Earthing System Lightning Protection System Solar System Exothermic Welding System Cathodic Protection System

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Cathodic Protection System Page 107-131





Tavan Gostaran Zino Co. has been established as a specialized company, taking advantage of the modern sciences with the aim of designing, production (supplement), and installation of the following items:

Electrical and Instrumentation Earthing system Lightning protection Cathodic protection (corrosion control) New energies systems (Solar systems)

By relying on its 20-year experience since its establishment, human resources and knowledge of its engineers and experts, and by transferring of modern technologies and methods and their employment, **Tavan Gostaran Zino Co.** has received a considerable growth in implementing EPC work in various industries including oil, gas, petrochemical, refineries, power plants, and electricity posts.









Engineering Service Range Earthing and Lightning Protection Systems

1. Site Survey

- 1.1. Soil study
 - 1.1.1.Soil resistivity test (Wenner Four-Electrode Method)
 - 1.1.2. Soil pH test
- 1.2. Lightening rod installation survey
- 1.3. Lightning protection level and method survey

2. Designing

Designing is done according to the documented standards and procedures in the system and relevant to the received information from section 1, as well as the existing maps in the system designing with the lowest cost and the best performance. At this point, the initial plan for the installation, running, and implementation, and the calculation tables are also suggested.

3. Post-Implementation Survey

- 1. Earth resistance system survey using 62% method, Slope method and etc.
- 2. Voltage contact detection
- 3. Voltage pitch survey
- 4. Continuity testing of ground and lightning protection systems
- 5- Leak testing













Residential



Off-grid solar energy storage system

Off-grid solar energy storage system can convert solar light into electrical energy. And the energy can be directly used by loads or stored for using at night. It is a ideal green power for without electricity, power shortage or unstable areas, such as: remote mountainous, islands, communication base stations, border posts, etc. Off-grid solar energy storage system also can be used as mobile or standby power supply. So if you want to construct your own off-grid solar energy storage system, Please contact us.

Zeno off-grid solar energy storage Kits are excellent solutions and pre¬configured with major components, which simplifies your purchase source, saves overall cost and time. Zeno will provide a full range of Off-grid solar energy storage system kit to meet different electricity demand, different output power requirement. You can choice them by your loads power consumption and rated output power. The following introduction is about single phase Off-grid solar energy storage system kit.

System Features

Available in different sizes from 500W to 8kW Inverter & charge controller all-in-one Integrated energy management system & a variety of work

mode

Frequency isolation transformer design, safe, quiet and stable

110V/230V optional, 50Hz/60Hz adaptive With electricity or Diesel generator by-pass VRLA-GEL battery, long deep cycle life

External batteries, flexible configuration

Easy installation, convenient operation

Fast and accurate delivery, do not wait again

Free pre-sales technical support, including customization

One-stop after-sales service for the whole solar kit





All in One Solar LED Street Light



Solar Lighting

All in one solar street light integrates the green-energy parts solar panel, LED lamp and the battery into a single product, is with human intelligence induction system to gain the solution of low-energy, long-time, high-luminance and free maintenance. And the same time, it's convenient in the shipment and installation





Solar Powered Cathodic Protection (SPCP)

Zino has developed a range of Solar Powered Impressed Current Cathodic Protection Systems (SPICCPS) for the protection of infrastructure in remote areas where mains power supply is not economically available. Combining the reliability of a Solar Power Supply including market-leading Batteries and Solar Panels, with the quality and robustness of a Cathodic Protection DC/DC Converter, the SPICCPS provides unrivalled performance and availability for cathodic protection requirements. Depending on size, systems are housed in ground mounted enclosures underneath solar array frames, or they can be pole mounted. Systems are available in varying power and voltage configuratifon customer requirements.

Systems utilize the CP system, which is a switch mode fully isolated DC/DC converter with a full range of features. The converter can be operated from a wide range of DC input voltages and is particularly suited to low power operations such as solar powered systems.







On Grid Solar System



Residential & Comercial Application

With the advent of on-grid solar kit, we can be more convenient to apply green solar energy. Because of rising electricity prices, more and more people want to own their own home solar power plant. They also gradually realize investing photovoltaic power plants, is risk-free and high return. So if you want to construct your own solar power system, Please contact us.

