

# FIRE DETECTION & ALARM SYSTEM

A fire detection and alarm system is essential for noticing a fire early in its development. Steps can then be quickly taken to evacuate people from the building and to stop the fire in its infancy before it can cause major damage to property.

Fire detection can be both automatically and manually actuated. In an automatic system, an alarm is automatically sounded when a fire is detected using a system which monitors environmental changes that happen due to combustion of materials. The changes in the environment include the presence of smoke, increase in temperature and the rate of rise of heat in an enclosed area. Manually actuated alarm devices such as break glass stations and single station smoke alarms are usually installed in places where such devices can be easily reached and operated, such as near exits.



# UNIQUE Photoelectric Smoke Detector

Photoelectric smoke detectors issue a signal to a fire alarm system when dense smoke enters the device and interrupts the line of sight between a small light source and a photoelectric-sensitive cell, both installed inside the detector. The detector is an essential device for detecting large fires caused by smouldering materials.

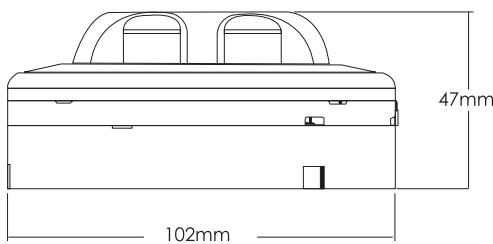
UNIQUE Photoelectric Smoke Detectors are made of rigid materials and designed to withstand heat.



AH 0711

### Features

- Easy to install and maintain
- Dual LEDs for 360° visibility
- Highly acid and rust resistant contact materials
- High endurance and fire-proof plastic covers
- Non-loosening screws on base terminal
- 2-wire or 3-wire standard detector. Add one relay output module for 4-wire unit.
- Passed strict EMC test which greatly eliminates false alarms caused by interference from nearby sources



TECHNICAL DATA	
<b>Model No.</b>	AH0711
<b>Code No.</b>	FAE-P0711
<b>Description</b>	2 Wire
<b>Alarm Current @ 24V DC 470 Ω</b>	40mA
<b>Operating Temperature Range</b>	-10°C to 55°C
<b>Operating Humidity Range</b>	10% to 93% Relative Humidity
<b>Voltage Range</b>	12V-30V DC
<b>Standby Current</b>	25 - 75 μA
<b>Sensitivity Setting</b>	Complies with UL 268
<b>Material</b>	Fire- proof plastic
<b>Size</b>	Ø102mm x 47mm (H)
<b>Weight</b>	130g
<b>Colour</b>	White
EFFECTIVE ALERT AREA	
<b>Building Height</b>	Under 4m      4m to 20m
<b>Area Covered</b>	150m <sup>2</sup> 75m <sup>2</sup>



# UNIQUE Photoelectric Smoke Detector

Photoelectric smoke detectors issue a signal to a fire alarm system when dense smoke enters the device and interrupts the line of sight between a small light source and a photoelectric-sensitive cell, both installed inside the detector. The detector is an essential device for detecting large fires caused by smouldering materials.

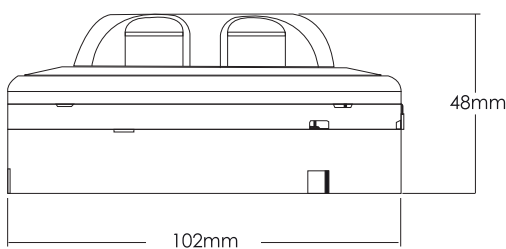
UNIQUE Photoelectric Smoke Detectors are made of rigid materials and designed to withstand heat.



