



12V

103Ah

SLA

AGM

12TP110AFT-FR

Rechargeable AGM Sealed Lead Acid Battery

SPECIFICATIONS

Nominal Voltage	12V	
Nominal Capacity		
20 hour rate (5.15A to 10.5V)		103Ah
10 hour rate (10A to 10.8V)		100Ah
5 hour rate (17A to 10.2V)		85Ah
1 hour rate (60A to 9.6V)		60Ah
1C (100A to 9.6V)		50Ah
Weight	Approx. 30kg	
Internal Resistance (at 1KHz)	Approx. 4.3mΩ	
Maximum Discharge Current (5 secs)	1000A	
Charge Methods at 25°C		
Cycle Use		
Charging Voltage	14.4V to 15.0V	
Coefficient -5.0mV/°C/Cell		
Maximum Charging Current	30.9A	
Standby Use		
Float Charging Voltage	13.5V to 13.8V	
Coefficient -3.0mV/°C/Cell		
Operating Temperature Range		
Charge	-15°C to 50°C*	
Discharge	-15°C to 50°C	
Storage	-15°C to 40°C	
Charge Retention (Shelf Life) at 20°C		
1 month	98%	
3 months	94%	
6 months	85%	
Case Material	UL94 V-0 Flame Retardant	
Termination	F18 (M8 Bolt)	

Description of Torque Value of Hardware for the Terminals

Recommended Torque Value	M8: 12 N-m (122kgf-cm)
Max. Allowable Torque Value	M8: 15 N-m (153kgf-cm)

Design Life 12 Years

Classified as a non-spillable battery.

Approved for transportation by:

- Air (IATA/ICAO provision A67)
- Road
- Sea (per IMDG Special Provision 238)



Barcode



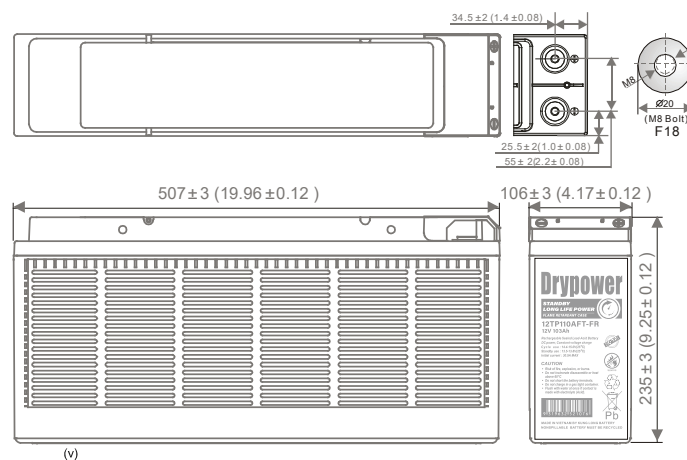
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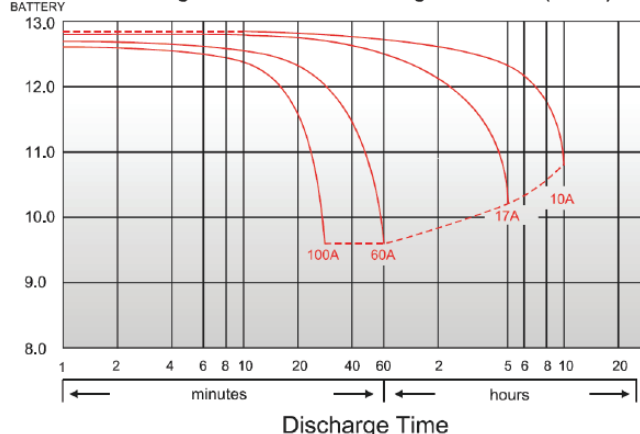
UL94 V-0
FLAME RETARDANT
CASE

DIMENSIONS

mm (inch)



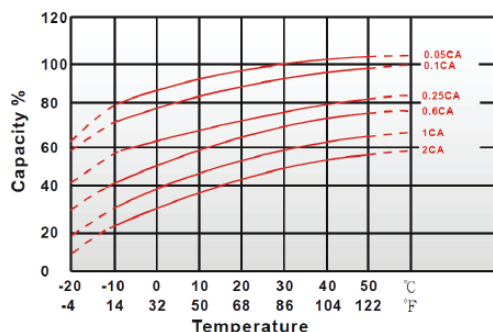
(v) Discharge Time VS. Discharge Current (25°C)



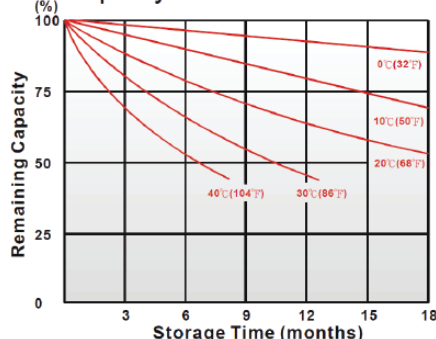
* If charging above 40°C, always use temperature-compensated charging (refer charge methods above). High temperature use accelerates ageing; as a general guide, service life halves for every 10°C sustained rise above 25°C. Consult the engineers at MI for more information if required.