Zino On-grid Solar System Kits are excellent solutions for residential PV installations, it is designed to meet most roof conditions and pre-configured with major components, which simplifies your purchase source, saves overall cost and time. Our On-gird Solar Kit is especially installation-friendly due to the modular structure and several sub kit. Zino will provide a full range of on-grid solar system kit to meet different countries, different output power requirement, You can choice by your local standards and rated output power. The following introduction is about Solar Kits for Australia standard.





Industrial & Utility Scale Applicaion



PV Diesel Hybrid Applications

Sun saves fuel. ZINO PV-diesel solutions offer independence from rising diesel prices and reduce operating- and maintenance costs, especially in remote areas far from the utility grid.

Pure diesel power generation for industrial consumers in remote regions leads to continually increasing operating costs. Simultaneously falling PV system costs make photovoltaic diesel hybrid systems with the our Fuel Save Solution an economically attractive and environmentally friendly solution



Solar Gel Deep Cycle Battery



Product Descriptions

The Ultra Power of Nrwrnax Lead-Acid Battery" NEI/MAX Solar Gel(SG Series) batteries are true maintenance-free sealed batteries engineered specifically to satisfy the need for frequent deep cycles from photovoltaic (PV) and renewable energy storage applications. We are confident that our technology-intensive, long-lasting, and environmentally friendly SG Series batteries will provide stability and efficiency for your everyday renewable energy needs.

Characteristics of Our Batteries

01. Long Life for Deep Cycle - High density.. anli-wirosive lead calcium aridly is used in harmony with the GEL electrolyte to reduce the sulfation effect significantly.

02. Maintenance Free - NE MA Battery has . gas re-comb[ning design that doesn't need maintenance until the end of its life.

03. Leak free - Gel Technology is applied to prevent leakage_They won't spill even if the battery is tipped upside dlown.

04. Safety - Specially designed anti-explosion filter and safety valves prevent gas leakage when overcharged'.

	~	Capacity (AH)						Dimension					Weight		vinal pe		
Туре	Voltage (V	20HR 10HR 5HR 1HR		Length		Wie	Width		Height		eight	(APPROX)		Tern Ty			
		Final V.P.C 1.75	Final V.P.C 1.75	Final V.P.C 1.75	Final V.P.C 1.75	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(Lb)	(kg)	standard	Optional
SG 800H	12	80	76	70	53	500	19.69	180	7.09	195	7.68	224	8.82	58.4	26.5	н	N
SG 1000H	12	100	95	87	66	500	19.69	180	7.09	195	7.68	224	8.82	66.1	30.0	н	Ν
SG 1200H	12	120	114	104	79	500	19.69	180	7.09	195	7.68	224	8.82	80.5	36.5	н	N
SG 1500H	12	150	143	131	99	500	19.69	260	7.09	196	7.72	225	8.86	94.8	43.0	н	Ν
SG 2000H	12	200	190	174	132	500	19.69	260	7.09	196	7.72	225	8.86	125.7	57.0	Н	N
SG 2000H	12	200	209	191	145	500	19.69	260	7.09	196	7.72	225	8.86	134.5	61.0	н	N









Solar System 😥



Solar System Equipment



PWM & MPPT Controller

Specially designed for industrial and outdoor applications, charger controller comes with an IP 65 casing made of powder-coated steel.

This solar charge controller can be used to control system sizes of up to 8,400 Wp at three voltage levels (12 V, 24 V, 48 V). The charger is based on the technology of the PWM & MPPT. When connected in parallel, several controllers from this series can be operated via a standard DC bus in a simple solar home system or a hybrid system. This allows an output of over 20 kWp to be re.

	2070	2140	4055	4110	4140		
Characterisation of the operating performan	ce						
System voltage	12 V	(24 V)		48 V			
Own consumption			14 Ma				
DC input side							
Open circuit voltage solar module	< 5	50 V	< 100 V				
Module current	70 A	140 A	55 A	55 A	70 A		
DC output side							
Load current	70 A	70 A	55 A	55 A	70 A		
End of charge voltage	13.7 V	(27.4 V)	54.8 V				
Boost charge voltage	14.4 V	(28.8 V)	57.6 V				
Equalisation charge	14.7 V	(29.4 V)	58.8 V				
Reconnection voltage (SOC / LVR)	> 50 % (25	/ 12.6 V .2 V)	> 50 % / 50.4 V				
Deep discharge protection (SOC / LVD)	< 30 % (22	/ 11.1 V .2 V)	< 30 % / 44.4 V				
Operating conditions							
Ambient temperature	(-)10 ° C(+)60 ° C						
Fitting and construction							
Set battery type	liquid (adjustable via menu)						
Terminal (fine / single wire)	50 mm2 95 mm2 - - AWG 1 AWG 000		50 mm2 - 70 mm2 AWG 1 - AWG 00		95 mm2 - AWG 000		
Degree of protection		•	IP 65				
Dimensions (X x Y x Z)	330 x 330 360 x 330 x 190 mm x 190 mm		330 x 330 x 190 mm 360 x 330 x 190 mm				
Weight			10 kg				



