APFT12-190
Front Terminal Gel Battery

Datasheet

The APFT12-190 is a gel battery with 12 years design life designed for frequent deep cycling and for high temperature applications. The battery is made with a heavy duty Calcium Tin alloy as well as double thickness of plates; the plates are made of a special alloy designed to reduce corrosion thus resulting in the long battery life. These features also mean that batteries will operate safely and reliably in high temperature and outdoor applications.

The APFT12-190 comes with 3 years warranty provided it is installed and have been having regular maintenance in accordance with manufacturer recommendation and specification.

Key features include:

- Maintenance-free operation
- ABS case, Flame Retardant V0 is available
- Gel Technology
- Stable quality and high reliability
- 12 years design life at 25°C

Applications include:

- Telecommunications systems
- UPS & DC power supplies
- Electronic apparatus and equipment
- Alarm and security systems
- Emergency Lighting
- Communications power supply
- Backup power
- Auto-control systems
- Fire alarm and security systems

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Product Specifications

Nominal Voltage		12V (6cells)
Nominal Capacity At 25°C		200Ah (20hr; 1.8V/cell) 190Ah (10hr; 1.8V/cell) 162Ah (5hr; 1.75V/cell) 114Ah (1hr; 1.6V/cell)
Terminal		T5
Container Material		ABS
Maximum Discharge Current		1900A (5s)
Internal Resistance		≈ 3.2mΩ
Operating Temperature Range	**Discharge**	-20 – 50°C
	Charge	0 – 40°C
	Storage	-15 – 40°C
	Nominal	25°C ± 3°C
Capacity Affected by Temperature	**40°C**	103%
	25°C	100%
	0°C	86%
Cycle Use		14.4 – 14.8V (25°C) Temperature coefficient -30mV/°C Initial charging current < 54A
Standby Use		13.5 – 13.8 (25°C) Temperature coefficient -20mV/°C No limit on initial charging current
Dimensions		L561 x W125 x H323 mm ± 2mm
Weight		58kg
Self-Discharge		May be stored for up to 6 months at 25°C after which a freshening charge is required. The time interval will be shorter for higher temperatures.

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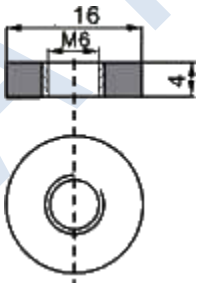
Constant Current Discharge (Amps @ 25°C)

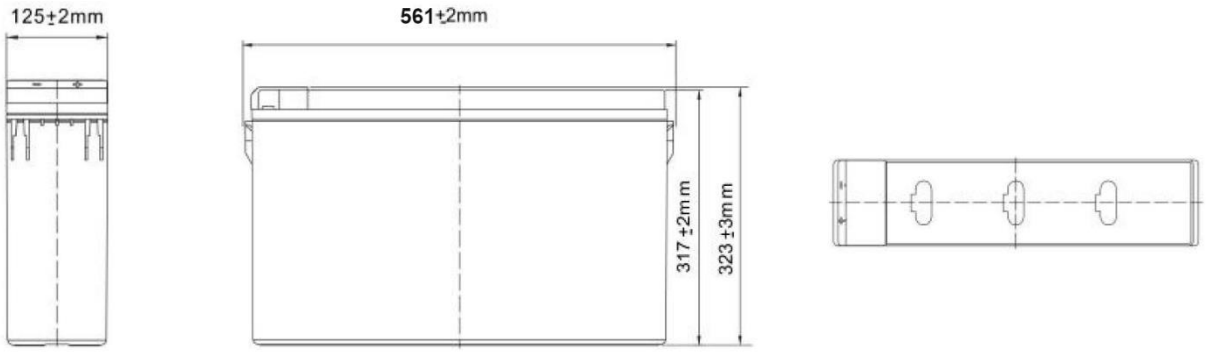
F.V/Time	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.8V/cell	316.1	257.8	163.0	124.9	103.2	60.9	45.7	31.6	19.1	10.0
1.75V/cell	347.2	279.6	169.7	129.6	106.5	62.6	46.9	32.4	19.5	10.2
1.7V/cell	370.8	301.9	175.5	133.8	109.6	64.4	47.9	32.9	19.7	10.3
1.65V/cell	395.5	319.1	185.1	139.4	113.9	66.2	49.3	33.6	19.9	10.4
1.6V/cell	422.6	333.7	193.4	144.5	117.7	68.1	50.1	34.2	20.1	10.5

Constant Power Discharge (Watts @ 25°C)

F.V/Time	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.8V/cell	579.2	489.1	306.2	237.2	103.2	60.9	45.7	62.5	38.0	19.8
1.75V/cell	620.8	513.6	318.7	247.1	106.5	62.6	46.9	63.4	38.5	20.1
1.7V/cell	653.3	540.3	329.5	255.1	109.6	64.4	47.9	64.2	38.8	20.3
1.65V/cell	683.8	560.3	347.4	262.5	113.9	66.2	49.3	65.5	39.0	20.5
1.6V/cell	711.6	584.5	358.1	269.4	117.7	68.1	50.1	66.5	39.3	20.7

