

Micro battery

Murata offers a wide range of primary micro batteries with high performance and reliability, taking

advantage of 40+ years technology development and manufacturing expertise.



Coin manganese dioxide lithium batteries (CR batteries)

- Wide range of CR batteries including heat-resistant type and high drain type
- High voltage, high energy density and excellent self-discharge performance
- Acquisition of ISO/TS16949 certification

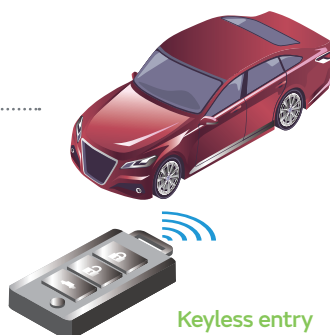
Battery types	CR (Standard)	CR (Extended temperature)	CR (Heat-resistance)	CR (High drain)
Nominal voltage	3.0 (V)	3.0 (V)	3.0 (V)	3.0 (V)
Operating temp.	-30 to +70 (°C)	-40 to +85 (°C)	-40 to +125 (°C)	-30 to +70 (°C)
Nominal capacity	30-610 (mAh)	220-2000 (mAh)	210-1000 (mAh)	200-500 (mAh)
Diameter	12.5-24.5 (mm)	20.0-36.5 (mm)	20.0-24.5 (mm)	20.0-24.5 (mm)
Thickness	1.6-5.0 (mm)	3.2-7.7 (mm)	3.2-7.7 (mm)	3.2-5.0 (mm)
Weight	0.67-7.0 (g)	3.0-20 (g)	3.1-11 (g)	3.0-6.4 (g)
Max plus discharge*1	30mA	30mA*2	30mA	50mA

*1 50% depth of discharge battery's maximum pulse discharge current over 2V for 3s (23°C)

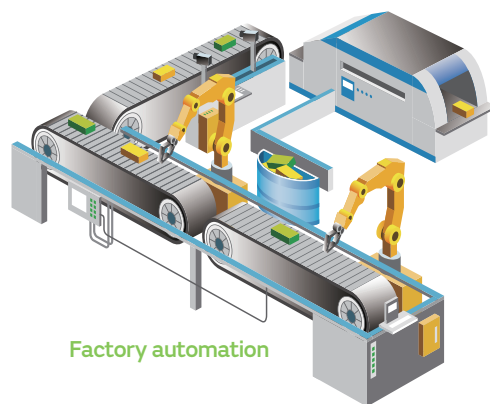
*2 CR3677X max plus discharge is 80mA

Applications

- Tire pressure monitoring system
- Keyless entry/Smart key
- Factory automation
- Smart meters
- Tracking devices
- Sensors



Keyless entry



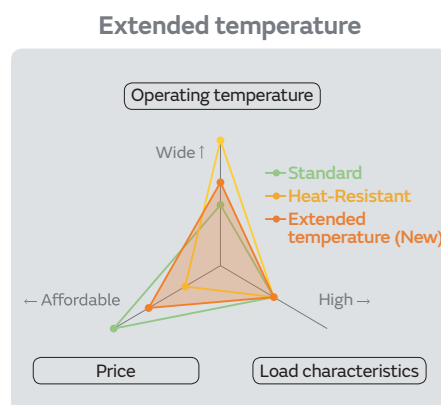
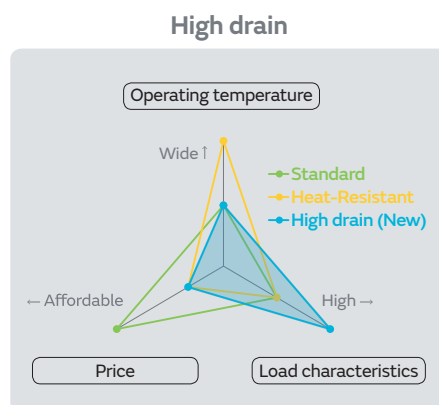
Factory automation

New products

In response to the expansion of IoT applications and increasing demand for small, reliable power sources, Murata developed two types of coin manganese dioxide lithium batteries; High drain type and Extended temperature type.

