

2.M52 EX SV

Primary Li-MnO₂ battery

6 V lithium primary battery with ATEX/IECEX certified cells

Saft's 2.M52 EX SV battery is based on ATEX/IECEX certified C size Li-MnO₂ cells with spiral electrode design. It is designed for integration into equipment used in Ex atmosphere at temperatures up to +72 °C.

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)
- Superior resistance to corrosion

Key features

- Two ATEX/IECEX certified Saft M52 EX SV cells^[5] in 2S1P configuration and side-to-side orientation
- Safe, hermetic and non-pressurized cell construction with glass-to-metal seal, safety vent and stainless steel container
- Integrated fuse^[6]
- Restricted for transport (class 9)
- Manufactured in Germany

Designed to meet all major quality, safety and environment standards

- Safety: UL 1642 (File MH 61234), IEC 60086-4
- Transport: UN 3090 and 3091
- ATEX/IECEX: IEC 60079-0 and -11^[7]
- Quality: IEC 80079-34, ISO 9001, Saft World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- Gas sensors in Ex atmosphere
- Tracking of dangerous goods
- Data loggers and wireless automation in Ex atmosphere
- Gas and oil tank level monitoring



Electrical characteristics

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

Typical capacity (at 60 mA, +20 °C, 4.0 V cut-off) ^[1]	5.6 Ah
Open circuit voltage	6.4 V
Nominal voltage (under 1 mA, at +20 °C)	6.0 V
Nominal energy (at 60 mA, +20 °C, 4.0 V cut-off voltage)	32 Wh
Maximum continuous discharge current ^[2]	0.75 A

Operating conditions

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

Physical characteristics

Length (max)	53.0 mm / 2.09 in
Width (max)	27.0 mm / 1.06 in
Height (max)	56.0 mm / 2.20 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	123 g
Li metal content	3.2 g

References

Saft part No. ^[4]	with 0.75 A fuse, JST XHP-2 connector	4423170153
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^[1] Can vary depending on current drain, temperature and cut-off voltage.

^[2] Hold current of the fuse at +72 °C. Higher currents are possible for pulses, at lower temperatures or with different types of protection elements. Consult Saft.

^[3] Long-time storage at high temperature may affect performance. Consult Saft.

^[4] Other versions with different part numbers are available on request. Consult Saft.

^[5] More information about the ATEX/IECEX certificates of the cells can be found in the data sheet of the Saft M52 EX SV cell.

^[6] Different or additional current limiting elements can be integrated on request. Consult Saft.

^[7] Note that the 2.M52 EX SV battery is not ATEX/IECEX certified. Based on the ATEX/IECEX certificates of the cells, certification of the customized pack is usually done as part of the equipment in which the battery is to be integrated.

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