Project Name: EG4 Panel MCU

Firmware Development Record

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| **No.** | **Firmware version** | **Solution** | **Date/Author** |
| **1** | 60.00 | First Version | 2022.03.29/ |
| **2** | 60.01 | 1. When the data returned from the BMS contains 0x0d, the communication between inverter and BMS will fail. Solve the problem | 2022.04.25/ |
| **3** | 61.02 | 1. When the inverter sends the data to BMS, it also disables receive function 5ms. And then enable receive function to parsing the data from BMS after 5ms. If the BMS feedback data to fast (within 5ms). It may cause communication fail. Modify the firmware to reduce the time to 1ms for disable receive function. | 2022.05.23/ |
| **4** | 61.04  Not release | 1. Add debug command to check 61 communication failures. (CRC failure count, CRC high byte value and receive data from BMS). | 2022.08.18/ |
| **5** | 61.05 | 1. Modify the BMS data CRC calculation position to avoid the BMS data not being parsed when the high byte of the BMS data is 0 base on version 61.03. | 2022.08.23/ |
| **6** | 61.06 | 1. Solve Battery type of Prog05 is EG4 as default when cycle power. | 2022.09.01/ |
| **7** | 61.07  Not release | 1. Solve time and date setting failure problem. | 2022.12.27/ |
| **8** | 61.08  Not release | 1. Modify the inverter only ban charging or discharging of the battery when the BMS has an error instead of a warning. | 2023.01.17/ |
| **9** | 61.09  Not release | 1. The inverter ban discharging and display F71 when the BMS has a ban discharging error. 2. The inverter the behavior without change and display warning 71 when the BMS has a ban discharging warning. | 2023.02.02/ |

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| **10** | 61.10  Not release | 1. The inverter ban discharging/ charging/ charging and discharging and display F71/ F69/ F60 when the BMS has a ban discharging/ ban charging/ ban charging and discharging error. 2. The inverter the behavior without change and display warning 71/ 69/ 60 when the BMS has a ban discharging/ charging/ charging and discharging warning. | 2023.02.08/ |
| **11** | 61.11  Not release | 1. The inverter ban charging and no display F69 when the BMS has a ban charging error. | 2023.02.08/ |
| **12** | 61.12  Not release | 1. Modify setting items 12/13/29, 51~55 settings are not saved. | 2023.02.10/ |
| **13** | 61.13  Not release | 1.Add setting items 42 for N-G relay control.  2. Cancel setting 92 |  |

**Firmware Development Record**

Project Name: EG4 DSP

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| **No.** | **Firmware version** | **Solution** | **Date/Author** |
| **1** | 79.02 | First Version | 2022.05.04/Leo |
| **2** | 79.03 | 1. Optimization MPPT over temperature fault detection logic when inverter work in high ambient temperature conditions | 2022.08.30/Leo |
| **3** | 79.60 | 1. Solve the following abnormal behavior. When change setting via LCD may cause the setting no change. 2. Improvement the EEPROM save timing to avoid all setting back to default value. | 2022.12.23/Leo |
| **4** | 79.61 | 1. Slow down the inverter voltage phase lock slew rate to avoid the LED lighting flicking(wPhaseLockLimit from 17 to 4) 2. Because the item1 modification Increase the Battery mode to Line mode delay time from 5 seconds to 8 seconds. | 2023.02.07/Kai |
| **5** | 79.62 | 1. New request for the input N and output N short always. | 2023.02.11/Kai |
| **6** | 79.63 | 1. Modify SBU behavior when inverter work in Line mode. PV and AC should charge battery first | 2023.02.13/Kai |
| **7** | 79.64 | 1. Optimization MPPT tracker when PV power low for PV voltage stuck on 90V issue. | 2023.03.03/Brian |
| **8** | 79.65 | 1. Add command” TPVLLxxxx and TQPVLL” to adjust MPPT low voltage point | 2023.03.15/ Brian |
| **9** | 79.66 | 1. Calibration PV current when PV current lower than 1A to make MPPT tracker to find real MPPT point. | 2023.03.16/ Brian |
| **10** | 79.67 | 1. Improvement Bus over(F08) detection 2. Improvement EEPRON read behavior when power on 3. The EEPROM fault show on data-log that warning just a message, it doesn’t impact to operation or behavior of the 6.5KW unit. The firmware version remove this message. | 2023.04.11/ Kai |
| **11** | 79.70 | 1. Improved F11 detection  2. When EEprom can’t save setting, the new firmware will shift the save area to keep EEporm work well and solve F11(PV voltage high) problem.  3. Improved the issue that when inverters are in parallel, put heavy loads instantly will make inverter BUS over may cause the unit broken. | 2023.05.05/ Brian |
| **12** | 79.71 | 1. Add N-G relay control function. The setting 42 to disable, the relay will short input and output neutral always as following “C” block. The setting 42 is disable, the relay will close on ground or floating side when inverter work in Battery mode as following “A and B” block. The default setting is disable. | 2023.05.26/ Kai |