

Datasheet, DS Energy - Wood Humidity Sensor

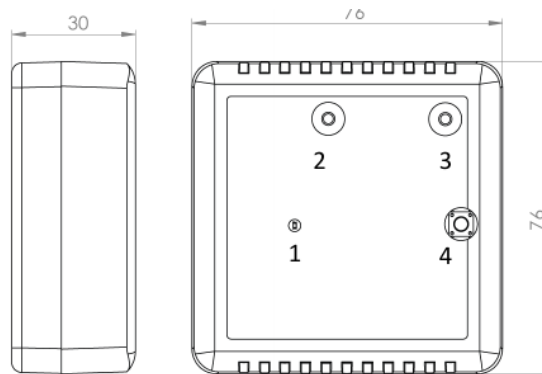


Illustration key:

- 1) Status LED 2-3) Mounting holes 4) Push button

Technical data:

Communication:	LoRa WAN
Operating range:	-20 °C to 60 °C
Wood humidity measurement range:	7% - 25% humidity
Power supply:	3.6V battery
Dimensions:	76 mm x 76 mm x 30 mm
IP:	20
Battery lifetime:	> 8 years with 1 measurement per day

Measured and transmitted values:

- Wood humidity
- Ambient temperature
- Ambient humidity
- Battery level
- Wood type
- Software version and MCU core temperature

Compliance:

- Radio Equipment Directive 2014/53/EU
- RoHS Directive 2011/65/EU
- General Product Safety Directive 2001/95/EC

Communication protocol

The following protocol for downlink commands is defined:

Byte 0	Command
Byte 1-x	Command data

Command table

Hex Value	Description
01	Set duty cycle
02	Reboot (No command data)
03	Numbers of messages before the module enters automatic re-join mode
04	Rejoin (No command data)
14	Set wood type

Wood type values:

Value hex	Description
00	Generic
01	Pine
02	Spruce

Uplink payload:

Byte #	Description
0	SW Version
1	MSB MCU core temperature (f7.8 format)
2	LSB MCU core temperature (f7.8 format)
3	MSB Ambient temperature (°C * 100)
4	LSB Ambient temperature (°C * 100)
5	MSB Ambient humidity (%)
6	LSB Ambient humidity (%)
7	Battery level (0-254)
8	MSB Wood Humidity (% * 10)
9	LSB Wood Humidity (% * 10)
10	Wood Type