

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

## SEM 70 battery

18 V lithium manganese dioxide (Li-MnO<sub>2</sub>) battery

Saft's SEM 70 battery has a 6S1P configuration of D size Li-MnO<sub>2</sub> cells type M 20 with spiral electrode design. It is used as power source for the SEM 70 radio communication transceiver and features a proven shelf-life of 10+ years.

### Benefits

- High drain and pulse capability
- High voltage response, stable even after long dormant periods
- 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)
- High energy density
- Lightweight
- Wide operating temperature range
- Superior resistance to corrosion
- Low magnetic signature

### Key features

- Six M20SVBW cells (M 20 military version) in 6S1P configuration
- Safe, hermetic and non-pressurized cell construction with glass-to-metal seal, safety vent and stainless steel container
- Integrated state-of-charge indicator with LED display and push button
- Short-circuit proof due to integrated polyswitch
- Restricted for transport (class 9)
- Manufactured in Germany

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

- Safety: UL 1642 (File MH 46385), IEC 60086-4
- Military: VG 96915-158 (German military standard)
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, Saft World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

### Typical applications

- Radio communication



### Electrical characteristics

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

Typical capacity (at 250 mA, +20 °C, 12.0 V cut-off) <sup>(1)</sup>	11.0 Ah
Open circuit voltage	19.8 V
Nominal voltage (under 1 mA, at +20 °C)	18.0 V
Nominal energy (at 250 mA, +20 °C, 12.0 V cut-off)	192 Wh
Maximum continuous discharge current <sup>(2)</sup>	2.0 A

### Operating conditions

Operating temperature range	-40 °C / +72 °C (-40 °F / +161 °F)	
Storage temperatures	Recommended	+35 °C (+95 °F) max.
	Allowable <sup>(3)</sup>	-55 °C / +72 °C (-67 °F / +161 °F)

### Physical characteristics

Length	191 mm / 7.52 in
Width	72 mm / 2.83 in
Height (max)	38 mm / 1.50 in
Battery case	Plastic hard case
Terminals	Resilient sockets
Battery weight	750 g
Li metal content	21 g

### References

Saft Part No.	4467080105
NSN (NATO Stock No.)	6135-12-309-8604

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

<sup>(2)</sup> Current limit of the polyswitch at +72 °C. Higher currents are possible at lower temperatures and for pulses. Consult Saft.

<sup>(3)</sup> Long-time storage at high temperature may affect performance. Consult Saft.

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