

EBS - Electronic Battery Sensor



LIN version: 2.1
 LIN speed: 19200 kbs
 Jitter: 0.1ms
 Masterframe timing: 50ms
 Frames: 0x34
 0x35

every 100ms

Frame 0x34 EBS -> Master

Bit	Signal	Description	Range	Coding	Init	Invalid	Update rate
1.0 .. 2.5	U_BATT	Battery voltage	[3, 18V]	Resolution: 2 ⁻¹⁰ V Offset: 3V Typ: unsigned [0x3C01...3FFE]: reserved	0x3FFF	0x3FFF	100ms(**)
2.6 .. 2.7	I_RANGE	Battery current range	[0,3]	0b00: current Range [-1, 1A] 0b01: current Range [-200, 200A] 0b10: current Range [-1500, 1500A] (***) Typ: unsigned	0b11	0b11	100ms(**)
3.0 .. 4.7	I_BATT(*)	Battery current	[-1, 1A]	Resolution: 2 ⁻¹⁰ A Offset_raw value: -32768	0xFFFF	0xFFFF	100ms(**)
			[-200, 200A]	Resolution: 2 ⁻⁷ A Offset_raw value: -32768	0xFFFF	0xFFFF	
			[-1500, 1500A]	Resolution: 2 ⁻⁴ A Offset_raw value: -32768	0xFFFF	0xFFFF	
5.0 .. 5.7	T_BATT	Battery temperature	[-40, 105°C]	Resolution: 1°C Offset: -40°C [0x92...0xFE] reserved Typ: unsigned	0xFF	0xFF	1min
7.0 .. 7.1	Status_Current	current Status	[0,3]	0b00: No error 0b01: Error Open circuit 0b10: HW defect (out of range or ADC defect) 0b11: LIN saturation (no HW defect)	0b00	0b00	100ms(**)
7.2 .. 7.3	Status_Voltage	Voltage Status	[0,3]	0b00: No error 0b01: Error Open circuit 0b10: HW defect (ADC defect) 0b11: LIN saturation (no HW defect)	0b00	0b00	100ms(**)
7.4 .. 7.5	Status_Temp	Temperature Status	[0,3]	0b00: No error 0b01: not used 0b10: HW defect (ADC defect) 0b11: LIN saturation (no HW defect)	0b00	0b00	100ms(**)

(*) calculation of current: (raw value+offset)*Resolution
 (**) Depending on LIN communication
 (***) Software can calculate up to 1500A but Hardware is limited to 1300A

Frame 0x35 EBS -> Master

Bit	Signal	Description	Range	Coding	Init	Invalid	Update rate
1.0 .. 1.7	SOC	State of Charge	[0, 100%]	Resolution: 1% Offset: 0 [0x65...FE]: reserved Typ: unsigned	0xFF	0xFF	5s
7.2 .. 7.3	SOC_STATE	SOC Status	[0,3]	0: deviation > 15% 1: deviation <15% 2: deviation < 10% 3: invalid	0x03	0x03	5s