GEL Gel Technology Batteries

Upower
Unlimited power

UP Series
G12-12
GENERAL PURPOSE GEL

Main Features

- Designed life 15 years in stand-by application.
- Superior Deep Cycle Design.
- High Power Density.
- Thick Plates and High-density Active Material.
- Longer Life in Deep Cycle Applications.
- Excellent Recovery from Deep Discharge.
- Wide operating temperature range from -10ºC ~ 50ºC.

Application

- Measuring equipment and instrument.
- Telephone sets.
- Lighting equipment.
- Security systems.
- UPS power supply.

MH27590 · CTSGZ071112-02446-E · TÜVRheinland R50124945 · ISO9001 ISO14000

Technical Specifications

Nominal Voltage (V)		12
Nominal Capacity (20 Hr)		12 Ah
Dimensions		Length: 151 ± 2 mm (5.94 inches)
		Width: 98 ± 1 mm (3.86 inches)
		Container Height: 95 ± 1 mm (3.74 inches)
		Total Height (+terminal): 99 ± 1 mm (3.90 inches)
Weight ± 3%		Approx. 3.75 Kg (8.26 lbs)
Internal Resistance (In full charge status)		≈ 22.2 mΩ
Standard Terminals		F2
Constant - Voltage Charge	Cycle application	1. Limit initial current less than 2.4 A. 2. Charge until battery voltage (under charge) reaches 14.1 V to 14.4 V at 25°C (77°F). 3. Hold at 14.1 V to 14.4 V until current drop to under 0.072 A for at least 3 hours. 4. Temperature compensation coefficient of charging voltage is -30 mV / °C.
	Standby service	1. Hold battery across constant voltage source of 13.6 to 13.8 volts with current limit 2.4 A continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charge status. 2. Temperature compensation coefficient of charging voltage is -18 mV / °C.
NOTE:		The battery should be charged within 6 months of storage. Otherwise, permanent loss of capacity might occuras a result of sulfation.

MASTER BATTERY

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UP-G12-12

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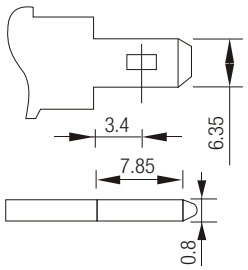
Electrical Specifications

Rated Capacity	20 hour rate (0.60 A)	12.0 Ah
	10 hour rate (1.2 A)	11.3 Ah
	5 hour rate (1.92 A)	9.6 Ah
	27 minute rate (12 A)	5.4 Ah
	7 minute rate (36 A)	4.2 Ah
Capacity affected by Temperature (20 Hour Rate)	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%

Terminal Type

Terminal F2
Unit: mm (inches)



Constant Current Discharge Data Sheet (Amperes at 25ºC/77ºF)

End Voltage/cell	5 min	10 min	20 min	45 min	1 h	2 h	4 h	8 h	10 h	20 h
1.70	44.4	28.9	16.1	8.38	7.20	4.26	2.43	1.38	1.16	0.612
1.75	44.0	28.6	16.0	8.30	7.15	4.10	2.37	1.37	1.15	0.606
1.80	43.5	28.3	15.8	8.22	7.10	3.94	2.31	1.35	1.14	0.600

Constant Power Discharge Data Sheet (Watt at 25ºC/77ºF)

End Voltage/cell	5 min	10 min	20 min	45 min	1 h	2 h	4 h	8 h	10 h	20 h
1.70	533	336	193	101	86.4	51.1	29.2	16.6	13.8	7.28
1.75	528	338	192	99.8	85.8	49.2	28.5	16.4	13.7	7.21
1.80	522	340	190	98.6	85.2	47.3	27.7	16.2	13.6	7.14

