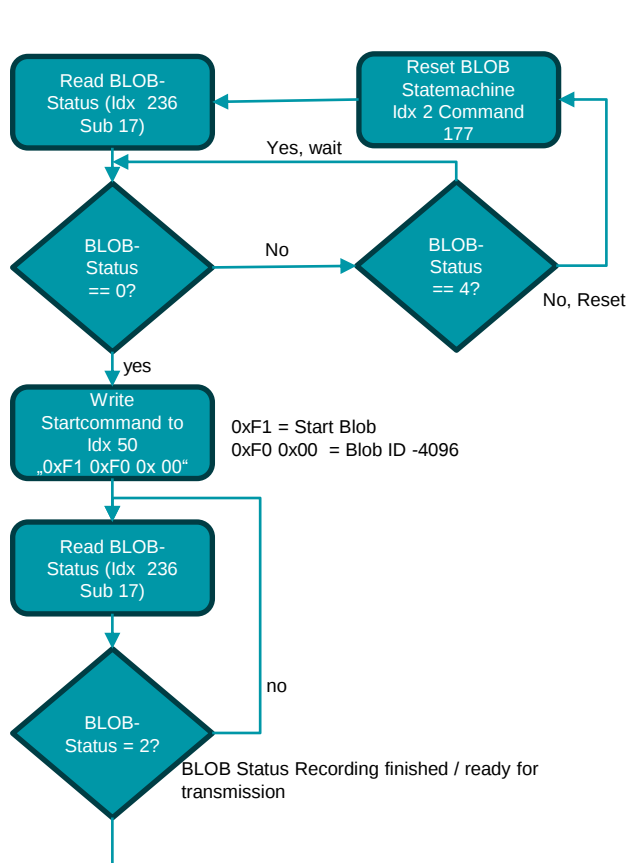




time discrete recording and transmission
of raw acceleration data with the HE055
BLOB-functionality

Valid for Firmware FW01.04 and higher

Algorithm trigger and read by BLOB ID -4096



0x10 0x00 0x06 0x1A 0x80

Blob Length=„400.000 Bytes“ = „100.000 Samples“

Sample1 Sample2

2 -> BLOB Segment

0,1,2...
Counter
Modulo 10

```

0x20 0x00 0x02 0x07 0xB9 0x00 0x02 0x07 0xBA 0x00 0x02 0x07 0xBD 0x00 0x02 0x07
0xC1 0x00 0x02 0x07 0xC5 0x00 0x02 0x07 0xC6 0x00 0x02 0x07 0xC7 0x00 0x02 0x07
0xC9 0x00 0x02 0x07 0xCD 0x00 0x02 0x07 0xD2 0x00 0x02 0x07 0xD5 0x00 0x02 0x07
0xD7 0x00 0x02 0x07 0xD8 0x00 0x02 0x07 0xDB 0x00 0x02 0x07 0xDF 0x00 0x02 0x07
0xE2 0x00 0x02 0x07 0xE5 0x00 0x02 0x07 0xE9 0x00 0x02 0x07 0xED 0x00 0x02 0x07
0xED 0x00 0x02 0x07 0xEC 0x00 0x02 0x07 0xEE 0x00 0x02 0x07 0xF5 0x00 0x02 0x08
0x00 0x00 0x02 0x08 0x0A 0x00 0x02 0x08 0x14 0x00 0x02 0x08 0x20 0x00 0x02 0x08
0x28 0x00 0x02 0x08 0x29 0x00 0x02 0x08 0x28 0x00 0x02 0x08 0x2E 0x00 0x02 0x08
0x35 0x00 0x02 0x08 0x39 0x00 0x02 0x08 0x38 0x00 0x02 0x08 0x37 0x00 0x02 0x08
0x3A 0x00 0x02 0x08 0x3C 0x00 0x02 0x08 0x39 0x00 0x02 0x08 0x33 0x00 0x02 0x08
0x32 0x00 0x02 0x08 0x38 0x00 0x02 0x08 0x40 0x00 0x02 0x08 0x43 0x00 0x02 0x08
0x40 0x00 0x02 0x08 0x44 0x00 0x02 0x08 0x54 0x00 0x02 0x08 0x64 0x00 0x02 0x08
0x67 0x00 0x02 0x08 0x62 0x00 0x02 0x08 0x5F

0x21 0x00 0x02 0x08 0x61 0x00 0x02 0x08 0x5F 0x00 0x02 0x08 0x5D 0x00 0x02 0x08
0x5F 0x00 0x02 0x08 0x62 0x00 0x02 0x08 0x60 0x00 0x02 0x08 0x5C 0x00 0x02 0x08
0x5C 0x00 0x02 0x08 0x5D 0x00 0x02 0x08 0x5F 0x00 0x02 0x08 0x63 0x00 0x02 0x08
0x68 0x00 0x02 0x08 0x6A 0x00 0x02 0x08 0x6D 0x00 0x02 0x08 0x71 0x00 0x02 0x08

...

0x30 0x00 0x02 0x08 0x61 0x00 0x02 0x08 0x5F 0x00 0x02 0x08 0x5D 0x00 0x02 0x08
0x5F 0x00 0x02 0x08 0x62 0x00 0x02 0x08 0x60 0x00 0x02 0x08 0x5C 0x00 0x02 0x08
0x5C 0x00 0x02 0x08 0x5D 0x00 0x02 0x08 0x5F 0x00 0x02 0x08 0x63 0x00 0x02 0x08
0x68 0x00 0x02 0x08 0x6A 0x00 0x02
  
```

3 -> Last BLOB Segment

0x40 0xCB 0x0B 0xEE 0xB7

4 -> Checksum

Algorithm for data interpretation

1. Optionally calculate CRC32 and compare to the transmitted checksum
2. Read Values: 32 Bit signed Integer values big endian (e.g. `int.from_bytes(barr[i*4:i*4+4], "big")`)
3. Scaling from raw data to acceleration in g.
 - 2) multiply values by $128 / (2^{18}-1)$ g/LSB $\approx 4.882831127e-4$ g/LSB
4. The sensor values have a DC-Offset. It is recommended to subtract the measured mean value.