



SOLAR

PHOTOVOLTAIC BATTERIES



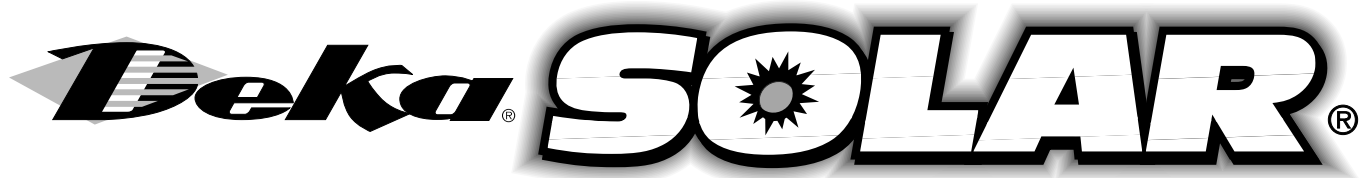
Deka Solar™/PV batteries provide reliable back-up power for any solar power application. A few of these include:

Water Pumping
Cathodic Protection
Lighting
Road Repair Work

Residential/Small Village
Remote Monitoring
Navigational Aids
Railway Signal
Solar Panel Electricity Collection

Communications
Refrigeration
Wind Generation
Missile Tracking

The Most Dependable Batteries Under the Sun



PHOTOVOLTAIC BATTERIES

FLOODED

Deka Solar photovoltaic flooded, lead-acid batteries are designed to deliver reliable, low-maintenance power for virtually any renewable energy application.

For smaller systems, Deka features a series of six and 12-volt Solar/PV batteries that have been specially engineered to provide maximum deep-cycle output in solar or photovoltaic applications. With a self-discharge rate of no more than 1% per week, battery replacement costs are significantly lowered providing the kind of reliability you can depend on.

Because larger voltage systems have greater power requirements, Deka also offers 6- to 36-cell Solar/PV flooded batteries which deliver slow-amp draw service. These batteries require minimum maintenance, even for severe service applications. The batteries have been engineered with extended watering intervals and operate up to six months between watering*. Deka high power Solar batteries are designed to provide long service life – up to 14 years of cycle life.

* Under normal use conditions, if maintained correctly.

VALVE-REGULATED

The Deka Solar photovoltaic series of valve-regulated, gelled-electrolyte lead-acid batteries is designed to offer reliable, maintenance-free power for renewable energy applications where frequent deep-discharge cycles are required and minimum maintenance is desired.

Ideal for smaller energy system needs, these 6- and 12-volt batteries are housed in polypropylene containers and covers with forged terminal bushings and self-sealing vents.

The Deka Solar/PV maintenance-free gel technology is also available for larger voltage system requirements and has the capability to provide up to 72 volts of reliable power.

Deka gel batteries are not simply a flooded design with gelled electrolyte. These batteries have been specially engineered to maximize the benefits of the gelled electrolyte while maintaining the power and performance needed. They are completely sealed and never require watering. The result...years of dependable, trouble-free service.

Deka SOLAR[®]

PHOTOVOLTAIC BATTERIES

The Deka Solar series of valve-regulated, gelled-electrolyte batteries is designed to offer reliable, maintenance-free power for renewable energy applications where frequent deep cycles are required and minimum maintenance is desirable.

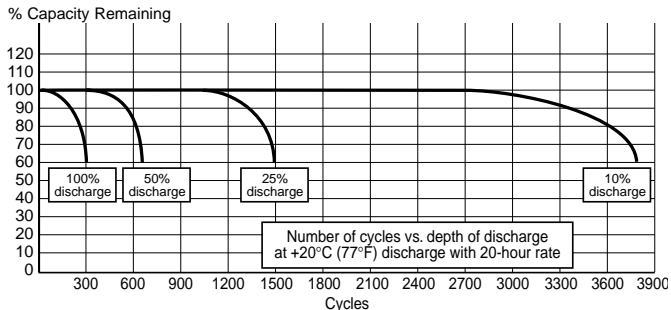
Applications

Water pumping • Residential • Communications
Cathodic protection • Remote monitoring • Refrigeration
Lighting • Aids to navigation • Wind generation

Specifications

Voltage 12 volts nominal (8GGC2 is 6 volts)
Plate alloy Lead calcium
Element, post Threaded stud or "flag" terminal, forged bushing
Container/cover ... Polypropylene
Charge voltage ... Cycle 2.30 to 2.35; Float 2.25 to 2.30 per cell
Electrolyte Sulfuric acid thixotropic gel
Vent Self sealing

Cycling Ability



The solar battery excels in cycling applications.

