^{2}}$ $0.0VAR~360.0VAR$ $300VAR~3900VAR$ $A VAR + B VAR + C VAR, Care$	600W-7800W Calculated value three significant digits 0.0VA~720.0VA 600VA~7800VA 0.0VAR~720.0VAR 600VAR~7800VAR	
Power Factor Power Factor Apparent (VA) Power Reactive (Q)	Range Resolution Accuracy Range Calculated Formula Range Accuracy	H L H L H L H L	$\frac{\sum^{P}}{\sum^{PA}}$ A Power + B Power + C Power, 0 - 1.000 0.001 Calculated and displayed to 0.0VA~360.0VA $\sqrt{(\sum^{W})^{2} + (\sum^{Q})^{2}}$ 0.0VAR~360.0VAR 300VAR~3900VAR $A VAR + B VAR + C VAR, Calculated AVAR + C VAR, Cal$	600W~7800W Calculated value three significant digits 0.0VA~720.0VA 600VA~7800VA 0.0VAR~720.0VAR 600VAR~7800VAR	

Single-phase mo	ode (1Ø2W) Setting	430XAC	460XAC	
requency	Range		40~1000 Hz Full Range Adjust		
	Resolution		0.1 Hz at 40.0~99.9 Hz , 1 Hz at 100~1000 Hz		
	Accuracy		± 0.03% of setting		
Starting & Ending	Range		0~359°	·9	
Phase Angle	Resolution		1°		
	Accuracy		± 1°(45~65 HZ)		
	5V~150V		0.01~27.60 A	0.01~55.20 A	
Current Hi Limit	5V~300V		0.01~13.80 A	0.01~27.60 A	
	Accuracy		± (2.0% of setting + 2	counts)	
OC Fold Back Response Time			< 1.4 s		
Single-phase m	mode (1Ø2W) measurement		430XAC	460XAC	
Frequency	Range		0.0~1000 Hz		
	Accuracy		± 0.1 Hz (501~1000 Hz Accu	racy ±0.2 Hz)	
Voltage	Range		0.0~420.0 V		
	Accuracy		± (0.2% of reading + 3	counts)	
Current (RMS)	Range		0.05 A~39.00 A	0.05 A~78.00	
	Accuracy		± (1% of reading +5 counts) at 40.0~500 Hz	± (1% of reading +5 counts) at 40.0~500 Hz	
			± (1% of reading +5 counts) at 501~1000 Hz,	± (1% of reading +5 counts) at 501~1000 Hz,	
			CF <1.5 and Current (peak) ≤82.8 A	CF <1.5 and Current (peak) ≤165.6 A	
Current (peak)	Range		0.0 A~114.0 A	0.0 A~228.0 A	
	Accuracy		± (1% of reading + 5 counts) a	at 40.0~70.0 Hz	
			± (1.5% of reading + 10 counts) at 70.1~500 Hz	
			± (1.5% of reading + 10 counts) at 50		
Power	Range		0 W~3900 W	0 W~7800 W	
	Accuracy		± (2% of reading +5 counts) at 40.0		
			± (2% of reading +15 counts) at 501	~1000 Hz and PF ≥0.5	
Power Factor	Range		0 - 1.000		
	Accuracy		W / VA, Calculated and displayed to	three significant digits	
Power Apparent	Range		0 VA~3900 VA	0 VA~7800 VA	
	Accuracy		V×A, Calculated va	alue	
Power	Range		0 VAR~3900 VAR	0 VAR~7800 VAR	
Reactive (Q)	Accuracy		$\sqrt{(VA)^2 - (W)^2}$, Calculated value		
Crest Factor	Range		0 - 10.00		
	Accuracy		Ap / A, Calculated and displayed to	two significant digits	
Poly-phase mod	le (1Ø3W) f	or per phase output			
			430XAC	460XAC	
Voltage	Range		5.0~300 VAC (phase), 10.0~600 VAC (line), 150/300 V Auto Range		
	Accuracy		± (0.2% of setting + 3 counts)		
Frequency	Range		40~1000 Hz Full Range Adjust		
	Accuracy		± 0.03% of setting		
Starting & Ending			± 0.03% of setting 0~359°		
Phase Angle	Range				
	Accuracy		± 1°(45~65 HZ)) 	
	5V~150V		0.01~9.20 A	0.01~18.40 A	
Current RI Limit	5V~300V		0.01~4.60 A	0.01~9.20 A	
	Accuracy		± (2.0% of setting + 2 counts)		
OC Fold Back Resp	onse Time		<1.4 s		
oly-phase mode (1Ø3W) for per phase measure- nent			430XAC	460XAC	
	Range		0.0-1000 Hz		
requency	Accuracy		± 0.1 Hz (501-1000 Hz Accuracy ±0.2 Hz)		
	Range		0.0-420.0 V		
	Accuracy		± (0.2% of reading + 3	counts)	
Voltage	Accuracy	L			
Voltage			0.005 A~1.200 A	0.005 A~2.400 A	
Voltage	Range				
Voltage	Range	Н	1.00 A~13.00 A	2.00 A~26.00 A	
Voltage	Range	Н	± (1% of reading +5 counts) at 40.0-500 Hz	± (1% of reading +5 counts) at 40.0-500 Hz	
Voltage Current (RMS)	Range				
	Range	Н	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤3.6 A	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤7.2 A	
		Н	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz,	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz,	

