

EXCELLENT CYCLING ABILITY

FOR
SOLAR / PHOTOVOLTAIC
WIND GENERATION
INVERTER / MOBILITY
TELECOMMUNICATION
APPLICATIONS



DP-12165

SEALED VRLA MONOBLOC AGM BATTERIES
VALVE REGULATED LEAD ACID BATTERY
FOR CYCLING APPLICATIONS

12V 165AH @ 20 HR RATE to 1.75VPC

12V 181AH @ 100 HR RATE to 1.75VPC

LONG DURATION

Innovative Features

- ◆ Thick positive plate design and high Tin alloy~12 years design life @ 20°C(68°F).
- ◆ Valve regulated lead acid battery (VRLA).
- ◆ High-Compression Absorbed Glass Mat technology (AGM) for greater than 99% recombination efficiency.
- ◆ Proprietary Fixed Orifice Plate Pasting technology applying active materials on both sides of the grid for consistent cell-to-cell performance, higher capacity and uniform grid protection.
- ◆ Operates at a low internal pressure.
- ◆ Heavy duty insert copper terminals for ease of assembly, reduced maintenance and increased safety.
- ◆ Advanced lead tin calcium alloy, reduces grid corrosion and promotes long battery life.
- ◆ Standard: Reinforced ABS (UL 94HB) container and cover.
- ◆ Optional: Flame-retardant reinforced ABS container and cover compliant with U.L.94 V-0 with an Oxygen limiting Index of greater than 28%.
- ◆ Over-sized, through the partition inter-cell welds provide low resistance connections, with minimal power loss.
- ◆ Flame arresting, low pressure safety release venting system for individual cells, recognized per U.L. 924.
- ◆ Multicell design for ease of installation and maintenance.
- ◆ Horizontal or vertical operation.

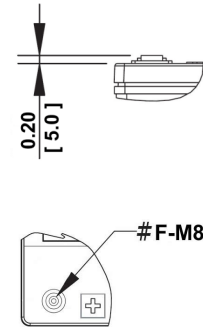
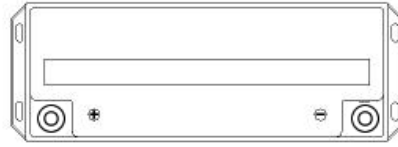
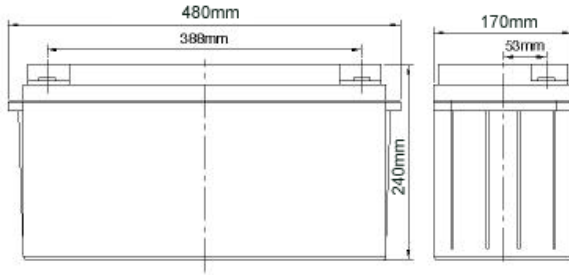
12 VOLTS - 165 AMPERE HOUR @ 20 HOUR RATE

AH Capacity to 1.75VPC @ 20°C (68°F)

End Point Volts/Cell	1.5hr	2hr	3hr	4hr	5hr	8hr	10hr	12hr	20hr	24hr	100hr
1.75	105	114	121	127	131	143	148	151	165	168	181

Deep Cycle AGM Range

EverExceed[®]
power your applications



Length: 480mm Width: 170mm Height: 240mm

Electrical Specifications

Cells Per Unit	Voltage Per Unit	Weight	Electrolyte	Maximum Discharge Current(5s)	Short Circuit Current	Internal Resistance Milli-ohms
6	12.84	94.6lbs 43.0kg	SG = 1.300	1485 Amps	4200 Amps	2.7

Capacity	165 Ah @ 20 hr. rate to 1.75 volts per cell @ 20°C (68°F). 181 Ah @ 100 hr. rate to 1.75 volts per cell @ 20°C (68°F).
Applicable Operating Temperature Range	-40°C (-40°F) to +70°C (158°F).
Ideal Operating Temperature Range	+20°C (+68°F) to +30°C (+86°F).
Floating Charging Voltage	13.5 to 13.8 VDC/unit Average at 20°C (77°F).
Recommended Maximum Charging Current Limit	33 Amperes (0.20C20 Amperes)
Equalization and Cycle Service Charging Voltage	14.1 to 14.4 VDC/unit Average at 20°C (77°F).
Maximum AC Ripple (Charger)	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Maximum voltage allowed = 1.4% RMS (4% P-P). Maximum current allowed = 0.82 amperes RMS (C/20) to 1.75VPC.
Self Discharge	EverExceed Deep Cycle AGM Range batteries may be stored for up to 12 months at 20°C (68°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.
Accessories	F-M8 inter unit connectors racks and cabinet systems are available.
Terminal: Inserted	Threaded copper alloy insert terminal.
Terminal Hardware Initial Torque: Inserted Terminal	11 N-m

