

BINDAL

ISO 9001:2008 & 14001:2004

**INSTRUCTION MANUAL
FOR**

**(MONOBLOCK TUBULAR BATTERIES)
(AS PER IS 13369:1992)**

Technical Specification for Solar Batteries

General Technical Specification:

- 1) Batteries are Lead Acid Tubular Positive Plate with Flooded Electrolyte.
- 2) Container: PP Heat Sealed Container.
- 3) Vent Plug: Float Type for each cell.
- 4) Terminal Type: 'L' Shaped with fitted Nut Bolts and Petroleum Jelly

Technical Data:

Type of Battery	Capacity @ 10Hr. Rate At 27 Deg	Discharge Current @ 10Hr. Rate	Rate of Initial Charge for 80 Hrs @ (Amp)	Normal Rate of Charging		Dry Weight (Kg)	Filled Weight (Kg)	Volume of Acid (Ltr.)	Overall Dimensions (+/- 5mm)		
				UP TO 2.4V	Till End Amp				(+/- 5%)	L	W
(12V Series)											
12V 20Ah	20 Ah	2.0	1.0	2.4	1.2	8.5	19.0	8.4	410	175	250
12V 40Ah	40 Ah	4.0	2.0	4.8	2.4	12.5	27.0	11.7	512	182	256
12V 60Ah	60 Ah	6.0	3.0	7.2	3.6	16.0	29.0	11.0	512	182	256
12V 75Ah	75 Ah	7.5	4.0	9.0	4.5	19.5	41.0	17.2	515	275	256
12V 100Ah	100 Ah	10.0	5.0	12.0	6.0	23.0	45.0	18.0	515	275	256
12V 120Ah	120 Ah	12.0	6.0	14.4	7.2	32.0	58.0	22.0	515	275	290
12V 150 Ah	150 Ah	15.0	7.5	18.0	9.0	36.5	62.0	19.0	515	275	290
12 V 180 Ah	180 Ah	18.0	9.0	21.6	10.8	41.0	66.0	18.0	515	275	290
12V 220 Ah	220 Ah	22.0	11.0	26.4	13.2	54.0	76.0	19.0	502	191	440

Initial Activation:

- 1) Fill each Cell of battery carefully with find battery grade Sulphuric Acid (Conforming to IS 266:1977) of 1.21 +/- .005 Sp. Gravity corrected to 27 Deg. C.
- 2) Allow battery to stand ideal for 10 to 12 Hrs.

Initial Charging:

- 1) Check Electrolyte Level and adjust if necessary, to correct for absorption and resultant level drop.
- 2) Charge the battery for 80 Hrs., using direct current at the recommended charging current as shown in technical specification, during charging temp. should not be allowed to rise above 50 Deg. If this goes beyond this limit than either discontinue charging or decrease the rate of charging current. Continue charging till compliation of charge is indicated by :
 - a) Specific Gravity of Electrolyte in each cell remain constant for three consecutive hourly reading.
 - b) All cell are gasing freely
 - c) At the end of charging the voltage of each cell will reach appox. 2.6 Volt and Sp. Gravity to 1.240 +/- 0.005. Adjust Sp. Gravity to this value corrected to 27 Deg.

INSTALLATION

- Ensure battery is fully charged.
- Re-check that the battery is of correct size and capacity as recommended.
- Use wooden or plastic (non conductive) planks for placing the battery.
- Ensure the connecting cables to the battery are not frayed and are of appropriate quality and size.
- Ensure system is off.
- Connect battery/batteries to the system with correct polarity.
- Cable connections should be properly located and tightened and smeared with thin layer of petroleum jelly/vaseline.
- Switch 'ON' the system and ensure it is functioning properly.
- Switch 'OFF' the mains for 5 minutes and then switch it 'ON'. Ampere meter changing indicator shall show charge.

MAINTENANCE

1. The Battery and surrounding area should be kept clean and dry.
2. Top up at regular intervals to correct level.
3. Use only distilled or de-ionised water for topping up.
4. If frequent topping up is required, then it is an indication that the battery is being 'over charged'. The charging system of the UPS/ Invertor must be rectified immediately.
5. Theconnectingcablestothebattery must be of appropriate quality and size.
6. Constant charging voltage should be less than 2.33 volts per cell. Do not overcharge.
7. Temperature should not exceed 45° C while charging
8. Keep flames, cigarettes etc away from the battery as the gases evolved are inflammable.
9. Keep connections properly bolted and tight and smear with thin layer of Vaseline / petroleum jelly.
10. Protect battery from metallic objects coming in contact with terminals and connectors.
11. Maintain battery records

For Complete Battery Solution Contact:

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