T5 Terminal





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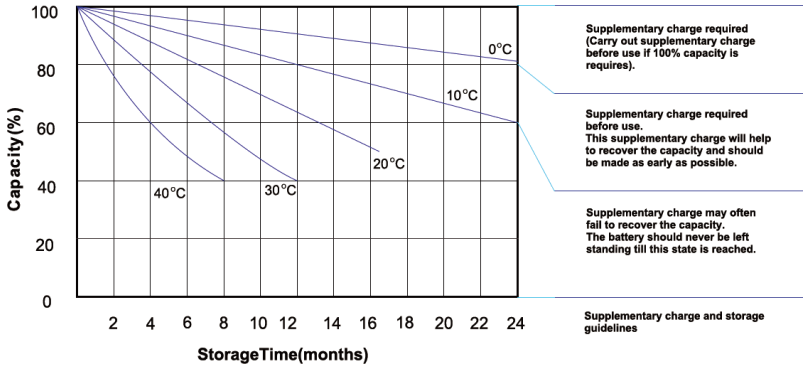
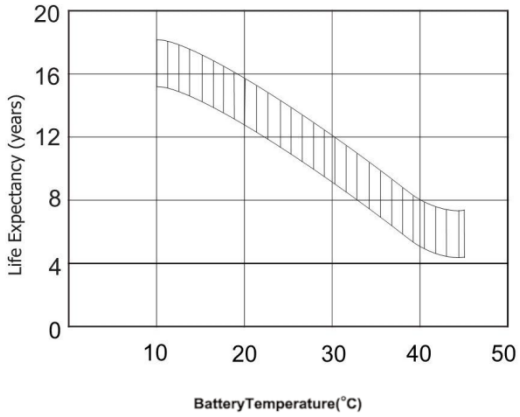
Storage Characteristics

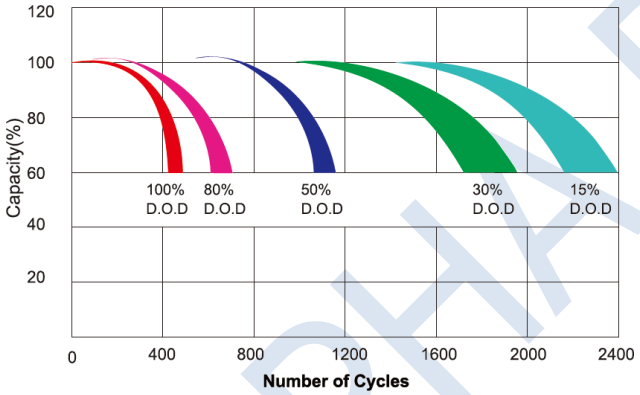


Effect of Temperature on Float Life

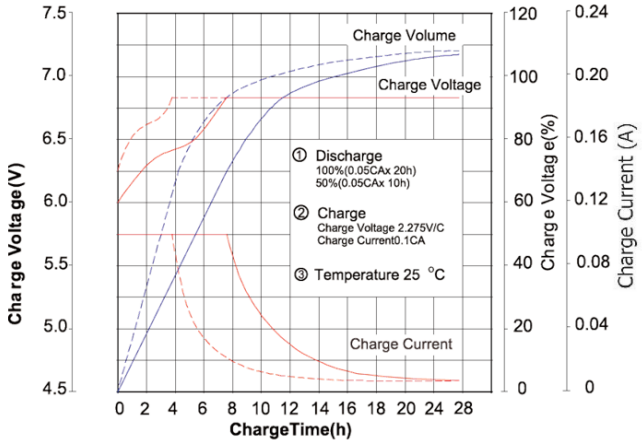


Cycle Life in Relation to Depth of Discharge

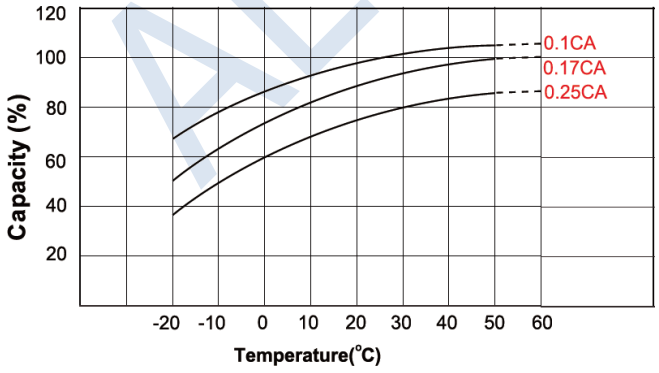
Testing Condition
Discharging: current 0.17C (FV 1.7V/cell)
Charging: current 0.25C max, voltage 2.45V/cell
Charging volume: 125% of discharged capacity



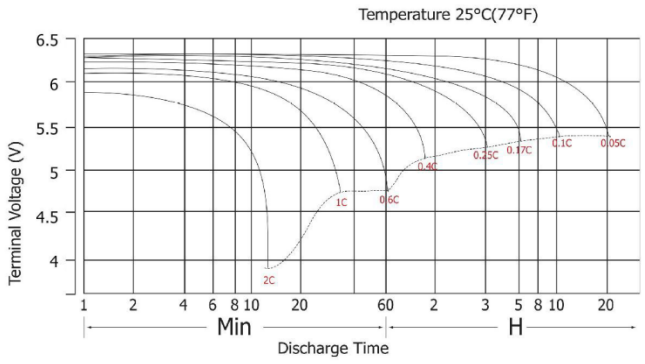
Charge Characteristics for Standby Use



Temperature Effects in Relation to Battery Capacity



Discharge Characterstic Curve



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