



PUURGEN

HYBRID POWER SYSTEM



Pure Energy Generated Locally

HYBRID POWER SYSTEM

Puurgen's Hybrid Power Systems provide power in remote and off-grid locations 24-7. Scalable power systems support applications requiring continuous operation by combining renewable energy sources to meet the most demanding of Systems.

KEY FEATURES

- Off-grid location
- Rapidly deployable
- Fully autonomous operation
- Continuous secure energy supply
- Rugged design for all weather types
- Suited to most environments – marine, land-based etc
- Battery under & over voltage protection prolongs life
- Configurable day/night operation
- Low maintenance
- Systems can be tailored for customer requirements
- Service contracts available



Technical Description

Puurgen's Hybrid Power Systems open new possibilities for operation of remote applications by using leading-edge technology that pushes the boundaries of sustainable power demands. Delivering in excess of 120W of continuous power, Puurgen's Hybrid Power Systems can supply the energy required by most CCTV camera and transmission combinations. Using abundant solar and wind energy to generate and store excess energy enables your system to keep operating 24 hours a day 365 days a year.

Puurgen's Hybrid Power Systems are customised to meet the specific requirements desired by our clients. Applications such as CCTV Systems, road signs, security lights and alarms are ideally suited to Puurgen's Hybrid Power Systems.



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Solar Engines

- Puurgen's Maximum Power Point Tracking delivers highefficiency energy transfer
- Designed to operate 24-7 as needed
- Day/Night continuous operation
- Mono-crystalline, polycrystalline or thin film solar pv available
- Designed to operate globally in harsh and friendly environments
- IP66 rated
- Silent operation

Wind Engines

- Effective power management
- Extremely efficient design
- Available in 12 or 24 volt DC
- Unparalleled low wind speed performance
- Almost silent in operation
- Vibration-free operation

Energy Storage & Conditioning

- Maximises energy extraction from power source
- Puurgen's charge regime prolongs battery life
- Wide input operating range
- Wide output Voltage range
- >95% efficiency
- Supports Lead-acid and Li-ion battery technologies

Mechanical

- Rugged solution designed to withstand severe weather conditions
- System rated to IP66 dust and water ingress protection
- Deployable to most structures with no drilling required
- Low maintenance due to ease of access to fixings

System

- Interfaces to most CCTV and Transmission Systems
- Monitor locations with no power or fixed line communications infrastructure, and record video to NVR, or integrate footage into existing CCTV network.
- VPN channel to allow user access to real time video



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Technical Specifications

SOLAR PANELS

	Min	Max	Units	Notes
Vmp	12	35.4	V	Depends on panel type
Voc	19	44	V	Depends on panel type
Power	35	280	W	Depends on panel type
Height	530	1956	mm	Depends on panel type
Width	515	992	mm	Depends on panel type
Thickness	28	50	mm	Depends on panel type
Weight	5.5	30	kg	Depends on panel type
Op temp	-40 to +85		°C	

WIND TURBINES

	Min	Max	Units	Notes
Pmax	100	400	W	
Vmax	12	24	V	
Blade Diameter	510	1100	mm	
Start up speed	3	7.5	m/s	
Mass	6	20	kg	
Op temp	-40 to +85		°C	

LITHIUM-ION BATTERIES

	Nom	Units	Notes
Operating voltage	12	V	Higher voltages possible
Capacity	204	Wh	Per pack
Length	113	mm	
Depth	63	mm	
Height	127	mm	
Weight	1.5	kg	

Lead-Acid Batteries

	Nom	Units	Notes
Operating voltage	12	V	Higher voltages possible
Capacity	240	Wh	Per pack
Length	173	mm	
Depth	87	mm	
Height	155	mm	
Weight	6.8	kg	

Camera Options (others available)

- Day/night Vandal Proof Dome Camera with DNR
- IP Compact Dome Camera with Virtual PTZ, 3 Mega Pixel Image Resolution and Built in DVR
- PTZ Dome with 18x optical zoom

Wireless Options

- Up to RF transmission 50km
- Encrypted Wireless Ethernet up to 30 miles
- GPRS/ 3G / HSDPA Communications



PUURGEN

Mirren Court One, 119 Renfrew Road, Paisley PA3 4EA, UK
t: + 44 (0) 844 573 8480 e: enquiries@puurgen.com

www.puurgen.com

Registered in Scotland No. SC285287 at 123 St Vincent Street Glasgow G2 5EA.

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