

FZA 40-12

12V 40AH

General



FZA 40-12 / VRLA GEL



Physical Specification

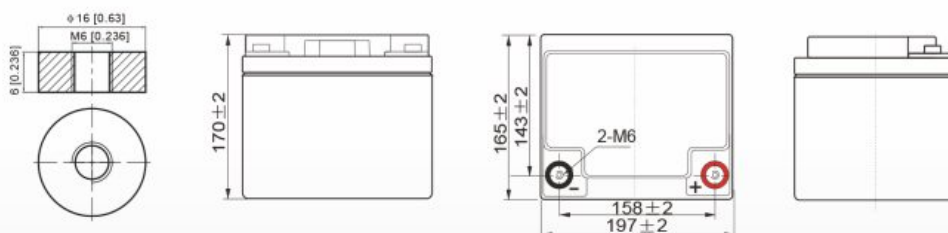
Part Number:	FZA 40-12
Length:	197 ± 2 mm (7.76 inches)
Width:	165 ± 2 mm (6.49 inches)
Container Height:	170 ± 2 mm (6.69 inches)
Total Height (with terminal):	170 ± 2 mm (6.69 inches)

Specifications

Terminal Type	Nominal Voltage	12V	
	Nominal Capacity (20HR)	40AH	
	Standard Terminal	F7	
Container Material	Optional Terminal	-	
	Standard Option	ABS	
Rated Capacity	Flame Retardant Option (FR)	ABS (UL94:VO)	
	40.0AH/4.08A	(20hr, 1.80V/cell, 25°C / 77°F)	
	37.2 AH/4.00A	(10hr, 1.80V/cell, 25°C / 77°F)	
	31.5 AH/6.89A	(5hr, 1.75V/cell, 25°C / 77°F)	
Max Discharge Current	31.2 AH/10.4A	(3hr, 1.75V/cell, 25°C / 77°F)	
	480A (5s)		
Internal Resistance	Approx 9mΩ		
Discharge Characteristics	Operating Temp. Range	Discharge: -15 ~ 50°C (5 ~ 122°F)	
		Charge: 0 ~ 40°C (5 ~ 104°F)	
		Storage: -15 ~ 40°C (5 ~ 104°F)	
	Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
	Cycle Use	Initial Charging Current less than 12.0A. Voltage 14.4V ~ 15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C	
		Standby Use	
Capacity affected by Temperature	No limit on Initial Charging Current Voltage 13.5V ~ 13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C		
	40°C (104°F)	103%	
	25°C (77°F)	100%	
Design Floating Life at 20°C	0°C (32°F)	86%	
	10 Years		

Dimensions

F6 Terminal



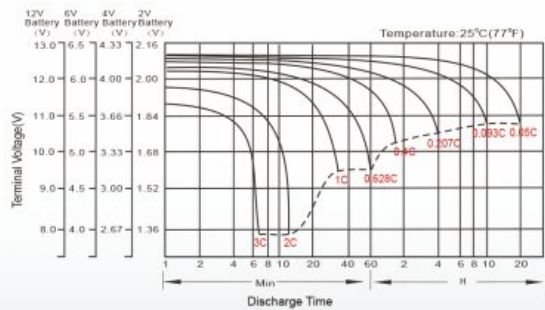
Constant Current Discharge (Amperes) at 25 °C (77 °F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.86V/cell	68.5	53.8	45.8	38.3	30.4	23.0	18.9	12.0	9.50	7.76	6.25	5.44	4.42	3.78	2.06
1.80V/cell	91.9	68.8	55.3	45.3	35.9	26.8	21.1	13.1	10.2	8.28	6.72	5.84	4.69	4.00	2.08
1.76V/cell	103.6	75.6	60.4	48.7	37.3	27.8	22.1	13.6	10.4	8.47	6.88	6.00	4.77	4.04	2.10
1.70V/cell	114.1	82.4	64.5	51.2	38.8	28.9	22.8	14.1	10.7	8.69	7.06	6.12	4.84	4.08	2.14
1.66V/cell	125.8	88.9	68.6	54.4	40.9	29.6	23.6	14.5	11.2	8.99	7.26	6.26	4.91	4.16	2.17
1.60V/cell	138.8	96.5	73.3	57.9	43.2	30.9	24.4	15.0	11.5	9.27	7.50	6.40	4.96	4.21	2.18

