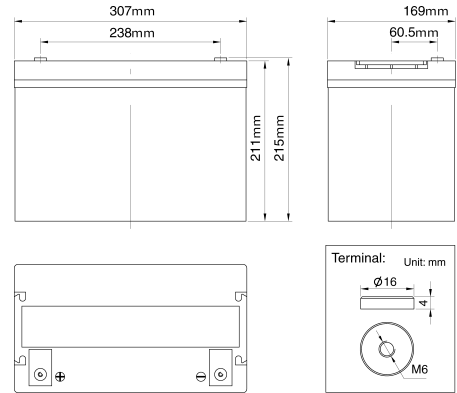


HL90-12



Specifications

Nominal Voltage		12V
Rated Capacity(20 hour rate)		90AH
Dimension	Total Height (with terminals)	215mm(8.46inches)
	Height	211mm(8.31inches)
	Length	307mm(12.09inches)
	Width	169mm(6.65inches)
Weight		Approx.30.9kg(67.46lbs)

Characteristics

Capacity 77°F(25°C)	20 hour rate(4.5A)	90AH
	10 hour rate(8.37A)	83.7AH
	5 hour rate(15.4A)	77AH
	1 hour rate(54A)	54AH
Internal Resistance	Full charged Battery 77°F(25°C)	5mΩ
Capacity affected by Temperature (20 hour rate)	104°F(40°C)	102%
	77°F(25°C)	100%
	32°F(0°C)	85%
	5°F(-15°C)	65%
Self-Discharge 77°F(25°C)	Capacity after 3 month storage	88%
	Capacity after 6 month storage	76%
	Capacity after 12 month storage	53%
Max. Discharge Current 77°F(25°C)	1350A(5S)	
Terminal	Standard	F15
	Optional	
Charging (Constant Voltage)	Cycle	Initial Charging Current 18A Or Small 14.5V~14.9V/77°F(25°C)
	Float	13.6V~13.8V/77°F(25°C)

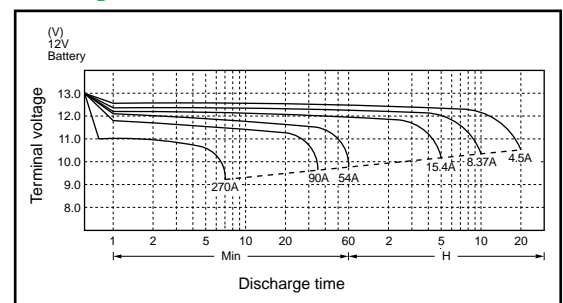
Constant Power Discharge Watts Per Cell @ 77°F(25°C)

End Point Volt/cell	Operation Time To End Point Voltage								
	5min	10min	15min	20min	30min	40min	50min	60min	90min
1.75	477	352	282	237	182	151	128	111	80.0
1.70	520	370	293	244	185	153	130	112	81.0
1.67	538	383	300	248	188	155	131	113	82.0
1.65	543	388	305	250	190	156	132	114	82.7
1.60	563	395	310	254	193	157	133	115	83.3

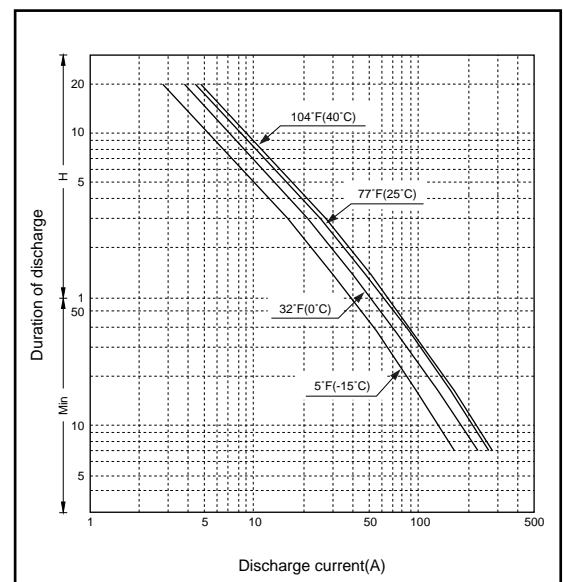
Constant Current Discharge Rating Amperes @ 77°F(25°C)

End Point Volt/cell	Operation Time To End Point Voltage													
	5min	10min	30min	60min	2hr	3hr	4hr	5hr	6hr	7hr	8hr	10hr	20hr	24hr
17.5	259	150	95.0	54.0	32.0	23.3	18.4	15.4	13.1	11.5	10.27	8.37	4.50	3.78
1.80	228	138	89.7	51.2	30.9	22.7	17.9	15.0	12.7	11.2	9.97	8.20	4.40	3.71
1.85	190	125	82.0	47.8	29.3	21.3	16.8	14.2	12.0	10.6	9.43	7.86	4.23	3.54
1.90	149	104	70.3	41.2	26.6	19.3	15.4	13.0	11.1	9.73	8.77	7.32	4.00	3.32

Discharge characteristics 77°F(25°C)



Duration of discharge vs. Discharge current



Note The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values.