TYPICAL CYCLING PERFORMANCE* CAPACITY WITHDRAWN	CYCLES
100%	300
50%	650
25%	1,500
10%	3,800

*Dependent upon proper charging and ambient temperatures.

Discharge Amps per unit to 1.75VPC at 80°F (27°C)

Type No.	Foot-notes	Volts	Standard Terminal	Discharge Amps per unit to 1.75VPC at 80°F (27°C)												Approx. Wt. Lbs. (Kgs.)	Dimensions In (mm)				
				5 Min	10 Min	15 Min	20 Min	30 Min	60 Min	90 Min	3 Hr	6 Hr	8 Hr	20 Hr	48 Hr		100 Hr	L	W	H	
8GU1	P	12	T873	90	67	53	45	35	21	15	8.50	4.67	3.56	1.58	1.33	0.73	0.36	24.2 (11.0)	7 1/8 (197)	5 1/8 (130)	7 1/4 (184)
8GU1H	HP	12	T873	90	67	53	45	35	21	15	8.50	4.67	3.56	1.58	1.33	0.73	0.36	24.2 (11.0)	8 5/8 (211)	5 1/8 (130)	7 1/4 (184)
8G22NF	VP	12	T881	135	100	84	72	55.5	33.5	24	13.60	7.40	5.74	2.53	2.15	1.16	0.58	37.6 (17.1)	9 1/8 (238)	5 1/8 (140)	9 1/4 (235)
8G24	HQP	12	T872M	215	160	125	105	80	48.5	35	19.77	10.75	8.30	3.68	3.12	1.68	0.845	53.6 (24.3)	10 1/8 (276)	6 1/8 (171)	9 1/4 (251)
8G27	HQP	12	T872M	255	195	150	125	95	57	41.5	23.30	12.67	9.80	4.32	3.67	1.99	0.99	63.2 (28.7)	12 1/8 (324)	6 1/8 (171)	9 1/4 (251)
8G30H	HP	12	T876	295	215	165	140	107	64.5	47	26.20	14.20	11.00	4.88	4.14	2.24	1.12	71.7 (32.5)	12 5/8 (329)	6 1/8 (171)	9 1/4 (248)
8G31	HP	12	Stud	295	215	165	140	107	64.5	47	26.20	14.20	11.00	4.88	4.14	2.24	1.12	71.7 (32.5)	12 5/8 (329)	6 1/8 (171)	9 1/4 (248)
8G31DT	HPT	12	SAE/Stud	295	215	165	140	107	64.5	47	26.20	14.20	11.00	4.88	4.14	2.24	1.12	71.7 (32.5)	12 5/8 (329)	6 1/8 (171)	9 1/4 (248)
8GGC2	VP	6	T881	325	250	210	180	150	99	76	45.30	25.80	20.00	9.00	7.60	3.90	1.98	68.4 (31.0)	10 1/8 (260)	7 1/8 (181)	10 1/4 (276)
8G4D	HP	12	SAE	485	375	300	255	195	122	88	49.20	26.70	20.70	9.15	7.78	4.22	2.10	129.8 (58.9)	20 1/8 (527)	8 1/8 (216)	10 (254)
8G8D	HP	12	SAE	600	460	370	315	245	150	105	60.60	33.00	25.50	11.25	9.54	5.18	2.65	160.8 (72.9)	20 1/8 (527)	11 (279)	10 (254)

