

# Marathon Pure Energy Premium

## Technical data sheet

### Technical features:

- Thin Plate Pure Lead technology (TPPL)
- Design life: 15 years at 20 °C (until 80 % nominal C<sub>10</sub>)
- Maintenance-free (no topping up) during the whole service life
- High-compression Absorbent Glass Mat (AGM) technology
- Nominal capacity 50.4-179 Ah
- Flame retardant UL 94 HB or UL 94 V-0 version
- Very low gassing due to internal gas recombination (99 % efficiency)
- Low self discharge rate, enabling extended storage capability
- Durable container material – maintaining structural integrity in higher operating temperatures

### Standards & certifications:

- EUROBAT 2022 classification: >12 years – Very long life
- Designed in accordance with IEC 60896-21/22
- Approval: UL (Underwriters Laboratories)
- Trouble-free transportation of operational blocks and cells. No restriction for most rail, road, sea, and air transportation (IATA, DGR clause A67)
- Manufactured in Europe in our ISO 9001 and 14001 certified production plants



Design life  
15 years



Nominal capacity  
50.4-179 Ah



Block battery



Grid plate



Recyclable

VRLA

Valve regulated  
lead-acid batteries



Maintenance-free  
(no topping up)

### Technical characteristics and data

Type	Part number	Nom. voltage V	Nominal capacity			Length (l) max. mm	Width (w) max. mm	Height (h) max. mm	Weight approx. kg	Internal resistance mOhm*	Short circuit current A*	Terminal
			C <sub>10</sub> 1.80 Vpc 20 °C Ah	C <sub>20</sub> 1.75 Vpc 20 °C Ah	C <sub>1</sub> 1.60 Vpc 20 °C Ah							
M6V180PE	NAPE060180HM0FA	6	179	193	120	309	172	223	27	1.8	3406	F-M6
M12V50PE	NAPE120050HM0FA	12	50.4	57.6	32.7	220	172	219	18.3	11.8	1070	F-M6
M12V70PE	NAPE120070HM0FA	12	66.6	74	45.6	262	172	223	22.6	8.4	1480	F-M6
M12V85PE	NAPE120085HM0FA	12	85.7	92.8	57.5	309	172	223	26.7	7.3	1712	F-M6

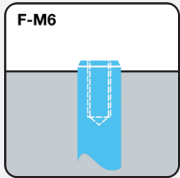
\* According to IEC 60896-21/22

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### Container, terminal and torque

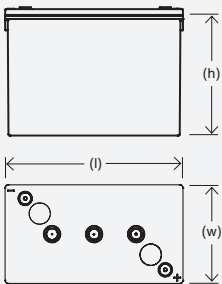
Flame retardant polypropylene (PP) according to UL 94 HB or to UL 94 V-0.  
Change **H** to **V** in the part number for UL 94 V-0 version.



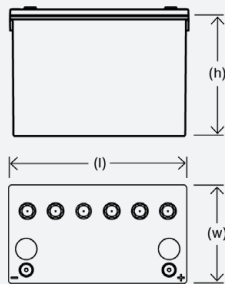
11 Nm

### Drawings

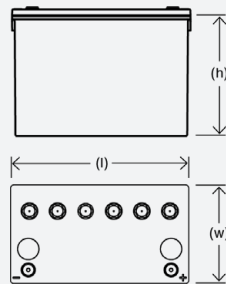
M6V180PE



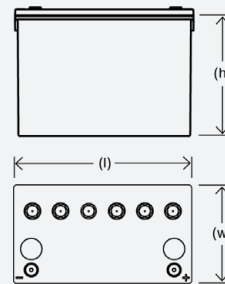
M12V50PE



M12V70PE



M12V85PE



Not to scale!

# Marathon Pure Energy Premium

## Constant current discharge

Type	Part number	3 min	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	5 h	8 h	10 h	20 h
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### 1.90 Vpc – Discharge in A at 20 °C

M6V180PE	NAPE060180HM0FA	NA	314	256	222	192	148	114	94.5	55.0	39.5	27.0	18.3	16.2	8.54
M12V50PE	NAPE120050HM0FA	NA	95.5	71.3	59.1	52.4	41.0	31.9	26.4	15.4	10.7	7.78	5.39	4.61	2.55
M12V70PE	NAPE120070HM0FA	NA	145	109	86.3	75.2	56.6	42.6	33.1	20.9	15.5	10.3	6.97	5.82	3.11
M12V85PE	NAPE120085HM0FA	NA	161	122	102	92.0	72.6	54.5	44.4	27.3	20.1	13.5	9.13	7.76	4.14

