7E7 Request ID

7EF Response ID

**Request and response for the main battery voltage**

ID DL DATA

7E7 8 03 22 02 04 FF FF FF FF Battery voltage request

7EF 8 10 0D 62 02 04 73 73 01 Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Flow control package

7EF 8 21 00 5A 2D 5A 3D 5A 45 Response from Smart

5A 45 16bit unsigned Main battery voltage x 64

For example, Vbatt=23109(5A45)/64=361.07V

**Request and response for the main battery current**

7E7 8 03 22 02 03 FF FF FF FF Battery current request

7EF 8 05 62 02 03 FB 93 55 55 Response from Smart

FB 93 16bit signed main battery current value x 32

For example, -1133(FB93)/32=-35.41A

**Request and response for the battery temperature**

7E7 8 03 22 02 01 FF FF FF FF Battery temp request

7EF 8 10 11 62 02 01 02 E1 02 Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Flow control package

7EF 8 21 78 02 BA 02 A1 08 02 Response from Smart

7EF 8 22 05 D8 06 C3 55 55 55 Response from Smart

02 E1 16bit signed max temp value x 64

For example, 737(02E1)/64=12.1°C

02 78 16bit signed min temp value x 64

For example, 632(0278)/64=9.87°C

02 BA 16bit signed average temp value x 64

For example, 698(02BA)/64=10.9°C

**Request and response for battery module temperatures**

7E7 8 03 22 02 02 FF FF FF FF Battery module temps request

7EF 8 10 3F 62 02 02 02 FE 02 Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Flow control package

7EF 8 21 FF 03 07 02 FE 03 03 Response from Smart

7EF 8 22 02 FC 02 F4 02 DC 02 Response from Smart

7EF 8 23 F6 80 00 80 00 80 00 Response from Smart

7EF 8 24 80 00 80 00 80 00 80 Response from Smart

7EF 8 25 00 80 00 80 00 80 00 Response from Smart

7EF 8 26 80 00 80 00 80 00 80 Response from Smart

7EF 8 27 00 80 00 80 00 80 00 Response from Smart

7EF 8 28 80 00 80 00 80 00 80 Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Flow control package

7EF 8 29 00 55 55 55 55 55 55 Response from Smart

02 FE 16bit signed Module 1 Sensor 1 temp value x 64

For example, 766(02FE)/64=11.96°C

02 FF 16bit signed Module 1 Sensor 2 temp value x 64

For example, 767(02FF)/64=11.98°C

03 07 16bit signed Module 1 Sensor 3 temp value x 64

For example, 775(0307)/64=12.10°C

02 FE 16bit signed Module 2 Sensor 1 temp value x 64

For example, 766(02FE)/64=11.96°C

03 03 16bit signed Module 2 Sensor 2 temp value x 64

For example, 771(0303)/64=12.04°C

02 FC 16bit signed Module 2 Sensor 3 temp value x 64

For example, 764(02FC)/64=11.93°C

02 F4 16bit signed Module 3 Sensor 1 temp value x 64

For example, 756(02F4)/64=11.81°C

02 DC 16bit signed Module 3 Sensor 2 temp value x 64

For example, 732(02DC)/64=11.43°C

02 F6 16bit signed Module 3 Sensor 3 temp value x 64

For example, 758(02F6)/64=11.84°C

**Request and response for battery cell voltages**

7E7 8 03 22 02 08 FF FF FF FF Battery cell voltages request

7EF 8 11 93 62 02 08 0F 97 0F Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Flow control package

7EF 8 21 9A 0F 98 0F 98 0F 99 Response from Smart

7EF 8 22 0F 9B 0F 99 0F 99 0F Response from Smart

7EF 8 23 99 0F 98 0F 99 0F 9B Response from Smart

7EF 8 24 0F 99 0F 9A 0F 98 0F Response from Smart

7EF 8 25 9A 0F 9A 0F 9A 0F 99 Response from Smart

7EF 8 26 0F 98 0F 9A 0F 98 0F Response from Smart

7EF 8 27 99 0F 97 0F 98 0F 99 Response from Smart

7EF 8 28 0F 98 0F 97 0F 97 0F Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Flow control package

