

## 锦浪逆变器监造及验货项目

### Solis Inverter Supervision&Inspection Items

本文件目的为客户产品监造及验货项目提供建议及参考，内容来源于锦浪量产中使用的检验项目及测试规范，适用于锦浪品牌生产的并网及储能系列逆变器等产品。检验项涵盖外观、老化及功能性测试等，以下所有检验及测试项在逆变器生产中已 100%完成并通过。

The purpose of this file is to provide recommendations for customer's product supervision and inspection items. This items are derived from the inspection items and test standards used in the mass production of Solis, the items applicable to the grid-connected, Hybrid inverter and other models produced by Solis brand. All the following inspection and testing items have been 100% completed and passed in the production of inverters.

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| 并网机型检验项 Test items (Grid-connected Model) |                                |                                                                                                                                                      |                     |
|-------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| No.                                       | 分类<br>Category                 | 评价标准<br>Evaluation Criteria                                                                                                                          | 测试结果<br>Test result |
| 1                                         | 外观检验<br>Inspection             | 检查表面--干净，无划痕；检查 LCD 面板--无划痕。Check the surface—clean and no scratch; check the LCD Board—no scratch;                                                  | Pass                |
| 2                                         |                                | 检查并确认螺丝的紧固性。Check and confirm the tightness of screws;                                                                                               | Pass                |
| 3                                         |                                | 检查并确认 AC/DC 端子的松紧度。Check and confirm the tightness of AC/DC terminal;                                                                                | Pass                |
| 4                                         |                                | 检查丝印-清晰，且位置及颜色正确。Check the silk print—clear, in proper place, and with correct color;                                                                | Pass                |
| 5                                         |                                | 检查内部--无异物。Check the inside—no foreign material;                                                                                                      | Pass                |
| 6                                         |                                | 检查包装--无潮湿、沉降或涂抹。Check the package—no humidity, subsidence, or smearing;                                                                              | Pass                |
| 7                                         |                                | 检查丝印（包装）-确认与图纸一致。Check the silk print (on package)—confirm to the design drawing;                                                                    | Pass                |
| 8                                         |                                | 检查配件是否齐全，铭牌是否正确，实物是否符合订单要求。Check the accessories are complete, the nameplate is correct, and the entity is in accordance with the order requirement. | Pass                |
| 1                                         | 安规测试项<br>Safety Test items     | 耐压/接地/绝缘测试 Hi-pot/PV isolation/ Ground resistance test                                                                                               | Pass                |
| 2                                         |                                | 气密性测试 Sealing test                                                                                                                                   | Pass                |
| 3                                         |                                | 上电测试 Power up test                                                                                                                                   | Pass                |
| 4                                         |                                | 老化测试 Aging test                                                                                                                                      | Pass                |
| 1                                         | 功能测试项<br>Functional Test items | 夜间功耗 Night consumption                                                                                                                               | Pass                |
| 2                                         |                                | 启动电压 Start up voltage                                                                                                                                | Pass                |
| 3                                         |                                | 通讯功能 Comm. Test                                                                                                                                      | Pass                |
| 4                                         |                                | 显示精度校准 Display Accuracy calibration                                                                                                                  | Pass                |
| 5                                         |                                | 温度测试 TEMP Test                                                                                                                                       | Pass                |
| 6                                         |                                | 风扇测试 Fan Test                                                                                                                                        | Pass                |
| 7                                         |                                | 满载输入运行 Max.MPPT Efficiency                                                                                                                           | Pass                |
| 8                                         |                                | 精度测试：直流电压/电流/输入功率比对 DC Accuracy calibration                                                                                                          | Pass                |
| 9                                         |                                | 精度测试：交流电压/电流/频率/输出功率比对 AC Accuracy calibration                                                                                                       | Pass                |
| 10                                        |                                | 逆变器直流/交流功率比对 DC/AC power Comparison                                                                                                                  | Pass                |

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| 并网机型检验项Testitems(Grid-connectedModel) |                |                               |                    |
|---------------------------------------|----------------|-------------------------------|--------------------|
| No.                                   | 分类<br>Category | 评价标准<br>Evaluation Criteria   | 测试结果<br>Testresult |
| 11                                    |                | 转换效率 Conversion efficiency    | Pass               |
| 12                                    |                | 谐波和波形畸变 THDi                  | Pass               |
| 13                                    |                | 功率因数 PF                       | Pass               |
| 14                                    |                | 直流分量 DC Injection             | Pass               |
| 15                                    |                | 软启动测试 Soft Run                | Pass               |
| 16                                    |                | 时间校准 Time Calibration         | Pass               |
| 17                                    |                | 软件比对（版本） Software Version     | Pass               |
| 18                                    |                | 比对 SN SN Comparison           | Pass               |
| 19                                    |                | 接地电压测试 Grounding voltage test | Pass               |
| 20                                    |                | 设置国家标准 Set national standards | Pass               |
| 21                                    |                | 一键下机 Reset                    | Pass               |

