



### OVERVIEW

Pharos Marine Automatic Power offers a versatile and rugged range of solar electrical power generators for individual or multiple installations, suitable for a wide range of client projects in demanding gas & dust hazard environments.

The Photovoltaic Module is highly resistant to water, abrasion, hail impact and other severe weather conditions, making it suitable for use in any climate. Our dedicated team can custom design and manufacture a portable or permanent certified Zone 1 solar powered system, with battery back-up to provide required autonomy for a multitude of applications in hazardous areas.

Current applications for this reliable and economical energy source include remote marine navigation and aviation warning systems, communications & wifi, site traffic management, pipeline / valve leak detection and fluid / vapour flow monitoring, security applications and offshore HPU UPS systems.

### KEY FEATURES

- PID resistant
- 1000V (UL) / 1000V (IEC) Certified
- Micro-crack free
- Triple stage 100% in-line EL passed
- Higher energy yield on field performance
- Certified solar panels range from 20W-400W for use in Zone 1 & Zone 2 hazardous environments
- Anodised aluminium extruded frame for torsional rigidity and ease of installation
- High integrity IP66 universal junction box c/w 4mm<sup>2</sup> terminals with blocking diode included
- Two ISO M25 cable entries
- Designed for modular integration and expansion in series for 24V and higher voltages
- Designed for modular integration and expansion in parallel for increased output currents

### CERTIFICATIONS

ATEX certificate number: ExVeritas 15ATEX0051X

IECEX certificate number: IECEX EXV 15.0001X

Coding: Ex II 2 G Ex e mb II C T6 Gb -40°C ≤ Tamb ≤ +55°C

Ingress Protection: IP-66

## MECHANICAL SPECIFICATIONS

|   |   |
|---|---|
| Connector                                 | MC4 Compatible  |
| Diode                                     | Shottky bypass diodes; 3nos                             |
| Frame                                     | Anodised aluminium alloy; twin wall profile             |
| Locking                                   | Corner key type   |
| Glass                                     | ARC; low iron; tempered; high light transmission; 3.2mm |
| Furnished with universal GRP junction box |   |

| Part No    | Length [mm] | Width [mm] | Thickness [mm] | Weight [kg] |
|------------|-------------|------------|----------------|-------------|
| SPEX25-12  | 515         | 470        | 35             | 3.85        |
| SPEX50-12  | 558         | 667        | 35             | 5.85        |
| SPEX95-12  | 1157        | 677        | 35             | 9.70        |
| SPEX160-12 | 1487        | 667        | 35             | 11          |
| SPEX200-24 | 1353        | 987        | 35             | 20          |
| SPEX305-24 | 1968        | 987        | 40             | 21          |

## ELECTRICAL SPECIFICATIONS

| Part Number | Nominal Volt | Rated Power (W) | Open Circuit Voltage (Voc) | Max Power Voltage (Vmp) | Max Current (Imp) | Short Circuit Current (Isc) | Efficiency (%) |
|-------------|--------------|-----------------|----------------------------|-------------------------|-------------------|-----------------------------|----------------|
| SPEX25-12   | 12           | 25              | 22.20V                     | 18.20V                  | 1.38              | 1.53                        | 6.44           |
| SPEX50-12   | 12           | 50              | 22.20V                     | 18.20V                  | 2.75              | 3.05                        | 9.59           |
| SPEX95-12   | 12           | 95              | 23.80V                     | 19.76V                  | 4.86              | 5.11                        | 12.4           |
| SPEX160-12  | 12           | 160             | 22.70V                     | 18.50V                  | 9.20              | 8.65                        | 16.13          |
| SPEX200-24  | 24           | 200             | 44.80V                     | 36.00V                  | 5.56              | 5.95                        | 14.84          |
| SPEX305-24  | 24           | 305             | 45.30V                     | 36.53V                  | 8.35              | 8.90                        | 15.44          |

**General Details:**

Output Tolerance (%): +-5

**Warranty:**

5 years product warranty  
0-10 years for 90% rated power

