

## 12HRL700



The Narada High Rate range of VRLA batteries and 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 production facilities**
- ◆ UL Recognized Component 924, for use in or with listed UL1778, UL1989 and UL924 systems
- ◆ IEC60896-21/22
- ◆ BS6290 part 4 / Eurobatt guide
- ◆ **TL9001 / ISO9001(TUV) Quality System**
- ◆ Battery installation compliant with: EN 50272-2
- ◆ 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)	700 watts
wpc @ 5 min 1.60 vpc / 77°F (25°C)	1154 watts
Ah @ 20hr 1.75 vpc / 77°F (25°C)	185 Ah

Nominal Voltage	12V
Float Charge Voltage @25°C (2.23 – 2.27vpc)	13.4 – 13.6
Max. Charge Current (A) (5 hour rate @ 1.75vpc)	45 Amps

Electrolyte Absorbed H <sub>2</sub> SO <sub>4</sub>	1.300
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Short Circuit Current (A)	4520 Amps
Internal Resistance (mΩ)	2.9 mΩ

Terminal Type	Torque
M6-M (Front L Bracket)	78 in-lbs (8 ±1 Nm)
M8-F (Top Insert)	90 in-lbs (10 ±1 Nm)

Dimension	in	mm
Length	21.97	558
Length Base	20.87	530
Width	5.0	126
Overall Height	12.45	316

	Lbs.	Kg
Weight	130	59

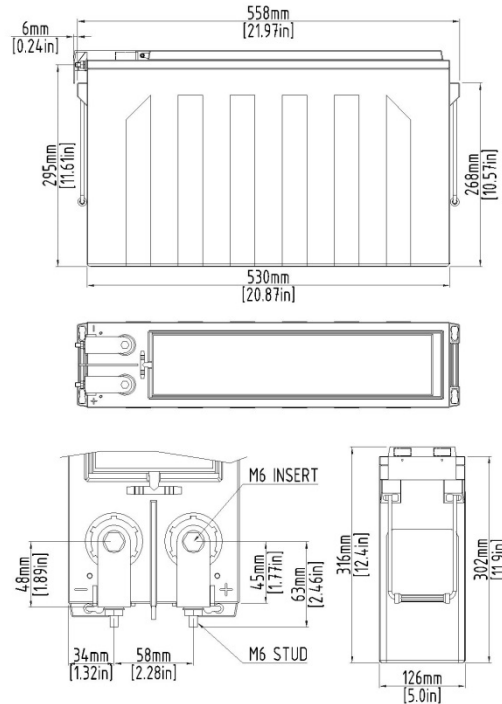
## Operating Parameters

Float Charging Voltage	13.5V / 2.25vpc @ 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	-2 mV/cell/°F > 77°F (-3.6 mV/cell /°C > 25°C)
	+2 mV/cell/°F < 77°F (+3.6 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 Cell Voltage	5min	10min	15min	20min	30min	40min	50min	1h	2h
1.60V	1154	906	727	605	453	364	305	264	154
1.67V	1106	867	700	587	444	359	303	262	153
1.70V	1080	843	683	574	438	356	301	261	152
1.75V	1021	790	645	547	423	347	296	258	151
1.80V	930	718	593	509	401	334	287	252	149
1.83V	846	663	557	484	388	327	283	249	146
1.85V	792	631	535	468	378	319	276	244	143

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

End Cell Voltage	5min	15min	30min	1h	2h	4h	8h	10h	20h
1.60V	793	382.0	231.0	135	76.7	42.4	24.1	18.7	9.82
1.67V	662	362.0	226.0	134	76.3	42.0	23.9	18.6	9.77
1.70V	602	350.0	223.0	133	76.0	41.8	23.8	18.5	9.71
1.75V	517	328.0	216.0	131	75.1	41.5	23.6	18.4	9.66
1.80V	453	299.0	202.0	126	73.3	40.8	23.2	18.0	9.45
1.83V	420	277.0	190.0	120	71.4	40.2	22.7	17.6	9.24
1.85V	395	254.0	177.0	116	70.6	40.1	22.2	16.9	8.87

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