

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06

Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81

Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16

Россия (495)268-04-70

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13

Казахстан (772)734-952-31

Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

www.sft.nt-rt.ru | | sfq@nt-rt.ru

Технические характеристики на литиевые первичные батареи 3.M20, 2.M52, 2.M20

3.M20 EX SV

Primary Li-MnO₂ battery

9 V lithium primary battery with ATEX/IECEX certified cells

3.M20 EX SV battery is based on ATEX/IECEX certified D size Li-MnO₂ cells with spiral electrode design. It is designed for integration into intrinsically safe 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
- 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

- Three ATEX/IECEX certified M20 EX SV cells ^[5] in 3S1P configuration and side-to-side orientation
- Safe, hermetic and non-pressurized cell construction with glass-to-metal seal, safety vent and stainless steel container
- Pack assembly with minimum separation distances and materials according to IEC 60079-11 ^[6]
- ATEX/IECEX certified fuse ^[7]
- 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 ^[6]
- Quality: IEC 80079-34, ISO 9001, ft World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- 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 150 mA, +20 °C, 6.0 V cut-off] ^[1]	12.4 Ah
Open circuit voltage	9.6 V
Nominal voltage [under 1 mA, at +20 °C]	9.0 V
Nominal energy [at 150 mA, +20 °C, 6.0 V cut-off voltage]	105 Wh
Maximum continuous discharge current ^[2]	1.0 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)	105.0 mm / 4.14 in
Width (max)	36.5 mm / 1.44 in
Height (max)	67.0 mm / 2.64 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	380 g
Li metal content	10.5 g

References

part No. ^[4]	with 1 A fuse, no connector	4432180146
-------------------------	-----------------------------	------------

^[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 fuses. Consult .

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

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

^[5] More information about the ATEX/IECEX certificates of the cells can be found in the data sheet of the M20 EX SV cell.

^[6] Note that the 3.M20 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.

^[7] Different or additional current limiting elements can be integrated on request. Consult .



2.M52 EX SV

Primary Li-MnO₂ battery

6 V lithium primary battery with ATEX/IECEX certified cells

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 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, 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

with 0.75 A fuse, JST XHP-2 connector	4423170153
---------------------------------------	------------

^[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 .

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

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

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

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

^[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.

2.M20 EX SV

Primary Li-MnO₂ battery

6 V lithium primary battery with ATEX/IECEX certified cells

2.M20 EX SV battery is based on ATEX/IECEX certified D 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 M20 EX SV cells ^[6] 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
- Two charge protection diodes for use in type of protection "d" (flameproof enclosures) ^[7]
- 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 ^[8]
- Quality: IEC 80079-34, ISO 9001, World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- Tracking of dangerous goods
- Data loggers 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 150 mA, +20 °C, 4.0 V cut-off] ^[1]	12.4 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
Pulse capacity ^[2]	Up to 8 A
Maximum continuous discharge current ^{[2] [3]}	3.5 A

Operating conditions

Operating temperature range	-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)	70.5 mm / 2.78 in
Width (max)	34.5 mm / 1.36 in
Height (max)	66.5 mm / 2.64 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	252 g
Li metal content	7.0 g

References

part No. ^[5]	with 2-pol MOLEX 502380-0200 connector	4423180150
-------------------------	--	------------

^[1] Can vary depending on current drain, temperature and cut-off voltage.

^[2] Limitation of the max. current to a lower level, e.g. by a series resistor, may be necessary depending on the electrical properties of the device, type of protection, desired level of protection and explosion group.

^[3] To maintain cell heating within safe limits.

^[4] Long-time storage at high temperature may affect performance. Consult .

^[5] Other versions with different part numbers are available on request. Consult .

^[6] More information about the ATEX/IECEX certificates of the cells can be found in the data sheet of the M20 EX SV cell.

^[7] Versions with other types of protection elements, e.g. fuses and/or current limiting resistors for type of protection "i" (intrinsic safety) are available on request. Consult .

^[8] Note that the 2.M20 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.

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06

Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81

Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16

Россия (495)268-04-70

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13

Казахстан (772)734-952-31

Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

www.sft.nt-rt.ru | | sfq@nt-rt.ru