

# MAXRATE™ PREMIUM PLUS

for UPS applications



Optional Inserted Terminal  
Call Factory for Details

## MR12-300

(Premium Replacement for UPS12-270FR)

**VALVE REGULATED  
LEAD ACID BATTERY  
FOR UPS STANDBY  
POWER APPLICATIONS  
12V 78 AH @ 20 HR RATE,  
12V 300 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.

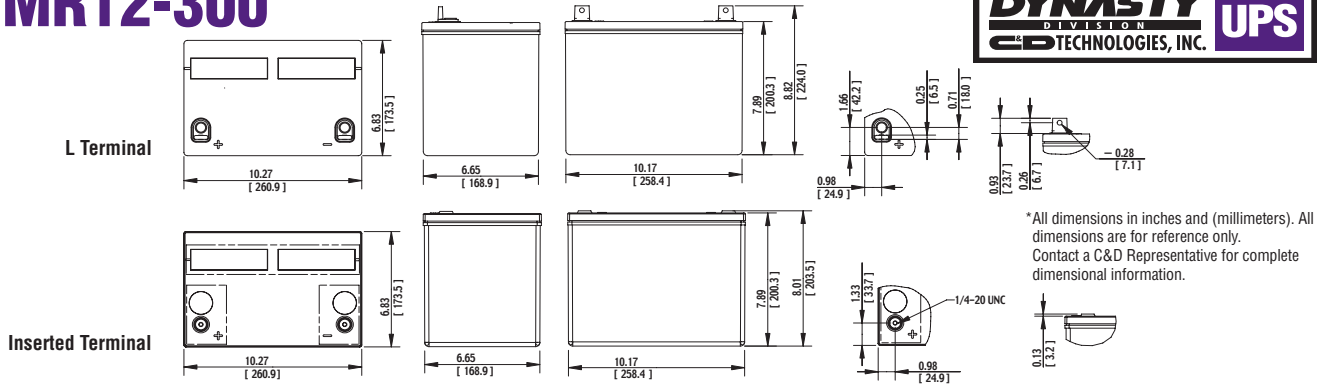
**12 Volts – 300 Watts Per Cell For 15 Minutes to 1.67 Volts per Cell**  
Constant Power Discharge Ratings – Watts Per Cell @ 77°F (25°C)

End Point Volts/Cell	Operating Time to End Point Voltage (in minutes)								
	10	15	20	30	40	45	50	60	90
1.67	382	300	244	179	144	131	121	105	76

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# MR12-300



## MR12-300 – Specifications

Cells Per Unit	Voltage Per Unit	Weight	Electrolyte	Maximum Discharge Current	Short Circuit Current	Ohms Imped. 60 Hz (Ω)
6	12.84	58.4 lbs. 26.5 kg	Absorbed H <sub>2</sub> SO <sub>4</sub> SG = 1.300	800 Amps	3600 Amps @ 0.1 sec.	0.0040 Ohms
<b>Capacity</b>		300 watts per cell at the 15 minute rate to 1.67 volts per cell at 77°F (25°C). 77.8 Ah @ 20 hr. rate to 1.75 volts per cell @ 77°F (25°C). 71.3 Ah @ 10 hr. rate to 1.80 volts per cell @ 20°C (68°F).				
<b>Operating Temperature Range</b>		<b>Discharge:</b> -40°F (-40°C) to +160°F (71°). <b>Charge:</b> -10°F (-23°C) to +140°F (60°) (with temperature compensation)				
<b>Nominal Operating Temperature Range</b>		+74°F (23°C) to +80°F (27°C).				
<b>Floating 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 (15.56 amperes @ 100% depth of discharge) @ 20 hr. 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 voltage allowed = 1.4% RMS (4% P-P). Maximum current allowed = 3.89 amperes RMS (C/20).				
<b>Self Discharge</b>		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.				
<b>Accessories</b>		Inter unit connectors, racks and cabinet systems are available.				
<b>Terminal: L</b>		“L” terminal with 0.28" clearance hole to accept 0.25" (6mm) bolt.				
<b>Terminal Hardware Initial Torque: L Terminal</b>		40 in.-lbs. (4.5 N-m); Annual Retorque: 32 in.-lbs. (3.48 N-m).				
<b>Terminal: Inserted</b>		Threaded copper alloy insert terminal to accept 1/4-20 UNC bolt.				
<b>Terminal Hardware Initial Torque: Inserted Terminal</b>		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	360	282	234	174	140	128	118	103	74
1.70	373	294	240	177	142	130	120	104	75
1.67	382	300	244	179	144	131	121	105	76
1.65	387	303	246	181	146	133	122	106	77
1.60	391	306	248	183	147	134	123	107	78

## 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	48.4	27.1	19.6	12.6	8.34	6.85	5.80	3.60	3.03	1.05
1.80	50.7	28.3	20.3	13.1	8.81	7.27	6.15	3.80	3.18	1.08
1.75	52.5	29.0	20.6	13.4	9.13	7.50	6.35	3.89	3.25	1.10

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