



# EnergiPro

Bi-directional inverter  
800 VA-8 KVA

EnergiPro was the bi-directional inverter designed for advanced solar hybrid system. EnergiPro delivers high reliability, performance and industry leading efficiency for mission critical application. In areas where the grid was limited or unreliable, where diesel generators are still being heavily relied on, EnergiPro will be a perfect choice to compose hybrid power solution.

EnergiPro integrated multiple functions, including a powerful battery charger, true sine wave inverter and a high speed automatic transfer switch. Its distinguishing surge capability makes it capable to power most demanding appliances, such as air conditioner, water pump, washing machine, freezer etc.

With built in AEA, it can automatically allocate the power available with AC source (either grid or genset) using whatever extra to charging, thus avoiding grid or generator to be overloaded. Through TAI, it is capable of handling two independent AC sources which could automatically switch between active grid and diesel generators.





- Pure sine wave output with outstanding peak power
- High efficiency up to 94.8%
- Extremely low static consumption power
- Solar mode makes the energy from sun be used as primary
- Powerful sophisticated lead acid battery charger featuring multi-stage charging algorithm, automatic temperature compensation and voltage compensation
- Equalization charging program was available
- Lithium Battery charging was available
- Fully programmable with Vision Lite or Vision Pro monitor
- GEN mode makes it compatible with majority of generators in the market
- Weak Grid mode can dramatically increase the usage of grid upon available
- Standby level adjustable
- Compatible with T-bus

#### TS/VS

Temperature Sensor/  
Voltage Sensor



#### Vision Lite

LCD Display and configuration  
with scroll roll design



#### RCF

Simple monitor with LED display



#### AGS

Automatic Generator start



#### TAI

Twin AC Input





Model No.	12 VDC	CF0825L	CF1240L	CF1645L	CF2060L
	24 VDC	CF0815M	CF1220M	CF1625M	CF2030M
	48 VDC	/	/	/	CS2015S

## Inverter

Nominal Voltage	12 VDC/24 VDC			12 VDC / 24 VDC / 48VDC
Cont. power @25 °C (VA)	800	1200	1600	2000
Cont. power @25 °C (W)	750	1100	1300	1600
Cont. power @40 °C (W)	700	1000	1200	1450
Output voltage	230 VAC / 110 VAC ± 2%			230 VAC ± 2%
Output frequency	50/60 Hz ± 0.1%			
Cos φ	0.9-1			
Overload Capability	>110%	15 mins		1 mins
	>125%	1 min		
	>150%	20s		
Surge	300%			
Efficiency (max)	12 V	89%		
	24 V	92%		
	48 V	95%		
Crest factor	3:1			
THD	< 3%			
Bypass range	UPS mode	184 VAC - 264 VAC / 88 VAC - 127 VAC		184 VAC - 264 VAC
	GEN mode	173 VAC - 276 VAC / 67 VAC - 132 VAC		173 VAC - 276 VAC
	Weak Grid mode	167 VAC - 264VAC / 80 VAC - 127 VAC		167 VAC - 264VAC
Zero load power	10/11 W	11/12 W	11/13 W	14 W
Zero load power (power save mode)	2.5 W	2.5/3 W	2.5/3 W	3.5 W
Overload protection	auto disconnect with 3 times restart attempt			
shortcut protection	auto disconnect			

## Charger

Nominal Output Voltage	12 VDC / 24 VDC			12 VDC / 24 VDC / 48 VDC
Max Output current (A) - adjustable	25/15	40/20	50/25	60/30/15
AC Input range	195 VAC - 264 VAC / 93.5 VAC - 126.5 VAC			195 VAC - 264 VAC
Battery types	AGM / GEL ( OPzV ) LFP / Flooded			
Absorption time	variable			
Temperature compensation	-4 mV / °C / cell			
Slave Charger	3-5 A float charge ( 12Vdc and 24Vdc model only)			

## Other Data

Transfer time	UPS mode	15 ms		
	GEN mode	2 s		
Transfer switch	16 A			31 A
Dry contact	Battery low			
Battery connector	M6 x 2			M8 x 2
AC terminal	M3			M4

## Mechanical Data

Enclosure	Steel with powder paint			
Dimension (mm) (max)	440×232.5×95			485×265×145
Net Weight (KGs)	10.5	11.65	11.9	18
Cooling	Forced fan			
Protection	IP22			IP20

## Standard

Safety	IEC62109-1			
EMC	EN61000-6-1, EN61000-6-3, EN61000-3-11, EN61000-3-12, EN55014-1, EN55014-2, EN55032, EN55024			
Automotive Directive	/	(E4) ECE R10		



Model No.	12 VDC	CF3090L	/	/	/	/
	24 VDC	CF3045M	/	CF5090M	/	/
	48 VDC	CF3020S	CF4030S	CF5040S	CF6050S	CF8060S

## Inverter

Nominal Voltage	12 VDC / 24 VDC / 48VDC					
Cont. power @25 °C (VA)	3000	4000	5000	6000	8000	
Cont. power @25 °C (W)	2500	3500	4500	5000	7000	
Cont. power @40 °C (W)	2200	3200	4000	4500	6000	
Output voltage	230 VAC ± 2%					
Output frequency	50/60 Hz ± 0.1%					
Cos φ	0.9-1					
Overload Capability	>110%	1 mins				
	>125%	1 min				
	>150%	20s				
Surge	300%					
Efficiency (max)	12 V	89%				
	24 V	92%				
	48 V	95%				
Crest factor	3:1					
THD	< 3%					
Bypass range	UPS mode	184 VAC - 264 VAC				
	GEN mode	173 VAC - 276 VAC				
	Weak Grid mode	167 VAC - 264VAC				
Zero load power	17 W	25 W	26 W	28 W	30 W	
Zero load power (power save mode)	4 W	6 W	6.5 W	7 W	7.5 W	
Overload protection	auto disconnect with 3 times restart attempt					
shortcut protection	auto disconnect					

## Charger

Nominal Output Voltage	12 VDC / 24 VDC / 48 VDC					
Max Output current (A) - adjustable	90/45/20	30	90/40	50	60	
AC Input range	195 VAC - 264 VAC					
Battery types	AGM / GEL ( OPzV ) LFP / Flooded					
Absorption time	variable					
Temperature compensation	-4 mV / °C / cell					
Slave Charger	3-5 A float charge ( 12Vdc and 24Vdc model only)					

## Other Data

Transfer time	UPS mode	15 ms				
	GEN mode	2 s				
Transfer switch	31 A			90 A		
Dry contact	Battery low					
Battery connector	M6 x 2			M8 x 2		
AC terminal	M4					

## Mechanical Data

Enclosure	Steel with powder paint					
Dimension (mm) (max)	485×265×145			550×285×190		
Net Weight (KGs)	19.2	21	35	40	46	
Cooling	Forced fan					
Protection	IP22			IP20		

## Standard

Safety	IEC62109-1					
EMC	EN61000-6-1, EN61000-6-3, EN61000-3-11, EN61000-3-12, EN55014-1, EN55014-2, EN55032, EN55024					
Automotive Directive	(E4)ECE R10	/				