AH 0621

## Features

- Easy to install and maintain
- Dual LEDs for 360° visibility
- Highly acid and rust resistant contact materials
- High endurance and fire-proof plastic covers
- Non-loosening screws on base terminal
- 2-wire or 3-wire standard detector. Add one relay output module for 4-wire unit.
- Passed strict EMC test which greatly eliminates false alarms caused by interference from nearby sources



TECHNICAL DATA	
<b>Model No.</b>	AH0621
<b>Code No.</b>	FAE-P0621
<b>Description</b>	2 Wire
<b>Alarm Current @ 24V DC 470 Ω</b>	40mA
<b>Operating Temperature Range</b>	-10°C to 37.8°C
<b>Operating Humidity Range</b>	10% to 93% Relative Humidity
<b>Voltage Range</b>	12V-30V DC
<b>Standby Current</b>	25 - 75 μA
<b>Sensitivity Setting</b>	Complies with UL 268
<b>Material</b>	Fire- proof plastic
<b>Size</b>	Ø102mm x 48mm (H)
<b>Weight</b>	130g
<b>Colour</b>	White
EFFECTIVE ALERT AREA	
<b>Building Height</b>	Under 4m      4m to 20m
<b>Area Covered</b>	150m <sup>2</sup> 75m <sup>2</sup>



# UNIQUE Single Station Smoke Detector

The UNIQUE Single Station Smoke Alarm is a self-contained unit that comprises a sensor and an alarm. The unit emits an audible signal when smoke is detected, indicating that a fire is nearby and giving warning that action is needed to put the fire out.



QA 22

### Features

- **Easy to install.** No wiring required.
- **Runs on a single 9V DC battery.** Optional 100-240V AC power plug.
- **Low battery warning.** Unit beeps and intermittent LED flashes.
- **Simple test method.** Press button to test alarm.
- **Optional relay out.** COM.NO.NC.
- **Optional series connection wiring.** Co-activate up to 15 detectors.

TECHNICAL DATA	
<b>Model No.</b>	QA22
<b>Code No.</b>	FAE-SSQA22
<b>Indicator</b>	Standby: Flash every 40 sec
	Alarm: Flash and beep continuously
	Battery Abnormal: Beeps and flash intermittently
<b>Sound</b>	90dB
<b>Operating Temperature Range</b>	-10°C to 55°C
<b>Operating Humidity Range</b>	10% to 93% Relative Humidity
<b>Power</b>	9V Battery
<b>Sensitivity Setting</b>	Complies with EN 54
<b>Material</b>	Fire- proof plastic
<b>Size</b>	Ø105mm x 40mm (H)
<b>Weight</b>	150g
<b>Colour</b>	White
<b>Optional Function</b>	Type 1: 9V Battery
	Type 2: Includes signal transfer COM. N.O. N.C
	Type 3: Built-in 100-240 V AC Plug
	Type 4: Type 2 + Type 3
EFFECTIVE ALERT AREA	
<b>Building Height</b>	Under 4m      4m to 20m
<b>Area Covered</b>	150m <sup>2</sup> 75m <sup>2</sup>



# UNIQUE Heat Detector

The UNIQUE Heat Detector (Model AH 0333) is a rate-of-rise detector that automatically monitors the change in temperature in an enclosed area and responds to a rapid rise in temperature by sending the signal to the fire indicator panel to sound an alarm to warn of a fire in progress.

Heat-sensitive elements in the unit detect the difference between the ambient temperature and the thermal heat caused by convection or radiation from a heat source such as a fire. The increase per minute, regardless of the starting temperature, is the rate-of-rise of temperature in the area.

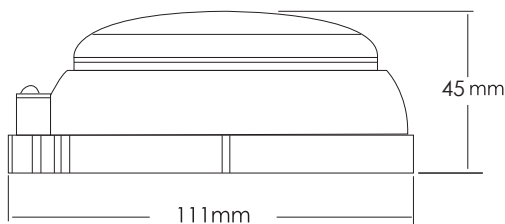
For fire prevention, UNIQUE Heat Detector should be installed in places where a smoke detector is not appropriate, such as in areas where smoke is a natural part of the surroundings or operations.



