



FT12-55

12V 55A/Hr



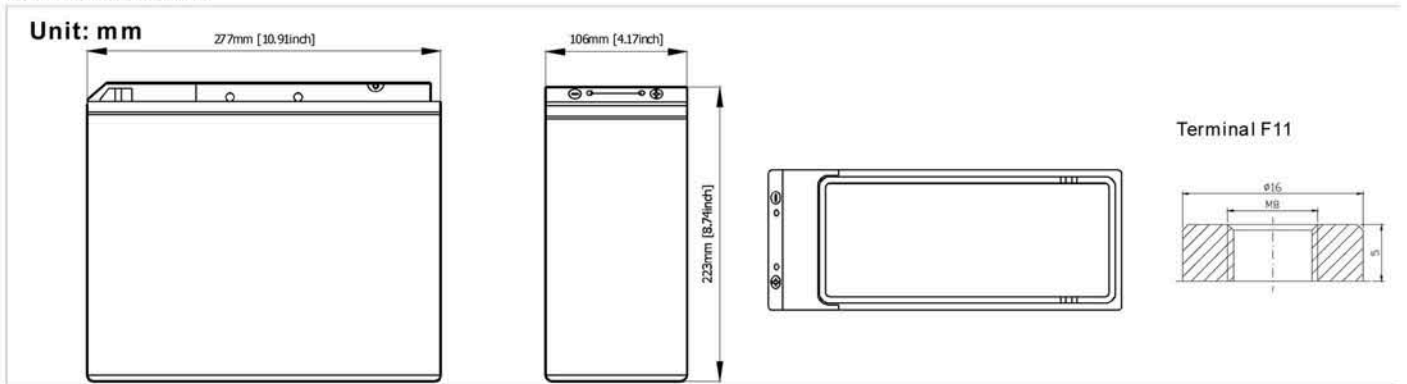
The Synergy FT series are front terminal 12V batteries with a 10 year design life in float charge use. The FT series are designed for Telco and UPS installations. As with all Synergy batteries, all FT series models are rechargeable, highly efficient, leak proof and maintenance free.

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	55Ah@10hr-rate to 1.75V per cell @25°C
Weight	Approx. 18 Kg
Max. Discharge Current	275 A (5 sec)
Internal Resistance	Approx. 6 mΩ
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C±5°C
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	16.5 A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C
Self Discharge	These batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter.
Terminal	Terminal F 11
Container Material	A. B. S. (UL94-HB) Flammability resistance of UL94-V1 can be available upon request.



Dimensions



Constant Current Discharge Characteristics Unit: A(25°C)

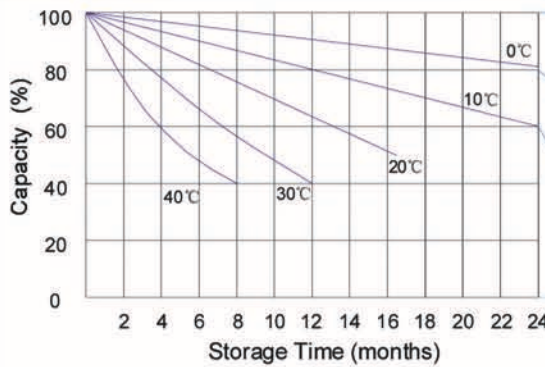
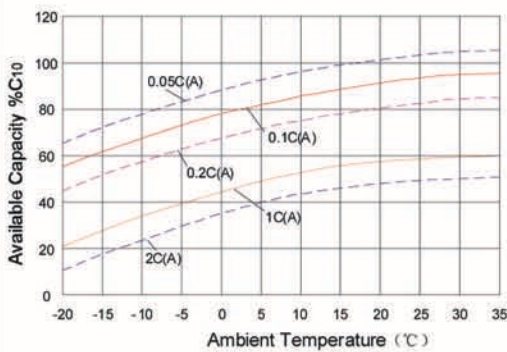
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	206	147	107	63.3	35.8	21.9	14.4	11.9	9.4	6.8	5.7	3.0
1.67V	200	140	105	62.2	35.6	21.8	14.3	11.8	9.3	6.7	5.7	3.0
1.70V	189	135	103	61.7	35.3	21.6	14.2	11.8	9.2	6.7	5.6	2.9
1.75V	169	125	98	60.1	34.9	21.5	14.1	11.7	9.1	6.6	5.6	2.9
1.80V	153	114	91	57.5	34.1	21.1	13.8	11.4	9.0	6.5	5.5	2.8
1.85V	133	102	81	53.8	32.4	20.1	13.1	10.8	8.6	6.2	5.3	2.6

