MP 174565 isr FL
Rechargeable Li-ion battery

3.65 V high energy Li-ion battery, high performance and **intrinsic safety**

Saft's 1p MP 174565 isr FL battery is compatible with applications requiring intrinsic safety, long operating life under cycling conditions and excellent performance in temperature environments from –30°C to +60°C.

Benefits

- Excellent operating lifetime in calendar and cycling with a very stable internal resistance
- High level of safety, compatible with potentially explosive atmospheres
- Long shelf life with extremely low capacity loss in storage
- Smaller environmental footprint than other technologies

Key features

- High energy density (264 Wh/l, and 150 Wh/kg)
- Cycle life more than 2250 cycles at 100% DoD at C/2 discharge, C charge
- The cell connection area is resin encapsulated with flying leads
- Aluminium casing
- Hermetically sealed
- Operates in any orientation
- Maintenance free
- No memory effect
- **Manufactured in the EU**

Designed to meet all major quality, safety and environmental standards

- Safety: UL 1642 and IEC 62133-2:2017
- Transport: UN 3480, UN 38.3
- ATEX[v] IEC 60079-11 (10.5.2, 10.5.3 (b)) compatible component
- Quality: ISO 9001, ISO 13485, Saft World Class program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- Backup for industrial equipment
- Medical devices
- Tracking
- Oil & Gas applications
- Internet of Things
- Wireless Sensor Networks
- Lighting & signalling
- Automotive

Electrical characteristics		
Typical capacity (at C/5 rate, +25°C, 2.5V cut-off) [i]		4.0 Ah
Nominal voltage		3.65 V
Nominal energy		14.6 Wh
Recommended maximum discharge current [ii]	Continuous	8 A (~2C rate)
	Pulse	16 A (~4C rate)

Physical characteristics	
Thickness [iii]	18.9 mm
Width	46.0 mm
Height (not including cable)	71.0 mm
Typical weight	97 g
Volume (including terminals)	0.057 l
IEC battery designation	1INP19/46/71
Saft internal cell designation	1p INT 174565 isr FL
Saft part number	70388K
Saft model / type reference	1p MP 174565 isr FL | GP31461

Operating conditions		
Typical cut-off voltage		2.5 V
Charging method		Constant current/Constant voltage
Charging voltage		4.2 ± 0.05 V
Maximum continuous charge current [iv]		4 A (~1C rate)
Operating temperatures	Charge	-30°C to +60°C
	Discharge	-30°C to +60°C
Storage & transportation temperatures	Recommended	+10°C to +30°C
	Allowable	-30°C to +60°C

[i] Can vary depending on temperature and discharge rate
[ii] Can vary depending on temperatures. Consult Saft
[iii] At beginning of life, 100% State-of-Charge. May increase with temperature and the cells' calendar life. Refer to drawing GP 31461.
[iv] For optimised charging below 0°C and +60°C, consult Saft
[v] Compatible with a temperature classification T4 for an ambient temperature of +60°C. The temperature classification shall be verified during the assessment of the intrinsically safe apparatus in which the cell will be used.

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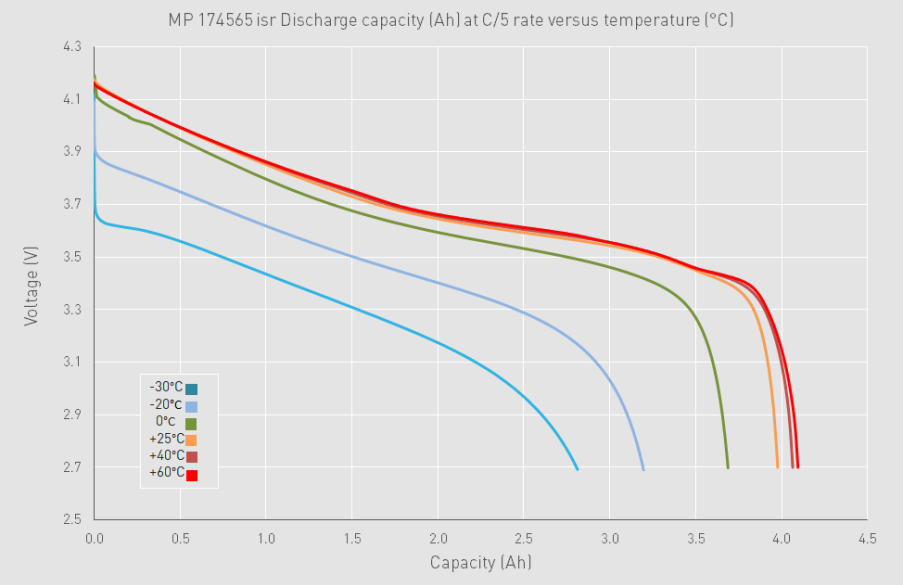


