

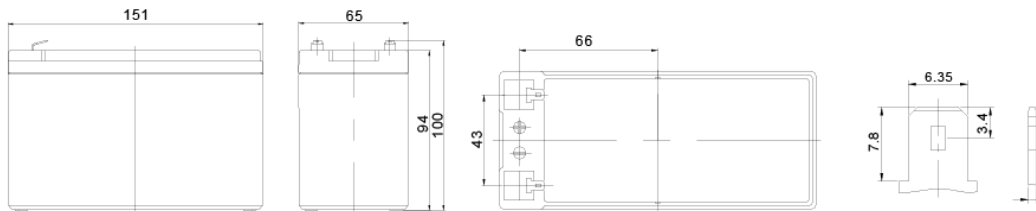


# SBL 9-12HR



Nominal voltage	12 V
Nominal capacity	303 W / 10min to 1,67 V/cell 9 Ah @ C20 to 1,75 V/cell
Technology	AGM (Absorbent Glass Mat) VRLA (Valve Regulated Lead Acid)
Weight	~ 2,45 kg
Design life time	10-12 years (standby use) Long Life acc. Eurobat
Internal resistance	~ 22 mΩ (full charged)

Operating temperature range	Discharge -20°C ~ +60°C
	Charge 0°C ~ +50°C
	Storage -20°C ~ +60°C
Max. discharge current	90 A (5 sec)
Short circuit current	445 A
Max. charging current	2,7 A
Charging voltage	Standby use 13,7 - 13,9 VDC
	Cycle use 14,6 - 14,8 VDC
Self discharge	Monthly is less than 3% at 25°C
Container material	ABS UL94HB (optional UL94-V0)



Length	151 ±1,5 mm
Width	65 ±1,5 mm
Height	94 ±1,5 mm
Total height	100 ±1,5 mm
Terminal	fast-on 6,3 mm

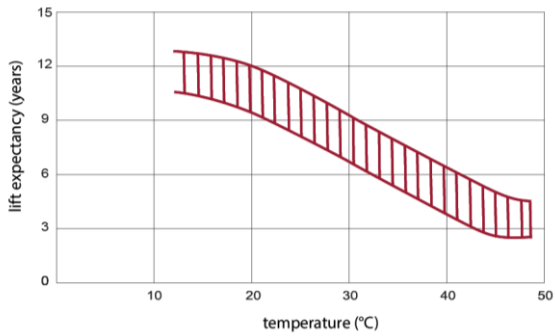
## CONSTANT CURRENT DISCHARGE CHARACTERISTICS (A at 25°C)

Voltage/Time	5 MIN	8 MIN	10 MIN	15 MIN	20 MIN	30 MIN	60 MIN	90 MIN
1.60 V	43,56	34,80	29,83	22,01	17,30	12,33	6,91	4,90
1.67 V	39,53	31,83	27,50	20,58	16,33	11,68	6,59	4,69
1.70 V	37,82	30,56	26,50	19,95	15,89	11,39	6,44	4,60
1.75 V	35,03	28,47	24,83	18,84	15,10	10,91	6,23	4,46
1.80 V	32,09	26,32	23,17	17,89	14,39	10,44	5,99	4,31
1.85 V	27,44	22,42	19,67	15,34	12,50	9,23	5,42	3,94

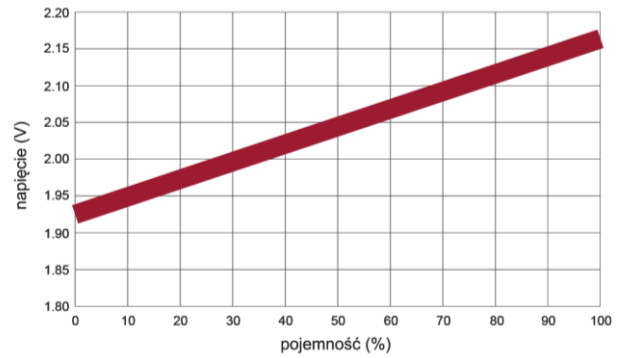
## CONSTANT POWER DISCHARGE CHARACTERISTICS (W/cell at 25°C)