Product features

- · Hybrid controller
- · State of charge determination with Steca AtonIC (SOC)
- · Automatic detection of voltage
- · PWM control
- · Multistage charging technology
- · Load disconnection depending on SOC
- · Automatic load reconnection
- · Temperature compensation
- · Common positive grounding or negative grounding on one terminal
- · Integrated data logger
- Night light function with Steca PA 15
- Integrated self test
- · Monthly maintenance charge
- Integrated energy meter

Electronic protection functions

- · Overcharge protection
- · Deep discharge protection
- · Reverse polarity protection of module, load and battery
- · Reverse polarity protection by internal fuse
- · Automatic electronic fuse
- · Short circuit protection of load and module
- · Overvoltage protection at module input
- · Open circuit protection without battery
- · Reverse current protection at night
- · Overtemperature and overload protection
- · Battery overvoltage shutdown

Displays

- Text LCD display
- ~ for operating parameters, fault messages, self test

Operation

- · Simple menu-driven operation
- · Programming by buttons
- · Manual load switch
- Interfaces
- · RJ45 interface

Options

- · External temperature sensor (included)
- · Alarm contact
- · System monitoring via a Steca PA CAB1 Tarcom

Certificates

- · Approved by the World Bank for Nepal
- · Fit for use in tropical areas (DIN IEC 68 part 2-30)
- · Compliant with European Standards (CE)
- · Made in Germany
- · Developed in Germany
- · Manufactured according to ISO 9001 and ISO 14001





Solar System Equipment



Efficient

Maximum efficiency of 98.4%

Flexible

- DC input voltage of up to 1,000 V
- Multistring capability for optimum

system design

Optional display

Innovative

Cutting-edge grid management functions with Integrated Plant Control
Reactive power available 24/7 (Q on Demand 24/7)

Safe

• DC surge arrester (SPD type II) can be integrated

Solar Graid-Tie Inverter

The versatile specialist for large-scale commercial plants and solar power plants. Is the ideal inverter for large-scale commercial and industrial plants. Not only does it deliver extraordinary high yields with an efficiency of 98.4%, but it also offers enormous design flexibility and compatibility

with many PV modules thanks to its multistring capabilities and wide input voltage range.

The future is now: the new inverter comes with cutting-edge grid management functions such as Integrated Plant Control, which allows the inverter to regulate reactive power at the point of common coupling. Separate controllers are no longer needed, lowering system costs. Another new feature—reactive power provision on demand (Q on Demand 24/7).



Technical Data	20000TL	25000TL		
Input (DC)				
Max. DC power (@ cos φ = 1) / DC rated power	20440 W / 20440 W	25550 W / 25550 W		
Max. input voltage	1000 V	1000 V		
MPP voltage range / rated input voltage	320 V to 800 V / 600 V	390 V to 800 V / 600 V		
Min. input voltage / start input voltage	150 V / 188 V	150 V / 188 V		
Max. input current input A / input B	33 A / 33 A	33 A / 33 A		
Number of independent MPP inputs / strings per MPP input	2 / A:3; B:3	2 / A:3; B:3		
output (AC)				
Rated power (@ 230 V, 50 Hz)	20000 W	25000 W		
Max. AC apparent power	20000 VA	25000 VA		
AC nominal voltage	3/ N / PE; 220 V / 380 V 3 / N / PE; 230 V / 400 V 3 / N / PE; 240 V / 415 V			