AH 0333

### Features

- Able to operate continuously for unlimited times
- Not affected by temperature as the conducting parts are made of gold coating to avoid oxidation
- Low incidence of false alarms due to a special alloy in components
- Completely sealed unit protects against humidity, dust and insects
- Passed strict quality control tests



TECHNICAL DATA		
<b>Model No.</b>	AH0333	
<b>Code No.</b>	FAE-H0333	
<b>Description</b>	2 Wire	
<b>Alarm Current @ 24V DC 470 Ω</b>	40mA	
<b>Operating Temperature Range</b>	0°C to 55°C	
<b>Operating Humidity Range</b>	10% to 93% Relative Humidity	
<b>Voltage Range</b>	12V-30V DC	
<b>Standby Current</b>	25 - 75 μA	
<b>Sensitivity Setting</b>	Complies with UL 268	
<b>Material</b>	Fire- proof plastic	
<b>Size</b>	Ø111mm x 45mm (H)	
<b>Weight</b>	137g	
<b>Colour</b>	White	
EFFECTIVE ALERT AREA		
<b>Building Height</b>	Fire Proof Building	Ordinary Building
<b>Under 4m</b>	90m <sup>2</sup>	50m <sup>2</sup>
<b>4m to 8m</b>	45m <sup>2</sup>	30m <sup>2</sup>



# System Sensor Detector

## SYSTEM SENSOR Photoelectric Smoke Detector

The 800 series of smoke are low-profile conventional 2-wire plug-in units that are connected to a fire indicator panel. Cost effective and highly reliable, these photoelectric detectors are designed to optically detect smoke in open areas and are to be used only with compatible UL listed panels.

Both Models 882 are UL listed and to be used only with compatible UL listed panels.



Model 882

TECHNICAL DATA	
<b>Code No.</b>	FAU-P882(Detector), FAU-PB882(Base)
<b>Operating Temperature Range</b>	0-49°C
<b>Operating Humidity Range</b>	10% to 93% Relative Humidity
<b>Latching Alarm</b>	Reset by momentary power interruption
<b>Operating Current</b>	8.5-35 V DC
<b>Standby Current</b>	≤ 90µA
<b>Alarm Current</b>	Min-10mA Max-130mA
<b>Diameter</b>	102mm (4")
<b>Height</b>	50mm (2")



## SYSTEM SENSOR Mechanical Heat Detector

The 5600 series of mechanical heat detectors are designed to protect property in situations where smoke detection is not practical, such as in garages and laundry rooms.

Model 5601P is a single circuit heat detector that is actuated at a fixed temperature of 135°F (57°C) or a rate-of-rise of 15°F (8.3°C) per minute.



Model 5601

TECHNICAL DATA	
<b>Model No.</b>	5601
<b>Code No.</b>	FAU-H5601
<b>Maximum Installation Temperature</b>	38°C
<b>Operating Humidity Range</b>	5% to 95% Relative Humidity
<b>Dimension with Mounting Bracket</b>	Ø116mm x 43mm (H)
<b>Alarm Temperature</b>	57°C
<b>Weight</b>	170g
<b>Rate-of-Rise Threshold</b>	8.3°C rise per minute
<b>Operating Voltage/Contract</b>	6-125 VAC/3A
<b>Input Terminal</b>	14-22 AWG





# Fire Detection Equipment

## UNIQUE Twin Flashing Lights



TECHNICAL DATA	
<b>Model No.</b>	KP305B (BULB), KP305L (LED)
<b>Code No.</b>	FAE-FLO-BU, FAE-FLO-LED
<b>Lens</b>	High efficient prismatic polycarbonate lens optimized for omnidirectional viewing.
<b>Luminary</b>	Filament Bulb/Ultra Bright LED
<b>Size</b>	210mm(W) x 77mm(D) x 108mm(H)
<b>Material (Casing &amp; Hood)</b>	Mild Steel
<b>Weight</b>	Epoxy Powder Red
<b>Finishing</b>	Black casing with green and red lens

