Fludia
Smart Energy Components

BelSenso **FM432**ir
LoRa Electricity Tracker

LoRa™

BelSenso

BelSenso FM432ir
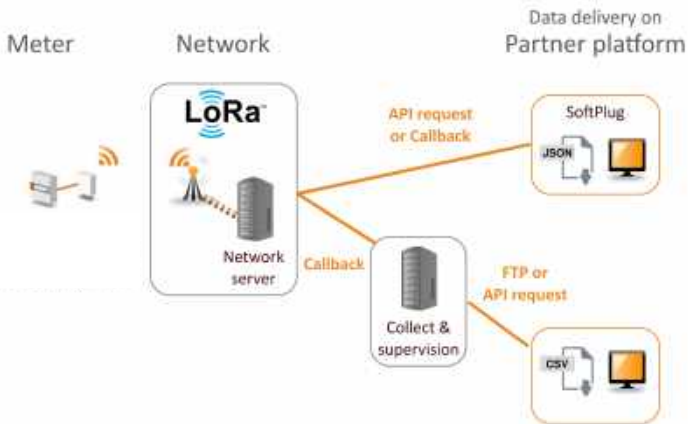
LoRa Electricity Tracker

BelSenso FM432ir is a univeral IoT optical sensor that can ready many types of Electricity Meters. It has been designed for Meters with infrared communication ports, but can also be used with old Ferraris meters. Radio transmission is based on LoRa technology (Long Range and low consumption) and is compatible with existing LoRaWAN networks.

Benefits

⇒ **Universal**: compliant with most meters (Ferraris, mMe,…)

⇒ **Plug & Play**: self installation (< 5mn)

⇒ **Precision**: consumption measurement every 1mn or 15mn

⇒ **Autonomy**: up to 8 years with provided batteries

⇒ **Cost-effective**: competitive IoT Network subscription

Operational

Implementations

⇒ **Smart Home and customer engagement:** rich content including disaggregation (NILM)

⇒ **Smart Monitoring in small buildings:** consumption supervision

⇒ **Solar Installations:** production and self-consumption audit

⇒ **Street Lighting:** operational cost optimization

General and technical features

	BelSenso FM432ir	
Input	Compliant with most electricity meters	
	Optical reading of electromechanical meters (Ferraris,….) (Detection of disk rotations)	Optical reading of electronic Meters (mME,…) (Decoding of infrared messages)
Output	LPWAN 868 Mhz Network - LoRaWan 1.0 Internal antenna (PCB) - RF Power 14 dbm (25mw)	
Operational	Adhesive pads (3M) Selection of meter type by switch Red and Green LEDs for commissionning T°: -15°C to +45°C	
Data	Load curve measurement: 1mn, 15mn Transmission 13 to 33 messages/day Data delivery (csv/json format): FTP/API/Softplug (.exe)/self-decoding	
Power supply	Internal battery 3.6V (replaceable)	
Size & Weight	**Optical reader** weight: 19gr (with cable) height: 24mm width: 40mm (without cable) depth: 19mm	**Radio Box** weight: 130gr height: 95mm width: 75mm depth: 30mm

FM432ir

References

FM432ir_15mn	LoRa Electricity Tracker - 15 minute data (*)
FM432ir_1mn	LoRa Electricity Tracker - 1 minute data (**)

(*) *Estimated Battery life 8 years for infrared port meter, 5 years for Ferraris (i.e. electromechanical) meter*

(**) *Estimated Battery life 4 years for infrared port meter, 3 years for Ferraris (i.e. electromechanical) meter*