

● To use the battery safety and properly, be sure to read the instruction manual before use.

- For stationary batteries, ensure that the room is well ventilated so that the hydrogen concentration is 0.8% or less.
- Failure to do so may cause fire or explosion.
- Do not install the battery in a poorly-ventilated area where the hydrogen concentration becomes more than 0.8% or near open flame. Doing so may cause fire or explosion.
- The service temperature ranges of the battery: Discharge -15~45°C, Charge 0~40°C, Storage -15~40°C. Using the battery outside this range may accelerate deterioration or cause the battery to freeze or overheat, resulting in damage or deformation.
- Do not use this battery where it is exposed to direct sunlight. Doing so may cause the parts of the battery to deteriorate.
- Do not expose the battery to water or seawater. Doing so may cause damage to the battery or fire, or cause the terminals or connecting plates to corrode.
- Do not use the battery near a heat source. Doing so may cause damage to the battery or cause the battery life to shorten.
- Do not use the battery in dusty areas. Doing so may cause a short-circuit.
- Charge the battery under the charging conditions recommended by Furukawa Battery. Failure to do so may result in insufficient charging, electrolyte leakage, temperature rise, explosion, deterioration in performance, or reduced service life.
- According to No. 6 Article 12 of the Fire Service Law Construction Regulations Ministry of Autonomy Ordinance, if the total of the product of the rated capacity and the number of cells is 4,800 Ah per cell or more, the device must be installed in accordance with the fire prevention ordinance of each municipality issued in accordance with Article 13 and Article 44 of the Fire Prevention Ordinance (example).
- When installing, do not tilt the unit more than 90° from the horizontal level with the terminals facing up, as it may cause leakage. Do not install with the long side down for FC38-12S or the short side down for FC24-12S, as it may lead to shortened cycle lifespans.
- When recharging at 0.3 C₁₀A to 0.4 C₁₀A, it becomes easier for the surface temperature of the storage batteries to rise, so make sure to leave space between and around the storage batteries to let the heat release.
- Operating at temperatures above 45°C may cause damage to the storage batteries. If the temperature is likely to exceed 45°C, reduce the charging current or improve the installation environment of the storage batteries to prevent their temperatures from rising.
- Ensure that the maximum discharge current is not exceeded for more than 5 minute for 2C₁₀A or for more than 5 seconds for 15C₁₀A. Failure to do so may cause damage to the battery.
- Conduct periodic inspections of storage batteries at intervals specified by the Fire Service Act and other regulations. If the inspections show that the use of the product is found to not conform to standards described in the instruction manual, take the necessary actions according to the instruction manual. Continued use while not conforming to standards can lead to damage to the storage batteries or burnout.
- Do not disassemble or modify the storage batteries, as it may lead to poor performance, leakage, overheating, ignition, explosion, fire or smoke.
- Do not use it for any purpose other than its intended purpose. Improper handling will not only result in insufficient performance, but may also cause an unexpected accident.
- Used storage batteries will be recyclable. Please contact us when its discarding.



ISO9001 certified
JQA-1118



ISO14001 certified
JQA-EM0380

* Colors shown in the may differ from the actual colors.

Contact Information

FB THE FURUKAWA BATTERY CO., LTD.

Head Office
2-4-1 Hosikawa, Hodogaya-Ku, Yokohama City, Kanagawa Prefecture
240-0006, JAPAN
TEL: +81-45-336-5051
<https://www.furukawadenchi.co.jp/>

Valve regulated lead-acid battery for cycle use

FC24-12S / FC38-12S

[FC-S series]



Multipurpose

Small

Long life

Compact and lightweight, with a long operating life. Valve regulated lead-acid battery for cycle use.

Solar-powered stand-alone street lights and LED signboards need to operate nonstop under harsh environments. For the maintenance of unmanned monitoring equipment in mountainous or remote areas, it is difficult to dispatch technical experts frequently. Automated guided vehicles and mobility scooters must be compact and lightweight while also exerting significant power. The multipurpose FC-S series covers all of these scenarios, as well as a wide range of other applications. While being compact and lightweight, it offers high performance and a long operating life, which helps reduce costs by cutting down significantly on the frequency of battery replacement, while also reducing the necessary human labor.



Multipurpose + Compact/lightweight + Long operating life

Multipurpose

Shows high performance in a variety of situations, including continuous operation, use in remote areas and unmanned environments.

Usage example

★ Supports a wide range of other uses besides those usage example mentioned below.



For solar-powered street lights, which are commonly used in harsh environments, including exposure to wind and rain on a daily basis.



For solar-powered outdoor LED signboards to brighten the atmosphere of stores including restaurants and convenience stores.



For water level monitoring equipment, which has become crucial in recent years due to the increasing number of typhoons, heavy rains and other water-related disasters.



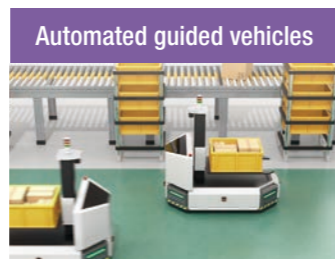
The equipment can operate for extended periods of time even in mountainous or remote areas where it can be difficult to send technical experts.