### 1.85 Vpc – Discharge in A at 20 °C

M6V180PE	NAPE060180HM0FA	NA	409	315	265	224	168	125	103	60.3	43.3	30.7	20.4	17.0	8.95
M12V50PE	NAPE120050HM0FA	NA	124	87.1	68.5	59.4	46.0	35.5	28.7	17.0	12.2	8.49	5.71	4.83	2.66
M12V70PE	NAPE120070HM0FA	NA	179	129	101	87.6	63.2	47.1	37.5	23.0	16.8	11.2	7.56	6.30	3.35
M12V85PE	NAPE120085HM0FA	NA	201	147	121	105	81.4	60.4	49.7	29.9	22.2	14.9	9.86	8.16	4.34

### 1.80 Vpc – Discharge in A at 20 °C

M6V180PE	NAPE060180HM0FA	NA	482	355	289	242	181	135	110	63.8	46.7	32.2	21.4	17.9	9.37
M12V50PE	NAPE120050HM0FA	NA	145	99.2	77.9	67.3	51.0	38.6	30.7	18.5	13.6	8.90	5.91	5.04	2.77
M12V70PE	NAPE120070HM0FA	NA	203	142	110	94.3	68.2	51.1	40.6	24.6	17.8	12.0	8.04	6.66	3.59
M12V85PE	NAPE120085HM0FA	NA	234	168	134	116	88.0	64.7	52.6	31.0	23.1	15.7	10.3	8.57	4.54

### 1.75 Vpc – Discharge in A at 20 °C

M6V180PE	NAPE060180HM0FA	NA	540	385	309	256	189	141	114	66.0	48.1	33.1	22.0	18.3	9.68
M12V50PE	NAPE120050HM0FA	NA	162	107	82.6	70.2	53.0	39.6	31.2	19.0	13.9	9.11	6.02	5.15	2.88
M12V70PE	NAPE120070HM0FA	NA	222	154	116	100	71.5	53.4	42.8	25.3	18.4	12.3	8.27	6.89	3.70
M12V85PE	NAPE120085HM0FA	NA	258	178	142	121	90.2	66.9	53.9	32.1	23.9	16.1	10.7	8.77	4.64

### 1.70 Vpc – Discharge in A at 20 °C

M6V180PE	NAPE060180HM0FA	NA	592	414	327	265	194	144	116	67.4	49.0	33.9	22.4	18.7	9.79
M12V50PE	NAPE120050HM0FA	NA	174	112	86.4	73.2	54.5	40.6	31.7	19.2	14.1	9.21	6.12	5.26	2.88
M12V70PE	NAPE120070HM0FA	NA	238	161	121	103	73.8	55.7	43.8	26.0	19.0	12.4	8.39	7.01	3.82
M12V85PE	NAPE120085HM0FA	NA	289	190	148	125	92.4	68.5	55.3	32.9	24.5	16.5	10.8	8.87	4.74

### 1.65 Vpc – Discharge in A at 20 °C

M6V180PE	NAPE060180HM0FA	NA	642	430	336	272	198	146	118	68.6	50.0	34.1	22.6	18.8	9.89
M12V50PE	NAPE120050HM0FA	NA	183	116	89.2	74.7	55.5	41.1	32.2	19.4	14.3	9.31	6.12	5.26	2.88
M12V70PE	NAPE120070HM0FA	NA	253	168	126	106	76.0	56.8	44.4	26.3	19.3	12.5	8.39	7.01	3.82
M12V85PE	NAPE120085HM0FA	NA	319	201	154	129	94.6	70.1	56.7	33.6	24.9	16.7	10.9	8.87	4.74

### 1.60 Vpc – Discharge in A at 20 °C

M6V180PE	NAPE060180HM0FA	NA	672	446	348	279	201	148	120	69.1	50.3	34.2	22.7	18.8	9.89
M12V50PE	NAPE120050HM0FA	NA	190	120	91.1	76.2	56.5	41.6	32.7	19.6	14.4	9.31	6.12	5.26	2.88
M12V70PE	NAPE120070HM0FA	NA	264	172	130	109	78.2	58.0	45.6	26.6	19.4	12.5	8.39	7.01	3.82
M12V85PE	NAPE120085HM0FA	NA	334	208	158	131	96.2	71.2	57.5	33.9	25.1	16.7	10.9	8.87	4.74