## PROGRAM Gas Fire Extinguishing Panel



SIZE				
No. of Zones	Model no.	Code no.	Size (mm) (W x D x H)	
			Normal	Weatherproof
2	PE-HP2000	FAP-02ZCP-N	430 x 195 x 370	435 x 195 x 410
4	PE-HP4000	FAP-04ZCP-N	525 x 178 x 380	540 x 178 x 420
TECHNICAL DATA				
<b>Power Supply Input</b>			240V AC 50Hz	
<b>Operating System</b>			24V DC	
<b>Charger</b>			Automatic/Trickle Type	
<b>Charging Rate</b>			300mA (Trickle)	
			2.5A (Boost)	
STANDBY MODE				
<b>Master</b>			75mA	
<b>Per zone (with detectors)</b>			5mA	
<b>Flashing Lights (Red LED)</b>			75mA	
ALARM MODE				
<b>Master</b>			120mA	
<b>Per Trigger Zone</b>			70mA	
<b>Output Devices</b>			100mA	
<b>Flashing Lights (Red LED)</b>			75mA	
<b>Per Bell</b>			30mA	

### UNIQUE Manual Key Switch



TECHNICAL DATA	
Model No.	KP307
Code No.	FAE-KS
Size	105mm (W) x 100mm(D) x 105mm (H)
Material	Mild Steel
Weight	0.76kg
Colour	Signal Red

### UNIQUE Fire Alarm Bell



TECHNICAL DATA				
Model No.	D102			
Code No.	FAE-6AB			
Supply Voltage	110/ 240V (AC)			
	12/24V (DC)			
Sound Output	92 - 105 dB			
Current Consumption	0.05 A			
Size	150mm(6")			
Finishing	Red			
DECIBEL SPECIFICATION				
AC Type		Decibel Rating @ 1m (3ft)		
Voltage	Amps	100mm(4")	150mm (6")	200mm (8")
110	0.0097	92dB	95dB	97dB
240	0.0033	98dB	105dB	106dB
DC Type		Decibel Rating @ 1m (3ft)		
12	0.008	95dB	99dB	100dB
24	0.005	96dB	103dB	105dB

### Emergency Key Box



TECHNICAL DATA	
Model No.	D106
Code No.	FAD-EKB
Size	Ø100mm x 32mm (H)
Material	ABS Plastic
Colour	Red
Net Weight	125g



## UNIQUE Manual Call Point

The UNIQUE Manual Call Point is used to send a signal to occupants in a building that a fire exists within the building. Snapping the glass by pressing on its centre will activate an alarm. It is used in fire detection systems with central control equipment and meets the requirements of BS5839 Part 2.

Alternative terminals are provided for open or close circuits. There are openings at the back, bottom and the back of the device that allows for 3/4" conduits.



TECHNICAL DATA	
<b>Model No.</b>	KP302
<b>Code No.</b>	FAE-MCP
<b>Size</b>	88mm(W) x 88mm(H) x 55mm(D)
<b>Current Ratings</b>	12/24 V DC 10A
	48V DC 3A
	250V AC 10A
<b>Net/Gross Weight</b>	0.15/0.18kg
<b>Connection</b>	Terminal – Max 2.5mm <sup>2</sup> Cable
<b>Material</b>	ABS plastic with polycarbonate panel

## Unique Smoke Detector Device

To test a heat detector, the tester device uses an in-built gas torch to briefly increase the temperature around the heat detector until the LED lights in the detector switches on to indicate that the unit is working. Smoke detectors are tested using the same tester to spray aerosol particles into the detector. The smoke detector is in working order when the LED lights in the detector switch on.



### Features

- Simple to operate
- Sturdy 5-section extension pole is extendable from 1.44m to 5m
- Optional Removal Tool attachment easily unscrews the cover of detector
- Temperature of in-built gas torch is adjustable
- Capable of 500 test sprays (minimum)

TECHNICAL DATA	
<b>Model No.</b>	AH-03128
<b>Code No.</b>	FAU-STD
<b>Characteristics</b>	For testing heat and smoke detectors.
<b>Component</b>	Extension pole, smoke tester, gas torch & removal device.

