

**battery type:**  
**battery size:**  
**chemical system:**

**Alkaline Manganese Dioxide (mercury free)**  
 A23; 8LR23; MN21; 8LR932; LR1028  
 Zn / KOH-H<sub>2</sub>O / MnO<sub>2</sub>

**nominal voltage:** 12 V  
**open circuit voltage:** 12.3...12.9 V  
 12.2...12.9 V

**Conditions**  
 new battery  
 after 1 year storage at 20°C

**capacity**  
 rated: 50 mAh  
 minimum: 47 mAh

all measurements at 22 ± 2°C ambient  
 discharge under 10kΩ load; 24hours/day  
 End Voltage (EV): 6.0V  
 discharge under 10kΩ load; 24hours/day  
 End Voltage (EV): 6.0V

**Standard discharge time**  
 nominal:

55 h at 10kΩ load new battery  
 EV: 6.0V

MAD:  
 (minimum average duration)

50 h at 10kΩ load after 12 months storage at 20°C  
 EV: 6.0V

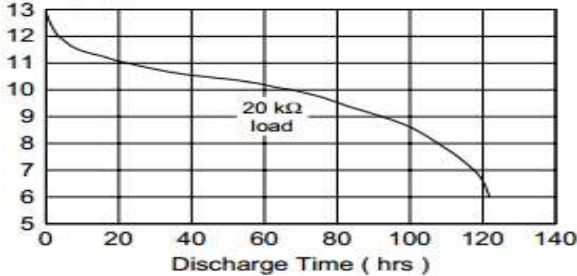
52 h at 10kΩ load for IQC measurement  
 EV: 6.0V (tested within 30 days after delivery)

**Discharge currents**

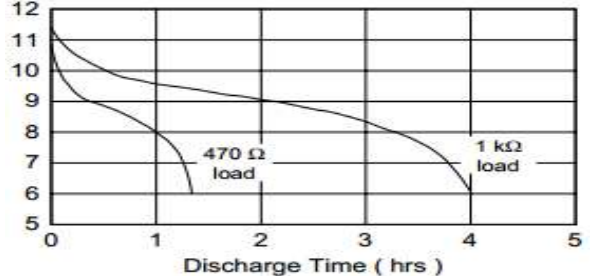
standard: 0.05 mA  
 max. recommended current under continuous discharge: 0.5 mA  
 max. recommended current under pulse discharge: 15 mA

**Discharge diagrams:**

**Normal Rate Discharge**  
 Voltage (V)



**High Rate Discharge**  
 Voltage (V)



**shelf life:** 3 years under proper storage conditions (ta: ≤ 22°C; RH: 60 ± 15%)  
 ≥90 % remaining capacity after 12 months storage

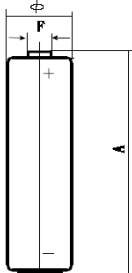
**operating temperature:** - 20...60 °C

**storage temperature:** 5...25 °C (recommended)

**mechanical specifications:**

Dimensions(mm):

/	min	max
Φ	9.90	10.60
A	27.70	28.50
F	5.2	5.8



**nominal weight:** 7.9 g

blister card  
 dimensions: 86 x 11 x 123mm  
 weight: 17.6g (incl. batteries)



**ANSMANN Specifications for model:**

**A23 (23A, LR1028) Alkaline Battery**  
**"Hg free" 2pcs blister package**

data sheet no. / part no.

1510-0024

author / date

TG / 10.01.2018