7EF 8 29 9A 0F 98 0F 9A 0F 9A Response from Smart

7EF 8 2A 0F 9A 0F 98 0F 99 0F Response from Smart

7EF 8 2B 83 0F 9A 0F 99 0F 9A Response from Smart

7EF 8 2C 0F 99 0F 97 0F 9A 0F Response from Smart

7EF 8 2D 9C 0F 9A 0F 99 0F 98 Response from Smart

7EF 8 2E 0F 9D 0F 98 0F 96 0F Response from Smart

7EF 8 2F 97 0F 98 0F 98 0F 98 Response from Smart

7EF 8 20 0F 97 0F 9A 0F 9A 0F Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Flow control package

7EF 8 21 9A 0F 99 0F 99 0F 97 Response from Smart

7EF 8 22 0F 9A 0F 99 0F 97 0F Response from Smart

7EF 8 23 98 0F 99 0F 9A 0F 9A Response from Smart

7EF 8 24 0F 97 0F 98 0F 98 0F Response from Smart

7EF 8 25 9A 0F 98 0F 98 0F 98 Response from Smart

7EF 8 26 0F 99 0F 98 0F 99 0F Response from Smart

7EF 8 27 98 0F 98 0F 96 0F 98 Response from Smart

7EF 8 28 0F 97 0F 99 0F 98 0F Flow control package

7E7 8 30 08 14 FF FF FF FF FF Response from Smart

7EF 8 29 9A 0F 99 0F 98 0F 98 Response from Smart

7EF 8 2A 0F 99 0F 99 0F 98 0F Response from Smart

7EF 8 2B 97 FF FF FF FF FF FF Response from Smart

7EF 8 2C FF FF FF FF FF FF FF Response from Smart

7EF 8 2D FF FF FF FF FF FF FF Response from Smart

7EF 8 2E FF FF FF FF FF FF FF Response from Smart

7EF 8 2F FF FF FF FF FF FF FF Response from Smart

7EF 8 20 FF FF FF FF FF FF FF Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Response from Smart

7EF 8 21 FF FF FF FF FF FF FF Response from Smart

7EF 8 22 FF FF FF FF FF FF FF Response from Smart

7EF 8 23 FF FF FF FF FF FF FF Response from Smart

7EF 8 24 FF FF FF FF FF FF FF Response from Smart

7EF 8 25 FF FF FF FF FF FF FF Response from Smart

7EF 8 26 FF FF FF FF FF FF FF Response from Smart

7EF 8 27 FF FF FF FF FF FF FF Response from Smart

7EF 8 28 FF FF FF FF FF FF FF Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Response from Smart

7EF 8 29 FF FF FF FF FF FF FF Response from Smart

7EF 8 2A FF FF FF FF FF FF FF Response from Smart

7EF 8 2B FF FF FF FF FF FF FF Response from Smart

7EF 8 2C FF FF FF FF FF FF FF Response from Smart

7EF 8 2D FF FF FF FF FF FF FF Response from Smart

7EF 8 2E FF FF FF FF FF FF FF Response from Smart

7EF 8 2F FF FF FF FF FF FF FF Response from Smart

7EF 8 20 FF FF FF FF FF FF FF Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Response from Smart

7EF 8 21 FF FF FF FF FF FF FF Response from Smart

7EF 8 22 FF FF FF FF FF FF FF Response from Smart

7EF 8 23 FF FF FF FF FF FF FF Response from Smart

7EF 8 24 FF FF FF FF FF FF FF Response from Smart

7EF 8 25 FF FF FF FF FF FF FF Response from Smart

7EF 8 26 FF FF FF FF FF FF FF Response from Smart

7EF 8 27 FF FF FF FF FF FF FF Response from Smart

7EF 8 28 FF FF FF FF FF FF FF Response from Smart

7E7 8 30 08 14 FF FF FF FF FF Response from Smart

7EF 8 29 FF FF FF FF FF 55 55 Response from Smart

0F 97 16bit unsigned 1. Cell voltage value in milli Volts.

For example, 0F97=3991mV

0F 9A 16bit unsigned 2. Cell voltage value in milli Volts.

For example, 0F9A=3994mV

0F 98 16bit unsigned 3. Cell voltage value in milli Volts.

For example, 0F98=3992mV

0F 97 16bit unsigned 93. Cell voltage value in milli Volts.

For example, 0F97=3991mV

Periodic velocity value from Smart

200 8 02 00 02 76 00 00 00 00

200 Package id for the velocity

02 76 16bit unsigned velocity value x 18

For example, 630(0276)/18=35Km/H