Technical Data	Sunny Tripower 20000TL	Sunny Tripower 25000TL		
AC voltage range	180 V to	o 280 V		
AC grid frequency / range	50 Hz / 44 Hz to 55 Hz 60 Hz / 54 Hz to 65 Hz			
Rated power frequency / rated grid voltage	50 Hz /	′ 230 V		
Max. output current / Rated output current	29 A / 29 A	36.2 A / 36.2 A		
Power factor at rated power / Adjustable displacement power factor	1 / 0 overexcited t	o 0 underexcited		
ТНО	≤ 3	%		
Feed-in phases / connection phases	3/	3		
Efficiency	,			
Max. effi ciency / European Effi ciency	98.4% / 98.0%	98.3% / 98.1%		
protective devices				
DC-side disconnection device	•			
Ground fault monitoring / grid monitoring	• /	′●		
DC surge arrester (Type II) can be integrated	с)		
DC reverse polarity protection / AC short-circuit current capability / galvanically	•/•	/—		
All-pole sensitive residual-current monitoring unit		•		
Protection class (according to IEC 62109-1) / overvoltage category (according to IEC				
62109-1)	I / AC: II	I; DC: II		
General Data				
Dimensions (W / H / D)	661 / 682 / 264 mm (2	26.0 / 26.9 / 10.4 inch)		
Weight	61 kg (13	34.48 lb)		
Operating temperature range	(–)25 °C to +60 °C ((–13 °F to +140 °F)		
Noise emission (typical)	51 d	B(A)		
Self-consumption (at night)	11	N		
Topology / cooling concept	Transformerless / Opticool			
Degree of protection (as per IEC 60529)	IP65			
Climatic category (according to IEC 60721-3-4)	4K4	4H		
Maximum permissible value for relative humidity (non-condensing)	100)%		
Features / function / Accessories	1			
DC connection / AC connection	SUNCLIX / spring	g-cage terminal		
Display	c)		
Interface: RS485, Speedwire/Webconnect	0/	•		
Data interface: SMA Modbus / SunSpec Modbus	•/	'●		
Multifunction relay / Power Control Module	0/	0		
OptiTrack Global Peak / Integrated Plant Control / Q on Demand 24/7	•/•	• / •		
Off-Grid capable / SMA Fuel Save Controller compatible	• /	· •		
Guarantee: 5 / 10 / 15 / 20 / 25 years	•/o/c	0/0/0		
	ANRE 30, AS 4777, BDEW 2	2008, C10/11:2012, CE, CEI		
	0-16, CEI 0-2	(, EN 50438*,		
	62116 MEΔ 20	13 NBR 16149		
* Does not apply to all national appendices of EN 50438	02110, MEA 2013, NBK 16149, NEN EN 50438 NBS 007-2-1 DEA 2013 DDC PD			
	1699/413, RD 661/2007,			
	Res. n°7:2013, SI4777, UTE C15-712-1, VDE 0126-1-1,			
	VDE-AR-N 41	05, VFR 2014		
Type designation	STP 20000TL-30	STP 25000TL-30		

Tavan Gostaran Zino



Voltaic Cell



250W+ for maximum power – standard size 165x100 cm

With an output power of 151,51Wp per square meter the PH-250P-60 EU belongs to the strongest modules of its class on the market.

High Performance at 17,6 % cell efficiency

Polycrystalline high performance cells assure a high energy conversation efficiency.

3-Busbar-Technology

Efficiency-increasing 3-Busbar-Technology for optimal power yield

German-European Production

Strictly controlled, German production rules maintain highest quality standard, European manufacturing plant (EU): Certified DIN ISO 9001:2008 and DIN ISO 14001:2004, as well as BS OHSAS 18001:2007.

25 years performance guarantee

product- and efficiency warranty of German manufacturer*

Plus power tolerance (0,0/+4,9W),

Positive tolerance (PLUS Power) ensures a high reliability of power output (DC), as well as higher module efficiency.

Anti-Reflex-Solar-Glass (Made in Germany)

Special, low-iron anti-reflective glass made of high quality German production with long-term average of 2.5% higher return than the PV modules with conventional solar glass. In addition, dust-repelling effect for higher yield in desert regions.

High-grade material

Only premium components with highest quality of noted suppliers are used. Regular controls in all stages of production ensure long-term reliability of the PH solar modules.







MECHANICA	L PARAMETERS	MECHANICAL DRAWING
Solar cells	60 cells, polycrystalline 156×156mm	
Number of cells	60 (6×10)	←──1000mm ──→ 42mm ←→
Dimensions L×B×W	1650×1000×42mm	
Weight	19 kg	
Front glass	Anti-reflex solar glass 3,2 mm	<u></u>
Encapsulation	Ethylen-Vinylacetat (EVA)	
Backsheet	Polyester sheet multiply (PET)	
Connection material	Silicone	42r
Frame	Aluminious box profile, anodised	
Junction box	IP 65, mit 3 Bypass-Diodes	<u>¥</u> 22mmI
Mechanical load Loading preasure	tested up to 5,4 kN/m ²	
Wind load / Snow preassure	2400Pa / 5400Pa (Snowload zone3)	
Connection wire	TÜV, 2x 1000mm,4mm ² , MC4 connector	

