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An affiliated business of the GS Yuasa Corporation, CenturyYuasa has an 80+ year history of supplying a range of stored energy solutions to the Australian market. An established network of sales and distribution offices throughout Australia and New Zealand has seen the business gain the trust and respect from its customers by focusing on quality products and exceptional customer service.

The portfolio within CenturyYuasa includes a wide range of stored energy products and services, as well as identifiable brands and unique technologies for automotive, materials handling and standby power applications. Directly maintaining and operating three manufacturing centres in Australia employing some 650 people, CenturyYuasa continues to be Australia's enduring manufacturer of stored energy products.

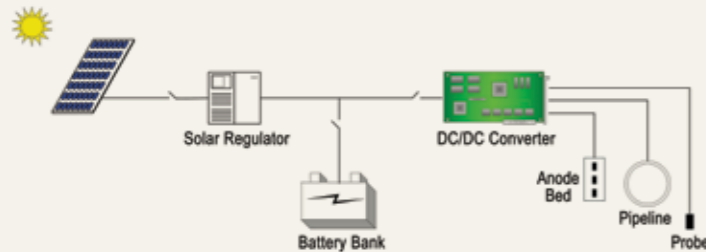
SOLAR POWERED IMPRESSED CURRENT CATHODIC PROTECTION SYSTEMS



Solar Powered Impressed Current Cathodic Protection Systems

Century Yuasa has developed a range of Solar Powered Impressed Current Cathodic Protection Systems (SPICCCPS) for the protection of infrastructure in remote areas where mains power supply is not economically available. Combining the reliability of a Century Yuasa Solar Power Supply including market-leading Yuasa Enersun Batteries and Solar Panels, with the quality and robustness of a Brodribb Cathodic Protection DC/DC Converter, the SPICCCPS 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 configurations up to 300W (10A) output, depending on customer requirements. Systems utilize the Brodribb D5625 CP system, which is a switchmode 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.



Standard System Designs

	ICCP10P50	ICCP10P100	ICCP10P150	ICCP10P300
Nominal Solar Voltage (V)	48	48	48	48
Nominal Output Voltage (V)	10	10	10	10
Power Output (W)	50	100	150	300
Duty Cycle	100%	100%	100%	100%
Minimum Solar Hours per Day	4.5 (North of Latitude 33)	4.5 (North of Latitude 33)	4.5 (North of Latitude 33)	4.5 (North of Latitude 33)
Backup Time (Days)	5	5	5	5
Solar Regulator	Enersun PL20	Enersun PL20	Enersun PL60	Enersun PL60
Solar Panel Type	Enersun ET 80M36	Enersun ET 170M72	Enersun ET 170M72	Enersun ET 170M72
No of Panels	8	8	12	22
Array Size (m ²)	5.5	10	15	28
Nominal Installed Solar Capacity (W)	640	1360	2040	3740
Battery Type	EN100-6	UXL330	UXL600S	UXL600S
Battery No of Blocks	24	48	48	96
Nominal Installed Battery Capacity (Ahr @ C100)	366	720	1200	2400
Battery Daily DOD	8%	8%	7%	7%
CP Controller	Brodribb D5625	Brodribb D5625	Brodribb D5625	Brodribb D5625
Local Indication	Output Volts Output Amps Alarms	Output Volts Output Amps Alarms	Output Volts Output Amps Alarms	Output Volts Output Amps Alarms
Remote Alarms	3	3	3	3

Standard Features

- Output controlled by Brodribb D5625 DC/DC CP Controller
- Operating Modes User selectable:
 - Constant Voltage
 - Constant Current
 - Auto-potential
- Overcurrent protection provided on output
- Output Overvoltage protection adjustable
- Surge, spike and lightning protection on input and output circuits
- Voltage and Current output meters on front panel
- Local alarm indication on front panel
- Solar Power backed up by five day Battery Capacity ensures continuity of power
- Provisions for remote monitoring
- Passively cooled Battery enclosure
- Optional Cyclone rated solar mounting frames
- Reliable long-life Solar Panels compliant with IEC61215
- Switchmode high efficiency solar regulator with remote communications capability
- Enclosure to IP54 suitable for remote external locations

System Components

Solar Panels

Enersun ET crystalline photovoltaic modules are designed to be used for both on-grid and off-grid applications. High efficiency solar cells provide outstanding performance with excellent low-light power production.

High quality raw materials are used to ensure the Enersun ET Modules provide long-term reliability. Designed and manufactured to comply with international quality standards, Enersun ET Modules have a long 25-year warranty.*



Solar Mounting Frames

Whether your application requires a large ground mounted frame suitable for either non-cyclone or cyclone rated regions, or a small pole mounted frame for low-power solutions, Century Yuasa has a solution to fit.

Structurally approved for use in W41 and W51 zones the H-Array frame mounts up to eight Solar Panels in a secure adjustable mounting frame. The tilt angle of the panels can be adjusted to suit all latitudes to maximise the available solar energy output. The H-Array frame is disassembled for shipment, and easily reassembled on-site for installation.

Solar Regulator

The Enersun PL range provides an economical solution to low power requirements. These switching regulator units are a simple and rugged design and can be operated in both high-speed and



low-speed mode for reduced EMI and RF generation for demanding power applications. Simple remote communications access is also available for remote monitoring of the power system.

Century Yuasa introduces the new **Maximum Power Point** tracking solar regulator. Through the use of proprietary algorithms and purpose designed hardware, these units are designed to maximise the feed of power generated by the solar panels to the load and backup batteries by tracking the maximum power operating point of the panels under all illumination conditions.

Solar Batteries

CenturyYuasa can offer a range of Lead Acid battery technologies to provide the necessary reserve power for any Solar ICCP application. Proven in solar applications for over 15-years, these batteries are preferred by numerous industrial network operators for critical applications. Designed to withstand a wide operating temperature, from -15°C to +45°C, the batteries are designed to provide 7-years service life**. A choice of either LA (Wet Cell) or VRLA (Sealed) batteries in various capacities are available to choose from. The LA batteries utilise tubular plate construction and 3mm steel powder coat tray, while the VRLA batteries incorporate a unique electrolyte suspension system which allows operation in horizontal or vertical orientation.

*See Century Yuasa's Warranty for Enersun ET for details
 **Cyclic applications at 25°C when operated in accordance to the manufacturer's specifications.