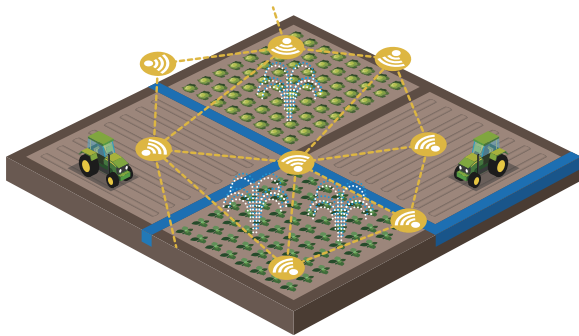


Coin manganese dioxide lithium batteries selection guide



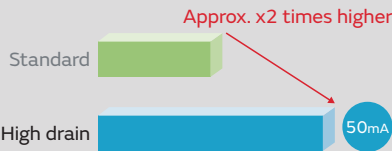
High drain

Excellent high-current discharge performance to support LPWA data transmission



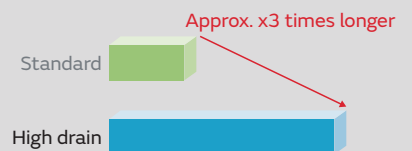
Tracking devices

Max. pulse discharge current



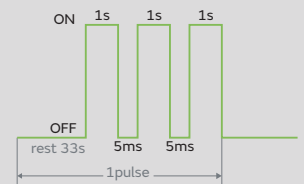
*50% depth of discharge battery's maximum pulse discharge current over 2V for 3s (23°C)

Discharge time (45mA pulse discharge)



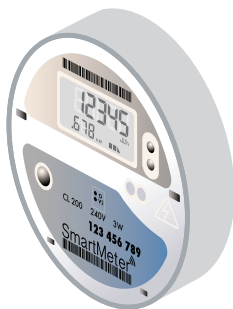
*Pulse discharge condition: 45mA x 3s, 33s off, 2V cut off (23°C)

Pulse discharge condition: LPWA



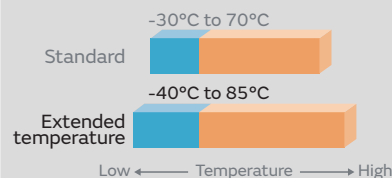
Extended temperature

Recommend for automotive and outdoor devices

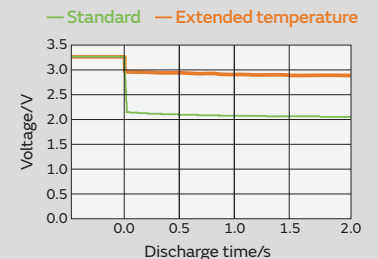


Smart meters

Operating temperature



Voltage comparison after 85°C storage



Silver oxide batteries (SR batteries)

Murata is the world's number one supplier of SR batteries, and was the first to manufacture mercury-free silver oxide batteries, providing excellent stable discharge characteristics.

Battery types	SR (Standard, High drain)	LR (Standard, High drain)
Nominal voltage	1.55 (V)	1.5 (V)
Nominal capacity	20-150 (mAh)	45-150 (mAh)
Diameter	6.8-11.6 (mm)	7.9-11.6 (mm)
Thickness	2.1-5.4 (mm)	3.0-5.4 (mm)
Weight	0.32-2.2 (g)	0.6-2.0 (g)
Operating temp.	-10 to +60 (°C)	-10 to +60 (°C)

Alkaline manganese batteries (LR batteries)

- High safety with unique technologies to prevent leakage and swelling
- Excellent high-drain pulse discharge characteristics

Applications

- Insulin pumps
- CGM (Continuous glucose monitoring)
- Capsule endoscopy

