



T230

230 Ah | 12 V | 100 h

Specifications

Voltage	12 V
Nominal Capacity	230 Ah @ 100 hour-rate
Number of Cells	6
Internal Resistance	Approx. 5.2 mΩ
Design Life	15 years (floating charge)
Self Discharge	Monthly rate < 3% @ 25 °C Recharge after 6 months Charge before using

Temperature Ranges

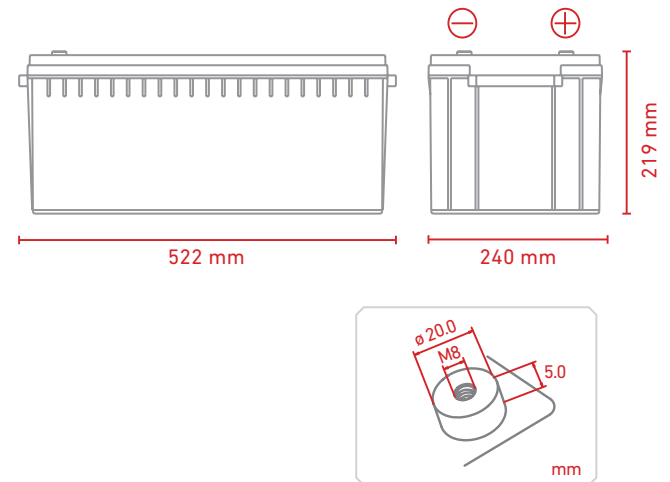
Normal Operation	25 °C ± 5 °C
Discharging	-40 °C to 60 °C
Charging	-20 °C to 50 °C
Storage	-40 °C to 60 °C

Charging & Discharging

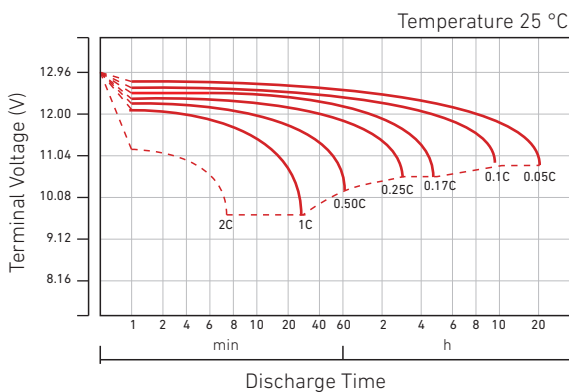
Max. Charging Current	40.0 A
Max. Discharge Current	2000 A (5 sec)
Float Charging Voltage	13.6 V to 13.8 V @ 25 °C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.2 V to 14.4 V @ 25 °C Temperature Compensation: -4mV/°C/Cell
Reference Capacity	C3 137 Ah C5 154 Ah C10 176 Ah C20 204 Ah C100 230 Ah

Mechanical Specifications

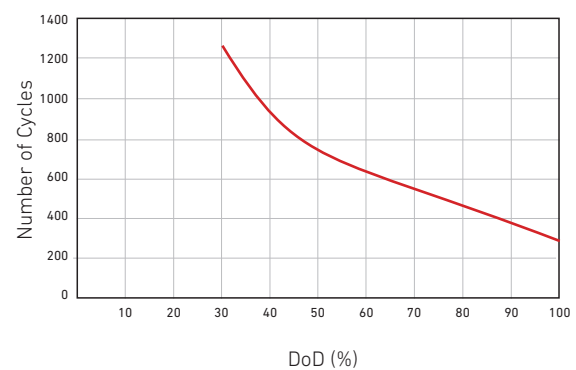
Measurements (L x W x H)	522 x 240 x 219 mm
Weight	Approx. 58.0 kg
Terminals	F10 (M8)
Case material	A.B.S. UL94-HB, UL94-V0 Optional



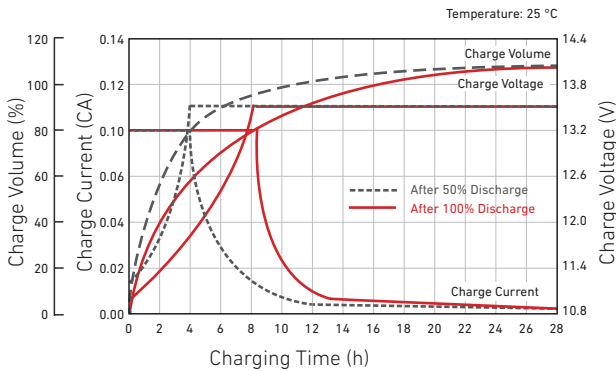
Discharge Characteristics Curve



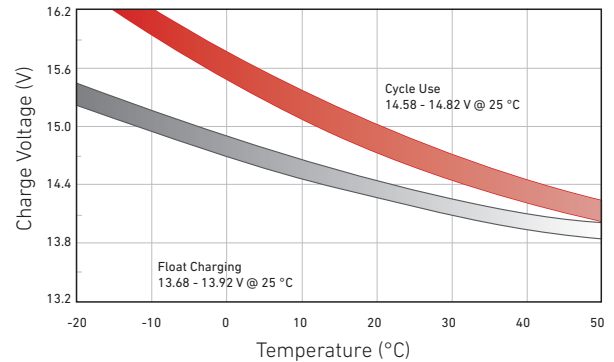
Cycle Life in Relation to Depth of Discharge



