



AL Series - Long Life Standby

AL12-75s (12V75AH)

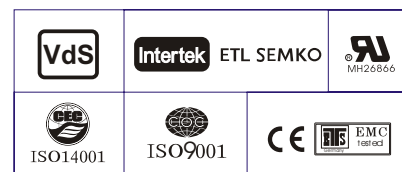
Specification

Nominal Voltage	12V	
Nominal Capacity(10HR)	75.0AH	
Dimension	Length	259±2mm (10.20 inches)
	Width	168±2mm (6.61 inches)
	Container Height	208±2mm (8.19 inches)
	Total Height (with Terminal)	214±2mm (8.43 inches)
Approx Weight	Approx 23.0 Kg (50.7 lbs)	
Terminal	T6 / T9 / T14	
Container Material	ABS	
Rated Capacity	80.2AH/4.01A	(20hr, 1.80V/cell, 25°C/77°F)
	75.0AH/7.50A	(10hr, 1.80V/cell, 25°C/77°F)
	65.3AH/13.05A	(5hr, 1.75V/cell, 25°C/77°F)
	58.5AH/19.5A	(3hr, 1.75V/cell, 25°C/77°F)
	46.5AH/46.5A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	900A (5s)	
Internal Resistance	Approx 6.6mΩ	
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 22.5A. 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	87.8	73.8	65.5	54.3	41.9	35.9	23.2	17.5	14.3	12.0	10.5	8.46	7.27	3.88
1.80V/cell	100.4	82.9	72.4	59.0	45.2	37.8	25.0	18.8	15.2	12.8	11.2	8.90	7.50	4.01
1.75V/cell	114.0	93.4	80.0	64.1	49.3	41.3	26.0	19.5	15.7	13.1	11.5	9.20	7.70	4.11
1.70V/cell	128.8	103.6	88.3	70.0	53.1	43.7	27.3	20.5	16.4	13.8	12.1	9.58	8.00	4.22
1.65V/cell	138.3	111.0	93.9	73.8	56.2	45.2	28.3	21.4	17.1	14.2	12.5	9.91	8.22	4.35
1.60V/cell	152.2	121.5	102.1	78.8	58.4	46.5	29.1	21.9	17.5	14.6	12.8	10.1	8.39	4.42

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

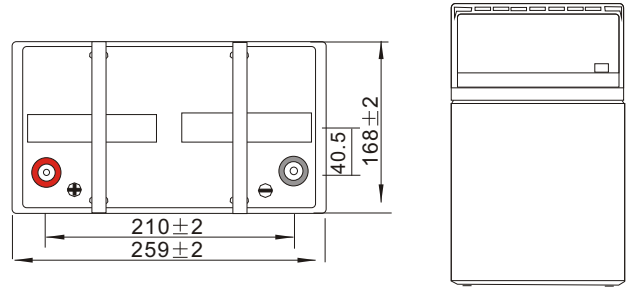
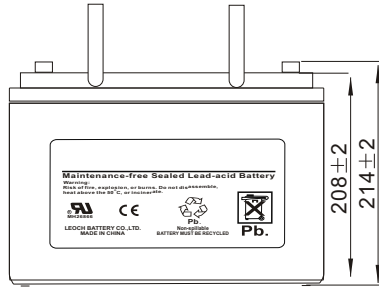
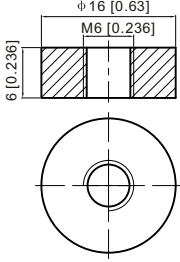
F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	163.8	139.2	124.7	104.6	81.4	69.9	45.5	34.4	28.2	23.8	20.9	16.9	14.5	7.76
1.80V/cell	185.3	154.2	135.9	111.9	87.1	73.4	48.6	36.7	29.9	25.1	22.1	17.7	15.0	8.02
1.75V/cell	207.1	171.7	148.8	120.6	94.1	79.6	50.4	38.0	30.8	25.6	22.7	18.2	15.4	8.21
1.70V/cell	228.7	187.9	163.0	130.9	101.0	84.0	53.0	40.0	32.1	27.1	23.8	19.0	15.9	8.41
1.65V/cell	243.3	199.6	172.1	137.0	105.9	86.2	54.6	41.4	33.2	27.8	24.5	19.6	16.4	8.67
1.60V/cell	261.7	215.1	185.0	145.2	109.5	88.4	55.7	42.3	33.9	28.4	25.0	19.9	16.7	8.79



