

WHEN DESIGN  
MEETS INNOVATION.

The All New  
AIO2 from Soltaro



All-in-One ESS - 2ND Generation  
Australian Designed & Engineered  
Wall Mounted

Expandable Storage  
Available in Hybrid or AC Coupled  
Inverter Options

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10 Year Warranty or  
10,000  
Charging Cycles



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| MODEL NUMBER                      | AIO2-INS-3680/AIO2-BTLV-5KWH | AIO2-INS-5000/AIO2-BTLV-5KWH | AIO2-INS-5000/AIO2-BTLV-10KWH |
|-----------------------------------|------------------------------|------------------------------|-------------------------------|
| <b>PV STRING INPUT (DC)</b>       |                              |                              |                               |
| Max. DC Input Power (W)           | 5520KW                       | 7500W                        | 7500W                         |
| Max. DC Input Voltage (V)         | 600V                         | 600V                         | 600V                          |
| MPPT Voltage Range (V)            | 125V~500V                    | 125V~500V                    | 125V~500V                     |
| Max. Input Current (A)            | 12A/12A                      | 12A/12A                      | 12A/12A                       |
| Max. Short Circuit Current (A)    | 15A/15A                      | 15A/15A                      | 15A/15A                       |
| No. of MPP Trackers               | 2                            | 2                            | 2                             |
| Strings per MPP Tracker           | 1                            | 1                            | 1                             |
| Galvanic Isolation for PV Modules | Transformerless              | Transformerless              | Transformerless               |
| Max. Backfeed Current to PV Array | 0A                           | 0A                           | 0A                            |

|   |  |                                 |                           |
|---|--|---------------------------------|---------------------------|
| <b>BATTERY INPUT SIDE**</b>             |  |                                 |                           |
| Battery Capacity                        | LiFePO4 5KWH/10KWH (Maximum 3 modules of the same type)  |                                 |                           |
| Useable Energy                          | 4.5 kWh  | 4.5 kWh                         | 9kWh                      |
| Nominal Battery Voltage                 | 51.2V  | 51.2V                           | 51.2V                     |
| Battery Voltage Range                   | 40-58.4V   | 40-58.4V                        | 40-58.4V                  |
| Galvanic Isolation for Battery          | YES  | YES                             | YES                       |
| Max. Charge Current *1 *6               | 50AxN (Max 80A)  | 50A xN (Max 100A)               | 100A                      |
| Max. Charge Power                       | 2.56KWxN (Max 3.68KW)  | 2.56KWxN (Max 5KW)              | 5.12kW                    |
| Max. Discharge Current *1 *6            | 80A  | 100A                            | 100A                      |
| Max. Discharge Power                    | 3.68KW   | 5.12KW                          | 5.12KW                    |
| Rated DC Power (per battery)            | 2.56KW Charge, 3.68KW Discharge  | 2.56KW Charge, 5.12KW Discharge | 5.12KW Charge & Discharge |
| Max Short Circuit Current (per battery) | 2500A  | 2500A                           | 2500A                     |
| Protection                              | Over Voltage, Less Voltage, Over Current, Short Circuit, Over Temperature<br>Lithium Ion: 0~90% DOD Adjustable |                                 |                           |

|  |   |               |               |
|--|---|---------------|---------------|
| <b>GRID AC OUTPUT (ON-GRID)</b>                      |   |               |               |
| Nominal Apparent Power Output to Utility Grid (VA)*2 | 3680VA  | 5000VA        | 5000VA        |
| Nominal Output Voltage (V)                           | 190 - 260 (V)                                   | 190 - 260 (V) | 190 - 260 (V) |
| Nominal Output Frequency (HZ)                        | 50/60 HZ  | 50/60 HZ      | 50/60 HZ      |
| Max. AC Current Output to Utility Grid (A)           | 16A   | 21.7 A        | 21.7 A        |
| Output Power Factor                                  | ~1 (Adjustable from 0.8 leading to 0.8 lagging) |               |               |
| Output THDI (@Nominal Output)                        | <3%   | <3%           | <3%           |

|                                     |                                 |                                 |                                 |
|-------------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>EPS AC OUTPUT DATA (BACK-UP)</b> |                                 |                                 |                                 |
| Max. Output Apparent Power (VA)     | 3680VA                          | 5000VA                          | 5000VA                          |
| Max. Output Current (A)             | 16A                             | 21.7 A                          | 21.7 A                          |
| Nominal Output Voltage (V)          | 220V                            | 50/60 (±2%)                     | 50/60 (±2%)                     |
| Output THDv (@Linear Load)          | <3%                             | <3%                             | <3%                             |
| Power Factor                        | 0.8 inductive to 0.8 capacitive | 0.8 inductive to 0.8 capacitive | 0.8 inductive to 0.8 capacitive |

