

GEL-12-28

Valve-regulated lead-acid battery



GEL SERIES

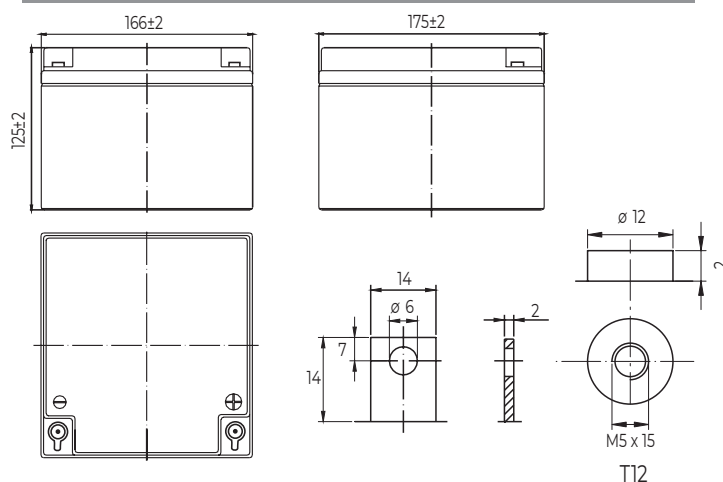
Characteristics

Nominal voltage		12V (6 cells per unit)
Nominal capacity at 20 hours rate/10.5V (25°C)		28Ah
Capacity (25°C)	10 Hours rate/10.8V	25.8Ah
	5 Hours rate/10.8V	22.4Ah
Terminal type		T12/T4
Torque		3.0±0.6N.m
Approx. internal resistance (25°C)		11.0mΩ
Dimensions	Length	166±2mm (6.54inch)
	Width	175±2mm (6.89inch)
	Height	125±2mm (4.92inch)
	Total height	125±2mm (4.92inch)
Design Life (stand-by)	JIS at 25°C	10 years
	Eurobat at 20°C	10/12 years
Weight		8.80kg (19.40lbs)±4%
Nominal operating temperature		25°C±3 (77±5°F)
Operating temperature range	Discharge	-15°C~50°C (5°F~122°F)
	Charge	-10°C~50°C (14°F~122°F)
	Storage	-20°C~50°C (-4°F~122°F)
Float charging voltage at 25°C		13.6V~13.8V
Cyclic charging voltage at 25°C		14.4V~14.7V
Temperature compensation	Float charge	-18 mV/°C/Block
	Cycle charge	-30 mV/°C/Block
Max. charging current (A)		5.6A
Max. discharge current for 5 seconds		360A
Self discharge rate (25°C)		≤3%/month
Battery container ABS UL94-HB		V-0 optional

Overview

GEL Series are manufactured following the highest demands in the deep cycle and renew-able energy applications. The batteries use colloidal or foamed silica gel to immobilize the electrolyte, which further enhances the cycling stability. Available in top and front terminal types.

Dimensions & Terminal Type (mm)



Construction

Component	Positive Plate	Negative plate	Container	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS (V-0 opt.)	AGM	Sulfuric Acid Gel	Rubber	Copper

Constant current discharge characteristics at 25°C

(Ampere/battery)

F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	84.5	57.6	48.0	28.0	17.0	9.80	6.91	5.60	4.71	2.60	1.42
9.90V	82.0	55.9	46.9	27.4	16.8	9.75	6.87	5.56	4.68	2.59	1.42
10.2V	78.6	53.6	45.1	26.6	16.3	9.66	6.82	5.53	4.65	2.58	1.41
10.5V	75.2	51.3	43.6	25.9	16.0	9.52	6.78	5.49	4.62	2.56	1.40
10.8V	71.0	48.4	41.3	25.0	15.5	9.27	6.57	5.32	4.48	2.51	1.37

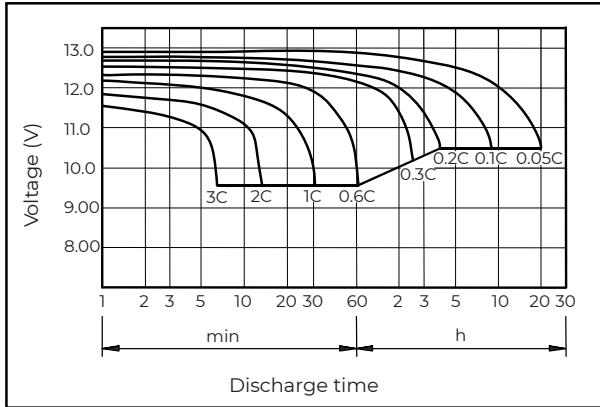
Constant power discharge characteristics at 25°C

(Watts/battery)

