

Tiny Home solar / battery / energy package PK12.01

Tiny Homes need the best power, Victron Energy Multiplus Inverter-chargers, coupled with ecoCool's Victron AGM home battery system, a Victron MPPT charger, and battery monitor round off a great solar-battery-energy package. PK12.01 includes:

- 48/1200 Multiplus Inverter charger (2.4KW max, takes generator input to 3.6KVA)
- 1.0KW, 4x 275W Tier 1 solar Panels & Mounting Frame (tin or tile roof)
- Bluesolar 100/20 MPPT Solar charger (under 120V = self install)
- 1.5KWh (2.9KWh Max) K29.28.20 Battery Storage System & fuses/isolator
- X30.03 energy management, with BMV Battery Monitor

Ready for your electrician to install, or call ecoCool to organise installation.





Victron Multiplus 48/1200/13 Data

12 Volt 24 Volt 48 Volt	MultiPlus 12/500/20 MultiPlus 24/500/10 MultiPlus 48/500/6	MultiPlus 12/800/35 MultiPlus 24/800/16 MultiPlus 48/800/9	MultiPlus 12/1200/50 MultiPlus 24/1200/25 MultiPlus 48/1200/13
PowerControl / PowerAssist	No		Yes
Three Phase and parallel operation	No		Yes
Transfer switch		16A	
INVERTER			
Input voltage range	9,5 – 17V	19 – 33V	38 – 66V
Output	Output voltage: 230VAC ± 2% Frequency: 50Hz ± 0,1% (1)		
Cont. output power at 25°C (3)	500VA	800VA	1200VA
Cont. output power at 25°C	430W	700W	1000W
Cont. output power at 40°C	400W	650W	900W
Cont. output power at 65°C	300W	400W	600W
Peak power	900W	1600W	2400W
Maximum efficiency	90 / 91 / 92%	92 / 93 / 94%	93 / 94/95%
Zero-load power	6 / 6 / 7W	7 / 7 / 8W	10 / 9 / 10W
Zero-load power in search mode	2 / 2 / 3W	2 / 2 / 3W	3 / 3 / 3W
CHARGER			
AC Input	Input voltage range: 187-265 VAC		Input frequency: 45 – 65 Hz
Charge voltage 'absorption'	14,4 / 28,8 / 57,6V		
Charge voltage 'float'	13,8 / 27,6 / 55,2V		
Storage mode	13,2 / 26,4 / 52,8V		
Charge current house battery (4)	20 / 10 / 6A	35 / 16 / 9A	50 / 25 / 13A
Charge current starter battery	1A (12V and 24V models only)		
Battery temperature sensor	Yes		
GENERAL			
Programmable relay (5)	Yes		
Protection (2)	a – g		
Common Characteristics	Operating temp. range: -40 to +65°C (fan assisted cooling) Humidity (non-condensing): max 95%		
ENCLOSURE			
Common Characteristics	Material & Colour: Steel/ABS (blue RAL 5012)		Protection category: IP 21
Battery-connection	16 / 10 / 10 mm ²	25 / 16 / 10 mm ²	35 / 25 / 10 mm ²
230V AC-connection	G-ST18i connector		
Weight	4,4 kg	6,4 kg	8,2 kg
Dimensions (h x w x d)	311 x 182 x 100 mm	360 x 240 x 100 mm	406 x 250 x 100 mm

Victron BMV700 (X30.01 Dashboard) Data

Battery Monitor	BMV-700	BMV-702 BMV-702 BLACK	BMV-700HS
Supply voltage range	6,5 - 95 VDC	6,5 - 95 VDC	60 – 385 VDC
Current draw, back light off	< 4mA	< 4mA	< 4mA
Input voltage range, auxiliary battery	n. a.	6,5 - 95 VDC	n. a.
Battery capacity (Ah)		20 - 9999 Ah	
Operating temperature range		-40 +50°C (-40 - 120°F)	
Measures voltage of second battery, or temperature, or midpoint	No	Yes	No
Temperature measurement range	-20 +50°C		n. a.
VE.Direct communication port	Yes	Yes	Yes
Relay	60V / 1A normally open (function can be inverted)		

