Sensit v2 downlink frames

About this doc

This doc describes how the frames sent to the Sensit v2 are formatted.

Bytes are read from left to right, the *first byte* being the most significant one

Bits are numbered the other way, from the LSB to the MSB. *Bit 0* being the LSB & *bit 7* the MSB of the said byte.

Downlink frame

Downlink messages are requested by the Sensit :

- daily
- After a 10-seconds press of the button

Upon receiving this request, the backend will reply with an 8-byte config frame structured as described below

Frame composition

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Temperature	Temperature	Light	Light	Accelerometer	Accelerometer	Accelerometer	Magnet + flag

Temperature

Lower Threshold	Frequency LSB	Upper Threshold	Frequency MSB
b0-b6	b7	b7-b14	b15

Values

Temperature is in °C , with an offset of 20.

Value	Interpretation
`0x00`	-20°C
`0xFF`	107°C

Period :

Value	Interpretation
`0b00`	10min
`0b01`	1h
`0b10`	6h
`0b11`	24h

Default value

Default value is `0x00FF`

Light

Lower Threshold	Upper Threshold
b0-b7	b8-15

Values

The first 5 bits are the value, the last two being the multiplying factor to apply

Value	Multiplier
b0 - b5	b6 - b7

Multiplier :

Value	Interpretation
`0b00`	1
`0b01`	8
`0b10`	64
`0b11`	2014

Default value

Default value is `0x008F` (0 lux & 9.6 lux as thresholds)

Accelerometer

Value	Interpretation
`0x100373`	Very little sensitivity
`0x080273`	Not very sensitive
`0x040273`	Standard
`0x030173`	Sensitive
`0x010173`	Very sensitive

Default value

Default value is `0x040173` (normal)

Magnet (7 bits)

Value | Interpretation `0x16` | Not very sensitive `0x32` | Standard `0x50` | Sensitive

Default value

Default value is `0x16` : not very sensitive

Flag (Duty cycle)

If flag is set to `0` , the device won't limit itself regarding the number of messages sent each hour