



AL Series - Long Life Standby

AL12-65s (12V65AH)

Specification

Nominal Voltage	12V	
Nominal Capacity(10HR)	65.0AH	
Dimension	Length	348±3mm (13.70 inches)
	Width	167±2mm (6.57 inches)
	Container Height	178±2mm (7.01 inches)
	Total Height (with Terminal)	178±2mm (7.01 inches)
Approx Weight	Approx 21.0 Kg (46.3 lbs)	
Terminal	T6 / T11	
Container Material	ABS	
Rated Capacity	69.5AH/3.48A	(20hr , 1.80V/cell, 25°C/77°F)
	65.0AH/6.50A	(10hr, 1.80V/cell, 25°C/77°F)
	56.5AH/11.3A	(5hr, 1.75V/cell, 25°C/77°F)
	50.7AH/16.9A	(3hr, 1.75V/cell, 25°C/77°F)
	40.3AH/40.3A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	780A (5s)	
Internal Resistance	Approx 7.3mΩ	
Operating Temp. Range	Discharge : -15~50°C (5~122°F)	
	Charge : 0~40°C (32~104°F)	
	Storage : -15~40°C (5~104°F)	
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 19.5A. Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Synergy AL series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



Applications

- ◆ UPS and EPS
- ◆ Emergency light
- ◆ Railway signal and aircraft signal system
- ◆ Marine and power stations Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply, DC power supply



Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	76.1	64.0	56.7	47.1	36.3	31.1	20.1	15.1	12.4	10.4	9.13	7.33	6.30	3.36
1.80V/cell	87.0	71.8	62.7	51.1	39.2	32.8	21.6	16.3	13.2	11.1	9.68	7.71	6.50	3.48
1.75V/cell	98.8	80.9	69.3	55.5	42.7	35.8	22.5	16.9	13.6	11.3	10.0	7.97	6.67	3.57
1.70V/cell	111.6	89.8	76.5	60.6	46.0	37.8	23.7	17.8	14.2	12.0	10.5	8.30	6.93	3.66
1.65V/cell	119.9	96.2	81.4	64.0	48.7	39.1	24.6	18.5	14.8	12.3	10.8	8.59	7.13	3.77
1.60V/cell	131.9	105.3	88.4	68.3	50.6	40.3	25.2	19.0	15.1	12.6	11.1	8.73	7.27	3.83

Constant Power Discharge (Watts) at 25 °C (77°F)

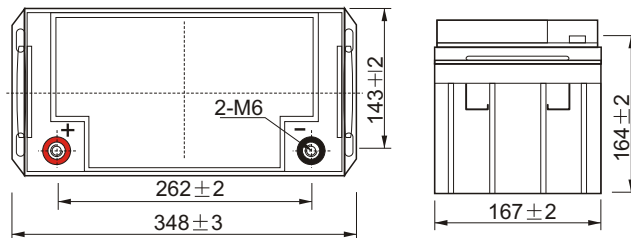
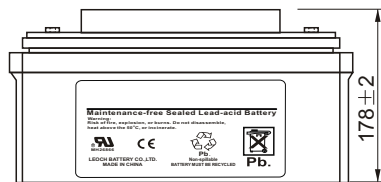
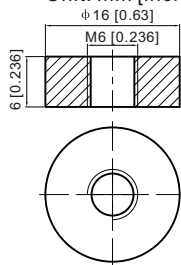
F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	142.0	120.6	108.1	90.6	70.5	60.6	39.5	29.8	24.5	20.6	18.1	14.6	12.6	6.72
1.80V/cell	160.6	133.7	117.8	97.0	75.5	63.6	42.1	31.8	25.9	21.8	19.1	15.3	13.0	6.95
1.75V/cell	179.5	148.8	128.9	104.5	81.6	69.0	43.7	33.0	26.7	22.2	19.7	15.8	13.3	7.12
1.70V/cell	198.2	162.8	141.3	113.5	87.5	72.8	45.9	34.6	27.8	23.5	20.6	16.5	13.8	7.29
1.65V/cell	210.9	173.0	149.2	118.8	91.8	74.7	47.3	35.9	28.8	24.1	21.2	17.0	14.2	7.51
1.60V/cell	226.8	186.4	160.3	125.8	94.9	76.6	48.3	36.6	29.4	24.6	21.6	17.2	14.4	7.62