# UNIQUE Sealed Lead-Acid Battery

## 12V 7AH

Code: BAT-007AH



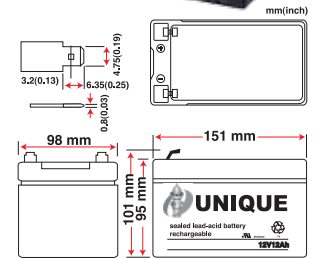
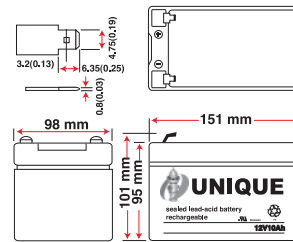
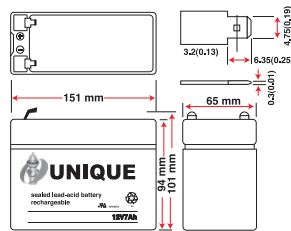
## 12V 10AH

Code: BAT-010AH



## 12V 12AH

Code: BAT-012AH

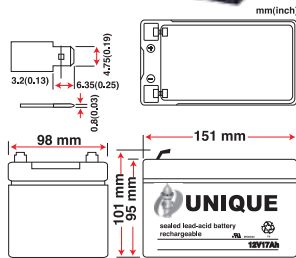


### SPECIFICATION

Specification	12V 7AH	12V 10AH	12V 12AH
<b>Nominal Voltage</b>	12v	12v	12v
<b>Approx Weight</b>	2.0 Kgs	3.17 Kgs	3.45 Kgs
<b>Design Life</b>	4 years	4 years	4 years
<b>Nominal Capacity 77°F (25°C)</b>	20 HR (0.325 A, 10.5V) = 7.0 Ah 10 HR (0.63 A, 10.5V) = 6.5 Ah 5 HR (1.11 A, 10.5V) = 5.55 Ah 1 HR (4.32 A, 9.6V) = 4.32 Ah	20 HR (0.5 A, 10.5V) = 10 Ah 10 HR (0.91 A, 10.5V) = 9.1 Ah 5 HR (1.6 A, 10.5V) = 8.0 Ah 1 HR (6.66 A, 9.6V) = 6.6 Ah	20 HR (0.6 A, 10.5V) = 12 Ah 10 HR (1.14 A, 10.5V) = 11.4 Ah 5 HR (2.05 A, 10.5V) = 10.3 Ah 1 HR (8.14 A, 9.6V) = 8.14 Ah
<b>Internal Resistance (Fully charged Battery at 25°C)</b>	Approx. 25 mΩ	Approx. 25 mΩ	Approx. 18 mΩ
<b>Self Discharge</b>	3% of capacity declined per month at 20°C(average)	3% of capacity declined per month at 20°C(average)	3% of capacity declined per month at 20°C(average)
<b>Operating Temperature Range</b>	Discharge.... -15°C ~ 55°C Charge.... -10°C ~ 55°C Storage.... -15°C ~ 55°C	Discharge.... -15°C ~ 55°C Charge.... -10°C ~ 55°C Storage.... -15°C ~ 55°C	Discharge.... -15°C ~ 55°C Charge.... -10°C ~ 55°C Storage.... -15°C ~ 55°C
<b>Max. Discharge Current 77°F (25°C)</b>	97.5 A(5S)	150 A(5S)	180 A(5S)
<b>Short Circuit Current</b>	325A	500A	600A
<b>Charge Methods: Constant Voltage Charge 77°F (25°C)</b>	Cycle use 14.5 - 14.9V Max.Charging Current: 1.95A Temperature compensation: -15mv/°C Standby use: 13.6 v ~ 13.8 v Temperature compensation: -10mv/°C	Cycle use 14.5 - 14.9V Max.Charging Current: 3.0A Temperature compensation: -15mv/°C Standby use: 13.6 v ~ 13.8 v Temperature compensation: -10mv/°C	Cycle use 14.5 - 14.9V Max.Charging Current: 3.60A Temperature compensation: -15mv/°C Standby use: 13.6 v ~ 13.8 v Temperature compensation: -10mv/°C