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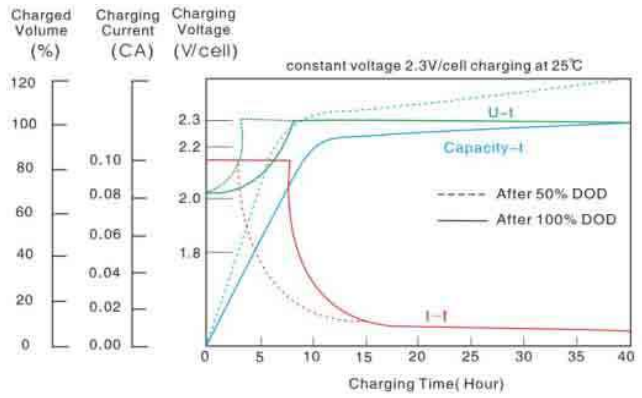
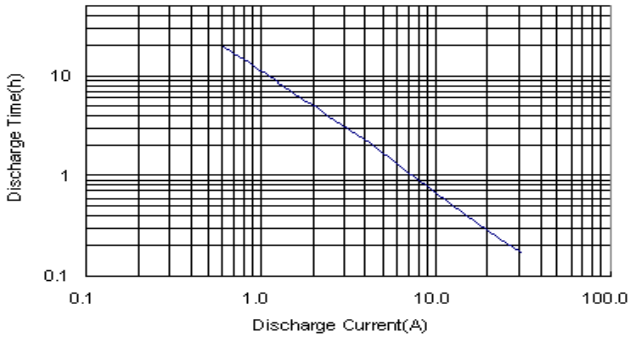
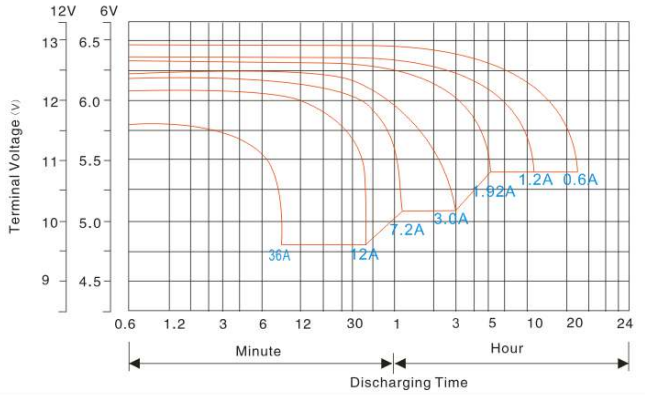
Charge Characteristics



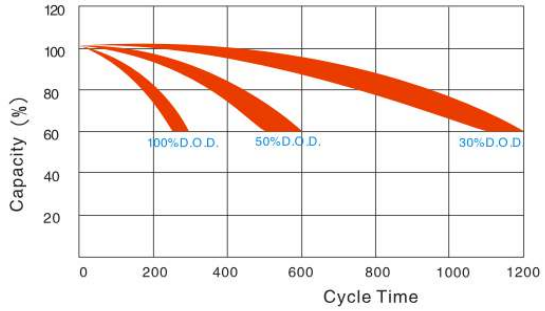
Discharge Current & Discharge Duration Time (25ºC/77ºF)



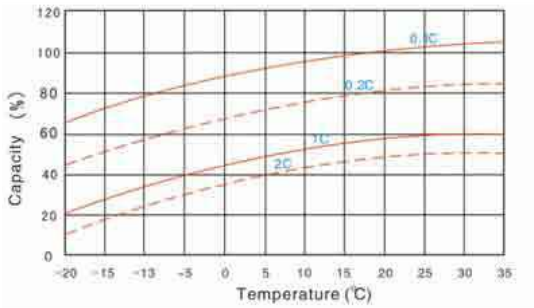
Discharge Characteristic (25ºC/77ºF)



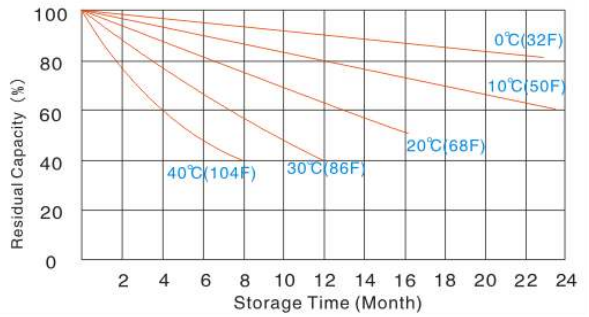
The Relationship Between Lifetime and Depth of Discharge (25ºC/77ºF)



Capacity Curve at Different Temperature



Storage Characteristics



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