Jinko 275W Poly Solar Panel Data

Module Type	JKM275PP(Plus)	
	STC	NOCT
Maximum Power (Pmax)	275Wp	205Wp
Maximum Power Voltage (Vmp)	32.0V	29.3V
Maximum Power Current (Imp)	8.61A	7.00A
Open-circuit Voltage (Voc)	39.2V	35.9V
Short-circuit Current (Isc)	9.18A	7.37A
Module Efficiency STC (%)	16.80%	
Operating Temperature(°C)	-40°C→+85°C	
Maximum system voltage	1000VDC (IEC)	
Maximum series fuse rating	15A	
Power tolerance	0→+3%	
Temperature coefficients of Pmax	-0.40%/°C	
Temperature coefficients of Voc	-0.30%/°C	
Temperature coefficients of Isc	0.06%/°C	
Nominal operating cell temperature (NOCT)	45±2°C	

Mechanical Characteristics	
Cell Type	Poly-crystalline 156×156mm (6 inch)
No. of cells	60 (6×10)
Dimensions	1650×992×40mm (65.00×39.05×1.57 inch)
Weight	19.0 kg (41.9 lbs)
Front Glass	3.2mm, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	TUV 1×4.0mm², Length: 900mm or Customized Length

Victron BlueSolar 100/20 (48V) Charge Controller Data

SmartSolar Charge Controller	MPPT 75/10	MPPT 75/15	MPPT 100/15	MPPT 100/20	MPPT 100/20 48V
Battery voltage	12/24V Auto Select				48V
Rated charge current	10A	15A	15A	20A	20A
Nominal PV power, 12V 1a,b)	145W	220W	220W	290W	n. a.
Nominal PV power, 24V 1a,b)	290W	440W	440W	580W	n. a.
Nominal PV power, 48V 1a,b)	n. a.	n. a.	n. a.	n. a.	1160W
Max. PV short circuit current 2)	13A	15A	15A	20A	20A
Automatic load disconnect	Yes				
Maximum PV open circuit voltage	75V		100V		
Peak efficiency	98%				
Self-consumption	12V: 25 mA 24V: 15 mA				15mA
Charge voltage 'absorption'	14,4V / 28,8V (adjustable)				57,6V (adj.)
Charge voltage 'float'	13,8V / 27,6V (adjustable)				55,2V (adj.)
Charge algorithm	multi-stage adaptive				
Temperature compensation	-16 mV / °C resp. -32 mV / °C				
Max. continuous load current	15A		20A		1A
Low voltage load disconnect	11,1V / 22,2V/44,4V or 11,8V / 23,6V/47,2V or Battery Life algorithm				
Low voltage load reconnect	13,1V / 26,2V/52,4V or 14V / 28V/56V or Battery Life algorithm				
Protection	Battery reverse polarity (fuse) / Output short circuit / Over temperature				
Operating temperature	-30 to +60°C (full rated output up to 40°C)				
Humidity	95%, non-condensing				
Data communication port	VE.Direct (see the data communication white paper on our website)				
ENCLOSURE					
Colour	Blue (RAL 5012)				
Power terminals	6 mm² / AWG10				
Protection category	IP43 (electronic components), IP22 (connection area)				
Weight	0,5 kg		0,6 kg		0,65 kg
Dimensions (h x w x d)	100 x 113 x 40 mm		100 x 113 x 50 mm		100 x 133 x 60 mm

ecoCool K29 Battery-Energy Storage Data

Part #	KWh	Nom. Power \$	Cycles	Depth D/chrg	AmpHr	Nom. Voltage	Dimensions (mm)	Weight
K29.15.10	1.5	1000W	1250	100%	60	24/48V dc	525x500x250	77kg
K29.29.20	2.9	2000W	1250	100%	120	48V dc	625x600x300	143kg
K29.43.30	4.3	3000W	1250	100%	180	48V dc	825x600x300	211kg
K29.58.40	5.8	4000W	1250	100%	240	48V dc	1025x600x300	275kg

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