# Marathon Pure Energy Premium

## Constant power discharge

Type	Part number	3 min	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	5 h	8 h	10 h	20 h
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### 1.90 Vpc – Discharge in W/block at 20 °C

M6V180PE	NAPE060180HM0FA	NA	1680	1570	1310	1120	876	683	565	334	246	155	106	91.8	50.9
M12V50PE	NAPE120050HM0FA	NA	1064	820	699	597	483	376	314	186	134	92.3	64.1	53.9	29.6
M12V70PE	NAPE120070HM0FA	NA	1640	1230	1000	836	657	498	398	240	177	121	81.6	69.9	38.5
M12V85PE	NAPE120085HM0FA	NA	1770	1380	1180	1070	854	647	534	327	244	152	106	91.7	48.7

### 1.85 Vpc – Discharge in W/block at 20 °C

M6V180PE	NAPE060180HM0FA	NA	2140	1880	1520	1270	978	750	629	366	268	173	117	97.9	55.1
M12V50PE	NAPE120050HM0FA	NA	1335	975	813	691	545	412	338	204	147	101	69.6	58.2	31.7
M12V70PE	NAPE120070HM0FA	NA	1970	1430	1140	948	730	549	443	269	199	131	88.5	74.6	41.1
M12V85PE	NAPE120085HM0FA	NA	2110	1630	1370	1220	943	712	589	358	266	168	116	98.8	52.8

### 1.80 Vpc – Discharge in W/block at 20 °C

M6V180PE	NAPE060180HM0FA	NA	2510	2130	1680	1390	1040	796	661	387	285	181	121	101	57.2
M12V50PE	NAPE120050HM0FA	NA	1560	1115	904	762	590	443	359	218	158	106	72.8	60.3	32.3
M12V70PE	NAPE120070HM0FA	NA	2190	1570	1250	1020	780	586	473	283	210	140	91.9	77.5	42.3
M12V85PE	NAPE120085HM0FA	NA	2370	1860	1540	1330	1020	759	622	375	276	177	121	102	54.7

### 1.75 Vpc – Discharge in W/block at 20 °C

M6V180PE	NAPE060180HM0FA	NA	2740	2280	1780	1460	1090	830	688	398	293	187	124	102	58.1
M12V50PE	NAPE120050HM0FA	NA	1690	1185	958	801	612	455	365	222	162	109	75.0	60.9	32.6
M12V70PE	NAPE120070HM0FA	NA	2360	1670	1320	1070	817	616	495	289	215	143	94.2	79.2	42.9
M12V85PE	NAPE120085HM0FA	NA	2680	2000	1600	1380	1050	780	640	380	282	182	123	103	55.6

### 1.70 Vpc – Discharge in W/block at 20 °C

M6V180PE	NAPE060180HM0FA	NA	2960	2420	1860	1510	1110	838	696	403	297	191	127	103	58.6
M12V50PE	NAPE120050HM0FA	NA	1795	1240	990	829	629	461	371	225	165	110	76.1	61.4	32.9
M12V70PE	NAPE120070HM0FA	NA	2490	1740	1350	1100	831	631	506	293	218	145	95.4	80.4	43.1
M12V85PE	NAPE120085HM0FA	NA	2940	2110	1660	1400	1060	791	649	385	286	184	124	104	55.9

### 1.65 Vpc – Discharge in W/block at 20 °C

M6V180PE	NAPE060180HM0FA	NA	3160	2480	1900	1530	1120	844	701	407	301	193	128	104	58.8
M12V50PE	NAPE120050HM0FA	NA	1860	1270	1010	839	634	464	374	227	167	110	76.1	61.4	33.2
M12V70PE	NAPE120070HM0FA	NA	2600	1780	1380	1120	845	638	511	296	220	146	96.5	80.4	43.2
M12V85PE	NAPE120085HM0FA	NA	3200	2210	1700	1420	1070	801	657	388	288	185	125	105	56.1

### 1.60 Vpc – Discharge in W/block at 20 °C

M6V180PE	NAPE060180HM0FA	NA	3260	2530	1940	1540	1130	848	704	409	303	194	128	104	58.8
M12V50PE	NAPE120050HM0FA	NA	1895	1290	1010	850	640	466	376	228	168	110	76.1	61.4	33.4
M12V70PE	NAPE120070HM0FA	NA	2680	1810	1400	1130	859	646	517	298	221	146	96.5	80.4	43.3
M12V85PE	NAPE120085HM0FA	NA	3310	2270	1740	1440	1080	810	663	391	290	186	125	105	56.2