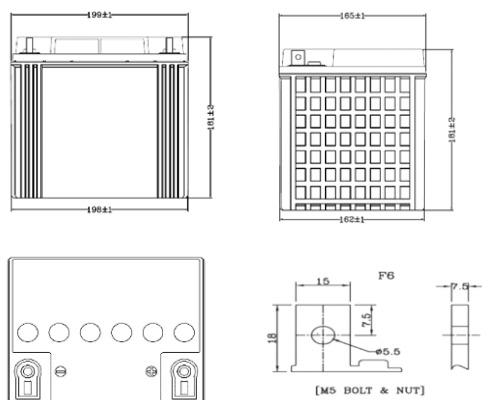


Product Outline



Product Details

Battery Type	EP 42-12
Nominal voltage (V)	12
Rated Capacity @25°C 20 hour (up to 10.5V)	42
Dimension (L x W x H) (mm) ±3	199 x 165 x 181
Weight (kg) ± 5%	13.2
Internal Resistance (mΩ) @ 25°C Fully Charged Condition	8.5 max
Short Circuit Current (A)	986
Ah Efficiency	>90%
Wh Efficiency	>80%
Plastic Material	PPCP-FR
Type of +ve & -ve plate	Flat Pasted
Terminal Torque (N-m)	2.5
Terminal Type	M5-Bolt
Operating Temperature Range	0°C to 45°C
Self-Discharge/Month @ 27°C	<3% of Rated Capacity

Features

- ❖ Non-spillable sealed maintenance free VRLA battery
- ❖ Absorptive Glass Mat Technology.
- ❖ Long Service Life
- ❖ Low Self-discharge
- ❖ Excellent Charge Retention.
- ❖ Superior High-Rate Discharge
- ❖ Internal Oxygen Recombination
- ❖ Design Float life of 10 years

Constant Power Discharge Rating (W) at 25°C

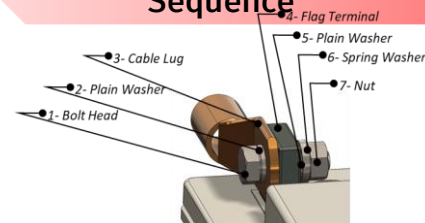
EMV	10 min	15 min	20 min	30 min	60 min	120 min	180 min	300 min	480 min	600 min
10.2	1022	825	671	507	305	185	134	88.2	60.5	50.4
10.5	1001	794	650	491	299	182	129	86.1	59.3	49.2
10.8	980	763	629	475	293	180	124	84.0	58.0	47.9

Constant Current Discharge Rating (A) at 25°C

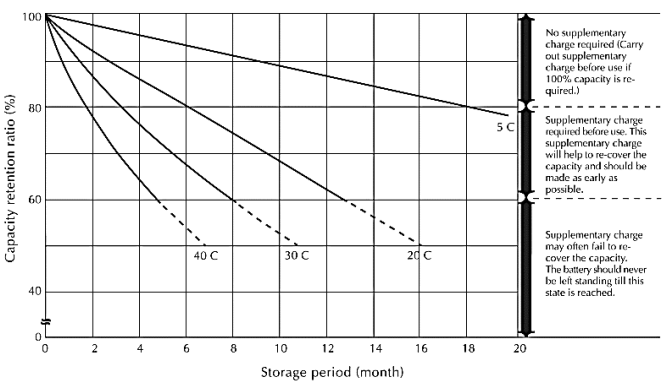
EMV	10 min	15 min	20 min	30 min	60 min	120 min	180 min	300 min	480 min	600 min
10.2	96.6	75.6	63.0	48.3	28.1	16.8	12.2	8.0	5.5	4.5
10.5	89.4	72.4	60.9	47.2	27.5	15.9	11.7	7.5	5.0	4.1
10.8	84.0	69.3	58.8	46.2	26.9	15.1	11.3	7.1	4.6	3.8