Poly-phase mode (1Ø3W) for per phase measurement			430XAC	460XAC	
	Range		0.0 A~38.0 A	0.0 A~76.0 A	
Current (peak)	Accuracy		± (1% of reading + 5 counts) at 40.0-70.0 Hz ± (1.5% of reading + 10 counts) at 70.1-500 Hz ± (1.5% of reading + 10 counts) at 501-1000 Hz and CF <1.5		
	D	L	0.0 W~120.0 W	0.0 W~240.0 W	
	Range	Н	100 W~1300 W	200 W~2600 W	
Power	Accuracy	L	± (2% of reading +30 cour	nts) at 40.0-500 Hz and PF ≥0.2 nts) at 501-1000 Hz and PF ≥0.5	
	Н		± (2% of reading +5 counts) at 40.0-500 Hz and PF ≥0.2 ± (2% of reading +15 counts) at 501-1000 Hz and PF ≥0.5		
Power Factor	Range		0 - 1.000		
Power Apparent (VA)	Accuracy		W / VA, Calculated and displayed to three significant digits		
	Range	H	0.0 VA~120.0 VA 100 VA~1300 VA	0.0 VA~240.0 VA 200 VA~2600 VA	
	Accuracy		VxA, Cal	Iculated value	
	Range	L	0.0 VAR~120.0 VAR	0.0 VAR~240.0 VAR	
Power Reactive (Q)	Kunge	Н	0 VAR~1300 VAR	0 VAR~2600 VAR	
,	Accuracy		√(VA)2 - (W)2	, Calculated value	
Crest Factor	Range		0	0-10.00	
	Accuracy		Ap / A, Calculated and dis	splayed to two significant digits	
Poly-phase mod	de (1 <u>Ø3W)</u> f	or L1-L2	1000/10		
			430XAC	460XAC	
Frequency	Range		0.0-	1000.0 Hz	
	Accuracy		± 0.1 Hz (501-1000	± 0.1 Hz (501-1000 Hz Accuracy ± 0.2 Hz)	
Voltage	Range		0.0)-840.0V	
	Accuracy		L1 Voltage + L2 Voltage, Calculate	d and displayed to one significant digits	
Current (RMS)	Range	L	0.005A~1.200A	0.005A~2.400A	
		Н	1.00A~13.00A	2.00~26.00A	
	Calculated	L	Σ	I .	
	Formula H		Σ	$\frac{\Sigma}{\Sigma^{r}}$	
Power	Range	L	0.0W~240.0W	0.0W~480.0W	
		Н	200W~2600W	400W~5200W	
	Accuracy L		L1 Power + L2 Power, Calculated value		
Power Factor	Range		0	0 - 1.000	
	Calculated I	Formula	(L1 P + L2 P) / (L1 VA + L2 VA), Calcular	ted and displayed to three significant digits	
Power Apparent	Range	L	0.0W~240.0VA	0.0W~480.0VA	
(VA)		Н	200W~2600VA	± 400W~5200VA	
	Calculated Formula	L H	$\sqrt{(\sum^W)^2 + (\sum^Q)^2}$	Calculated value	
Power	Range	L	0.0VAR ~ ± 240.0VAR	0.0VAR ~ ± 480.0VAR	
Reactive (Q)		Н	± 200VAR ~ ± 2600VAR	± 400VAR ~ ± 5200VAR	
	Calculated Formula	L	L1 VAR + L2 VAR, Calculated value		
DC OUTPUT					
Max. Power			3000 W	6000 W	
Max. Current	0-210 V		14.4 A	28.8 A	
	0-420 V		7.2 A	14.4 A	
Ripple and Noise (Ripple and Noise (RMS)		Range: 5-210 V <700 mV Range: 5-420 V <1100 mV		
Ripple and Noise (p-p)		<4.0 Vp-p		
DC SETTINGS					
				420.V.C-1	
Voltage	Range			420 V Selectable	
	Accuracy			etting + 3 counts)	
	5 V-210 V		14.40 A	0.10 - 28.80 A	
Current Hi Limit	5 V-420 V		7.20 A	0.10 - 14.40 A	
	Accuracy			etting + 2 counts)	
OC Fold Back Response Time			<1.4 s		