CHARACTERISTICS CHARTS

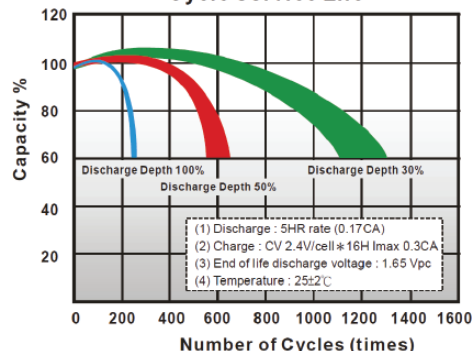
Effect of Temperature on Capacity 25°C (77°F)



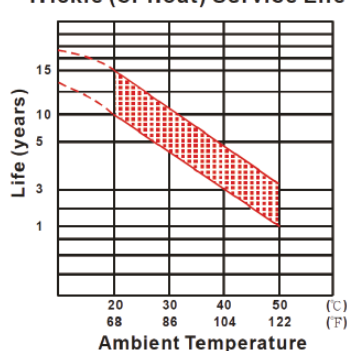
Capacity Retention Characteristic



Cycle Service Life



Trickle (or float) Service Life



FEATURES & BENEFITS

- ◆ Industry leading 99.99% pure lead content for superior service life and dependable performance.
- ◆ Long service life to reduce maintenance and logistical costs across telecom, utilities and off-grid applications.
- ◆ Minimises sulphation with a thicker plate design and higher percentage of tin content to maximise battery standby life.
- ◆ High rate discharge capable to ensure reliable performance.
- ◆ Maintenance free technology and non-spillable design.
- ◆ Manufactured by Kung Long Battery (KLB) at facilities in Taiwan and Vietnam. KLB is a leading manufacturer and complies with relevant international quality standards including ISO9001, CE ETL9000, UL1989, OHSAS18001 and ISO17025. KLB supports Green Sustainable supply chain practices.



PERFORMANCE DATA

Discharge Rates in Watts to Various End Voltages at 25°C (77°F)

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
Time								
15	min	268	293	364	369	379	389	392
30	min	171	191	203	215	225	232	242
60	min	114	116	119	121	124	127	129
120	min	59.8	69.9	73.4	75.3	76.7	77.5	78.3
180	min	46.3	48.3	49.8	51.7	52.7	53.7	55
240	min	36	38.3	40.5	41.3	41.7	42	42.3
300	min	26.7	29.5	31.3	31.8	32.7	33.5	34.2
480	min	21.2	21.7	23	23.3	24	24.5	25
600	min	17.5	18.5	19.3	19.8	20.2	20.3	20.5
1200	min	8.67	9.83	10.5	10.7	10.8	10.8	11

Discharge Rates in Amperes to Various End Voltages at 25°C (77°F)

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
Time								
15	min	135	153	189	190	194	198	202
30	min	100	105	109	112	115	118	125
60	min	54.5	60	61.5	62.4	63.6	64.3	64.7
120	min	32.2	34.4	36	36.8	37.5	38.3	39.7
180	min	24.3	25.1	26.4	26.7	27	27.4	27.8
240	min	18.2	19.1	20	20.3	20.5	20.8	21.1
300	min	15.8	16.4	17	17.3	17.7	18	18.3
480	min	10.50	11.3	11.7	11.9	12	12.1	12.2
600	min	9.5	10	10.1	10.2	10.3	10.4	10.5
1200	min	4.7	5	5.1	5.2	5.2	5.3	5.4

All data on the spec. sheet is an average value:

The tolerance range : $X < 6\text{min}$ (+15%~-15%), $6\text{min} \leq X < 10\text{min}$ (+12%~-12%), $10\text{min} \leq X < 60\text{min}$ (+8%~-8%), $X \geq 60\text{min}$ (+5%~-5%)

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Performance may vary depending on application. All specifications are correct at time of creation. All specifications and operation conditions contained in this datasheet are subject to change or improvement without prior notice to the user. This data is for evaluation purposes only. No guarantee is intended or implied by this data. For clarification and updated information, please contact us.