1. DESCRIPTION

MCF-LW06CNT is a LoRaWAN™ interface with one optoisolated digital input that can be used to count pulses or to measure a frequency, up to 2KHz, from 5V to 36V. This allows to read any devices with pulse output interface or measure frequency or speed, like a tachometer.

MCF-LW06CNT is available with DIN rail option as follow:

2. CONNECTION OF THE DEVICE

2.1 Connection as stand-alone device:

Pin	Name	Description
J3.1		
J3.2		
J3.3		
J3.4		
J3.5		
J3.6		
J3.7	IO5	Input positive - yellow wire (5V to 36V)
J3.8	IO6	Input negative - white wire
J3.9	GND	Negative power supply
J3.10	VDD	Positive power supply range [10-36Vdc]

Power can also be supplied by USB.

2.2 Connection with DIN rail option:

2.2.1 Input:

Pin	Name	Description
J1.1		
J1.2		
J1.3		
J1.4		
J1.5		
J1.6		
J1.7	IO5	Input positive (5V to 36V)
J1.8	IO6	Input negative

2.2.2 Power supply:

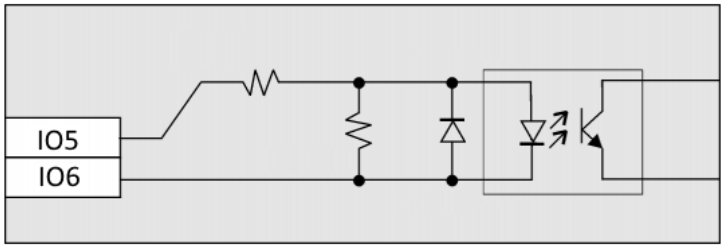
Pin	Name	Description
J2.1	VDD	Positive power supply range [10-36Vdc]
J2.2	GND	Negative power supply

Power can also be supplied by USB.

2.3 Input characteristics:

Maximum frequency (Dip 1 OFF)	2200Khz*
Maximum frequency (Dip 1 On)	150Hz*
Optoinsulation	300V
Off voltage	0÷2V
On Voltage	> 4V
Maximum input voltage	40V
Maximum reverse voltage	40V
Input resistance	6600Ω
Internal voltage drop	2V

* duty cycle = 50%



2.2.3 Dip switches:

- dip1 ON/OFF = hardware filter 100Hz/1KHz
- dip2 ON/OFF = Internal polarization to 5V
- dip3 ON/OFF = Internal polarization to 3V

* Avoid dip2 and dip3 ON at the same time.