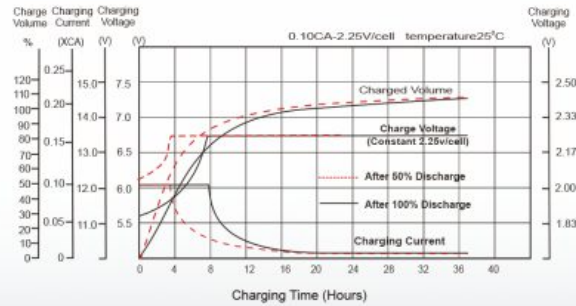
Constant Power Discharge (Watts) at 25 °C (77 °F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.86V/cell	125.2	99.4	85.4	72.2	58.0	44.3	36.4	23.3	18.5	15.2	12.3	10.7	8.73	7.47	4.08
1.80V/cell	166.2	125.5	101.8	84.1	67.4	51.1	40.5	25.3	19.8	16.1	13.1	11.4	9.23	7.90	4.11
1.76V/cell	183.4	135.7	109.8	89.6	69.4	52.5	42.2	26.1	20.1	16.4	13.4	11.7	9.36	7.97	4.15
1.70V/cell	196.4	144.6	115.6	93.4	71.8	54.4	43.4	27.1	20.6	16.8	13.7	11.9	9.49	8.05	4.23
1.66V/cell	213.5	154.6	122.0	98.5	75.1	55.3	44.5	27.7	21.4	17.3	14.0	12.2	9.61	8.20	4.28
1.60V/cell	230.0	164.0	128.3	103.8	78.8	57.3	45.9	28.5	22.0	17.8	14.5	12.4	9.69	8.27	4.29

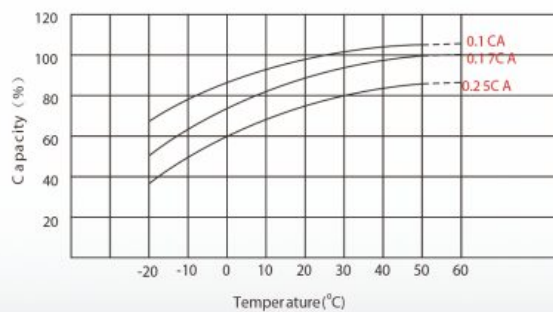
Discharge Characteristics



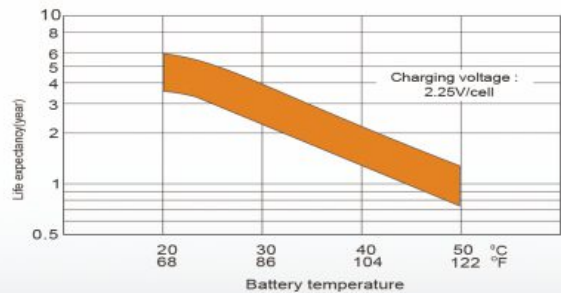
Float Charging Characteristics



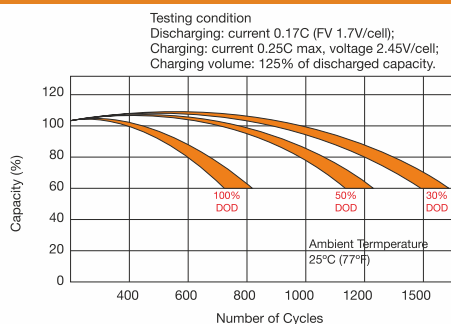
Temperature Effects in Relation to Battery Capacity



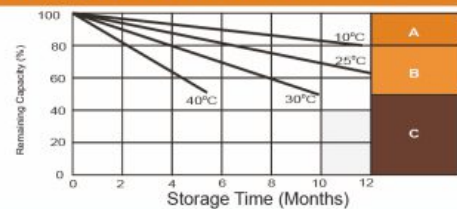
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary required
(Carryout supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.25V/cell.
3. Charged for 8 ~ 10 hours at limited current 0.05 CA.
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.