EMUS G1 BMS – DISTRIBUTED REGULAR

5 Control Unit

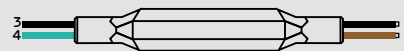**Display Unit**

1 **2**

3

4 Current Sensor

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1 Top Isolator

(1) **Black** (Control Unit pin TX-)
(2) **Green** (Control Unit pin TX+)
(3) **Black** (Top cell-)
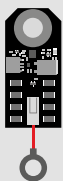(4) **Green** (UP, battery cell)
(5) **Red** (Top cell+)

2 Bottom Isolator

(1) **Black** (Control Unit pin RX-)
(2) **Brown** (Control Unit pin RX+)
(3) **Black** (Bottom cell-)
(4) **Green** (Down, battery cell)

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3 Cell Module

Cell Module, mounted on each serial cell or group of paralleled cells. Cell module type from EMUS assortment is selected according balancing current requirement, e.g for 50-100Ah cell is appropriate to choose 0.7A balancing current cell module Small type. It is helpful to calculate by such ratio: cell capacity (Ah) = ~0.5-1% required balancing current. This ratio depends according to cells quality (inbalance), overall system thermal management capabilities.

4 Current Sensor

EMUS support three types of current sensors: busbar dual range, closed loop hall effect and third party "Isabellenhütte" IVT series current sensors.

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5 Control Unit

EMUS G1 Control Unit (or simply Control Unit) is the main controller that autonomously executes all core and utility functions of battery management.
It connects to user's PC via USB port and allows to make BMS system configuration via EMUS Control Panel.

EMUS G1 Control Unit is also equipped with a non isolated CAN interface. This interface is multipurpose, and enables the Control Unit to:

- Communicate with other CAN equipped EMUS G1 BMS components
- Control certain third-party charging devices
- Transmit BMS activity data (either periodically or by request)
- Receive new configuration parameter values and other special messages