n-BMS release notes

New in this release:

- ✓ New BMS error handling
- ✓ CANopen access to firmware build date and time
- ✓ More accurate .eds file for CANopen use
- ✓ Changed GPIO input function for setting of CANopen node ID
- ✓ CANopen access to BMS reported errors
- ✓ More robust CMU and ISO-SPI communication for systems with too much electrical noise
- ✓ Bugfix for the BMS calculated value: DYN_LIM_I2T_REMAIN ID 31

BMS Creator:

- ✓ Match the new BMS error handling
- ✓ Converting function for older configuration files
- ✓ Sub-minor firmware version number added

CONTACT

Lithium Balance A/S

Hassellunden 13

2765 - Smørum

DK - Denmark

+45 58 51 51 04

info@lithiumbalance.com

www.lithiumbalance.com

---

n-BMS version 2.5.0

ABOUT THIS RELEASE

The n-BMS v2.5.0 release includes changes for the MCU firmware and associated Creator PC support tool.

FIRMWARE FEATURES

The new BMS error handling has changed from the previous method with error escalation of severity levels into individual timing of error reactions that is configurable for each BMS state. Furthermore, the error reporting for selected errors can be filtered and changed to alternative behaviour like e.g. sticky errors that require BMS reset before a reported error is cleared.

CANopen now also:
- ✓ can access the BMS firmware build date and time
- ✓ has a more accurate .eds description file for easy integration of the CANopen protocol
- ✓ GPIO inputs configured for CANopen node ID setup is now an offset added to the configured CANopen node ID.
- ✓ BMS reported errors is readable via CANopen (or standard CAN) where a fixed BMS memory location continuously is updated with next error from the BMS list of detected errors.

The BMS internal ISO-SPI communication between MCU and CMU's are now more immune against electrical noise. Previous version reported communication error at first communication failure, while this version tries retransmissions before reporting the error.

Fix of calculation overflow bug for the i2t value in previous versions where the DYN_LIM_I2T_REMAIN (ID 31) sometimes shows wrong values.

The PC Creator includes new configuration parameters for setting up the new error handling in the BMS.
The BMS firmware version number includes a major version number, a minor version number and a sub-minor version number, all separated by a dot. In this version is also the sub-minor version number of the connected BMS displayed in the Creator.

On behalf of the Lithium Balance Support and R&D team

n-BMS 2.5.0 Release Notes – 12th January 2020