Voltage/Time	5 MIN	8 MIN	10 MIN	15 MIN	20 MIN	30 MIN	60 MIN	90 MIN
1.60 V	78,28	62,77	54,00	40,22	31,85	22,78	12,96	9,28
1.67 V	71,92	58,17	50,50	38,00	30,38	21,93	12,47	8,96
1.70 V	69,43	56,30	49,00	37,22	29,75	21,42	12,28	8,82
1.75 V	64,95	53,03	46,50	35,47	28,62	20,73	11,93	8,59
1.80 V	60,30	49,62	43,83	33,88	27,48	20,07	11,59	8,37
1.85 V	52,38	42,88	37,67	29,45	24,08	17,85	10,55	7,68

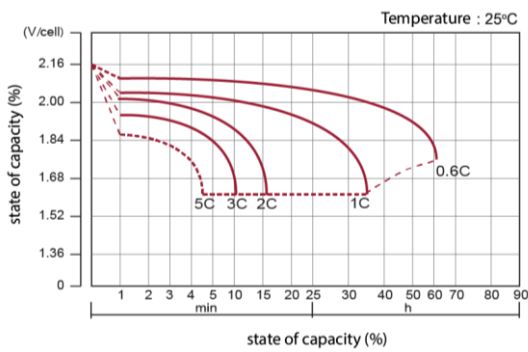
EFFECT OF TEMPERATURE ON LONG TERM LIFE



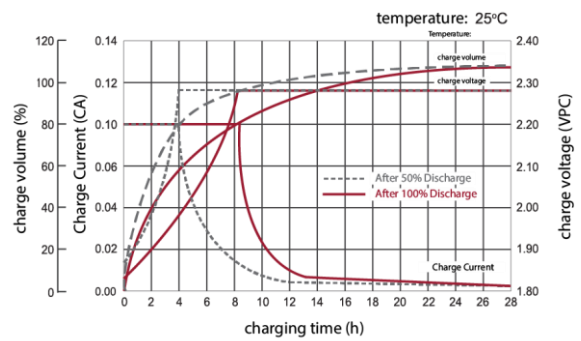
CHARGE CHARACTERISTIC CURVE FOR STANDBY USE



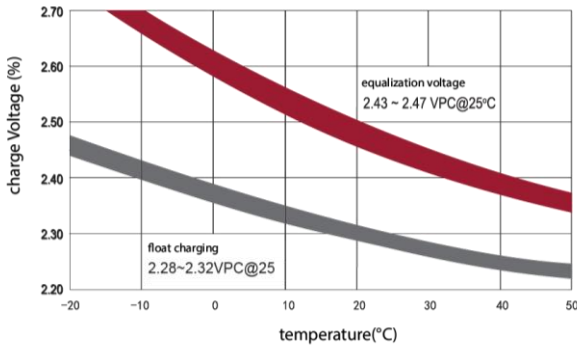
DISCHARGE CHARACTERISTICS CURVE



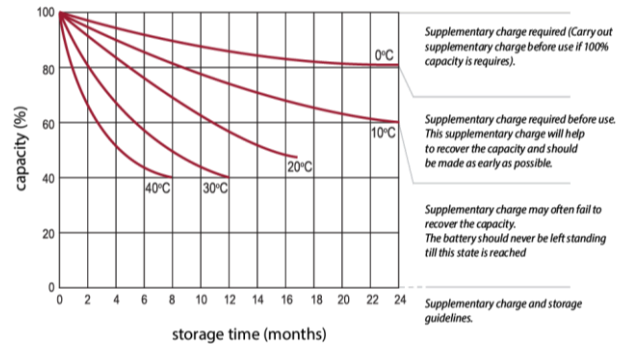
CHARGE CHARACTERISTIC CURVE FOR CYCLE USE



RELATIONSHIP BETWEEN CHARGING VOLTAGE AND TEMPERATURE



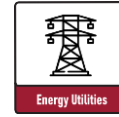
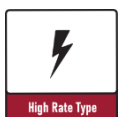
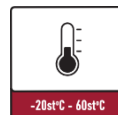
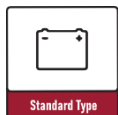
STORAGE CHARACTERISTICS



**Standards met:**

PN-EN 60896-21:2007 • PN-EN 60896-22:2007 • PN-EN 61056-1:2013 • PN-EN 61056-2:2013 • PN-E-83016:1999

Batteries manufactured in compliance with: ISO 9001 • ISO 14001



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