Constant Power Discharging Ratings - Watts Per Cell @ 20°C (68°F)

End Point Volts/Cell	1.5hr	2hr	3hr	4hr	5hr	8hr	10hr	12hr	20hr	24hr	100hr
1.85	124	100	72.7	57.9	48.2	32.7	27.2	23.3	15.5	13.0	3.42
1.80	133	105	75.4	59.8	49.9	34.0	28.4	24.2	15.8	13.4	3.61
1.75	135	107	77.6	61.9	50.7	34.9	29.0	24.7	16.2	13.8	3.74

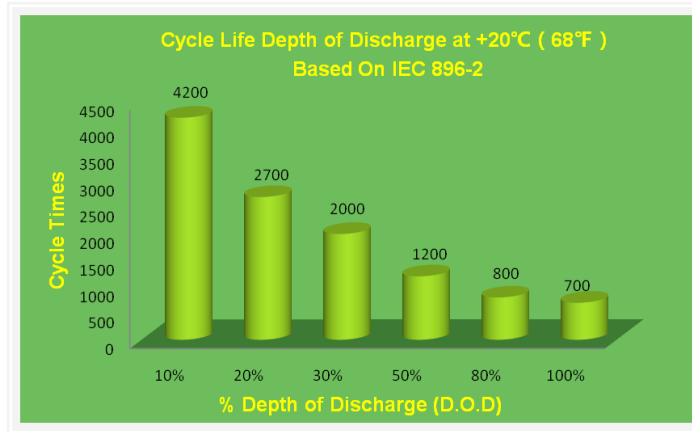
Constant Current Discharging Ratings - Amperes Per Cell @ 20°C (68°F)

End Point Volts/Cell	1.5hr	2hr	3hr	4hr	5hr	8hr	10hr	12hr	20hr	24hr	100hr
1.85	64.9	51.8	37.3	29.5	24.3	16.3	13.5	11.4	7.53	6.42	1.70
1.80	69.1	55.0	39.4	30.7	25.4	17.2	14.4	12.2	8.07	6.84	1.74
1.75	69.7	56.8	40.3	31.8	26.1	17.9	14.8	12.6	8.25	7.01	1.81

Note: Batteries to be mounted with 0.39 in (1.00 cm) spacing minimum and free air ventilation.
Specifications subject to change without notification.

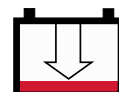
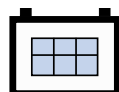
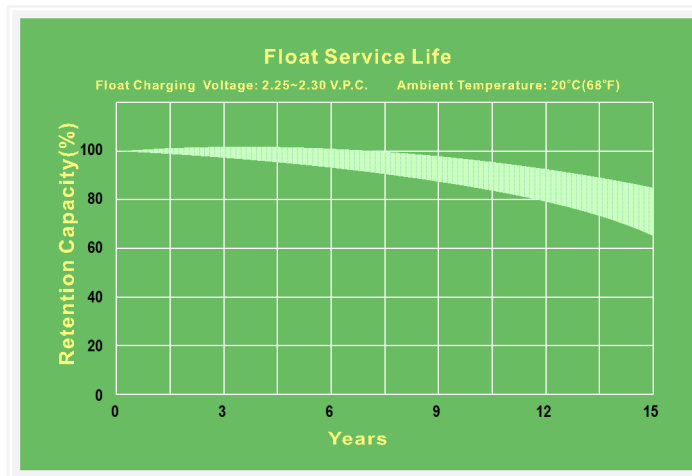
Deep Cycle AGM Range

EverExceed[®]
power your applications

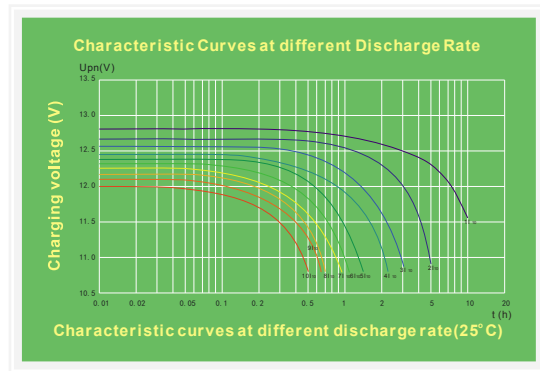
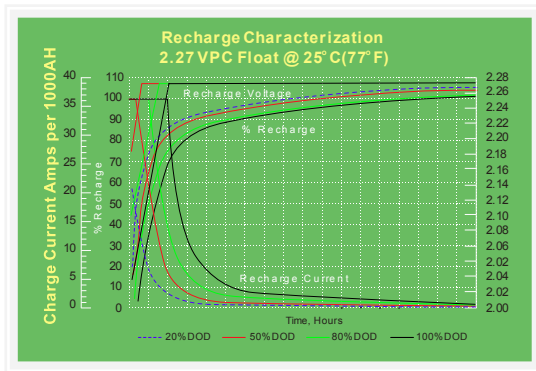