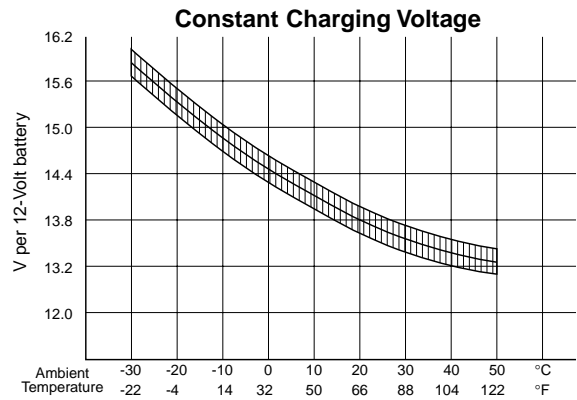
ALL RATINGS ARE AFTER 15 CYCLES AND CONFORM TO B.C.I. SPECIFICATIONS.

IMPORTANT CHARGING INSTRUCTIONS: WARRANTY VOID IF OPENED OR IMPROPERLY CHARGED. Do not install in a sealed container. Constant under or overcharging will damage any battery and shorten its life! Use a good constant potential, voltage-regulated charger. For 12-volt batteries, charge to at least 13.8 volts but no more than 14.1 volts at 68°F (20°C). For 6-volt batteries, charge to at least 6.9 volts but no more than 7.05 volts at 68°F (20°C). The open circuit voltage of a fully charged 12-volt battery is 12.8V at 68°F (20°C). However, as the battery charges, the building internal pressure (voltage) causes resistance to the charge. Therefore, the on-charge voltage must be higher (at least 13.8V) to overcome this internal pressure (voltage) during charging.

Footnotes:

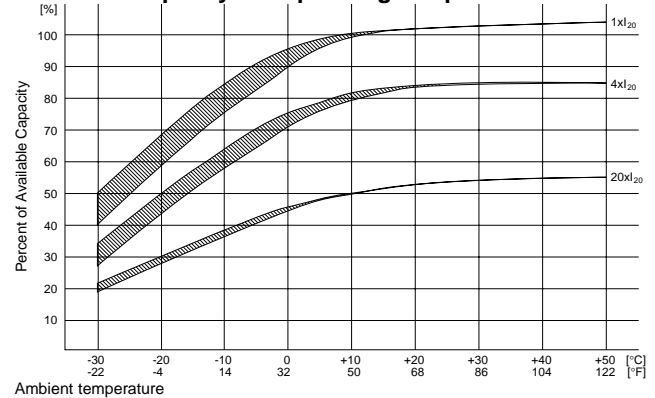
H - Includes handles
P - Polypropylene container and cover
Q - Combination terminals, offset with 5/16" stainless stud and wing nuts

T - Dual top terminals with SAE posts and stainless steel 3/8" stud and wing nuts.
V - Combination terminals, offset post with horizontal hole, 5/16" bolt and hex nut



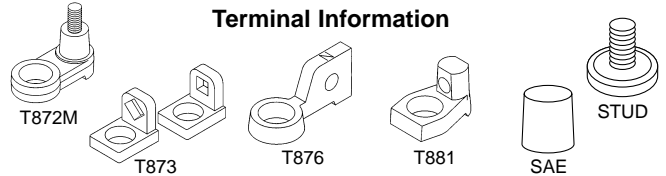
Constant Charging Voltage: Shown is the constant charging voltage in relation to the ambient temperature. The bandwidth shows a tolerance of $\pm 30\text{mV/cell}$. This constant voltage is suitable for continuous charging and cyclic operation. In a parallel standby mode it always keeps the battery in a fully charged state; in a cyclic mode, it provides for rapid recharging and high cyclic performance.

Capacity vs. Operating Temperature



Capacity vs. Operating Temperatures: Shown are the changes in capacity for wider ambient temperature range, giving the available capacity, as a percentage of the rated capacity, at different ambient temperatures for 3 different load examples with uninterrupted discharge to the appropriate discharge cut-off voltage. The values for the upper edge of the curve were obtained from charging at an ambient temperature of +20°C with a voltage limit of 2.3 V/cell. For the lower edge, charging was carried out at the specified ambient temperature. The curves show the behavior of the battery after a number of cycles.

Terminal Information



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E.P.M. Form No. 0919 Rev. 11/01
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