Battery assembly

The MP 174565 isr battery must be mechanically and electrically integrated into a system to operate properly. The battery must include electronic devices for performance, thermal and safety management specific to each application.

Battery surface temperature

- The cell can be compatible with a temperature classification of T4 at an ambient temperature of +60°C.
- The temperature classification shall be verified during the assessment of the intrinsic safety apparatus in which the battery is to be used.

Spark ignition

- The spark ignition risk shall be verified during the assessment of the intrinsically safe apparatus in which the battery will be used.

Storage

- The storage area should be clean, cool (preferably not exceeding +30°C), dry and ventilated

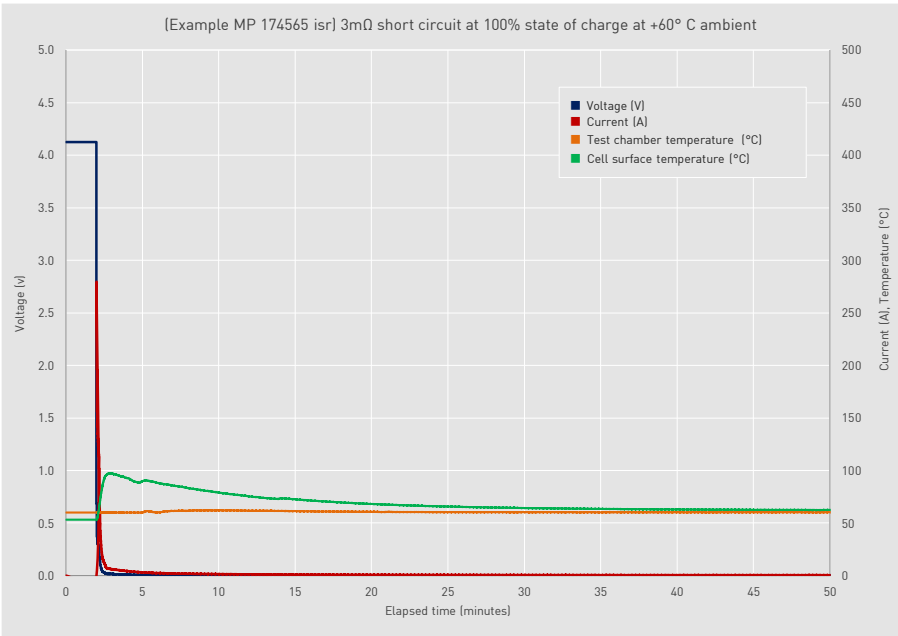
Warning

- Do not crush, short-circuit, incinerate, dismantle, immerse in any liquid or heat above +85°C
- Observe charging conditions at all times

Pretest conditions	Value
Test chamber temperature	60 °C
Cell state of charge	100 %
Short circuit resistance	2.79 mΩ

Test data recorded	Value (max)
Maximum current	263.5 A
Cell maximum temperature	111.1 °C

Test results	Result
Temperature >100 °C and ≤135 °C	Temperature class T4
Externally visible electrolyte ≥24 h	No visible electrolyte
Discharge current interruption	No partial discharge



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