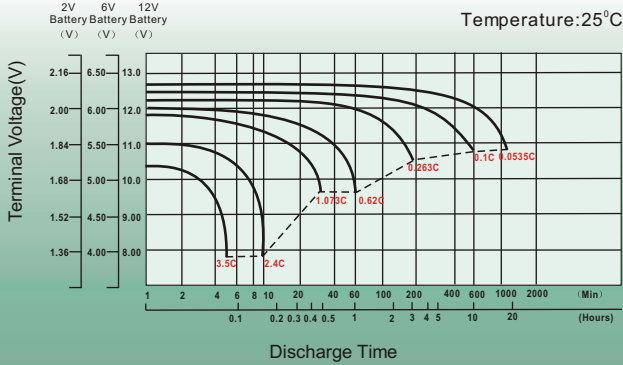
Dimensions

T6 Terminal

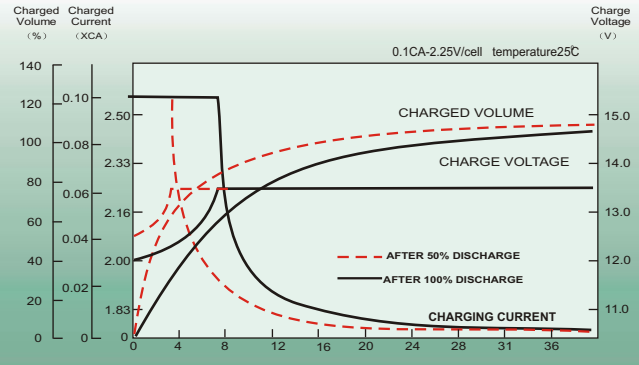
Unit: mm [inches]



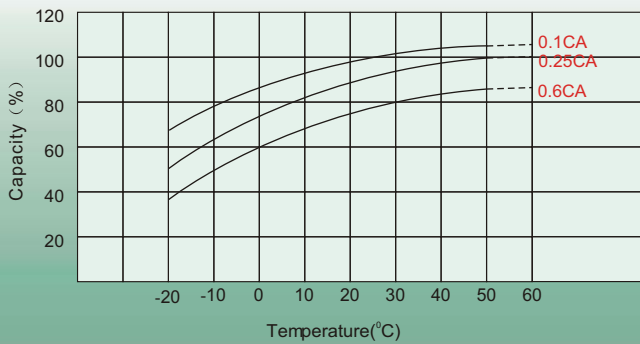
Discharge Characteristics



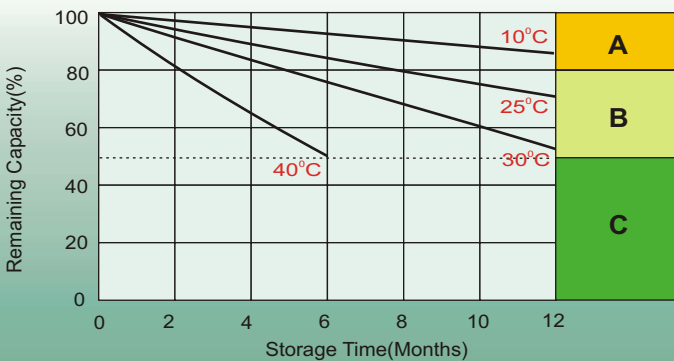
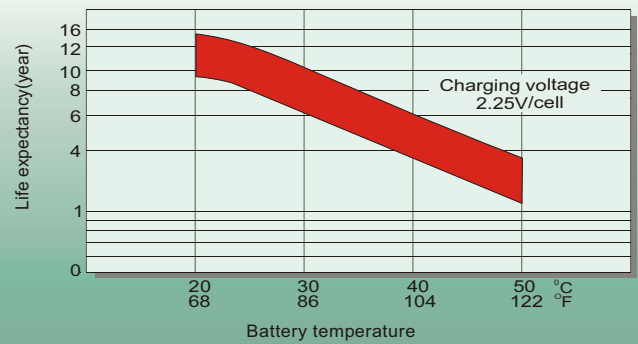
Float Charging Characteristics



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 20 hours at limited current 0.25CA and constant volatge 2.45V/cell.
 3. Charged for 8-10 hours 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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