



S60

60 Ah | 12 V | 20 h

Specifications

Voltage	12 V
Nominal Capacity	60 Ah @ 20 hour-rate
Number of Cells	6
Internal Resistance	Approx. 6.0 mΩ
Design Life	12 years (float charging)
Short Circuit Current	1160 A
Self Discharge	Monthly rate < 3% @ 25 °C Recharge after 6 months Charge before using

Temperature Ranges

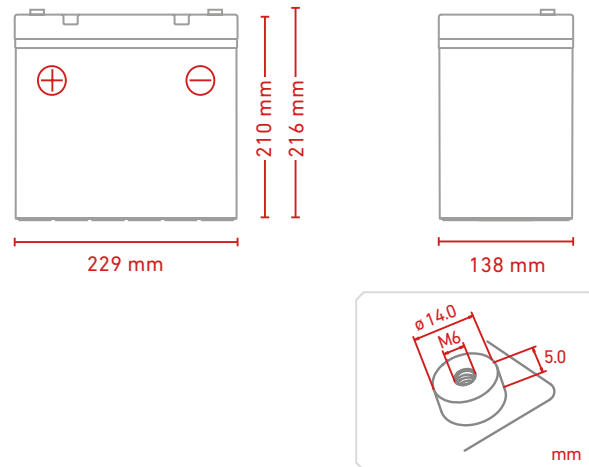
Normal Operation	25 °C ± 5 °C
Discharging	-20 °C to 60 °C
Charging	0 °C to 50 °C
Storage	-20 °C to 60 °C

Charging & Discharging

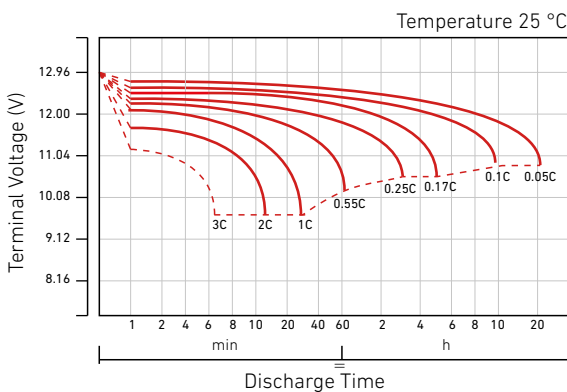
Max. Charging Current	16.5 A
Max. Discharge Current	550 A (5 sec)
Standby Use Voltage	13.6 V to 13.8 V @ 25 °C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V to 14.8 V @ 25 °C Temperature Compensation: -4mV/°C/Cell
Reference Capacity	C3 43 Ah C5 48 Ah C10 55 Ah C20 60 Ah

Mechanical Specifications

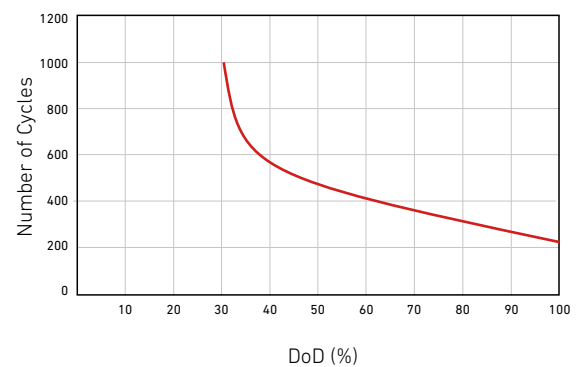
Measurements (L x W x H)	229 x 138 x 210 mm
Weight	Approx. 16.5 kg
Terminals	F11 (M6)
Case material	A.B.S. UL94-HB, UL94-V0 Optional



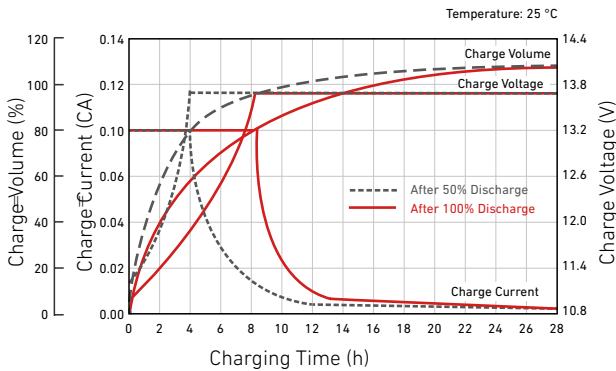
Discharge Characteristics Curve



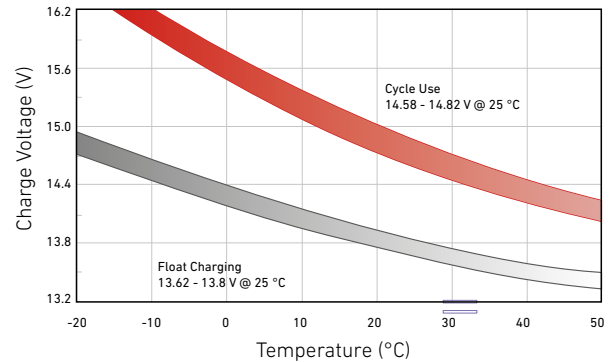
Cycle Life in Relation to Depth of Discharge