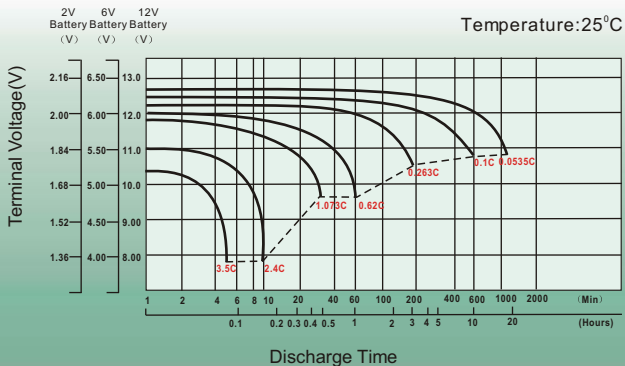
Dimensions

T6 Terminal

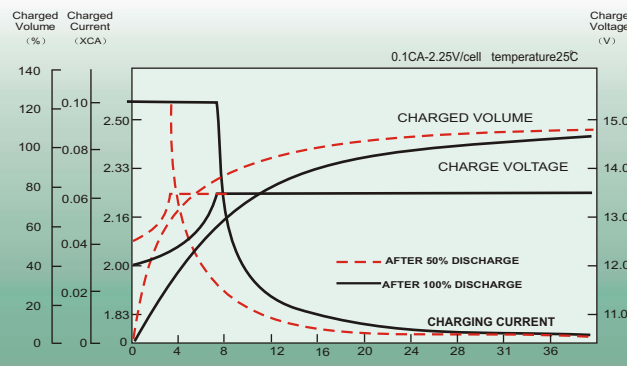
Unit: mm [inches]



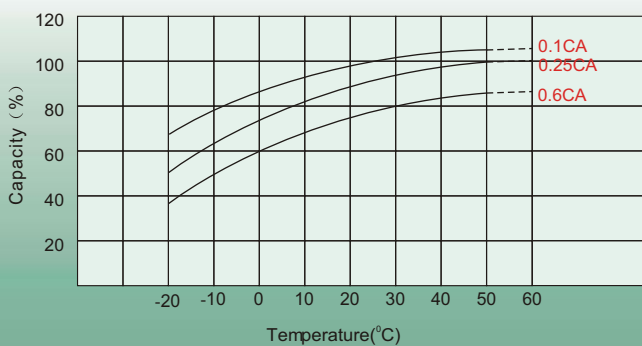
Discharge Characteristics



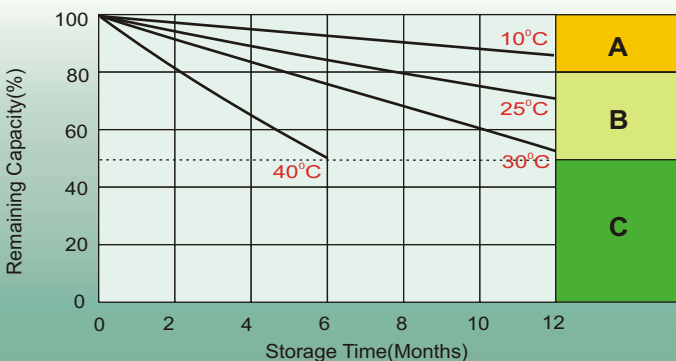
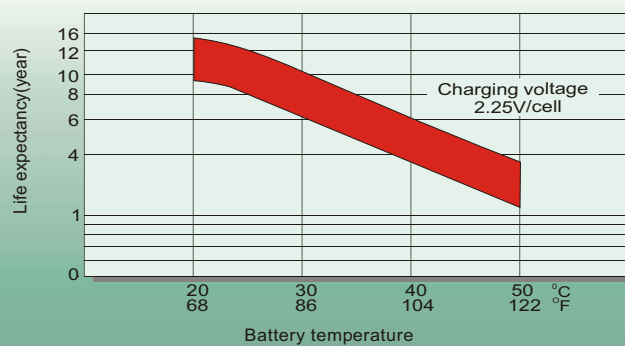
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics

- A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
 1. Charged for above 3 days at limited current 0.25CA and constant volatge 2.25V/cell.
 2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
 3. Charged for 8~10hours at limited current 0.05CA .
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

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