

2.M20 CV

Primary Li-MnO₂ battery

6 V lithium manganese dioxide battery

Saft's 2.M20 CV battery is based on D size Li-MnO₂ 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 side-to-side 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⁽⁶⁾
- 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

- Tank level monitoring
- Metering



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) ⁽¹⁾	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 ⁽²⁾	2.0 A

Operating conditions

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

Physical characteristics

Length (max)	68 mm / 2.68 in
Width (max)	34.5 mm / 1.36 in
Height (max)	64.5 mm / 2.54 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	255 g
Li metal content	7.0 g

References

Saft part numbers ⁽⁵⁾	with JST XHP-2 connector	4422080137
	with JST 03 connector	4422080145

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

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

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

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

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

⁽⁶⁾ Other protection elements can be integrated on request. Consult Saft.

Saft

12, rue Sadi Carnot
93170 Bagnole-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

Doc N° 31139-2-0416
Edition: April 2016

Information in this document is subject to change without notice and becomes contractual only after written confirmation by Saft.

Published by the Communication Department