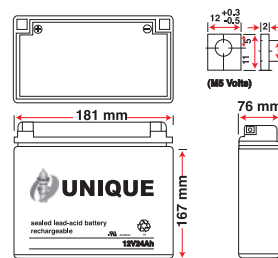
### 12V 17AH

Code: BAT-017AH



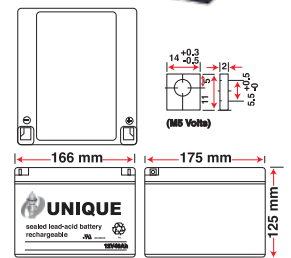
### 12V 24AH

Code: BAT-024AH



### 12V 40AH

Code: BAT-040AH

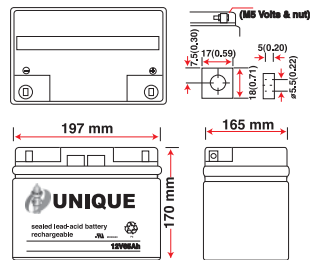


## SPECIFICATION

Specification	12V 17AH	12V 24AH	12V 40AH
<b>Nominal Voltage</b>	12v	12v	12v
<b>Approx Weight</b>	5.0 Kgs	8.0 Kgs	12.85 Kgs
<b>Design Life</b>	4 years	4 years	9 years
<b>Nominal Capacity 77°F (25°C)</b>	20 HR (0.85 A, 10.5V) = 17.0 Ah 10 HR (1.68 A, 10.5V) = 16.8 Ah 5 HR (3.00 A, 10.5V) = 15.0 Ah 1 HR (12.0A, 9.6V) = 12.0 Ah	20 HR (1.2 A, 10.5V) = 24 Ah 10 HR (2.37 A, 10.5V) = 2.37 Ah 5 HR (4.1 A, 10.5V) = 20.5 Ah 1 HR (16 A, 9.6V) = 16 Ah	20 HR (2.1 A, 10.5V) = 42 Ah 10 HR (4.0 A, 10.5V) = 40 Ah 5 HR (7.2 A, 10.5V) = 36 Ah 1 HR (2.5 A, 9.6V) = 25 Ah
<b>Internal Resistance (Fully charged Battery at 25°C)</b>	Approx. 17 mΩ	Approx. 13 mΩ	Approx. 10 mΩ
<b>Self Discharge</b>	3% of capacity declined per month at 20°C(average)	3% of capacity declined per month at 20°C(average)	3% of capacity declined per month at 20°C(average)
<b>Operating Temperature Range</b>	Discharge.... -15°C ~ 55°C Charge.... -10°C ~ 55°C Storage.... -15°C ~ 55°C	Discharge.... -15°C ~ 55°C Charge.... -10°C ~ 55°C Storage.... -15°C ~ 55°C	Discharge.... -15°C ~ 55°C Charge.... -10°C ~ 55°C Storage.... -15°C ~ 55°C
<b>Max. Discharge Current 77°F (25°C)</b>	225 A(5S)	300 A(5S)	400 A(5S)
<b>Short Circuit Current</b>	850A	1200A	900A
<b>Charge Methods: Constant Voltage Charge 77°F (25°C)</b>	Cycle use 14.5 - 14.9V Max.Charging Current: 5.1A Temperature compensation: -15mv/°C Standby use: 13.6 v ~ 13.8 v Temperature compensation: -10mv/°C	Cycle use 14.5 - 14.9V Max.Charging Current: 7.2A Temperature compensation: -15mv/°C Standby use: 13.6 v ~ 13.8 v Temperature compensation: -10mv/°C	Cycle use 14.5 - 14.9V Max.Charging Current: 12.0A Temperature compensation: -15mv/°C Standby use: 13.6 v ~ 13.8 v Temperature compensation: -10mv/°C

