

# Backup Battery for Timer

Application Note



## Backup Battery for Timer

Electronic timers in industrial applications are facing **extended temperature** in closed **electronic control cabinets** with increasing number of heat generating components. This requires reliable backup batteries for sensible switching operations at extended average ambient temperature of about 40°C.

## Battery challenge

The main challenges for the battery are the **charge efficiency at higher ambient temperature, leakage-free consistency in performance, 5-7 years of lifetime in the application, reliability, easy charging and low service effort**. New generation of Ni-MH batteries for Memory backup offer **high resistance to extended ambient temperature** stress due to the **special sealing construction with new plastic materials** while the patented GCE electrode design gives high **overcharge stability** for simple charging solutions.

## Technical solution

The V 65 HT cell with a capacity of 65 mAh out of the robust85 family of Ni-MH button cells, is specially designed for extended back-up times in extended industrial conditions by patented GCE Electrode and special sealing construction.



Characteristics	V 65 HT
Voltage level	1.2 V (other voltages possible)
Cont. discharge current	130 mA
Capacity	65 mAh
Discharge Temperature range	-20°C to +85°C
Overcharge capability	1.95 mA continuous at 45°C for 5 years
Weight per cell	4.5 g

## Timer Battery

VARTA Microbattery's Ni-MH V 65 HT batteries (robust85 family) offer rechargeable battery solutions with reliable power for supplying timer back-up solutions for robust use in industrial applications.

- wide temperature range from -20 to +85°C
- long lifetime – up to 6 years and above
- high reliability – by special sealing construction with new plastic materials
- Extended shelf life by the use of robust mass type electrode design
- High overcharge capability by patented GCE electrode
- design flexibility on battery shape side-by-side or stacked, SMD mounting or wire connector
- simple charging system continuous charging possible
- ROHS compatible
- Halogen and Perchlorate free
- UL recognized cell
- environmentally friendly Ni-MH technology