** Please note, the above discharge values are average and can be achieved within 5 charge/discharge cycles

Terminal Connection Sequence



Capacity Retention & Supplementary Charge

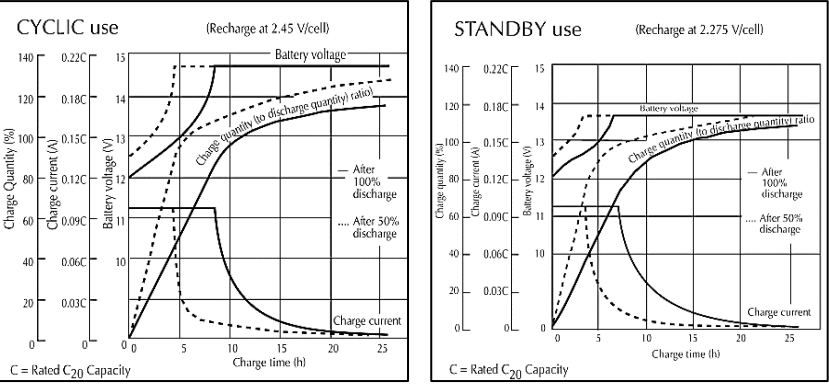


Supplementary Charge Guideline for 3 -6 Months of Storage					
Charging Method	Voltage Setting	Current Setting	Duration for upto 3 months storage	Duration for upto 6 months storage	Temperature
Constant Voltage	14.5V per battery	15% limit current	6 hours	12 hours	5°C-35°C
Constant Current	NA	5% Current	6 hours	12 hours	

Charge Characteristics

Recharge voltages: Batteries to be charged in CC-CV mode only		
Recharge Voltage Type	Voltage settings per 12 V unit for ambient temperature 20°C-30°C	
Float	13.7 ± 0.1 V	
Boost	14.1 ± 0.1 V	
Cycle	14.7 ± 0.1 V	
Temperature compensation (Ref. 25°C)		-18 mV/ °C increase / 12 V unit

Current setting	
Maximum	0.3C A
Minimum	0.1C A
Recommended	0.15C A



Gas Evolution & Heat Generation

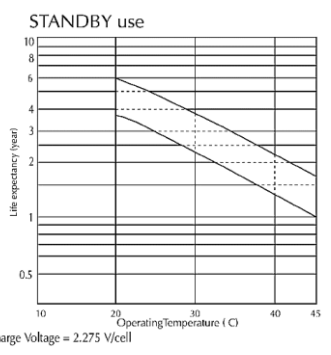
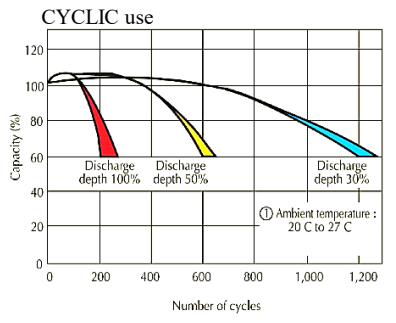
Considering the wide variation in the operating condition, in a worst-case scenario, Hydrogen gas evolved per hour per battery may be estimated as = 0.000227 m³ at NTP

Heat Generation per battery = 1.13 W

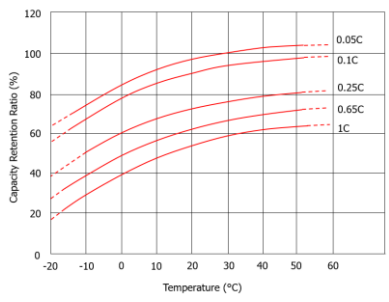
Sizing Calculator – Online



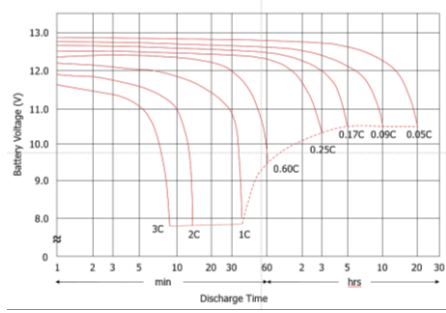
Service Life Characteristics



Effect of Temperature on Capacity



Discharge Characteristics



Installation – Best Practices

