



PowerSafe[®]
DU

Telecommunications

NEBS[™] Certified

Battery Performance Specifications



Visit us at www.enersys.com

EnerSys[®]

Power/Full Solutions

RESERVE
POWER

Publication No: US-DU-PS-AA January 2016

Features and Benefits

- Capacity range 310 – 780Ah
- Flat plate, lead-calcium grid alloy, well suited for long duration float applications
- Proven Slide-Lock™ post seal design
- Positive and negative posts on each cell allow for monitoring of individual cells
- Standard UL94 V-0 flame retardant cover and container
- NEBS™ level 3 certified for systems with a nominal voltage under 80V
- 20 year life expectancy in float service at 77°F (25°C) ambient temperature

Construction

- 0.25" thick positive plates provide long discharge rates and long life
- Lead plated copper posts - one positive and one negative post per cell
- Cover - standard PVC UL94 V-0 LOI>28%
- Container - standard PC UL94 V-0 LOI>28%
- Separator - microporous phenolic with "Vitrex" glass fiber retainers
- 1.215 specific gravity nominal at 77°F (25°C)
- Intercell connectors - lead plated copper; optional tin plated copper

Installation and Operation

- Maintenance connectors available
- Flat plate, lead-calcium grid alloy, well suited for long duration float applications
- 20 year life expectancy in float service at 77°F (25°C) ambient temperature
- Operating temperature: 32°F (0°C) to 104°F (40°C)
Recommended temperature: 68°F (20°C) to 86°F (30°C)

Standards

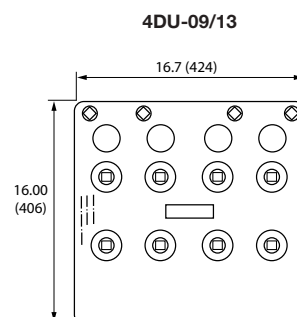
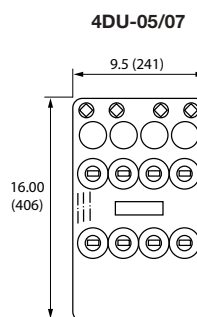
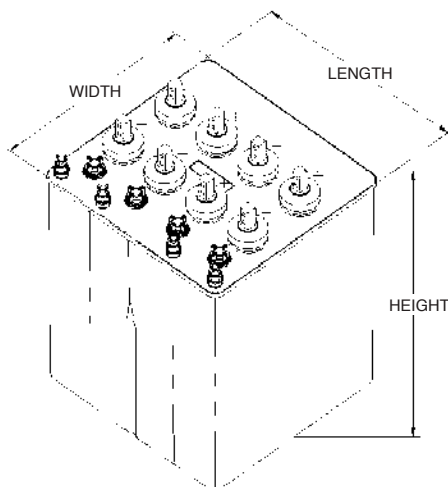
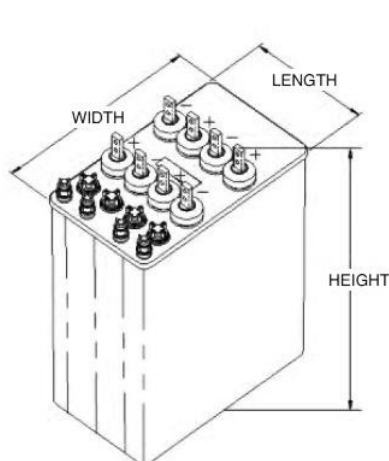
- The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified

General Specifications

		Nominal Dimensions												Electrolyte (1.215 S.G.)				Pure Acid (H ₂ SO ₂) Acid			
PowerSafe® DU Battery Type	Nominal Capacity (Ah)*	Length		Width		Height to Post		Height to Term Plate		Typical Weight		Internal** Resistance Milli-Ohms	Volume Per Container		Weight Per Container		Volume Per Container		Weight Per Container		
		in	mm	in	mm	in	mm	in	mm	lbs	kg		lbs	kg	lbs	kg	L	gal	lbs	kg	
4DU-05	310	9.50	241	16.0	406	22.7	576	26.9	683	267	121	520	6.30	23.8	64.0	29.0	1.23	4.67	19.0	8.60	
4DU-07	395	9.50	241	16.0	406	22.7	576	26.9	683	328	149	360	5.82	22.0	59.2	26.8	1.14	4.32	17.5	7.95	
4DU-09	625	16.7	424	16.0	406	22.7	576	28.8	732	494	224	270	13.2	49.8	134	60.6	2.58	9.75	39.6	18.0	
4DU-11	715	16.7	424	16.0	406	22.7	576	28.8	732	555	252	220	12.2	46.0	124	56.0	2.38	9.01	36.6	16.6	
4DU-13	780	16.7	424	16.0	406	22.7	576	28.8	732	617	280	190	11.1	42.1	113	51.3	2.18	8.25	33.5	15.2	

*Nominal Ah capacity is based on an 8 hour rate to 1.75 volts per cell @ 77°F (25°C).

