

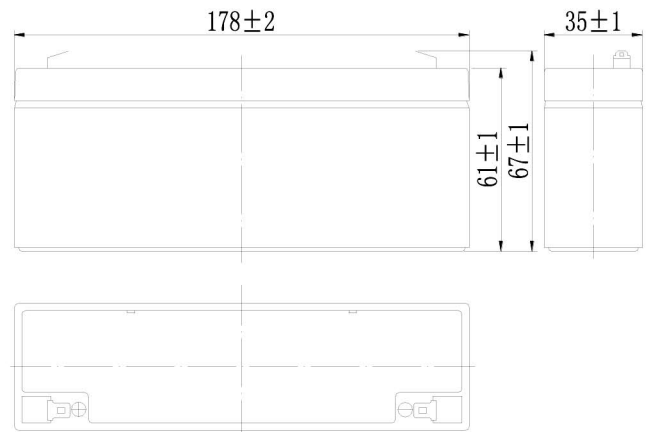
HX12-2.3(12V2.3Ah)

Specifications

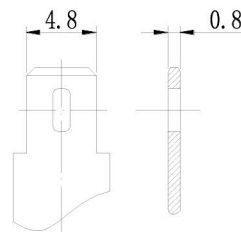
Nominal Voltage		12 V
Capacity (25°C)	20HR(10.5V)	2.3Ah
	10HR(10.5V)	2.15Ah
	1HR(9.60V)	1.5Ah
Dimension	Length	178 ± 2mm (7.01inch)
	Width	35 ± 1mm (1.38inch)
	Height	61 ± 1mm (2.40inch)
	Total Height	67 ± 1mm (2.64inch)
Approx. Weight		0.9kg (1.98lbs) ± 5%
Terminal type		F1
Internal resistance (Fully charged, 25°C)		Approx. 60mΩ
Capacity affected by temperature (20HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge (25°C)	3 month	Remaining Capacity: 91%
	6 month	Remaining Capacity: 82%
	12 month	Remaining Capacity: 65%
Nominal operating temperature		25°C ± 3°C (77°F ± 5°F)
Operating temperature range	Discharge	-15°C ~ 50°C (5°F ~ 122°F)
	Charge	-10°C ~ 50°C (14°F ~ 122°F)
	Storage	-20°C ~ 50°C (-4°F ~ 122°F)
Float charging voltage(25°C)		13.60 to 13.80V Temperature compensation: -18mV/°C
Cyclic charging voltage(25°C)		14.50 to 15.00V Temperature compensation: -30mV/°C
Maximum charging current		0.69A
Maximum discharge current		34.5A(5 sec.)
Designed floating life(20°C)		5 years



Dimensions



Terminal



F1

Constant Current Discharge Characteristics (A, 25°C)

F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	8.79	5.57	4.35	2.45	1.51	0.82	0.57	0.47	0.40	0.218	0.117
9.90V	8.52	5.40	4.24	2.40	1.48	0.82	0.57	0.47	0.40	0.217	0.116
10.2V	8.17	5.18	4.09	2.33	1.45	0.81	0.56	0.47	0.40	0.216	0.116
10.5V	7.82	4.95	3.95	2.27	1.42	0.80	0.56	0.46	0.39	0.215	0.115
10.8V	7.38	4.68	3.74	2.19	1.37	0.78	0.54	0.45	0.38	0.210	0.113

Constant Power Discharge Characteristics (Watt, 25°C)

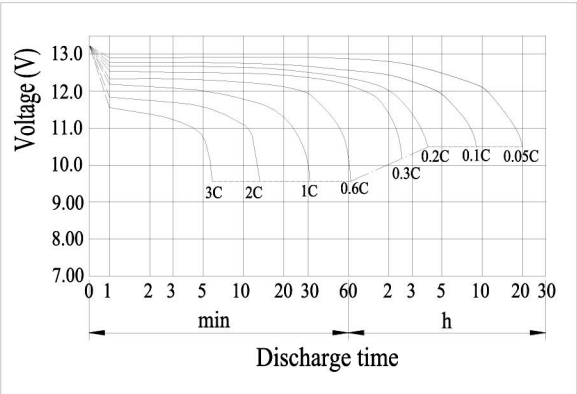
F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	98.1	62.8	49.6	28.1	17.4	9.64	6.77	5.62	4.79	2.61	1.40
9.90V	95.1	60.9	48.4	27.5	17.2	9.58	6.73	5.58	4.76	2.60	1.40
10.2V	91.2	58.4	46.6	26.7	16.7	9.50	6.69	5.54	4.73	2.59	1.39
10.5V	87.3	55.9	45.0	26.0	16.4	9.36	6.64	5.51	4.70	2.58	1.38
10.8V	82.4	52.7	42.6	25.1	15.9	9.12	6.44	5.34	4.56	2.52	1.35

Note: The above characteristics data can be obtained within three charge/discharge cycles.

