

MAXRATE™ PREMIUM PLUS

for UPS applications



MR12-490

(Premium Replacement for UPS12-475FR)

**VALVE REGULATED
LEAD ACID BATTERY
FOR UPS STANDBY
POWER APPLICATIONS
12V 139 AH @ 20 HR RATE,
12V 488 WATTS/CELL @
15 MIN RATE**

FEATURES

- 10 year design life @ 25°C (77°F)
- 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, 41-9011)
- 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.
- Proprietary computer modeled radial grid matrix using multiple conductors to provide the lowest internal resistance and highest current carrying capability.
- Proprietary Fixed Orifice Plate Pasting technology applying active material on both sides of the grid for consistent cell-to-cell performance, higher capacity and uniform grid protection.
- UL-recognized component complying with UL1778, 924, 1989 and 94 V-0
- 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 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.
- Flame-retardant polypropylene case and cover compliant with UL 94 V-0 with an Oxygen Limiting Index of greater than 28.

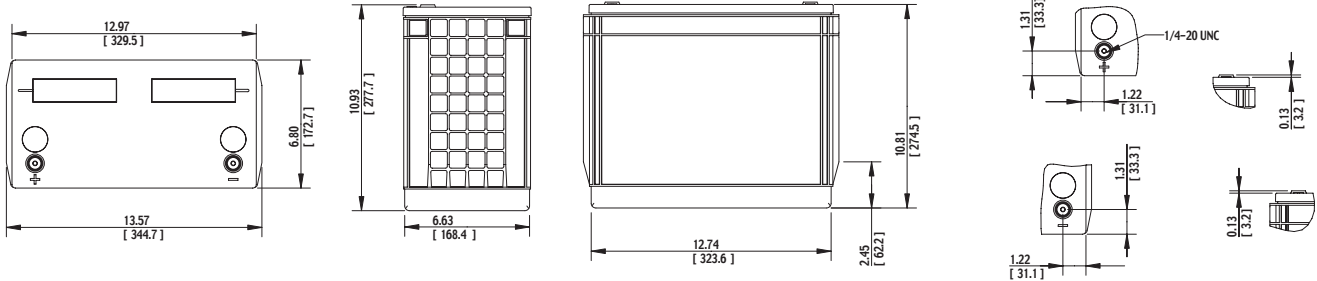
12 Volts – 488 Watts Per Cell For 15 Minutes to 1.67 Volts per Cell
Constant Power Discharge Ratings – Watts Per Cell @ 77°F (25°C)

End Point Volts/Cell	Operating Time to End Point Voltage (in minutes)								
	10	15	20	30	40	45	50	60	90
1.67	590	488	412	317	256	236	218	189	136

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DYNASTY Division
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Milwaukee, WI 53212
Phone: 800-396-2789
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MR12-490



Inserted Terminal

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

MR12-490 – Specifications

Cells Per Unit	Voltage Per Unit	Weight	Electrolyte	Maximum Discharge Current	Short Circuit Current	Ohms Imped. 60 Hz (Ω)
6	12.84	100 lbs. 45 kg	Absorbed H ₂ SO ₄ SG = 1.300	800 Amps	5000 Amps @ 0.1 sec.	0.0023 Ohms
Capacity		488 watts per cell at the 15 minute rate to 1.67 volts per cell at 77°F (25°C). 139.2 Ah @ 20 hr. rate to 1.75 volts per cell @ 77°F (25°C). 125.4 Ah @ 10 hr. rate to 1.80 volts per cell @ 20°C (68°F).				
Operating Temperature Range		Discharge: -40°F (-40°C) to +160°F (71°). Charge: -10°F (-23°C) to +140°F (60°) (with temperature compensation)				
Nominal Operating Temperature Range		+74°F (23°C) to +80°F (27°C).				
Floating Charging Voltage		13.5 to 13.8 VDC/unit Average at 77°F (25°C).				
Recommended Maximum Charging Current Limit		C/5 amperes (27.84 amperes @ 100% depth of discharge) @ 20 hr. rate.				
Equalization and Cycle Service Charging Voltage		14.4 to 14.8 VDC/unit Average at 77°F (25°C).				
Maximum AC Ripple (Charger)		0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Maximum voltage allowed = 1.4% RMS (4% P-P). Maximum current allowed = 6.96 amperes RMS (C/20).				
Self Discharge		Dynasty MaxRate 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.				
Accessories		Inter unit connectors, racks and cabinet systems are available.				
Terminal: Inserted		Threaded copper alloy insert terminal to accept 1/4-20 UNC bolt.				
Terminal Hardware Initial Torque: Inserted Terminal		110 in.-lbs. (12.4 N-m).				

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

End Point Volts/Cell	Operating Time to End Point Voltage (in minutes)								
	10	15	20	30	40	45	50	60	90
1.75	525	444	385	300	245	224	208	183	133
1.70	570	472	401	310	252	231	214	186	135
1.67	590	488	412	317	256	236	218	189	136
1.65	614	500	418	322	260	238	220	191	137
1.60	644	513	428	327	264	241	222	192	138

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	80.9	47.2	34.4	22.5	15.0	12.3	10.5	6.58	5.53	1.93
1.80	85.5	50.9	36.3	23.5	15.5	12.8	10.9	6.79	5.70	1.99
1.75	90.3	53.2	37.8	24.2	16.1	13.2	11.2	6.96	5.84	2.03

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