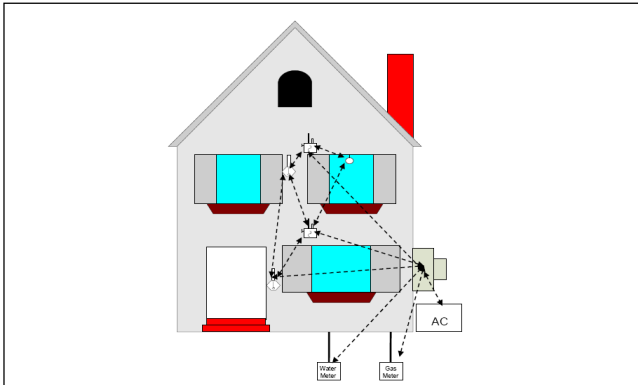


Electricity Metering

Remote Reading

Application Note



Energy Metering

Particularly in regards to the fast growing demand for more energy and the limitation of available natural resources, **intelligent energy metering** will become more popular. Special advantages are: Prepaid energy, higher accuracy, remote data reading and less maintenance cost. Many meters need two separate batteries for data storage and service functions.

Battery challenge

Since data storage and Real time clock backup has to be done electronically, the backup battery in this application environment is a vital factor in the design of electronic metering systems. In addition there is a need to support high pulses for remote reading (e.g. Zigbee) or LCD illumination.

Technical solution

The V65HT cell out of the robust85 family of Ni-MH button cells from VARTA Microbattery is specially designed for long lifetime in backup applications with high peak pulses for remote data reading and LCD illumination backup.



Characteristics	3/V65HT Battery
Voltage level	3.6V (other voltages possible)
Cont. discharge current	130mA
Capacity	65mAh
Discharge Temperature range	-20°C to +85°C
Overcharge capability	1,95mA continuous at 45°C for 5 years
Weight	13g

Remote Reading Backup Battery

VARTA Microbattery's Ni-MH HT batteries (robust85 family) offer rechargeable battery solutions with reliable power for supplying data in wireless networks for remote reading. Recommended configurations: 3/V65HT, 3/V150HT depending on lifetime and power demand.

- wide temperature range from -20 to +85°C
- long lifetime – up to 10 years
- high reliability – by special sealing construction with new plastic materials
- high charge retention with mass electrodes
- High overcharge capability by patented GCE electrode
- design flexibility on battery shape side-by-side or stacked
- simple charging system continuous charging possible
- UL recognized cell
- environmentally friendly Ni-MH technology