DC MEASUREMENT		430XAC	460XAC	
Voltage Range Accuracy		0.0-420.0 V		
		± (0.2% of se	etting + 5 counts)	
Current	Range	0.05 A~19.50 A	0.05 A~39.00 A	
	Accuracy	± (1% of rea	ding +5 counts)	
Power	Range	0 W~3900 W	0 W~7800 W	
Accuracy		± (2% of reading +5 counts)		
PROTECTION				
Software OCP		Over Current 110% of full rated current >1 second		
Output Short Shut Down Speed		<1 second		
Software OPP		When over Power 105 ~ 1	110% of full power >5 second.	
		When over Power >110	% of full power <1 second.	
Software OTP		Temperature over 95 degree C on the power amp and PFC heatsink	Temperature over 120 degree C on the power amp and PFC heatsink	
Software OVP		When output frequency < 100Hz, maximum voltage deviation + 5V		
	L		Hz, maximum voltage deviation + 15V	
			Hz, maximum voltage deviation + 20V z, maximum voltage deviation + 10V	
	Н		tz, maximum voltage deviation + 10V	
			Hz, maximum voltage deviation + 40V	
Software LVP		When output frequency < 100Hz, maximum voltage deviation -5V > 0.5 second		
	L		ximum voltage deviation -15V > 0.5 second	
		When output frequency 501-1000Hz, maximum voltage deviation -20V > 0.5 second		
		When output frequency < 100Hz, maximum voltage deviation -10V > 0.5 second		
	Н	When output frequency 101-500Hz, maximum voltage deviation -30V > 0.5 second When output frequency 501-1000Hz, maximum voltage deviation -40V > 0.5 second		
Payarsa Current	t Protection (RCP)	Over 75W		
GENERAL	t i rotection (itcl)			
Transient (only f	for 40~70 Hz)	Trans-Volt 0.0-300.0 V Resolution 0.1 V		
Transient (only)	101 40 70 112)	Trans-Site 0°~359° Resolution 1°		
		Trans-Time 0.5-999	.9 mS Resolution 0.1 mS	
		Trans-Cycle 0-9999, 0-Constant		
Operation Key I	Feature	Soft key, Numeric key, Rotary Knob		
Remote Input S	ignal	Test, Reset, Interlock, Recall program memory 1 through 7		
Remote Output	t Signal	Pass, Fail , Test-in Process		
Key Lock		Yes, Password Driven		
Memory		50 memories, 9 steps/memory		
Ext Trigger		START / END / BOTH / OFF in the Program mode, Output Signal 5 V, BNC type		
Alarm Volume Setting		Range: 0-9 ; 0 = OFF, 1 is softest volume, 9 is loudest volume.		
Graphic Display		240 x 64 dot resolution Monographic LCD/Contrast 9 Levels 1-9		
PFC		PF ≥0.97 at Full load		
Efficiency		≥78% (at Full load)		
Auto Loop cycle		0 = Continuous, OFF, 2~9999		
Auto Loop cycle	e	0 = Continuo	ous, OFF, 2~9999	
Auto Loop cycle Over Current Fo		On/Off, Setting On when output current over setting Hi-A valu	ous, OFF, 2~9999 e it will fold back output voltage to keep constant output current is Response time <1400ms	
		On/Off, Setting On when output current over setting Hi-A valu setting Hi-A value, I	e it will fold back output voltage to keep constant output current is	
Over Current Fo	old Back	On/Off, Setting On when output current over setting Hi-A value, If CE	e it will fold back output voltage to keep constant output current is Response time <1400ms	
Over Current Fo	old Back	On/Off, Setting On when output current over setting Hi-A value, I CE	e it will fold back output voltage to keep constant output current is Response time <1400ms Listed	
Over Current Fo	old Back	On/Off, Setting On when output current over setting Hi-A value, I CE	e it will fold back output voltage to keep constant output current is Response time <1400ms Listed	

Why We Use Counts

EEC publishes some specifications using "counts" which allows us to provide a better indication of the power source's capabilities across measurement ranges. A count refers to the lowest resolution of the display for a given measurement range. For example, if the resolution for voltage is 1V then 2 counts = 2V.

