

Ni-MH backup battery system for wind turbine pitch control system

Realise high power, high reliability, reduced maintenance cost and provides long life

FEATURES:

- Does not contain environmentally hazardous substances (Pb, Cd).
- High installation flexibility with small size and light weight battery system.
- Enable reduction of maintenance frequency by long lifetime.
- Enable battery health check by remote monitoring.
- Available for wide temperature range from -40°C to 80°C*.

* Heating system is required below -20°C. Please consult discharge current value with us.

SYSTEM SPECIFICATION INCLUDES BMS AND BATTERY CHARGER FOR DC 300 V SYSTEM

FEATURES OF NI-MH BATTERY:



Wide temperature range



Safety
(Non-flammable)



Easy transportation

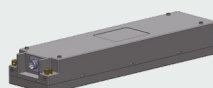
Specifications^{*1}

Part number (Tentative)	BK-30SC576T1
Nominal voltage (V)	345.6 (4 module series connection, total 288 cells)
Rated capacity (Ah)	5 (2 module parallel connection)
Temperature range (°C)	-40 to +80 (Heating devices are included depends on temperature)
Weight (kg)	62 (Module 4S2P +BMS, charger)
Dimensions (mm)	W 260 × D 490 × H 380 (Module 4S2P)
Charge current (It)	0.03 ~ 0.1 (In case of over 50°C, charge current is decreasing in a step-by-step)
Expected life (years ^{*2})	10 to 12
Additional function	Remote monitoring and health check function

^{*1} Under development. ^{*2} Based on Panasonic suggested condition.

BACKUP BATTERY SYSTEM

Battery module
(72 cells in series)



Battery pack



BMS / Charger

Battery module
4S2P



CR CYLINDRICAL LITHIUM PRIMARY BATTERY

Superb durability, long lifetime and support high rate discharge for various applications



FEATURES

- Allows long lifetime where battery cannot easily be replaced.
- Superb high rate discharge performance for various IoT devices.
- Usable for harsh environment from -40 to +85°C condition.

Model number	Nominal voltage (V)	Nominal ¹⁾ capacity (mAh)	Diameter (mm)	Height (mm)	Weight (g)	Temperature range ²⁾ (°C)
CR-AAK	3	1,650	14.5	50.5	18	-40 to +85
CR-AAU	3	1,800	14.5	50.5	18	-40 to +85
CR-2Z	3	1,000	15.6	27.0	11	-40 to +85
CR-2U	3	1,000	15.6	27.0	11	-40 to +85
CR-2/3AU	3	1,600	17.0	33.5	16	-40 to +85
CR-2/3AZ	3	1,600	17.0	33.5	16	-40 to +85
CR-AG	3	2,400	17.0	45.5	22	-40 to +85
CR-AGZ	3	2,700	17.0	45.5	23	-40 to +85

¹⁾ Standard discharge condition at 20°C (discharge cut-off 20 V)

²⁾ Please contact us when using over 70°C

APPLICATIONS

Remote sensing for infrastructure



IoT devices



Smoke detector



Smart door lock



Smart meter



Defibrillator

NICKEL METAL HYDRIDE BATTERY

Suitable for backup power of infrastructure application where long lifetime is required



FEATURES

- Wide temperature range from -20°C up to +75°C (in case of BK-60AAAHU, min. -10°C).
- Superb long-term reliability for backup usage.
- Low self-discharge characteristics.

Model number	Size	Nominal voltage (V)	Discharge capacity ¹⁾ (mAh)		Diameter (mm)	Total height (mm)	Weight (g)	Charging temperature (°C)	Discharging ²⁾ temperature (°C)
			Rated	Average					
BK-60AAAHU	AAA	1.2	500	550	10.5 +0/-0.7	44.5 +0/-1.5	12	-10 to +75	-20 to +75
BK-120AAAHU	AA	1.2	1,200	1,280	14.5 +0/-0.7	50.5 +0/-1.5	24	-20 to +75	-20 to +75
BK-220SCHU	SC	1.2	2,200	2,350	23.0 +0/-1.0	43.0 +0/-1.5	50	-20 to +75	-20 to +75
BK-310CHU	C	1.2	3,100	3,300	25.8 +0/-1.0	50.0 +0/-2.0	80	-20 to +75	-20 to +75
BK-1100FHU	F	1.2	11,000	12,000	33.0 +0/-1.0	91.0 +0/-2.5	250	-20 to +75	-20 to +85

¹⁾ 0.2 It discharge capacity after charging at 0.1 It for 16 hours. It (A) = rated capacity (Ah) / 1(h)

²⁾ Please contact us when using in the range of 75°C to 85°C.

APPLICATIONS



Pitch control system backup



UPS

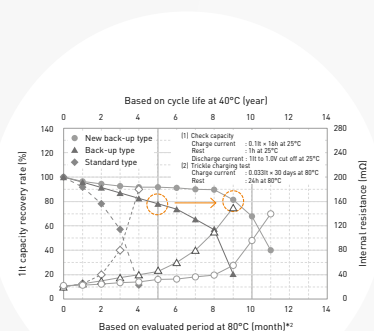
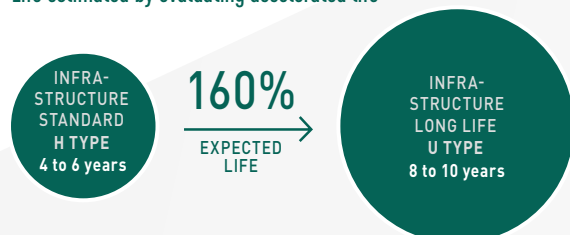


Solar devices



Emergency light

Life estimated by evaluating accelerated life



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Panasonic ENERGY

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