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| 储能机型检验项 Inspection Test items(Hybrid) |                               |                                                                                                                                                      |                     |
|---------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| No.                                   | 分类<br>Category                | 评价标准<br>Evaluation Criteria                                                                                                                          | 测试结果<br>Test result |
| 1                                     | 外观检验<br>Inspection            | 检查表面--干净，无划痕；检查 LCD 面板--无划痕。Check the surface—clean and no scratch; check the LCD Board—no scratch;                                                  | Pass                |
| 2                                     |                               | 检查并确认螺丝的紧固性。Check and confirm the tightness of screws;                                                                                               | Pass                |
| 3                                     |                               | 检查并确认 AC/DC 端子的松紧度。Check and confirm the tightness of AC/DC terminal;                                                                                | Pass                |
| 4                                     |                               | 检查丝印-清晰，且位置及颜色正确。Check the silk print—clear, in proper place, and with correct color;                                                                | Pass                |
| 5                                     |                               | 检查内部--无异物。Check the inside—no foreign material;                                                                                                      | Pass                |
| 6                                     |                               | 检查包装--无潮湿、沉降或涂抹。Check the package—no humidity, subsidence, or smearing;                                                                              | Pass                |
| 7                                     |                               | 检查丝印（包装）-确认与图纸一致。Check the silk print (on package)—confirm to the design drawing;                                                                    | Pass                |
| 8                                     |                               | 检查配件是否齐全，铭牌是否正确，实物是否符合订单要求。Check the accessories are complete, the nameplate is correct, and the entity is in accordance with the order requirement. | Pass                |
| 1                                     | 安规测试项<br>Safety Test items    | 耐压/接地/绝缘测试 Hi-pot/PV isolation/ Ground resistance test                                                                                               | Pass                |
| 2                                     |                               | 气密性测试 Sealing test                                                                                                                                   | Pass                |
| 3                                     |                               | 上电测试 Power up test                                                                                                                                   | Pass                |
| 4                                     |                               | 老化测试 Aging test                                                                                                                                      | Pass                |
| 1                                     | 功能测试项<br>Funtional Test items | 夜间功耗 Night consumption                                                                                                                               | Pass                |
| 2                                     |                               | 启动电压 Start up voltage                                                                                                                                | Pass                |
| 3                                     |                               | 通讯功能 Comm. Test                                                                                                                                      | Pass                |
| 4                                     |                               | 显示精度校准 Display Accuracy calibration                                                                                                                  | Pass                |
| 5                                     |                               | 温度测试 TEMP Test                                                                                                                                       | Pass                |
| 6                                     |                               | 风扇测试 Fan Test                                                                                                                                        | Pass                |
| 7                                     |                               | 满载输入运行 Max.MPPT Efficiency                                                                                                                           | Pass                |
| 8                                     |                               | 精度测试：直流电压/电流/输入功率比对 DC Accuracy calibration                                                                                                          | Pass                |
| 9                                     |                               | 精度测试：交流电压/电流/频率/输出功率比对 AC Accuracy calibration                                                                                                       | Pass                |
| 10                                    |                               | 逆变器直流/交流功率比对 DC/AC power Comparison                                                                                                                  | Pass                |
| 11                                    |                               | 转换效率 Conversion efficiency                                                                                                                           | Pass                |
| 12                                    |                               | 谐波和波形畸变 THDi                                                                                                                                         | Pass                |
| 13                                    |                               | 功率因数 PF                                                                                                                                              | Pass                |
| 14                                    |                               | 直流分量 DC Injection                                                                                                                                    | Pass                |
| 15                                    |                               | 软启动测试 Soft Run                                                                                                                                       | Pass                |

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| 储能机型检验项 Inspection Test items(Hybrid) |                |                                                 |                     |
|---------------------------------------|----------------|-------------------------------------------------|---------------------|
| No.                                   | 分类<br>Category | 评价标准<br>Evaluation Criteria                     | 测试结果<br>Test result |
| 16                                    |                | 时间校准 Time Calibration                           | Pass                |
| 17                                    |                | 软件比对 (版本) Software Version                      | Pass                |
| 18                                    |                | 比对 SN SN Comparison                             | Pass                |
| 19                                    |                | 接地电压测试 Grounding voltage test                   | Pass                |
| 20                                    |                | 设置国家标准 Set national standards                   | Pass                |
| 21                                    |                | 一键下机 Reset                                      | Pass                |
| 22                                    |                | 半载有功, 无功检测 50% Active/Reactive power detection  | Pass                |
| 23                                    |                | 满载有功, 无功检测 100% Active/Reactive power detection | Pass                |
| 24                                    |                | PV->BAT                                         | Pass                |
| 25                                    |                | BAT->BK                                         | Pass                |
| 26                                    |                | GRID->BAT                                       | Pass                |
| 27                                    |                | BAT->GRID                                       | Pass                |
| 28                                    |                | 电表型号写入 Meter model writing                      | Pass                |
| 29                                    |                | EPM ( Customized)                               | Pass                |
| 30                                    |                | DRM ( Customized)                               | Pass                |

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