For security surveillance cameras, which are commonly used 24 hours a day, 365 days a year in order to protect people's safety and security.



For outdoor, self-powered Wi-Fi stations that use solar panels.



Exhibits high performance in environments such as logistics warehouses where maintenance-free operation for long hours is required.



For mobility scooters, which are being used by more people today due to the growing need for nursing care.

Small

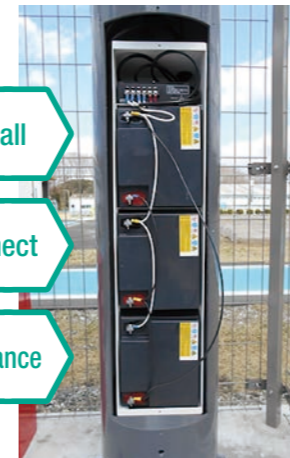
With its compact size, it can be used for a wide variety of equipment. Not only is it lightweight, but it is also easy to install and connect.

Installation (example)

Easy to install

Easy to connect

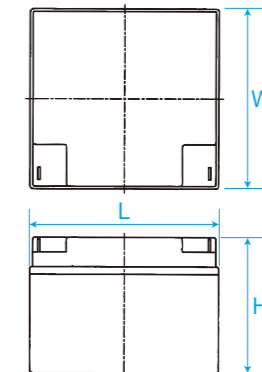
Easy maintenance



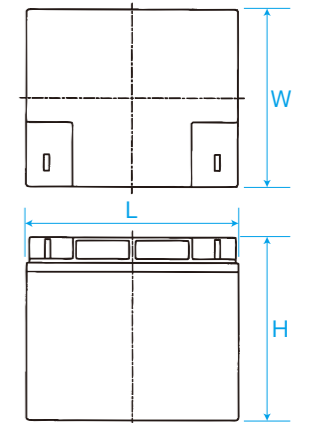
Example of installation (FC38-12S)

Dimensional outline drawing

1 FC24-12S



2 FC38-12S



Main specification

Battery type	Nominal voltage [V]	20 Hr rated capacity [Ah]	5 Hr rated capacity [Ah]	Maximum charge current [A]	Self discharge (25°C) [%/day]	Dimension [mm]				Mass [kg]	Terminal shape	Installation direction		
						Overall height	Height H (±2)	Length L (±2)	Wide W (±2)			Horizontal	Vertical	
1 FC24-12S	12	24	20	9.6	0.1 以下	127	125	175	166	9.6	B1 (M5)	○	×	○
2 FC38-12S	12	38	32	15.2	0.1 以下	172	170	197	165	16.0	B2 (M5)	○	○	×

When the battery mounted on a mobility, it can only be placed horizontal.

Long life

Achieved about 2,000 cycle, and maximum usable year of about 10 years. High performance can be expected for long period time.

Cycle life

About **2,000 cycle**^{*1}
(DOD=50%, 25°C, Discharge/Charge current=0.25C_{20A})

Maximum usable year

About **10 years**
(25°C)

*1 The number of cycles varies depending on the usage environment. The number of cycles is based on internal test results, and is not a guaranteed value.

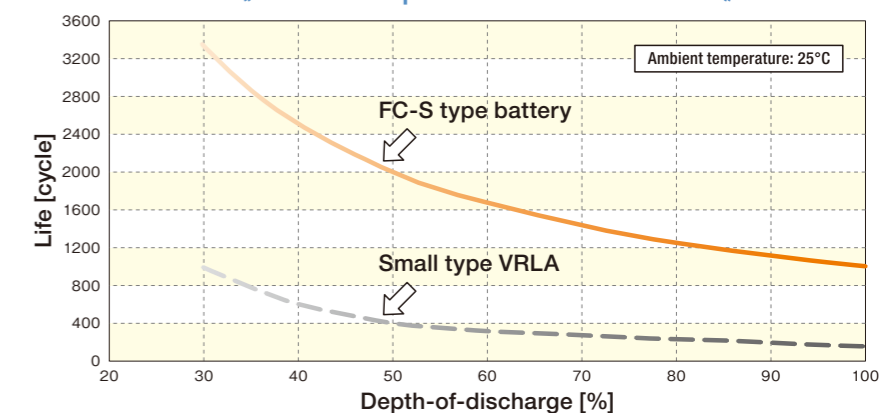
As long as about five times the life compared to the conventional battery^{*2}

Greatly reduce the frequency of storage battery replacements

Greatly reduce lifecycle costs during operation

*2 Conventional battery: m series battery

《Relationship between DOD and life》



*The DOD is not a ratio to the rated capacity, but to the discharge capacity under the storage battery's operating conditions (discharge time rate). *The lifespan values under 50% DOD are estimated values. *The lifespan values of the storage battery vary significantly depending on the operating temperature, usage and other conditions, and are not guaranteed values.