

41-7107MPS

**MULTI  
PURPOSE  
SERIES**

# MPS12-50 VALVE REGULATED LEAD ACID BATTERY

## FOR STANDBY POWER APPLICATIONS

**12V 50 AH @ 20 HR Rate,  
12V 170 Watts/Cell @ 15 Min Rate**



**VALVE REGULATED BATTERY  
DESIGNED FOR UNINTERRUPTIBLE  
POWER SUPPLY (UPS), EMERGENCY  
LIGHTING, COMMUNICATION,  
GENERAL PURPOSE AND OTHER FLOAT  
SERVICE APPLICATIONS.**

### FEATURES

- Robust plate for extended life.
- Flame-arresting one-way pressure-relief vent for safety and long life.
- Durable polypropylene container and cover.
- Thermally welded case-to-cover bond to eliminate leakage.
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance.
- UL-recognized component.
- Multicell design for economy of installation and maintenance.
- Can be used in any orientation. Upright, side, or end mounting recommended.
- Not restricted for air transport – Complies with IATA/ICAO Special Provision A67.
- Not restricted for surface transport – classified as non-hazardous material as related to DOT-CFR Title 49 parts 171-189.
- Not restricted for water transport – classified as non-hazardous material per IMDG Amendment 27.
- Computer designed lead, low calcium alloy grid for minimal gassing and ease of recycling.

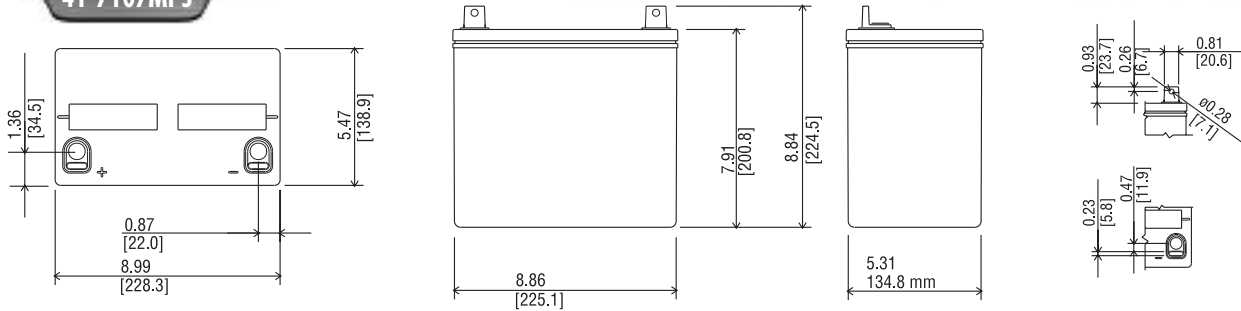
### SPECIFICATIONS

**12 Volts – 50 Ampere Hour Capacity @ 20 Hour Rate**

**Ampere Hour Capacity to 1.75 Volts per Cell @ 77°F (25°C)**

Discharge in Hours	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	10.00	12.00	20.00	24.00	72.00	100.00
Amp-Hr Capacity	32.0	37.2	40.0	42.0	43.3	44.3	45.1	46.0	46.9	47.8	50.0	50.3	51.7	52.0

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\*All dimensions in inches and (millimeters). All dimensions are for reference only. Contact a C&D Representative for complete dimensional information.

**Specifications**

Cells Per Unit	Voltage Per Unit	Weight	Electrolyte	Maximum Discharge Current	Short Circuit Current	Ohms Imped. 60 Hz (Ω)
6	12.84	40 lbs. 18 kg	Absorbed H <sub>2</sub> SO <sub>4</sub> SG = 1.300	600 Amps	2500 Amps @ 0.1 sec.	0.0060 Ohms

<b>Capacity</b>	170 watts per cell at the 15 minute rate to 1.67 volts per cell at 77°F (25°C). 50 Ah @ 20 hr. rate to 1.75 volts per cell @ 77°F (25°C). 44.8 Ah @ 10 hr. rate to 1.80 volts per cell @ 68°F (20°C).
<b>Operating Temperature Range</b>	<b>Discharge;</b> -40°F (-40°C) to +160°F (71°C), <b>Charge;</b> -10°F (-23°C) to +140°F (60°C). (with temperature compensation)
<b>Recommended Operating Temperature Range</b>	+74°F (23°C) to +80°F (27°C).
<b>Float Charging Voltage</b>	13.5 to 13.8 VDC/unit Average at 77°F (25°C).
<b>Recommended Maximum Charging Current Limit</b>	C/5 amperes (10 amperes @ 100% depth of discharge) @ 20 hour rate
<b>Equalization and Cycle Service Charging Voltage</b>	14.4 to 14.8 VDC/unit average at 77°F (25°C).
<b>Maximum AC Ripple (Charger)</b>	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Maximum AC ripple voltage allowed = (4% P-P). Maximum AC ripple current allowed = 2.5 amperes rms (C/20).
<b>Self Discharge</b>	Dynasty MPS batteries may be stored for up to 6 months at 77°F (25°C) and then a freshening charge is required. For higher temperatures the time interval will be shorter.
<b>Accessories</b>	Inter unit connectors, racks and cabinet systems are available.
<b>Terminal</b>	"L" terminal with 0.28" clearance hole to accept 0.25" (6mm) bolt.
<b>Terminal Hardware Initial Torque</b>	40 in.-lbs. (4.5 N-m).
<b>Terminal Hardware Annual Retorque</b>	32 in.-lbs. (3.48 N-m).

**Constant Power Discharge Ratings – Watts Per Cell @ 77°F (25°C)**

**Operating Time to End Point Voltage (in minutes)**

End Point Volts/Cell	5	10	15	20	30	40	45	50	60	90
1.75	250	190	155	130	100	82.5	76.7	70.8	62.0	45.3
1.70	272	204	165	136	105	86.6	80.0	74.4	65.0	46.7
1.67	280	210	170	140	107	88.1	81.7	75.2	65.5	47.3
1.65	284	213	173	142	108	88.5	82.1	75.8	66.0	47.7
1.60	290	215	174	143	109	88.9	82.6	76.2	66.5	48.1

**Constant Current Discharge Ratings – Amperes @ 77°F (25°C)**

**Operating Time to End Point Voltage (in hours)**

End Point Volts/Cell	.083	.25	.50	.75	1	2	3	5	8	10	12	20	24	72	100
1.90	73.0	53.6	38.0	31.7	25.2	16.0	11.8	7.80	5.15	4.25	3.58	2.17	1.83	0.63	0.46
1.85	107	69.2	45.6	37.3	29.0	17.5	12.7	8.26	5.45	4.43	3.75	2.33	1.96	0.68	0.50
1.80	120	75.6	49.2	39.8	30.4	18.2	13.0	8.48	5.60	4.57	3.88	2.45	2.06	0.71	0.51
1.75	134	81.6	52.6	42.3	32.0	18.6	13.3	8.66	5.75	4.69	3.98	2.50	2.10	0.72	0.52

**Note:** Batteries to be mounted with 0.5 in. (1.25 cm) spacing minimum and free air ventilation. Specifications subject to change without notification.