ELECTRICAL CHARACTERISTICS								
PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC: 1000 W/m ² , 25°C, AM 1,5)								
Modul-Series	PH-235P-60 EU	PH-240P-60 EU		PH-245P-6	0 EU	PH-250P-60 EU		
Maximum Power at STC (Pmax)	235 Wp		240 Wp	245 Wp		250 Wp		
Short circuit current (lsc)	8,32 A		8,39 A	8,50 A		8,60 A		
Open circuit voltage (Voc)	37,20 V		37,41 V	37,61 V		37,80 V		
Maximum Power current (Impp)	7,80 A		7,91 A	8,03 A		8,12 A		
Maximum Power voltage (Vmpp)	30,52 V		30,71 V	30,90 \	/	31,17 V		
Cell Efficiency	16,6 %		17,0 %	17,3 %)	17,6 %		
Modul-Efficiency	14,2 %		14,5 %	14,8 %)	15,1 %		
Power toleranz			-0,0 W /	′ + 4,9 W				
PERFORMANCE UNDER NORMAL	OPERATING CELL TEMPER	ATUR	E (NOCT: 800W/m²,	47+/-3°C, AM 1,	5)			
Maximum Power (Pmax)	173,85 Wp	177,5	55 Wp	181,25 Wp		184,89 Wp		
Short circuit current (lsc)	(lsc) 6,68 A 6		A	6,85 A		6,91 A		
Open circuit voltage (Voc)	34,77 V 34		δV	35,15 V		35,32 V		
Maximum Power current (Impp)	6,26 A 6,3		A	6,42 A		6,48 A		
Maximum Power voltage (Vmpp)	27,83 V	28,07	7 V	28,32 V		28,54 V		
Minor reduction in efficiency under partia	al load conditions at 25°C, at 20	00 W/m ³	², 95% (+/- 3%) of the S	TC efficiency (1000	W/m²) is acl	hieved.		
THERMAL CHARACTERISTICS			PACKAGING					
Normal operating cell temperature	47°C		Palette size / -weig	ht 170 x 80		x 120 cm, 390 kg		
Temperature coefficient Pmax (γ)	-0,43 % / K		Modules per palettes		18 pcs			
Temperature coefficient Voc (β)	-0,35 % / K		Palettes per truck		46 Palet	ts		
Temperature coefficient lsc (α)	0,05 % / K		Modules per truck		828 pcs			
Operating temperature	-45°C up to +80°C							
Outdoor temperature	-45°C up to +45°C			mmmi 4	in the second	mmmm		
SYSTEM INTEGRATION PARAMETE	They Mill							
System Integration 1000 V								
Reverse current Max. External Power < Uoc						4/ 1 I b		
Reverse current connection String protection max. I < 16 A					1			
Panel protection								
Application classification	IEC 61215, IEC 61730				and the second second			
Marking	CE							

Tavan Gostaran Zino

Portable Power Systems Plug & Play

Emergency Backup for Power Outages or Rolling Blackouts
 Can be Used for Camping, Tailgating, Recreation and More!
 Recharge from a Renewable Power Source

IIII) Recharge Through Household AC Power

Solar Panel Features

- Environmentally friendly photovoltaic technology
- High wattage polycrystalline panel up to 80 watts
- Foldable panel with handle make for easy portability
- Easy to us e plug and play connectors
- Great for use with RVs, boats, backup power and all 12V applications

Portable Power System Features

- Separate models generate 400,800, and 1800 watts of output power
- Easily installed anywhere
- No fuel requirements
- Completely safe for indoor use
- Add a backup for stand alone systems
- Simple plug and play system
- USB port for charging handheld devices
- AC outlets operate home appliances, power tools, and home electronics
- Combine all models with solar panels (included with 1800S2 model)
- Can be recharged from utility power with built-in AC charger
- Each model contains a built-in battery. The AP1800 contains a 60Ah battery and additional battery boxes can be purchased separately to expand run times









