

# 12HRL600



MH27487



The Narada High Rate range of VRLA batteries provide reliable battery backup to any High Rate UPS application. All Narada High Rate series batteries use optimized plate technology and a patented post design offering exceptional service life.

## TECHNICAL FEATURES:

- Flame Retardant ABS Cover and Container, UL94 V-0, LOI>28%
- Patented copper alloy terminal design
- Epoxy TPS design for high reliability post seal
- 6 months of storage at 77°F (25°C) with a capacity > 80%
- Initial capacity at 100%
- Low pressure one-way flame arresting valve(s) UL1989
- Absorbent Glass Mat (AGM) Sealed Technology, Recombination efficiency of 99.9%

## COMPLIANCE AND SAFETY:

- ISO 9001:2000 and ISO 14001:2004 certified facilities
- UL Recognized Component 924, for use in or with listed UL1778, UL1989 and UL924 systems
- IEC60896-21/22 / BS6290 part 4
- Certified to NEBS Version 8, Level 3
- Telcordia GR-1089-CORE, Issue 6
- Telcordia GR-63-CORE, Issue 4
- Manufactured under system ISO9001(TUV)
- All batteries meet or exceed IEEE recommended practices

## TRANSPORTATION:

- Classified as Nonspillable UN 2800 and meet the Nonspillable criteria listed in DOT-CFR Title 49, 171-189 (d) (3) (i) and (ii) and exempt from CFR 49, Subchapter C requirements
- Meets transportation conditions of IMDG exemption 238, IATA/ICAO Special Provision A67 (Not Restricted)

WPC @ 15 min 1.67 VPC / 77°F (25°C)	600 watts
WPC @ 5 min 1.60 VPC / 77°F (25°C)	1165 watts
Ah @ 20hr 1.75 VPC / 77°F (25°C)	160 Ah

Nominal Voltage	12V
Float Charge Voltage @25°C (2.23 vpc)	13.4
Max. Charge Current (A) (5 hour rate @ 1.75vpc)	37.5 Amps

Electrolyte Absorbed H <sub>2</sub> SO <sub>4</sub>	1.300
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Short Circuit Current (A)	4000 Amps
Internal Resistance (mΩ)	3.29

Terminal Type	Torque
M6-M (Front L Bracket)	78 in-lbs (8 ±1 Nm)
M6-F (Top Insert)	78 in-lbs (8 ±1 Nm)

Dimension	In	mm
Length	21.65	550
Length Base	20.87	530
Width	4.9	125
Overall Height	11.23	285

Weight	Lbs.	Kg
	113	51

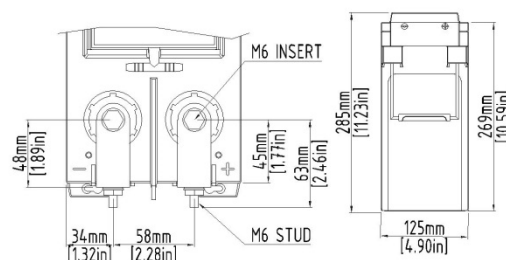
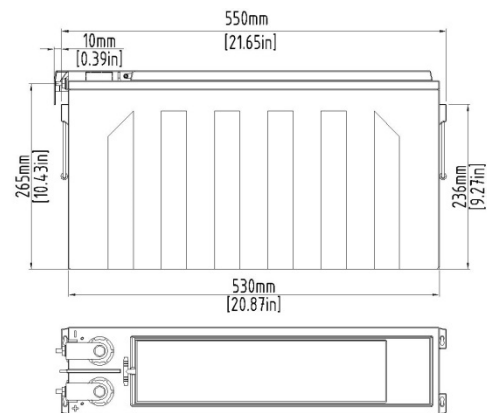
OPERATING PARAMETERS

Float Charging Voltage	13.38V / 2.23Vpc @ 77°F (25°C)
Equalize /Cycle	14.0V – 14.3V 2.33Vpc to 2.38Vpc @ 77°F (25°C)
See Operations and Maintenance Manual for specific guidelines and recharge times	

Charging Temperature Compensation	-1.7 mV/cell/°F > 77°F (-3 mV/cell /°C > 25°C)
	+1.7 mV/cell/°F < 77°F (+3 mV/cell/°C < 25°C)

Maximum AC Ripple (Charger)	0.5% RMS, 1.5% peak-to-peak for float charge voltage for best results
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Operating Temperature Range	
Nominal	+74°F (24°C) to 80°F (27°C)
Charge	-20°F (-28°C) to +122°F (50°C)
Discharge	-40°F (-40°C) to +140°F (60°C)
Storage Temperature Range	-4°F (-20°C) to +104°F (40°C)



Constant Power Discharge Watts per cell (25°C, 77°F)

End vpc	5min	10min	15min	20min	30min	40min	50min	1h	2h
1.60V	1165	850	621	516					
1.63V	1116	824	610	509	386				
1.67V	1068	798	600	503	384	292	249	217	
1.70V	985	767	586	495	383	291	248	216	
1.75V	893	717	562	482	379	290	246	215	120
1.80V	719	624	535	464	369	287	245	214	119
1.83V	675	592	511	445	355	277	238	208	117
1.85V	643	565	488	426	342	273	230	202	115

Constant Current Discharge Amperes (25°C, 77°F)

End vpc	5min	10min	15min	20min	30min	40min	50min	1h	2h
1.60V	627	345	208						
1.67V	563	335	206						
1.70V	531	329	204	112	62.7	34.3	18.7	15.3	8.03
1.75V	476	313	199	110	62.2	34.1	18.6	15.2	7.98
1.80V	424	291	189	106	60.9	33.7	18.3	15.0	7.88
1.83V	393	271	179	103	59.8	33.5	18.0	14.7	7.72
1.85V	365	250	169	100	59.6	33.4	17.6	14.2	7.46