



LPWAN KAMSTRUP Calorimeter

LPWAN KAMSTRUP Calorimeter board has been designed as add on board for KAMSTRUP MULTICAL device and it's capable to interoperate with MULTICAL electronic to get all available registry content, wrap into LPWAN payload and send to application server.

LPWAN KAMSTRUP Calorimeter board takes power from built in MULTICAL device battery. Total battery lifetime is then influenced by number of data transmissions per day. We strictly follow low power approach and typical sleep current is max. 5uA. Desired registers can be selected by user and can be also reconfigured remotely over the downlink. The board is capable to work in 2 modes – so called Expert mode – then full register is wrapped to the payload or Optimal mode – then the payload contribution from selected register is shrunk to 7 bytes only to optimize payload length.

Due to strict payload length limitations, Sigfox version is not available.

Message sending can be invoked by magnetic contact.



Usage

- Heating energy measurement
- Invoicing for heating energy consumption
- Critical heating energy consumption monitoring

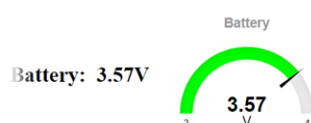
LPWAN KAMSTRUP Calorimeter board	Parameter
Protection	Transparent paint
Operating temperature	-40 to +85°C
Power supply	3.6V lithium battery, typically powered from MULTICAL device
Power consumption	<5uA in deep sleep/80mA transmission (Sigfox, LoRa) / 500mA (NBLoT)
Battery lifetime	Aprox. 30 000 transmissions
Supported LPWAN standards	LoRaWAN, NBLoT, GSM
Dimensions	90x44mm
Weight	20g
Protocol	KAMSTRUP MULTICAL
Accuracy	Defined by the calorimeter
Antenna/typical range	U-FL Connector – internal flexible antenna on a pigtail, 2dBi or pigtail with external SMA a external antenna from 3 to 5dBi



LPWAN KAMSTRUP Calorimeter in details



LoRaWAN Kamstrup Calorimeter



History:

Date	Time	Batt	T1	T2	E1	E8	vol1	Time
2021-03-11	08:39:46	3.57V	24.06°C	24.12°C	291.6GJ	83175m3°C	144478m3	40151h
2021-03-11	08:09:46	3.57V	23.48°C	23.55°C	291.6GJ	83175m3°C	144478m3	40150h
2021-03-11	07:39:46	3.57V	23.04°C	23.19°C	291.6GJ	83175m3°C	144478m3	40150h
2021-03-11	07:21:24	3.57V	22.53°C	22.66°C	291.6GJ	83175m3°C	144478m3	40149h
2021-03-11	07:09:46	3.57V	22.45°C	22.57°C	291.6GJ	83175m3°C	144478m3	40149h
2021-03-11	06:39:46	3.57V	22.26°C	22.37°C	291.6GJ	83175m3°C	144478m3	40149h
2021-03-11	06:09:47	3.57V	22.11°C	22.23°C	291.6GJ	83175m3°C	144478m3	40148h
2021-03-11	05:39:47	3.57V	21.92°C	22.01°C	291.6GJ	83175m3°C	144478m3	40148h
2021-03-11	05:09:47	3.57V	20.75°C	21.82°C	291.6GJ	83175m3°C	144478m3	40147h
2021-03-11	04:39:47	3.57V	21.64°C	21.67°C	291.6GJ	83175m3°C	144478m3	40147h

Android application for B2C solution coming soon (2Q/2021)...

- Quick device adding to list over QR code
- Edit/Delete device
- Up to 250 devices in list
- Important parameters quick view
- Push/email notifications
- Device battery and signal status view
- History data view

