



# HIGH RATE MAX



Valve Regulated Lead Acid Battery  
Designed for UPS Standby Power Applications.

## APPLICATIONS

- Data Centers
- Network Operations Centers
- Industrial Process Control Facilities
- Internet Housing Sites
- Semiconductor Manufacturing
- Banks & Financial Markets
- Power Generation Plants
- Hospitals & Testing Laboratories
- Emergency 911 Response Centers

## FEATURES & BENEFITS

- 10 year design life @ 25°C
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance.
- 3 Year Warranty (refer Dynasty warranty card, 41-9027)
- Patented Long Life Alloy having the lowest calcium levels in the industry - minimizing grid growth, reducing gassing, and extending battery life.
- Patented UL Recognized Flame-arresting vents in each cell for safety and long life.
- Designed with the same recombination, thermal runaway prevention, gassing and flame retardant characteristics of the Bellcore 4228 compliant Dynasty Telecom products.
- Flame retardant polypropylene case and cover compliant with UL94-V2
- Proprietary Fixed Orifice Plate Pasting technology applying active materials on both sides of the grid for consistent cell-to-cell performance, higher capacity and uniform grid protection.
- Thermally welded case-to-cover bond to eliminate leakage.
- Can be operated in any orientation. Upright, side or end mounting recommended.
- Not restricted for air transport - Complies with IATA/ICAO Special Provisions 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.

## TECHNICAL DATA

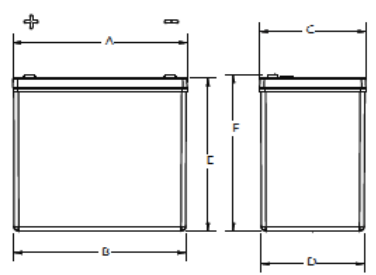
Model	Voltage	AH 20 hr*	Constant Power Discharge Ratings - Watts per Cell @ 77°F (25°F)									Weight	
			Operating Time (in minutes) to 1.67 Volts per Cell									lbs	kg
			5	10	15	20	30	40	50	60	90		
UPS12-400MR	12	103	716	506	400	328	244	195	162	139	97.2	75.8	34.4



## SPECIFICATIONS

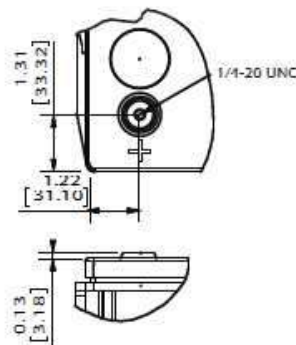
<b>Operating Temperature Range with temperature compensation</b>	Discharge: -40°F (-40°C) to +160°F (71°C) Charge: -10°F (-23°C) to +140°F (60°C)
<b>Nominal Operating Temperature Range</b>	+74°F (23°C) to +80°F (27°C)
<b>Recommended Maximum Charging Current Limit</b>	C/5 amperes @ 20hr rate
<b>Float Charging Voltage</b>	13.65 ± 0.15 VDC average per 12V unit (6.75 to 6.90 per 6V unit)
<b>Maximum AC Ripple (Charger)</b>	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Max voltage allowed = 1.4% RMS (4% P-P) Max current allowed = C/20
<b>Self Discharge</b>	Battery can be stored up to 6 months at 77°F (25°C) before a freshening charge is required. Batteries stored at temperatures greater than 77°F (25°C) will require recharge sooner than batteries stored at lower temperatures. See C&D brochure 41-7272, Self-Discharge and Inventory Control for details.
<b>Equalize charge and cycle service voltage</b>	14.40 to 14.80 VDC average per 12V unit @ 77°F (25°C) (7.20 to 7.40 VDC per 6V unit.)
<b>Terminal: Flag</b>	0.22 in. clearance hole to accept 0.1875 in. or 10-32 bolt (UPS12-100MR)
<b>Terminal: Inserted</b>	Threaded copper alloy insert terminal to accept 10-32 UNF bolt (UPS12-150MR, UPS12-210MR) ¼-20 UNC bolt (UPS12-300MR, UPS12-350MR, UPS12-400MR, UPS12-490MRLP, UPS12-490MR, UPS12-540MR, UPS6-620MR)
<b>Terminal Hardware Annual Retorque</b>	32 in.-lbs (3.48 N-m) (UPS12-100MR)
<b>Terminal Hardware Initial Torque: Inserted Terminal</b>	40 in.-lbs. (4.5 N-m) (UPS12-100MR) 30 in.-lbs. (3.4 N-m) (UPS12-150MR, UPS12-210MR) 110 in.-lbs. (12.4 N-m) (UPS12-300MR, UPS12-350MR, UPS12-400MR, UPS12-490MRLP, UPS12-490MR, UPS12-540MR, UPS6-620MR)

## DIMENSIONS



	A	B	C	D	E	F
UPS12-400MR	13.42	12.75	6.80	6.54	8.40	8.52
UPS12-490MRLP	(340.9)	(323.7)	(172.7)	(166.0)	(213.2)	(216.4)

### UPS12-400MR/UPS12-490MRLP







## UPS12-400MR

Constant Power Discharge Ratings - Watts Per Cell @ 77° F (25° C)										
End Point Volts/Cell	Operating Time to End Point Voltage (in minutes)									
	5	10	15	20	30	40	45	50	60	90
1.75	612	470	374	310	232	186	169	155	134	94.7
1.70	678	490	388	323	241	193	176	161	138	96.6
1.67	716	506	400	328	244	195	177	162	139	97.2
1.65	740	515	403	332	247	197	179	164	140	98.1
1.60	767	530	411	337	249	199	180	165	142	99.2

Constant Current Discharge Ratings - Amperes @ 77° F (25° C)										
End Point Volts/Cell	Operating Time to End Point Voltage (in hours)									
	1	2	3	5	8	10	12	20	24	72
1.85	56.2	33.7	24.4	15.7	10.8	8.85	7.56	4.8	4.06	1.38
1.80	62.1	36.5	26.1	16.7	11.4	9.38	8.00	5.03	4.23	1.43
1.75	67.9	39.2	27.8	17.6	11.9	9.73	8.26	5.17	4.35	1.46

Note: Batteries to be mounted with 0.5 in. (1.25 cm) spacing minimum and free air ventilation. Specifications subject to change without notification. Above ratings do not include interunit connector voltage drops.

## SPECIFICATIONS

Model	Cells per Unit	Maximum Discharge Current (AMPS)	Short Circuit Current (AMPS @ 0.1 sec)	Ohms Impedance 60 Hz (Ω)
UPS12-400MR	6	800	5100	0.0025

High Rate Max Part Number	Manufacturer Approved Premium Replacement for:
UPS12-100MR	UPS12-100FR
UPS12-150MR	UPS12-140FR & MR12-150
UPS12-210MR	UPS12-170FR, UPS12-200FR & MR12-210
UPS12-300MR	UPS12-270FR & MR12-300
UPS12-350MR	UPS12-310FR & MR12-350
UPS12-400MR	UPS12-370FR & MR12-400
UPS12-490MRLP	UPS12-475FR, MR12-490 & UPS12-490MR (Low profile high rate applications)
UPS12-490MR	UPS12-475FR & MR12-490 (Extended run applications)
UPS12-540MR	UPS12-530FR & MR12-540
UPS6-620MR	UPS6-620FR



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