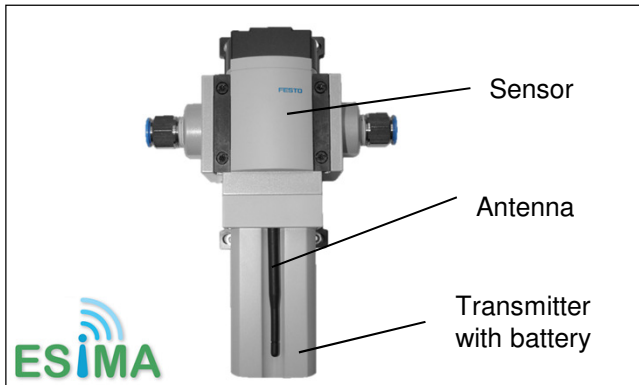


Energy self-sufficient industrial environmental sensor

Application Note



Industrial Environmental Sensor

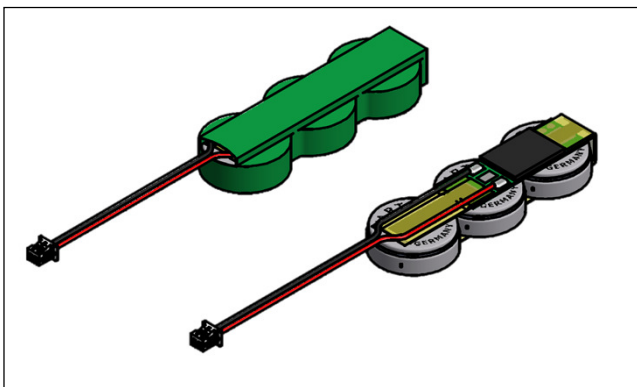
Industry 4.0 energy efficiency grows more and more important in the market. Energy consumption of production lines need to be measured, analysed and optimized. Several sensors are positioned all over the production site in order to give detailed information about the current consumption in real-time of certain areas. This will help to bring down energy consumption in every part of the factory.

Battery challenge

Since this device is designed for industrial use, reliability of the battery pack must be given. The cycle life performance must meet the requirement of continuous usage for several years. The sending of data will require quite high peak-currents and the battery must handle these without any degradation.

Technical solution

In order to gain the required backup time to run the sensor and send data without producing energy, three cells have been assembled into a battery-pack. With a total capacity of 360 mAh the sensor has enough energy to run over a longer time period without being recharged via the harvester. Thanks to the coil design the CoinPower can handle peak currents up to 3C. This is required for sending data to the hub in the industrial environment.



Characteristics	CoinPower 3P/CP1654 A3
Capacity	360 mAh @ 3.7 V
Dimensions	49 mm x 16.5 mm x 7.6 mm
Discharge current	600mAh continuous
Cycle Performance	>500 Cycles (>85% of Cini)
Safety	Integrated Protection Circuit Module

Lithium Button Cell – CoinPower

The CoinPower series can be used as a single bare cell as well as a battery pack when more capacity in a small space is needed. Due to high drain capability this battery type can also power devices which have peak loads while sending or writing data. The entire CoinPower Series is exclusively produced on fully automated production lines in Germany to ensure maximum production accuracy for every single cell.

- Highest energy density in rechargeable coin cells
- Chargeable by Energy Harvesting applications
- Discharge current up to 3C (up to 360mA per cell)
- Highest safety features on the market
- Excellent reliability and lifetime for industrial use
- UL, IEC and UN IATA recognized cell
- Reliability – Made in Germany