**Resistance values are for reference only and not intended to represent an Ohmic Value or Baseline Measurement.



Battery Performance Specifications

Constant Current

PowerSafe® DU Battery Constant Current Discharge Rates (Amps to 1.75 Vpc at 77°F / 25°C - 1.215 S.G.)*

PowerSafe® DU Battery Type	Nominal Capacity¹ (Ah)	Minutes		Hours										
		15	30	1	1.5	2	3	4	5	8	10	12	24	72
4DU-05	310	322	245	169	131	108	80.7	65.1	55.2	38.7	31.9	27.6	16.2	6.6
4DU-07	395	474	354	238	182	149	109.4	87.0	72.7	49.5	40.6	34.6	19.2	7.2
4DU-09	625	636	485	336	262	216	161.5	130.3	110.5	77.9	64.4	55.7	32.9	13.6
4DU-11	715	786	594	406	313	257	191.7	153.2	129.0	89.3	73.6	63.2	36.3	14.4
4DU-13	780	932	699	472	360	293	216.6	172.4	143.8	97.6	80.1	68.4	37.7	14.1

PowerSafe® DU Battery Constant Current Discharge Rates (Amps to 1.80 Vpc at 77°F / 25°C - 1.215 S.G.)*

PowerSafe® DU Battery Type	Nominal Capacity¹ (Ah)	Minutes		Hours										
		15	30	1	1.5	2	3	4	5	8	10	12	24	72
4DU-05	310	278	220	158	125	104	79.5	64.9	55.2	38.7	31.9	27.6	16.2	6.6
4DU-07	395	403	313	218	169	140	104.8	84.5	71.3	49.1	40.5	34.6	19.2	7.2
4DU-08	625	542	428	308	245	205	157.5	129.0	110.2	77.9	64.4	55.7	32.9	13.6
4DU-11	715	667	522	371	291	242	183.7	148.9	126.4	88.6	73.3	63.2	36.3	14.4
4DU-13	780	788	611	428	332	274	204.7	164.5	138.4	94.9	78.4	67.2	37.4	14.1

PowerSafe® DU Battery Constant Current Discharge Rates (Amps to 1.84 Vpc at 77°F / 25°C - 1.215 S.G.)*

PowerSafe® DU Battery Type	Nominal Capacity¹ (Ah)	Minutes		Hours										
		15	30	1	1.5	2	3	4	5	8	10	12	24	72
4DU-05	310	229	192	142	114	97	74.6	61.5	52.7	37.5	31.3	27.1	16.1	6.6
4DU-07	395	326	269	193	153	127	96.4	78.2	66.3	45.8	37.9	32.6	18.3	7.0
4DU-09	625	437	369	275	222	188	146.4	121.0	104.0	74.5	62.3	54.3	32.5	13.6
4DU-11	715	531	449	329	263	221	169.2	138.6	118.3	83.0	69.3	60.0	35.0	14.0
4DU-13	780	618	524	377	298	248	187.0	151.7	128.4	88.3	73.3	63.0	35.3	13.3

*Values listed represent 100% of the cell's capacity. Initial capacity shall be a minimum of 90% of these values per IEEE 450.

¹1.215 S.G. electrolyte at 77°F (25°C) includes intercell connector drop. Nominal Ah capacity is based on an 8 hour rate to 1.75 volts per cell @ 77°F (25°C).

Constant Current

PowerSafe® DU Battery Constant Current Discharge Rates (Amps to 1.86 Vpc at 77°F / 25°C - 1.215 S.G.)*

PowerSafe® DU Battery Type	Nominal Capacity ¹ (Ah)	Minutes		Hours										
		15	30	1	1.5	2	3	4	5	8	10	12	24	72
4DU-05	310	194	175	132	107	91	70.9	58.7	50.5	35.9	30.1	26.2	15.6	6.5
4DU-07	395	273	244	178	142	119	90.6	73.9	62.6	43.2	36.0	31.0	17.5	6.7
4DU-09	625	368	336	254	207	177	138.2	114.9	99.1	70.9	59.7	52.2	31.5	13.2
4DU-11	715	447	408	303	244	206	159.2	131.0	112.2	78.8	66.1	57.4	33.6	13.5
4DU-13	780	517	474	347	276	231	175.3	142.5	120.8	83.5	69.6	59.9	33.7	12.7

PowerSafe® DU Battery Constant Current Discharge Rates (Amps to 1.88 Vpc at 77°F / 25°C - 1.215 S.G.)*

PowerSafe® DU Battery Type	Nominal Capacity ¹ (Ah)	Minutes		Hours										
		15	30	1	1.5	2	3	4	5	8	10	12	24	72
4DU-05	310	161	157	120	99	85	66.2	55.1	47.5	33.8	28.5	24.9	14.9	6.2
4DU-07	395	225	217	161	130	109	83.7	68.5	58.2	40.2	33.6	29.0	16.4	6.3
4DU-09	625	305	299	231	190	163	128.2	107.2	92.9	66.4	56.3	49.4	29.9	12.5
4DU-11	715	369	362	274	223	190	147.1	121.7	104.5	73.5	61.9	54.0	31.8	12.7
4DU-13	780	427	421	312	251	211	161.1	131.9	112.0	77.5	64.7	55.9	31.6	11.9

PowerSafe® DU Battery Constant Current Discharge Rates (Amps to 1.90 Vpc at 77°F / 25°C - 1.215 S.G.)*

PowerSafe® DU Battery Type	Nominal Capacity ¹ (Ah)	Minutes		Hours										
		15	30	1	1.5	2	3	4	5	8	10	12	24	72
4DU-05	310	130	130	107	89	77	60.6	50.7	43.8	31.1	26.4	23.2	14.0	5.8
4DU-07	395	181	181	143	116	98	75.5	61.9	52.8	36.6	30.6	26.5	15.1	5.7
4DU-09	625	245	245	204	170	147	116.8	98.2	85.2	60.9	52.0	45.8	28.0	11.7
4DU-11	715	296	296	242	199	170	133.0	110.6	95.2	67.1	56.9	49.7	29.4	11.8
4DU-13	780	344	343	275	222	188	144.9	118.8	101.1	70.3	59.0	51.1	29.0	11.0

*Values listed represent 100% of the cell's capacity. Initial capacity shall be a minimum of 90% of these values per IEEE 450.

¹1.215 S.G. electrolyte at 77°F (25°C) includes intercell connector drop. Nominal Ah capacity is based on an 8 hour rate to 1.75 volts per cell @ 77°F (25°C).