C&D TECHNOLOGIES
Power Solutions

12-1050

C&D® DYNASTY® UPS

RETURN RECYCLE LEAD

HIGH RATE MAX XT

UPS12-220MRX

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

- Eurobat Classification: Long life
- > 12 year design life @ 20˚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 Bell-core 4228 compliant Dynasty Telecom products.
- Flame retardant polypropylene case and cover compliant with UL94V-2
- 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	Constant Power Discharge Ratings - Watts per Cell @ 25°C (77°F)										20 hour rate to 1.75 VPC @ 25°C	IEC Rating: 10 hour rate to 1.80 VPC @ 20°C
	Operating Time (in minutes) to 1.67 Volts per Cell											
	5	10	15	20	30	40	45	50	60	90		
UPS12-220MRX	372	278	220	178	132	110	98.5	92.3	79.8	57.7	56 AH	49 AH

Cells Per Unit	Voltage Per Unit	Weight (Kg)	1 Min Current to 1.75VPC (Amps)	Short Circuit Current (Amps)	Internal Resistance (mOhms)
6	12.98	19	383	1985	6.37

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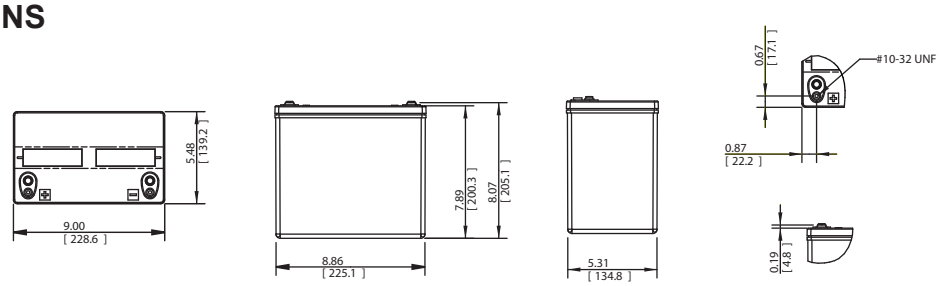
SPECIFICATIONS

Operating Temperature Range with temperature compensation	Discharge: -40˚F (-40˚C) to +160˚F (71˚C) Charge: -10˚F (-23˚C) to +140˚F (60˚C)
Nominal Operating Temperature Range	+74˚F (23˚C) to +80˚F (27˚C)
Recommended Maximum Charging Current Limit	C/5 amperes @ 20hr rate
Float Charging Voltage	13.65 ± 0.15 VDC average per 12V unit
Maximum AC Ripple (Charger)	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
Self Discharge	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.
Equalize charge and cycle service voltage	14.40 to 14.80 VDC average per 12V unit @ 77˚F (25˚C)
Terminal	Threaded copper alloy insert terminal to accept 10-32 UNF.
Terminal Hardware Initial Torque	30 in.-lbs. (3.4 N-m)

DIMENSIONS



CONSTANT POWER DISCHARGE RATINGS

Constant Power Discharge Ratings - Watts Per Cell @ 20°C (68°F)										
Operating Time To End Voltage (in minutes)										
End Point Volts/Cell	**5**	**10**	**15**	**20**	**30**	**40**	**45**	**50**	**60**	**90**
1.75	334	251	198	163	123	103	92.4	86.8	75.5	54.9
1.70	345	257	204	166	124	104	93.3	87.7	76.2	55.3
1.67	349	261	207	168	125	104	93.9	88.2	76.6	55.5
1.65	352	263	209	169	126	105	94.2	88.4	76.8	55.7

Constant Power Discharge Ratings - Watts Per Cell @ 77°F (25°C)										
Operating Time To End Voltage (in minutes)										
End Point Volts/Cell	**5**	**10**	**15**	**20**	**30**	**40**	**45**	**50**	**60**	**90**
1.75	355	267	211	172.5	130	108	96.9	90.8	78.7	57.1
1.70	367	274	217	176.3	131	109	97.9	91.7	79.4	57.5
1.67	372	278	220	178.2	132	110	98.5	92.3	79.8	57.7
1.65	375	280	222	179.5	133	110	98.8	92.5	80.0	57.9

CONSTANT CURRENT DISCHARGE RATINGS

Constant Current Discharge Ratings - Amperes @ 20°C (68°F)									
Operating Time To End Point Voltage (in hours)									
End Point Volts/Cell	**1**	**2**	**3**	**5**	**8**	**10**	**12**	**20**	**24**
1.85	37.1	20.0	14.0	8.83	5.80	4.76	4.04	2.55	2.16
1.80	38.2	20.6	14.4	9.15	6.03	4.97	4.22	2.68	2.28
1.75	39.1	21.1	14.7	9.32	6.14	5.05	4.29	2.72	2.31

Constant Current Discharge Ratings - Amperes @ 77°F (25°C)									
Operating Time To End Point Voltage (in hours)									
End Point Volts/Cell	**1**	**2**	**3**	**5**	**8**	**10**	**12**	**20**	**24**
1.85	38.6	20.8	14.5	9.13	5.97	4.88	4.14	2.61	2.22
1.80	39.8	21.4	14.9	9.46	6.22	5.10	4.33	2.75	2.34
1.75	40.7	21.9	15.2	9.64	6.33	5.18	4.40	2.79	2.37

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