TYPICAL CYCLIC PERFORMANCE

CAPACITY WITHDRAWN	CYCLES
100%	700
80%	800
50%	1200
25%	2100
10%	4200



Deep Cycle AGM Range

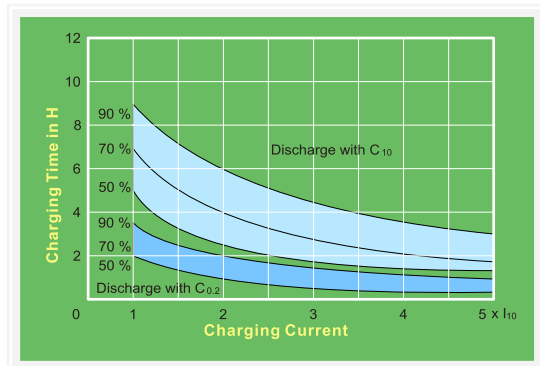
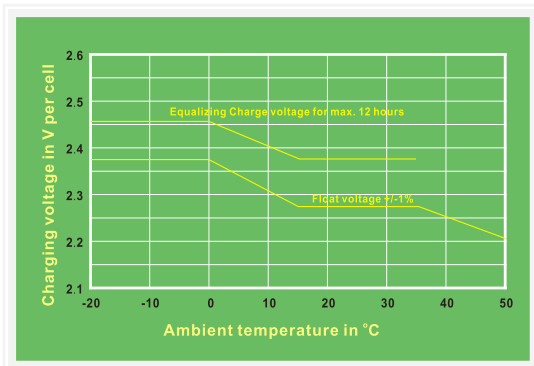


Float Voltage & charging

Constant Voltage charging is recommended
Recommended float voltage: 2.27VPC @ 25°C(77°F)
Float Voltage Range: 2.25VPC to 2.30 VPC @ 25°C(77°F)
Equalize voltage: 2.35VPC for 12 Hours

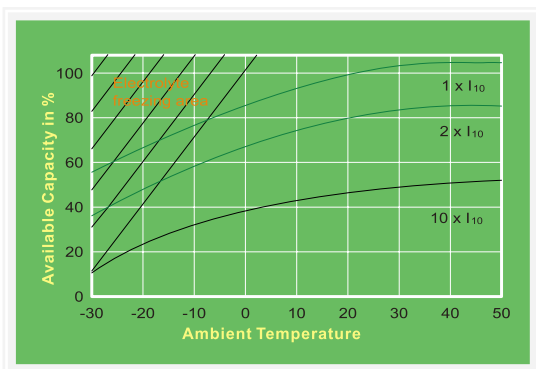
Temperature compensation:

Apply for temperature range of 0°C / 32°F to 40°C / 104°F. Subtract 3 mV / °C / cell or 1.7 mV / °F / cell, above 25°C / 77°F. Add 3mV / °C / cell or 1.7 mV / °F / cell, below 25°C / 77°F.

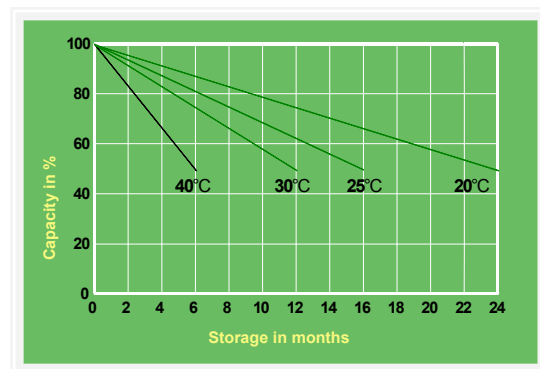


For charging 2.27 V/cell is recommended. The charging voltage must be compensated according to the curve for continuously different battery ambient temperature.

Recharging time in dependence of charging current (guide values) for up to 50, 70 and 90% of capacity at 25°C and with a charging voltage of 2.27 V/cell.



Extracted capacity in relation to the temperature.



Self-discharge in relation to the storage temperature.

