

stored energy solutions for a demanding world

**Narada**

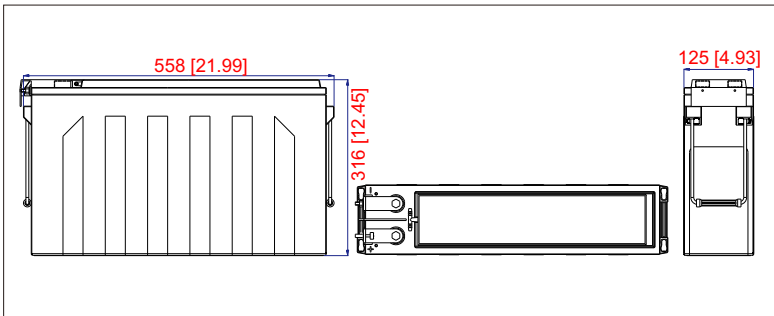
Model: **12NDT180**

**Acme**

The Acme T range of front access VRLA batteries has been specifically designed for applications using 19" and 23" cabinets, especially telecoms. Reliability is assured with the patented post seal and a state-of-the-art design developed to comply with the latest IEC, British and Telcordia standards. A 12+ years design life and centralised venting system add to the suitability and flexibility of this superior range.



**Dimensions-mm [inch]**



**Specifications**

Battery Model	12NDT180
Nominal Voltage	12V
Rated Capacity	180Ah (10 hour rate) to 1.80V/cell @25°C(77°F)
Typical Weight	60.0 kg
Internal Resistance	Approx 3.88mΩ
Temperature Ranges	Operation (maximum): -40°C to 50°C(-40°F to 122°F)
	Operation (recommended): 15°C to 25°C(59°F to 77°F)
	Storage: -20°C to 40°C(-4°F to 104°F)
Float Voltage	2.25V/cell@25°C(77°F)
Recommended Maximum Charging Current Limit	45 A
Equalize and Cycle Service	2.35V~2.40V/cell@25°C(77°F)
Self Discharge	The residual capacity is above 90% after 90 days storage(25°C/77°F)
Terminal	M6 Female
Terminal Hardware Torque	8 ± 1.0Nm
Container Material	ABS (V0 optional)



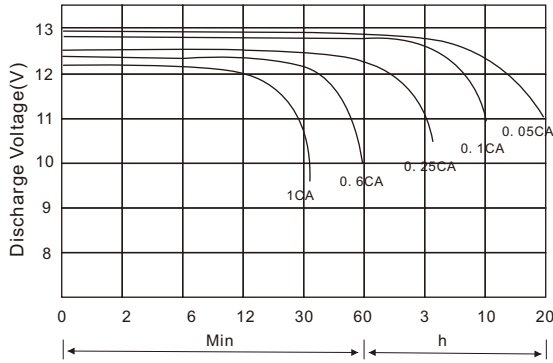
**Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)**

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1.60V	504	316	208	153	125	72.4	51.3	40.5	34.4	29.1	23.0	18.5	15.9	9.90	8.30
1.67V	472	311	205	153	124	71.7	51.1	40.5	34.2	28.8	22.8	18.4	15.8	9.80	8.23
1.70V	455	305	202	152	123	71.4	50.9	40.4	34.1	28.7	22.7	18.3	15.7	9.71	8.19
1.75V	432	292	194	149	122	70.8	50.6	40.2	33.9	28.4	22.5	18.1	15.6	9.61	8.12
1.80V	388	268	183	142	118	69.3	49.8	39.8	33.3	27.9	22.4	18.0	15.5	9.61	8.08
1.83V	354	251	174	136	116	67.5	48.9	39.3	32.6	27.2	22.1	17.9	15.4	9.52	8.04
1.85V	336	239	170	131	113	65.7	48.0	38.8	32.1	26.9	21.8	17.8	15.3	9.52	7.99

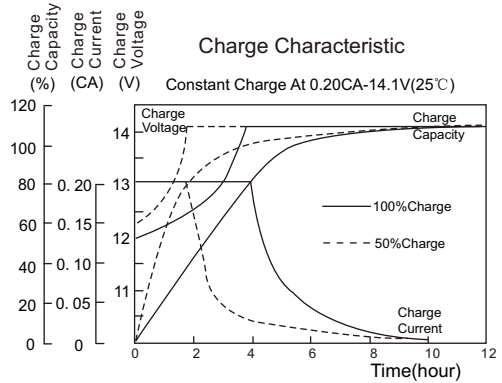
**Discharge Data with Constant Power Units: Watts per cell (25°C, 77°F)**

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1.60V	879	584	374	300	255	151	107	83.5	70.3	59.8	45.9	39.4	34.1	20.8	17.4
1.67V	831	568	371	298	254	151	107	83.2	70.0	59.6	45.8	39.3	34.0	20.7	17.3
1.70V	801	557	369	297	253	150	106	83.0	69.7	59.5	45.7	39.3	33.9	20.6	17.3
1.75V	740	536	362	293	249	149	106	82.5	69.3	59.2	45.4	39.2	33.8	20.4	17.2
1.80V	680	507	351	284	243	146	104	81.5	68.3	58.7	45.1	39.0	33.6	20.1	17.2
1.83V	660	480	340	276	236	142	102	80.5	67.3	58.1	44.9	38.7	33.4	19.9	17.1
1.85V	647	458	333	270	231	139	99.5	79.5	66.1	57.4	44.6	38.6	33.2	19.6	17.1

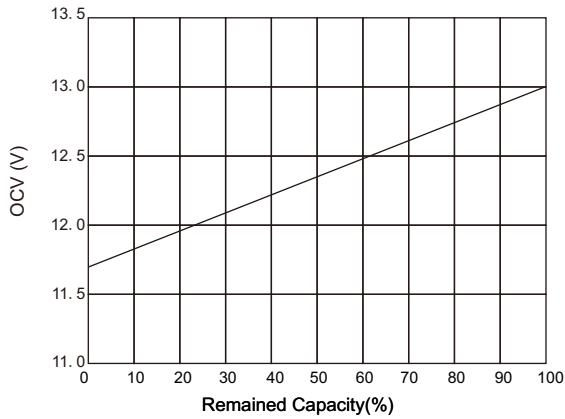
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



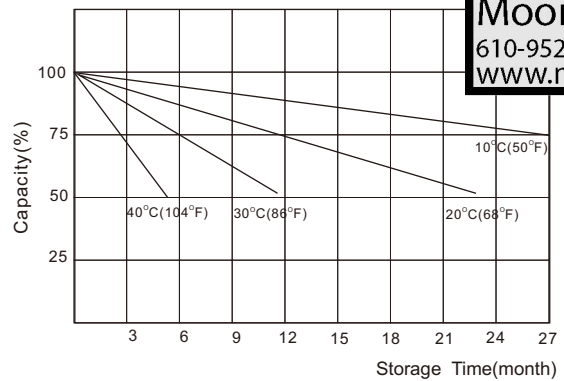
Battery Voltage Vs. Charge Time



Relationship of OCV Vs. State of Charge



Capacity Retention Characteristic



IEEE/UL Battery  
Sizing by  
**MooreU**  
610-952-6067  
www.mooreu.com

**Charging Procedures**

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle	25°C	2.40	2.35~2.40	0.25C
Standby	25°C	2.25	2.23~2.27	

**Discharge Current VS. Discharge Voltage**

Final Discharge Voltage V/Cell	1.80	1.70	1.55	1.30
Discharge Current (A)	0.2C ≥ (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C

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