|                                 |                          |                          |                          |
|---------------------------------|--------------------------|--------------------------|--------------------------|
| <b>EFFICIENCY</b>               |                          |                          |                          |
| MPPT Efficiency                 | 99.9%                    | 99.9%                    | 99.9%                    |
| Euro Efficiency                 | 97.0%                    | 97.0%                    | 97.0%                    |
| Max. Efficiency                 | 97.5%                    | 97.5%                    | 97.5%                    |
| Max. Battery to Load Efficiency | 95%                      | 95%                      | 95%                      |
| Topology                        | High Frequency Isolation | High Frequency Isolation | High Frequency Isolation |

|   |     |     |     |
|---|-----|-----|-----|
| <b>PROTECTION</b>                           |     |     |     |
| Anti-islanding Protection                   | YES | YES | YES |
| PV String Input Reverse Polarity Protection | YES | YES | YES |
| Insulation Resistance Detection             | YES | YES | YES |
| Residual Current Monitoring Unit            | YES | YES | YES |
| Output Over Current Protection              | YES | YES | YES |
| Output Short Protection                     | YES | YES | YES |
| Output Over Voltage Protection              | YES | YES | YES |

| GENERAL DATA                  | 3.68KW INVERTER             | 5KWH BATTERY                           | 5KW INVERTER                | 10KWH BATTERY                          |
|-------------------------------|-----------------------------|--|-----------------------------|--|
| DC Switch                     | Inverter PV Switch optional | Standard                               | Inverter PV Switch optional | Standard                               |
| Dimensions (W*H*D) (mm)       | 540x630x210mm               | 540x430x210mm                          | 540x630x210mm               | 540x680x210mm                          |
| Net Weight (KG)               | 29KG                        | 45KG                                   | 34kg                        | 85KG                                   |
| Protection Degree             | IP65                        | IP 65                                  | IP 65                       | IP 65                                  |
| Mounting Information          | Wall Mount                  | Wall Mount                             | Wall Mount                  | Wall Mount                             |
| Operating Temperature Range   | -10°C ~ + 60°C              | 0-45°C charge / -10°C - 50°C discharge | -10°C ~ + 60°C              | 0-45°C charge / -10°C - 50°C discharge |
| Noise Emission (typical) (dB) | <40dB                       | <25dB                                  | <40dB                       | <25dB                                  |
| User Interface                | APP                         |  |                             |  |
| Communication with BMS*3      | RS 485 & CAN                |  |                             |  |
| Communication with Meter      | RS 485                      |  |                             |  |
| Communication with Portal     | Wi-Fi (Ethernet option)     |  |                             |  |
| Relative Humidity (%)         | 95% no condensation         |  |                             |  |
| Site Altitude (m)             | <2000m                      |  |                             |  |
| Cooling Concept               | Natural Convection          |  |                             |  |
| Protective Class              | I                           |  |                             |  |
| Over Voltage Category         | III (mains) II (PV)         |  |                             |  |

|                                       |  |
|---------------------------------------|--|
| <b>CERTIFICATIONS &amp; STANDARDS</b> |  |
| Grid Regulation                       | EN50549, VDE-AR-N 4105, VDE0126-1-1, AS4777.2, G83/2, G99, CE10-21, NRS 097-2-1, En50438   |
| Safety Regulation                     | IEC/EN62109-1&2, IEC62040-1  |
| EMC Standard                          | EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-4.16, EN6100-4.18, EN6100-4.29 |
| Warranty                              | 10 Years Standard Warranty/ 5 Years Off-Grid Usage   |

\*1 N is the number of battery modules  
 \*3 217A for AS4777.2  
 \*5 The standard configuration is CAN  
 \*\* Soltaro AIO2-INS-5000 is compatible with the following battery chemistries: LiFePO4

\*2 4600 for VDE 0126-1-1 & VDE-AR-N4105, 4950 for AS4777.2, 4050 for CE10-21  
 \*4 Can be reached only if PV and battery power is enough  
 \*6 This value may be reduced by high/low ambient temperatures  
 Manufactured in China