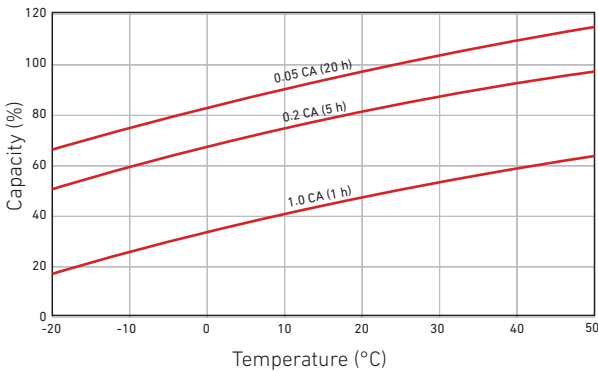
Charge Characteristics Curve For Cycle Use (IU)



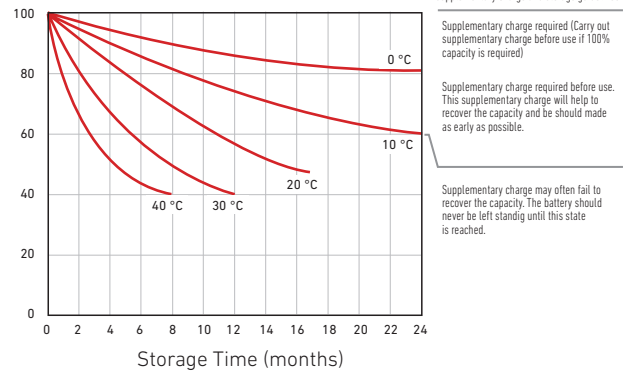
Relationship Between Charging Voltage and Temperature



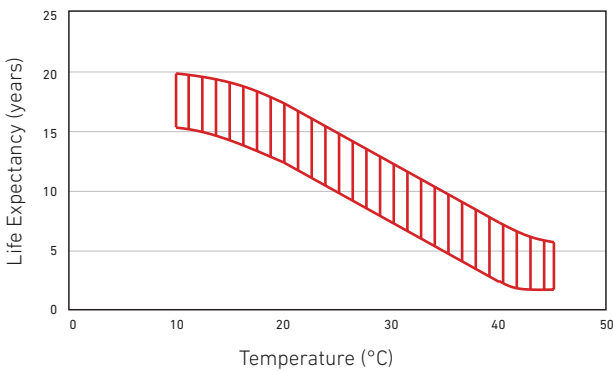
Temperature Effects on Capacity



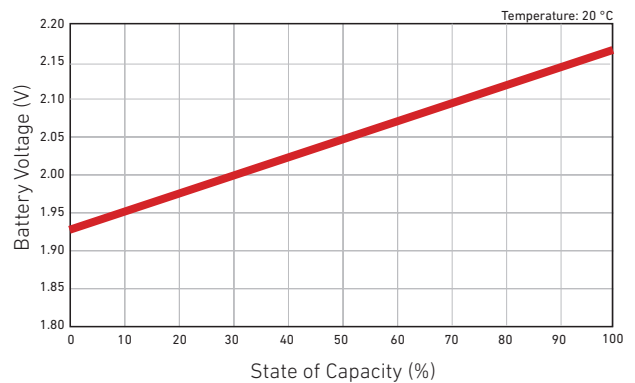
Storage Characteristics



Effect of Temperature on Long-Term Life



Relationship of OCV and State of Charge



Constant Current Discharge Characteristics: A (25 °C)

F.V	Time										
	15 min	30 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h	100 h
1.60 V	273,6	183,4	111,8	66,9	46,2	37,9	31,0	21,4	18,1	11,0	2,67
1.65 V	268,0	181,8	111,3	66,4	46,1	37,7	30,8	21,2	17,9	10,6	2,57
1.70 V	263,8	180,7	110,2	65,9	45,7	37,5	30,7	21,0	17,7	10,3	2,50
1.75 V	254,1	177,9	109,2	65,4	45,5	37,2	30,3	20,8	17,5	10,0	2,43
1.80 V	237,0	171,7	106,6	64,2	44,3	36,3	29,7	20,5	17,4	9,40	2,28
1.85 V	215,0	162,4	101,3	61,4	42,3	34,6	28,5	19,6	16,8	9,00	2,18

Constant Power Discharge Characteristics: WPC (25 °C)

F.V	Time										
	15 min	30 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h	100 h
1.60 V	502	348	215	131	91,8	75,3	61,7	42,5	36,0	19,5	4,72
1.65 V	494	344	215	131	91,7	75,2	61,5	42,3	35,8	19,1	4,64
1.70 V	488	345	213	130	91,3	75,0	61,3	42,0	35,4	18,8	4,55
1.75 V	471	341	211	129	91,0	74,3	60,6	41,7	35,1	18,4	4,46
1.80 V	440	330	207	127	88,5	72,6	59,5	41,0	34,7	18,1	4,38
1.85 V	401	313	198	123	84,7	69,1	56,9	39,3	33,7	17,0	4,12