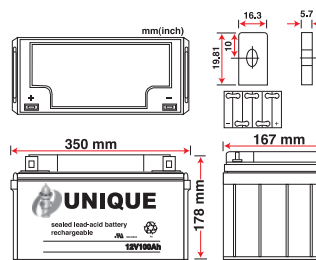
### 12V 65AH

Code: BAT-065AH



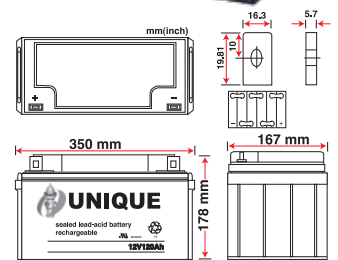
### 12V 100AH

Code: BAT-100AH



### 12V 120AH

Code: BAT-120AH



## SPECIFICATION

Parameter	12V 65AH	12V 100AH	12V 120AH
<b>Nominal Voltage</b>	12v	12v	12v
<b>Approx Weight</b>	20.50 Kgs	31.50 Kgs	38 Kgs
<b>Design Life</b>	9 years	9 years	9 years
<b>Nominal Capacity 77°F (25°C)</b>	20 HR (3.45 A, 10.5V) = 69 Ah 10 HR (6.5 A, 10.5V) = 65 Ah 5 HR (11.5 A, 10.5V) = 57.5 Ah 1 HR (39.4 A, 9.6V) = 39.4 Ah	20 HR (5.35 A, 10.5V) = 107 Ah 10 HR (10.0 A, 10.5V) = 100 Ah 5 HR (18.2 A, 10.5V) = 91 Ah 1 HR (62.4 A, 9.6V) = 62.4 Ah	20 HR (6.35 A, 10.5V) = 127 Ah 10 HR (12.0 A, 10.5V) = 120 Ah 5 HR (21.6 A, 10.5V) = 108 Ah 1 HR (74.9 A, 9.6V) = 74.9 Ah
<b>Internal Resistance (Fully charged Battery at 25°C)</b>	Approx. 6 mΩ	Approx. 5 mΩ	Approx. 5 mΩ
<b>Self Discharge</b>	3% of capacity declined per month at 20°C(average)	3% of capacity declined per month at 20°C(average)	3% of capacity declined per month at 20°C(average)
<b>Operating Temperature Range</b>	Discharge.... -15°C ~ 55°C Charge.... -10°C ~ 55°C Storage.... -15°C ~ 55°C	Discharge.... -15°C ~ 55°C Charge.... -10°C ~ 55°C Storage.... -15°C ~ 55°C	Discharge.... -15°C ~ 55°C Charge.... -10°C ~ 55°C Storage.... -15°C ~ 55°C
<b>Max. Discharge Current 77°F (25°C)</b>	650 A(5S)	900 A(5S)	950 A(5S)
<b>Short Circuit Current</b>	1700A	2100A	2200A
<b>Charge Methods: Constant Voltage Charge 77°F (25°C)</b>	Cycle use 14.5 - 14.9V Max.Charging Current: 19.5A Temperature compensation: -15mv/°C Standby use: 13.6 v ~ 13.8 v Temperature compensation: -10mv/°C	Cycle use 14.5 - 14.9V Max.Charging Current: 30.0A Temperature compensation: -15mv/°C Standby use: 13.6 v ~ 13.8 v Temperature compensation: -10mv/°C	Cycle use 14.5 - 14.9V Max.Charging Current: 36.0A Temperature compensation: -15mv/°C Standby use: 13.6 v ~ 13.8 v Temperature compensation: -10mv/°C