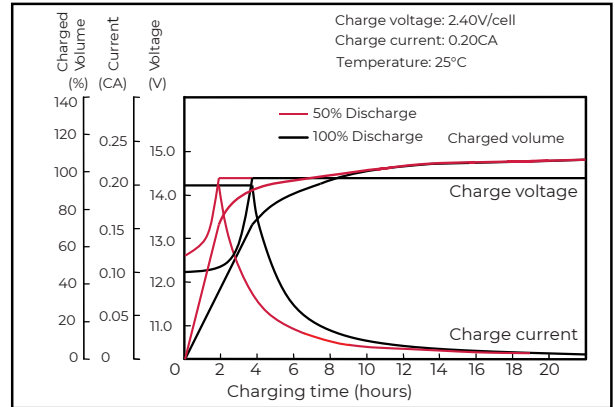
F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	943	650	547	321	197	115	82.1	66.7	56.3	31.2	17.1
9.90V	915	630	534	314	194	114	81.6	66.3	55.9	31.1	17.0
10.2V	877	604	515	305	189	113	81.1	65.8	55.5	30.9	16.9
10.5V	839	578	497	297	185	111	80.5	65.4	55.2	30.7	16.8
10.8V	792	546	471	286	180	109	78.1	63.4	53.5	30.1	16.5

The above characteristics represent average values and can be obtained within three charge and discharge cycles. The batteries must be fully charged before testing. The data in this document is subject to change without notice and become contractual only after written confirmation. Please contact **Conexpro** for the latest available version.

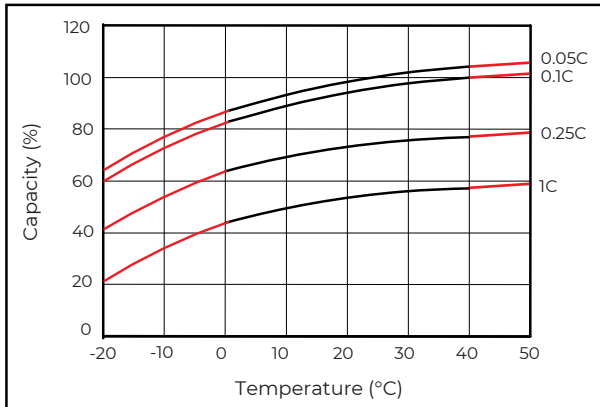
Discharge characteristics (25°C)



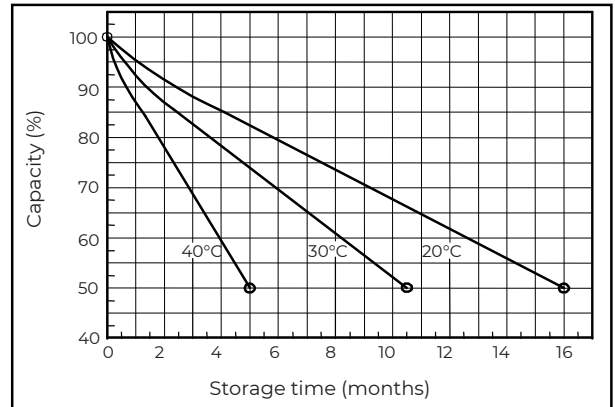
Charging characteristics (25°C)



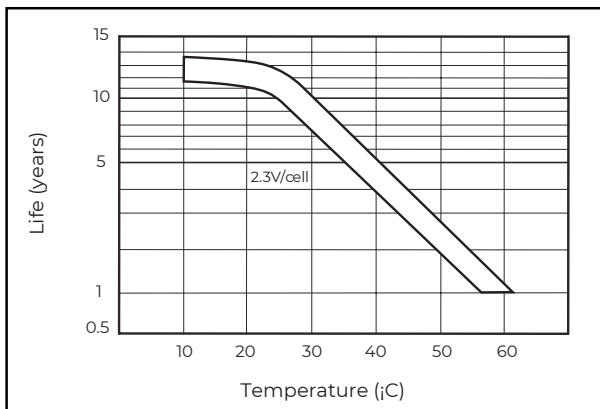
Temperature effects on capacity



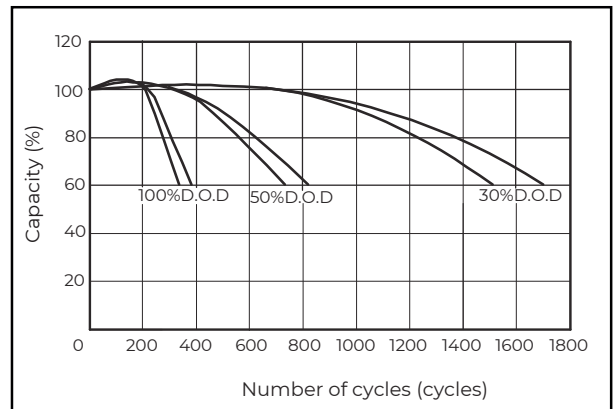
Self-discharge characteristics



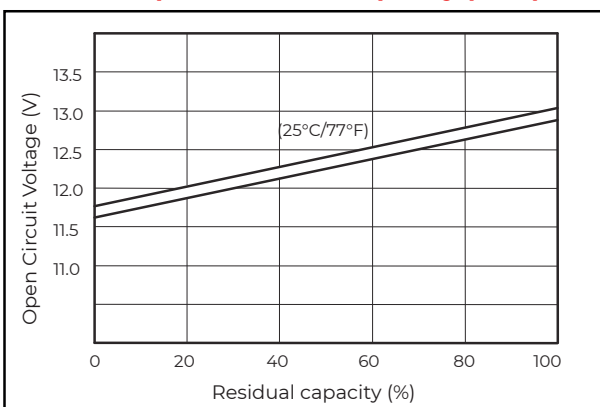
Floating life on temperature



Cycle life on D.O.D (25°C)



Relationship for OCV and capacity (25°C)



Charging voltage VS temperature