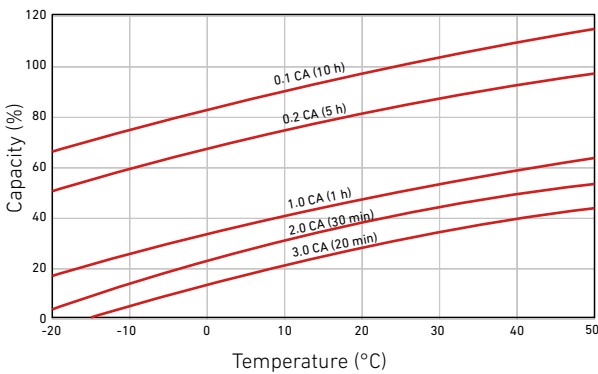
Discharge Characteristics Curve For Standby Use



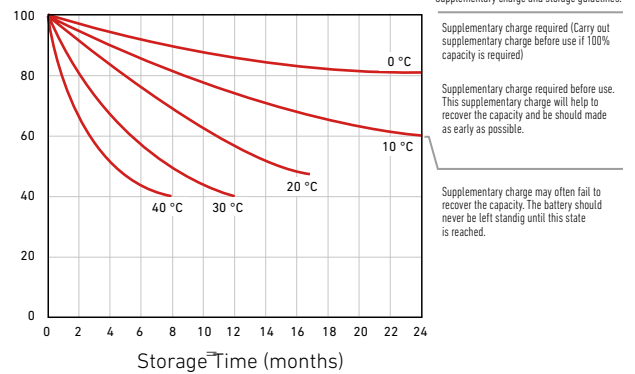
Relationship Between Charging Voltage and Temperature



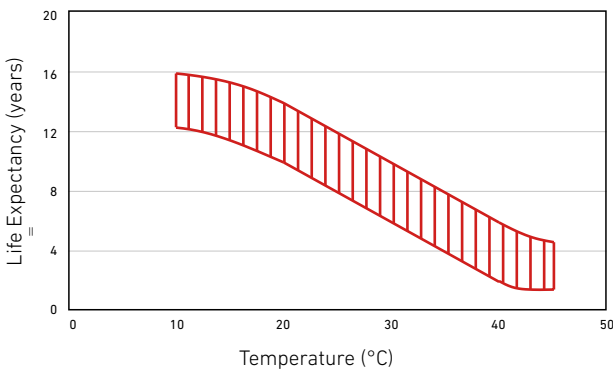
Temperature Effects on Capacity



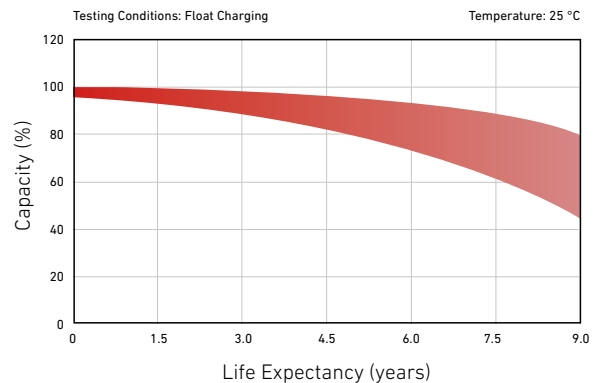
Storage Characteristics



Effect of Temperature on Long-Term Life



Life Characteristics of Standby Use



Constant Current Discharge Characteristics: A (25 °C)

F.V	Time											
	5 min	10 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h
1.60 V	176,2	134,24	101,97	60,23	33,60	20,02	15,51	12,19	10,38	6,97	5,80	3,04
1.65 V	169,8	126,85	97,49	57,82	32,45	19,38	15,03	11,86	10,11	6,90	5,73	2,99
1.70 V	161,5	116,78	91,31	55,27	31,40	18,74	14,63	11,54	9,84	6,79	5,65	2,95
1.75 V	150,9	106,89	84,97	52,82	30,25	18,09	14,19	11,24	9,60	6,69	5,57	2,91
1.80 V	137,5	96,76	78,46	50,49	29,09	17,44	13,75	10,92	9,35	6,58	5,50	2,89
1.85 V	121,0	79,08	65,11	43,49	26,09	15,98	12,71	10,15	8,72	6,18	5,18	2,74

Constant Power Discharge Characteristics: WPC (25 °C)

F.V	Time											
	5 min	10 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h
1.60 V	303,3	228,2	178,27	109,40	63,15	37,95	29,63	23,41	20,00	13,62	11,41	5,98
1.65 V	300,1	219,8	172,96	106,13	61,33	36,91	28,84	22,86	19,56	13,49	11,28	5,89
1.70 V	288,6	206,0	164,42	102,46	59,71	35,89	28,18	22,32	19,11	13,32	11,13	5,83
1.75 V	274,5	192,0	155,23	98,94	57,88	34,80	27,45	21,83	18,70	13,16	10,99	5,76
1.80 V	254,4	176,8	145,36	95,52	55,99	33,72	26,71	21,28	18,28	12,96	10,87	5,71
1.85 V	227,9	147,1	122,33	83,08	50,52	31,07	24,80	19,86	17,10	12,20	10,25	5,43