Constant Power Discharge Characteristics Unit: W(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	369	270	199	119	68.1	42.1	27.6	22.9	18.0	13.1	10.7	5.7
1.67V	361	258	194	117	67.8	41.9	27.6	22.8	17.9	13.0	10.6	5.6
1.70V	341	249	192	116	67.3	41.5	27.4	22.7	17.9	12.9	10.6	5.6
1.75V	307	230	183	113	66.7	41.1	27.2	22.6	17.7	12.8	10.5	5.5
1.80V	276	209	168	108	65.0	40.5	26.6	21.9	17.4	12.5	10.3	5.4
1.85V	238	186	150	101	61.6	38.7	25.2	20.9	16.6	12.1	10.0	5.2

Storage characteristic

Temperature effects curve



Storage characteristic

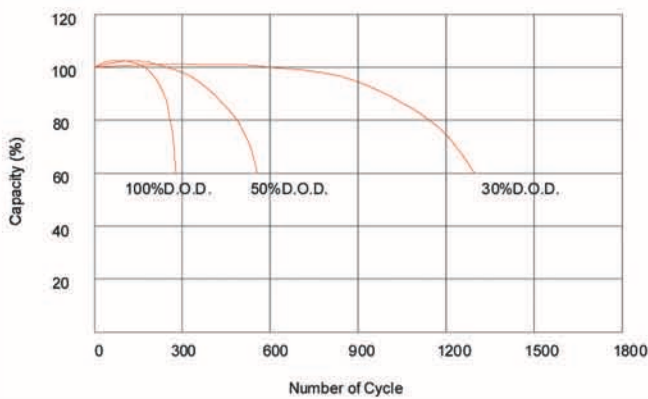
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.

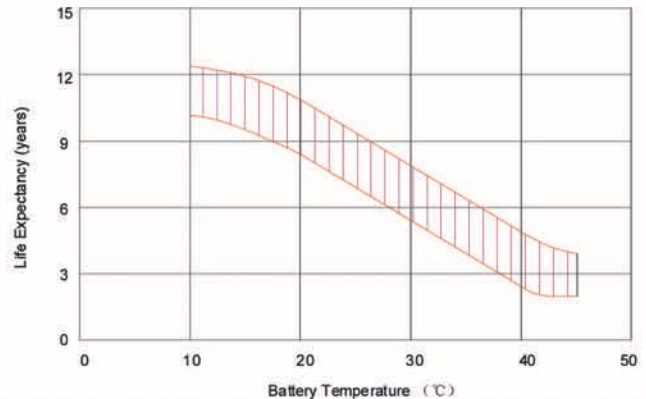
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached.

Supplementary charge and storage guidelines

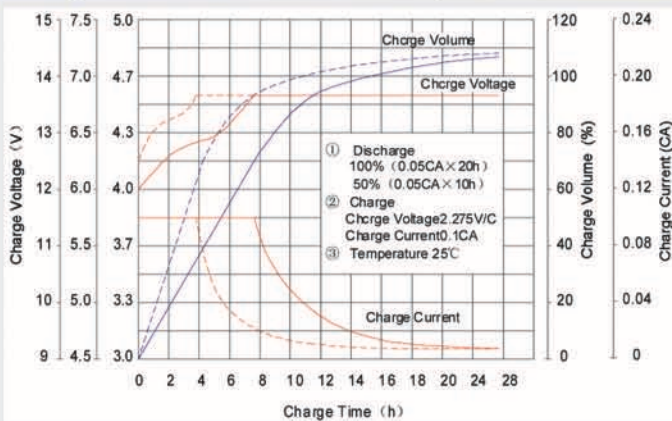
Life characteristics of cyclic use



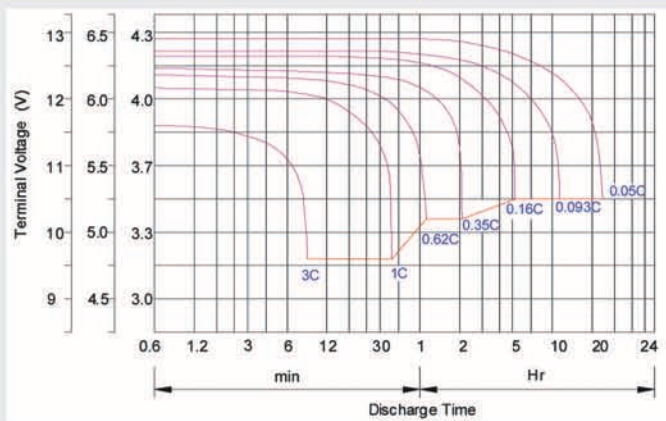
Effect of temperature on long term float life



Charge characteristic Curve for standby use



Discharge characteristic Curve



Charging Procedures(12V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	14.7	14.4~15.0	0.3C
Standby	25°C	13.7	13.6~13.8	0.3C

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

Constant Voltage	-0.2Cx2h +14.4~15.0V,24h,Max. Current 0.3CA
Constant Current	-0.2Cx2h +0.1CAx12h
Fast	-0.2Cx2h +0.3CAx4h

Charging Procedures(6V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	7.35	7.25~7.45	0.3C
Standby	25°C	6.85	6.8~6.9	0.3C