Specifications	1800	800	400	Specifications	Specifications		800	400
Inverter:				Office Applications:				
Continuous Power	1800W	800W	400W	Cell phone	5W	95 hrs	65 hrs	55 hrs
				Inkjet printer	8W	60 hrs	40 hrs	34 hrs
Surge power	3600W	1600W	800W	17" LCD monitor	35W	15.5 hrs	10.5 hrs	9.2 hrs
Output voltage		120 VAC		Table lamp (40W)	40W	12 hrs	8.5 hrs	7.2 hrs
Output waveform	Мо	odified sine w	ave	Table lamp (60W)	60W	8 hrs	5.5 hrs	4.6 hrs
AC receptacles	4	2	2	Laptop	65W	7.5 hrs	5 hrs	4 hrs
Peak efficiency		90%		Emergency Power Applica	tions:			
No-load battery draw		<3W		Cordless phone	5W	90 hrs	65 hrs	55 hrs
Transfer time		<30 ms		Clock radio	8W	55 hrs	40 hrs	34 hrs
AC input protection	15A	15A	10A	20″ LCD TV	40W	13 hrs	9.5 hrs	8 hrs
AC charger (built-in):				Home Backup Power Appli	cations:		1	
Charger current	5A	2A	2A	Home alarm system	5W	90 hrs	65 hrs	55 hrs
Charging stages	three-stage	es (bulk, absor	ption, float)	8.8 cu. Ft. freezer	80W	4.5 hrs	N/A	N/A
Solar charger (built-in):				18 cu. Ft. freezer	120W	3.5 hrs	N/A	N/A
Input current	8	ADC maximu	m	Sump pump (1/4hp)	300W	65 mins	45 mins	N/A
Charging stages	three-stage	es (bulk, absor	ption, float)	1/2" drill	700W	19 mins	13 mins	N/A
Maximum input voltage		26 VDC		Microwave	1000W	20 mins	N/A	N/A
5V USB:				Coffee maker	1200W	10 mins	N/A	N/A
Type	2 ports @	1 port @	1 port @	How long will it provide po	wer?			
~^~	2.1A	/50mA	/50mA	Laptop, inkjet printer, mode	em, cord-	Up to	Up to	Up to
Battery:				less phone		10 hrs	6.5 hrs	5.5 hrs
Туре	Dee	ep cycle lead-	acid	Cordless phone, 13"TV,	radio	Up to	Up to	Up to
Capacity	60Ah	40Ah	34Ah	and table lamp		3.3 hrs	2 hrs	1.6 hrs
Solar panel: (comes with A	P1800S2)			18.8 cu. ft. fridge and a	larm	Up to	N/A	N/A
Peak power (Pmax)		2 X 40W		system 3 hrs				
Voltage (Vmp) 17.5 VDC				Operating temperate	Environmental:			40()
Open circuit voltage (VOC)		21 VDC				32 to	104 F (0 to	40 C)
Current (Imp)		2 X 2.29 A		Storage temperatur	e	-4 to 1	40 F (-20 to	0 60 C)
				Estimated recharging time	:			

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Using built-in charger

Using 80W solar panel

24 hrs

11 hrs

14.5 hrs

13 hrs

20 hrs

18 hrs



Zino CATHODIC CONVERTER™

Solar System 💻

The latest series is more powerful and efficient than previous Cathodic Protection Controllers, with peak power efficiencies now at 98%. **Zino CATHODIC CONVERTER™** also now features a revolutionary new ultra-low heat, high efficiency thermal design with passive cooling capacity, eliminating the need for cooling fans or bulky heatsinks, making it the most efficient, reliable, compact and lightweight Cathodic Protection Controller on the market.

The world's first MPPT Solar Charge Controller, has since been designing and manufacturing highly reliable and efficient specialised power electronics for use in Solar PV, Micro Hydro, Micro Wind and Cathodic Protection applica-tions. AERL has now supplied literally thousands of highly efficient and reliable Cathodic Protection Controllers to satisfied customers worldwide including the Middle East, Europe, America and Australasia.

PRODUCT SPECIFICATIONS								
Model Number	CP15	CP30						
Maximum Anti-Corrosion Current	15A	30A						
Maximum ambient air temperature	50°C	50°C						
Maximum output current	15A	30A						
Minimum battery input voltage—V MIN	11V	11V						
Maximum battery input voltage—V MAX	60V	60V						
Standby current consumption	35mA	35mA						
Peak efficiency	98%	98%						
Weight	1.5	5kg						
Dimensions (L x W x H)	240 x 160 x 90 mm							
Input/output power cable size	16mm2							
OPTIONAL EXTRAS								
Option	Descr	iption						
Surge Buster	50KA Lightning Protection Module							
Reference Cell Function	Accurate corrosion protection control							

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