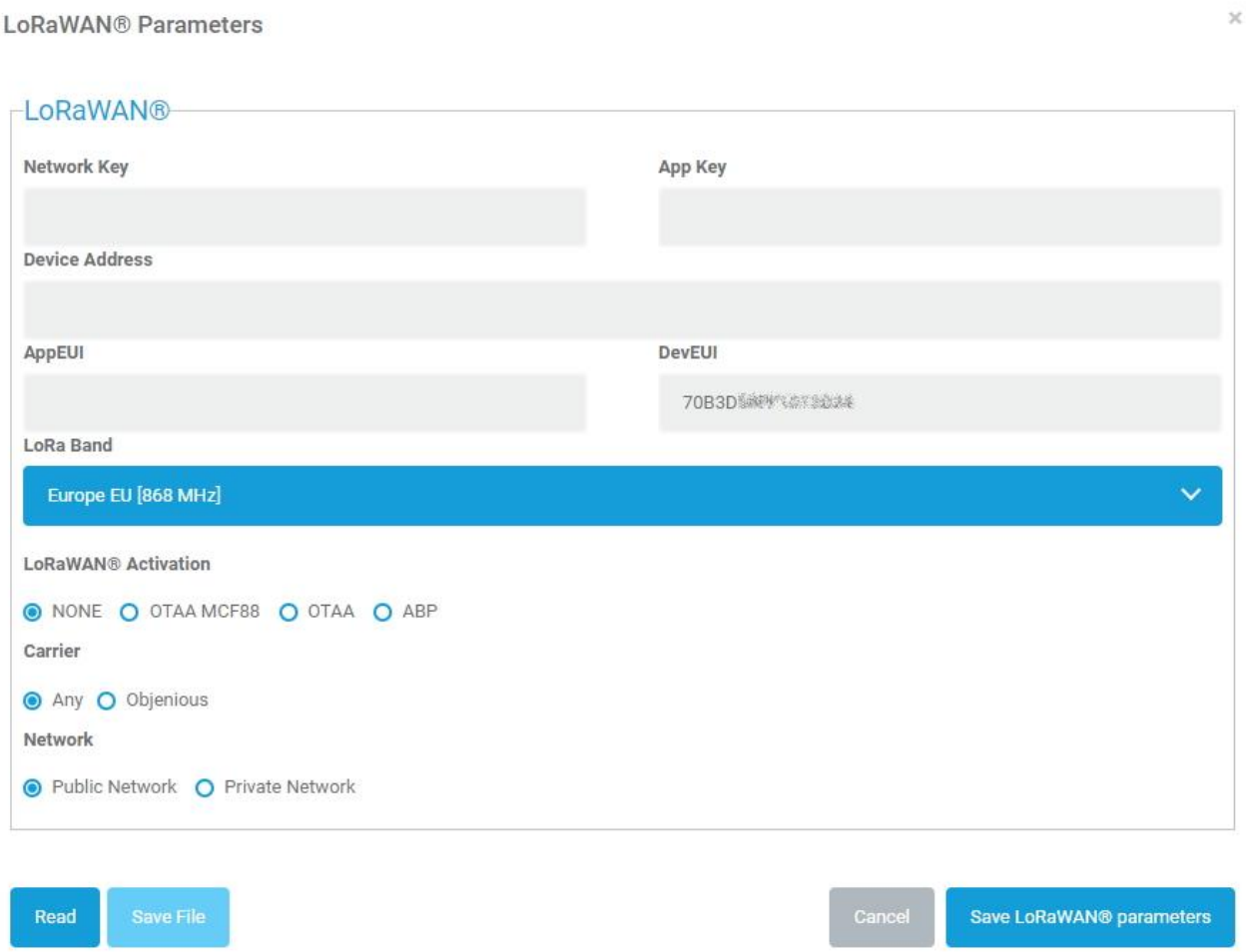
3. LORAWAN™ ACTIVATION

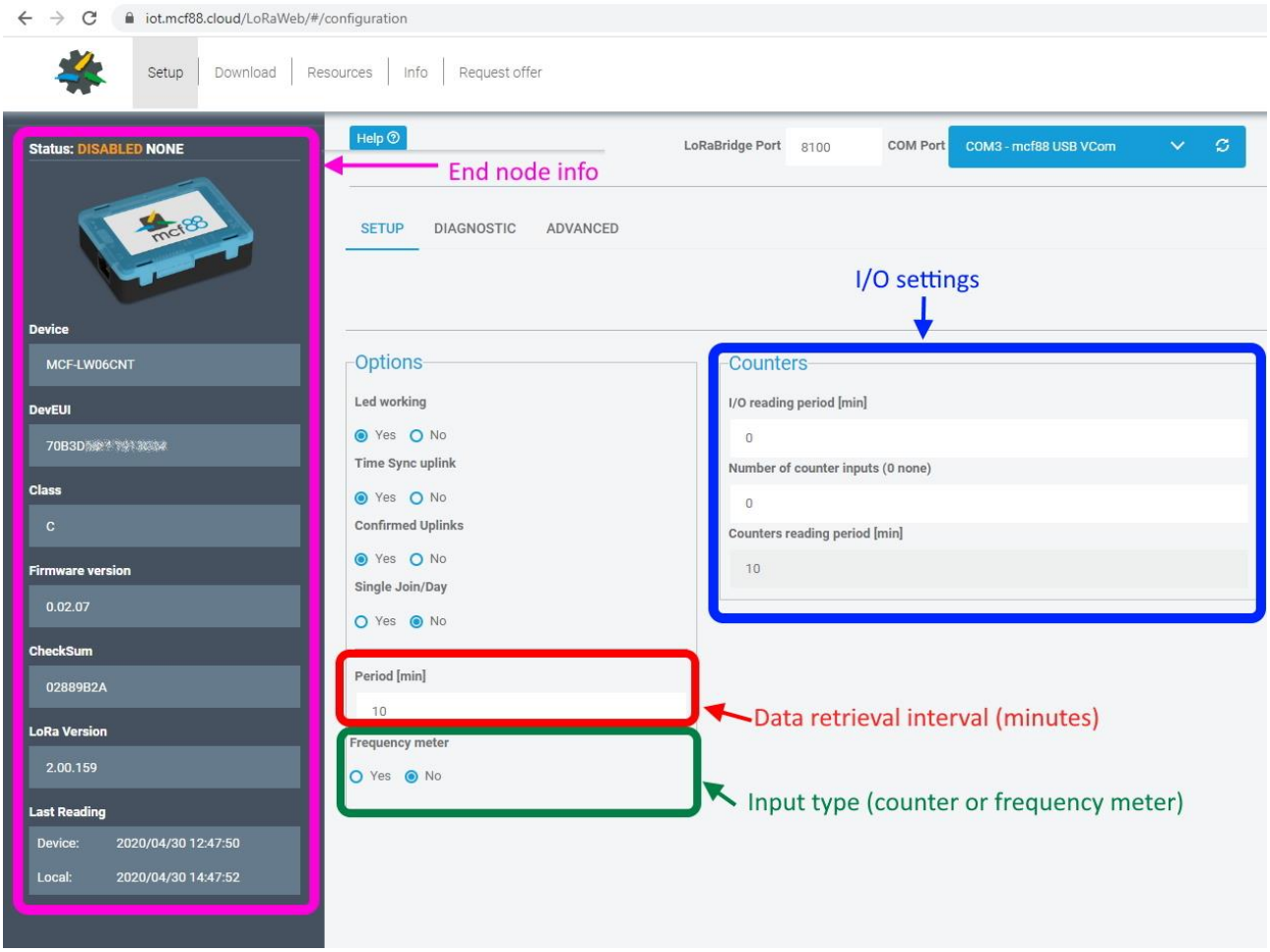
The device supports the following activations on a LoRaWAN ™ network:
NONE: sensor not activated
OTAA: needs settings of appkey and appEUI
OTAA MCF88: Over the air activation according to mcf88 specifications
ABP: needs settings of NwkSkey, AppSkey, DevAddr

The device exits factory activated with **NONE** mode. The devEUI of the device is shown on the product label. MCF-LW06CNT is a Class A LoRaWAN ™ device.

4. DEVICE CONFIGURATION

The activation parameters and the device settings can be read and modified via USB using the appropriate "LoRaWEB" desktop application (https://iot.mcf88.cloud/LoRaWeb/#/configuration):




iot.mcf88.cloud/LoRaWeb/#/configuration
Setup
Download
Resources
Info
Request offer
Status: DISABLED NONE
Device
MCF-LW06CNT
DevEUI
70B3D
Class
C
Firmware version
0.02.07
CheckSum
02889B2A
LoRa Version
2.00.159
Last Reading
Device: 2020/04/30 12:47:50
Local: 2020/04/30 14:47:52
Help
End node info
LoRaBridge Port
8100
COM Port
COM3 - mcf88 USB VCom
SETUP
DIAGNOSTIC
ADVANCED
I/O settings
Options
Led working
Yes
No
Time Sync uplink
Yes
No
Confirmed Uplinks
Yes
No
Single Join/Day
Yes
No
Counters
I/O reading period [min]
0
Number of counter inputs (0 none)
0
Counters reading period [min]
10
Period [min]
10
Data retrieval interval (minutes)
Frequency meter
Yes
No
Input type (counter or frequency meter)

5. INSTALLATION

The magnetic antenna must be positioned on a metal body. It should preferably be vertical and at least 30 cm away from other metal bodies.
The installation must take place in a place where the LoRaWAN ™ signal coverage is good (SF=7 optimal, SF=12 weak).
Use the provided clip to hold the antenna connector in place, as in the pictures:

6. ORDERING CODE

Ordering Code	Description
MCF-LW06CNT	Counter/Frequency to LoRaWAN interface EU863-870
MCF-LW06CNT-AS	Counter/Frequency to LoRaWAN interface AS923