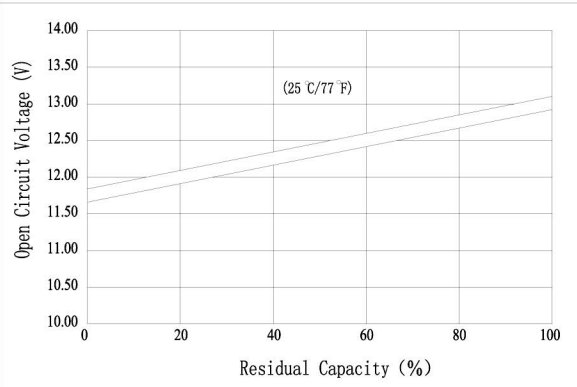
Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Sulfuric acid	Rubber	Copper

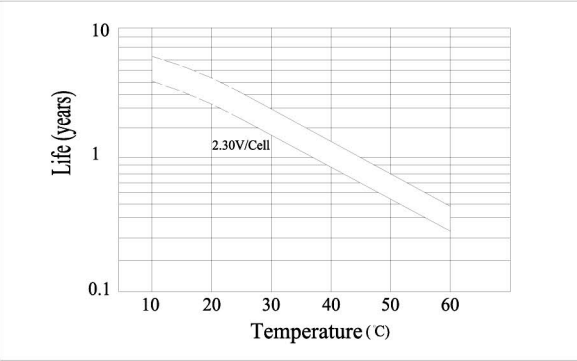
Discharge Characteristics(25°C)



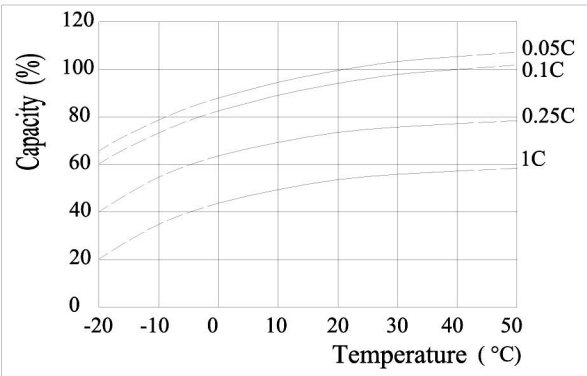
The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



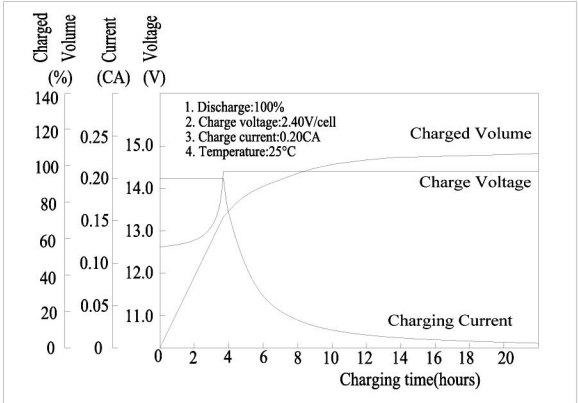
Floating Life on Temperature



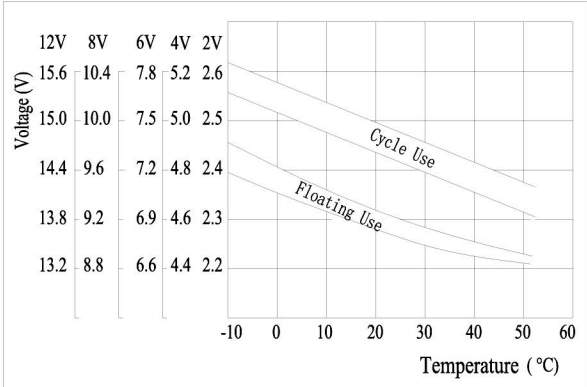
Effect of Temperature on Capacity



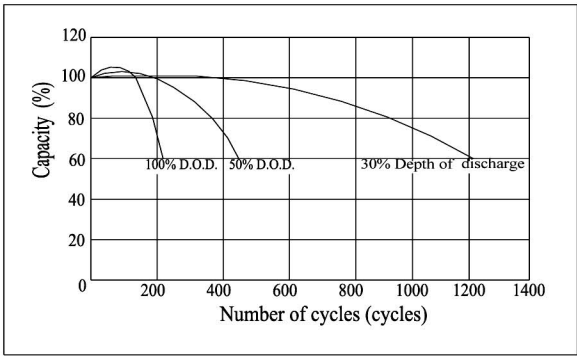
Charging Characteristics(25°C)



The Relationship for Charging Voltage and Temperature



Cycle Life on D.O.D(25°C)



Self-discharge Characteristics

