Goodwe/SMA CAN Bus protocol V1.2

General Specifications:

Bit-rate: 500 kbs

11-bit identifiers: 0x351, 0x355, 0x356, 0x35A, 0x35B, 0x35E, 0x35F

Default settings TX only

CAN messages are sent every 100 ms

8 byte message structure:

Table 6: CAN message 0x351 structure description.

Byte	Description	Type	Property	Maps to JK-BMS
0	Charge voltage low byte	Unsigned integer	LSB = 0.1 V	No mapping?? Static charge_v
1	Charge voltage high byte			
2	Max charging current low byte	Signed integer	LSB = 0.1 A	charging_ overcurrent_protection
3	Max charging current high byte			
4	Max discharging current low byte	Signed integer	LSB = 0.1 A	discharging_ overcurrent_protection
5	Max discharging current high byte			
6	Discharge voltage limit low byte	Unsigned integer	LSB = 0.1 V	total_voltage_ undervoltage_protection
7	Discharge voltage limit high byte			

Table 7: CAN message 0x355 structure description.

Byte	Description	Type	Property	Maps to JK-BMS
0	SOC low byte	Unsigned integer	LSB = 1 %	capacity_remaining
1	SOC high byte			
2	SOH low byte	Unsigned integer	LSB = 1 %	No mapping 100?
3	SOH high byte			
4	SOC high definition low byte	Unsigned integer	LSB = 0.01 %	Optional `raw_battery_remaining_capacity`
5	SOC high definition high byte			

Table 8: CAN message 0x356 structure description.

Byte	Description	Type	Property	Maps to JK-BMS
0	Battery voltage low byte	Signed integer	LSB = 0.01 V	total_voltage
1	Battery voltage high byte			
2	Battery current low byte	Signed integer	LSB = 0.1 A	current
3	Battery current high byte			
4	Battery temperature low byte	Signed integer	LSB = 0.1 °C	power_tube_temperature
5	Battery temperature high byte			

Table 9: CAN message 0x35A structure description.

Byte	Description	Type	Property	Maps to JK-BMS
0	Alarm byte 1	Unsigned char	Bit orientated Alarm structure	
1	Alarm byte 2	Unsigned char		
2	Alarm byte 3	Unsigned char		
3	Alarm byte 4	Unsigned char		
4	Warning byte 1	Unsigned char	Bit orientated Warning structure	
5	Warning byte 2	Unsigned char		
6	Warning byte 3	Unsigned char		
7	Warning byte 4	Unsigned char		

Table 10: CAN message 0x35E structure description.

Byte	Description	Type	Property	Maps to JK-BMS
0	Byte 1	ANSII	Manufacturer description: GoodWe	??
1	Byte 2	ANSII		
2	Byte 3	ANSII		
3	Byte 4	ANSII		
4	Byte 5	ANSII		
5	Byte 6	ANSII		
6	Byte 7	ANSII		
7	Byte 8	ANSII		

Table 11: CAN message 0x35F structure description.

Byte Description Type Property

Byte	Description	Type	Property	Maps to JK-BMS
0	Cell chemistry low byte	Unsigned integer	Battey type	battery_type
1	Cell chemistry high byte			
2	Hardware version low byte	Byte	HW Version: “1.0”	maybe 1.0
3	Hardware version high byte	Byte		
4	Capacity low byte	Unsigned integer	LSB = 1 Ah	total_battery_capacity_setting
5	Capacity high byte			
6	Software version low byte	Byte	SW Version: “ 0.1”	software_version
7	Software version high byte	Byte		