

# 2.M20 CV stick pack

## Primary Li-MnO<sub>2</sub> battery

6 V lithium manganese dioxide battery

Saft's 2.M20 CV stick pack is based on D size Li-MnO<sub>2</sub> cells with spiral electrode design. It is ideally suited for applications requiring high energy with stable voltage under high discharge rate in -40 °C / +72 °C environment.

### Benefits

- High drain and pulse capability
- High voltage response, stable even after long dormant periods
- High capacity even at high current and low temperature
- High energy density
- No voltage delay
- Low self-discharge compatible with long shelf-life of 10+ years (less than 1% after 1 year of storage at +20 °C)

### Key features

- Two M20 CV cells in 2S1P configuration and longitudinal orientation
- Safe, hermetic and non-pressurized cell construction with glass-to-metal seal, safety vent and nickel-plated steel container
- Alternative versions with M20 SV cells featuring stainless-steel container, superior resistance to corrosion and low magnetic signature available on request
- Short-circuit proof due to integrated polyswitch<sup>(6)</sup>
- Restricted for transport (class 9)
- Manufactured in Germany

### Designed to meet all major quality, safety and environment standards

- Safety: IEC 60086-4
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, Saft World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

### Typical applications

- Tracking systems
- Data loggers



### Electrical characteristics

(Typical values related to batteries stored up to one year at +30 °C max)

Typical capacity (at 150 mA, +20 °C, 4.0 V cut-off) <sup>(1)</sup>	12.5 Ah
Open circuit voltage	6.4 V
Nominal voltage (under 1 mA, at +20 °C)	6.0 V
Nominal energy (at 150 mA, +20 °C, 4.0 V cut-off voltage)	70 Wh
Maximum continuous discharge current <sup>(2)</sup>	2.0 A

### Operating conditions

Operating temperature range <sup>(3)</sup>	-40 °C / +72 °C [-40 °F / +161 °F]	
Storage temperatures	Recommended	+30 °C [+86 °F] max.
	Allowable <sup>(4)</sup>	-55 °C / +90 °C [-67 °F / +194 °F]

### Physical characteristics

Length (max)	128.5 mm / 5.06 in
Diameter (max)	36 mm / 1.42 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	260 g
Li metal content	7.0 g

### References

Saft part numbers <sup>(5)</sup>	with JST PHR-2 connector	4422080148
	stainless steel version / 3-pol connector	4423080154

<sup>(1)</sup> Can vary depending on current drain, temperature and cut-off voltage.

<sup>(2)</sup> Hold current of the polyswitch at +72 °C. Higher currents are possible for pulses, at lower temperatures or with different polyswitch types. Consult Saft.

<sup>(3)</sup> Operating temperatures up to +85 °C can be achieved. Consult Saft.

<sup>(4)</sup> Long-time storage at high temperature may affect performance. Consult Saft.

<sup>(5)</sup> Other versions with different part numbers are available on request. Consult Saft.

<sup>(6)</sup> Other protection elements can be integrated on request. Consult Saft.

**Saft**  
12, rue Sadi Carnot  
93170 Bagnoleux-France  
Tel.: +33 1 49 93 19 18  
www.saftbatteries.com

**Friemann & Wolf**  
**Batterietechnik GmbH**  
Industriestr. 22,  
63654 Büdingen, Germany  
Tel.: +49 (0) 6042 954 150  
www.friemann-wolf.de

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