



2CP345

Compact-Power Blockline™



Technical specifications

Type

2CP345

Part number

61020345


Electrical Data

Nominal voltage	2 V	
Number of cells	1	
Rated capacity C ₁₀ to 1.80 Vpc at 20 °C	346 Ah	
Rated capacity C ₈ to 1.75 Vpc at 25 °C	358 Ah	
Current/Power for 0.5 h back-up time 1.65 Vpc 20 °C	430 A	766 W
Current/Power for 1.0 h back-up time 1.67 Vpc 20 °C	245 A	460 W
Current/Power for 2.0 h back-up time 1.80 Vpc 20 °C	133 A	257 W
Current/Power for 4.0 h back-up time 1.80 Vpc 20 °C	78.5 A	149 W
Current/Power for 8.0 h back-up time 1.80 Vpc 20 °C	43.0 A	81 W
Current/Power for 10.0 h back-up time 1.80 Vpc 20 °C	34.6 A	65 W
Current/Power for 20.0 h back-up time 1.80 Vpc 20 °C	16.9 A	28 W
Conversion to capacity at 25 °C (77 °F)	20 °C Ah x 1.03 (t > 1 h)	
Internal resistance (± 10%) to IEC/EN 60896-21	0.28 mΩ	
Short circuit current (± 10%) to IEC/EN 60896-21	7.0 kA	
Self discharge at 20 °C to IEC/EN 60896-21	max. 3%/month	
Heat loss during float service at 20 °C	≈ 0.35 W	

Mechanical Data

Weight ready for use	32.1 kg	
Height of monobloc	283 mm	
Height over terminal connector	298 mm	
Width	177 mm	
Depth	282 mm	
Number of terminals	1⊕ / 1⊖	
Dimension of connector screw hole	M8	
Suggested/maximum cable cross-section	185 mm ²	
Connection torque	11 Nm	
Terminal insulation class according to IEC/EN 60529	IP20	
Diameter of diagnostic hole for voltage probe	2 mm Ø	
Connector (copper, tin-coated) rigid and insulated	90 mm ²	
Complete connector and terminal connection accessoires	available	

Environmental Data

Shelves, cabinets and racks	available upon request
Installation	vertically/horizontally
Distance for cooling and ventilation (preset with the rigid connectors)	10 mm
Flame retardancy rating case/cover according to Underwriters Laboratories (UL) USA	ABS – UL 94 HB (std.) ABS-PC – UL 94 V-0 with LOI > 32%, halogen-free
Flame barriers at vents	installed
UL file number 	MH 26065
Service life expected at 20 °C	15 years

Operating specifications

Figure 1



Figure 2

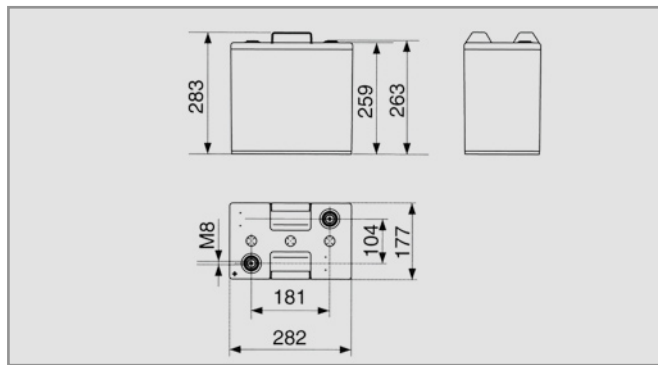
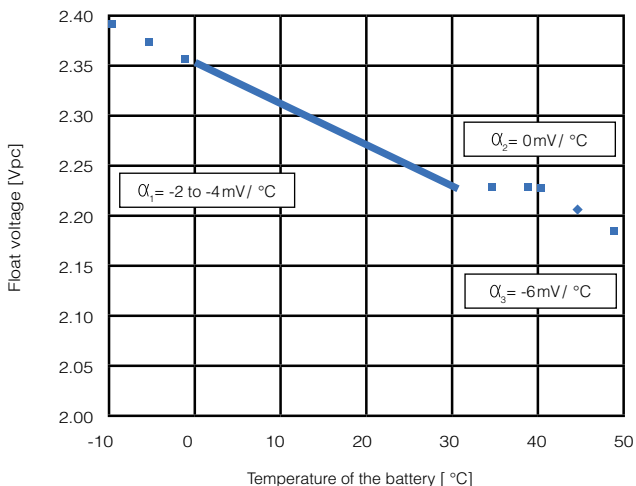


Figure 3



Temperature in °C	Temperature in °F	Percent of the rated capacity
40	104	104.8
35	95	104.2
30	86	103.6
25	77	103.0
20	68	100.0
15	59	97.0
10	50	94.0
5	41	90.0
0	32	84.7
-5	23	77.7
-10	14	69.4
-15	5	60.0
-20	-4	49.6
-25	-13	38.4
-30	-22	25.6
-35	-31	14.1
-40	-40	2.1

Battery installation and operation

Float voltage setting according to DIN 41773

Float voltage with daily discharge cycles

CC-CV charge current according to DIN 41773

Float voltage compensation in function of temperature

Boost charge

Air exchange

Preferred operating temperature range

Maximum long term operating temperature

Maximum short term operating temperature (for hours)

Minimum fully charged operating temperature

Stand-by mode with constant voltage float operation according to EN 50272-2:2001

2.25 Vpc ± 1% at 20 to 25 °C (68 to 77 °F)

2.29 Vpc - 2.30 Vpc (no correction factor needed)

unlimited, otherwise 3 · I₁₀ max. if T > 25 °C

-2 to -4 mV/°C or with profile as displayed figure 3

Not needed, if desirable then 2.35 Vpc and I₁₀ max. for 24 h max. at t < 30 °C

As a VRLA battery according to EN 50272-2:2001

$Q=0.05 \cdot N_{\text{cells}} \cdot I_{\text{gas}} \cdot C_{\text{Ah}} C_{10} \cdot 10^{-3} [\text{m}^3/\text{h}]$

I_{gas} = 1 (at 2.25 Vpc) I_{gas} = 8 (at 2.40 Vpc)

e.g. 48 V: 0.4152 m³/h = 14.66 cu.ft/h (at 2.25 Vpc)

Between 15 °C (68 °F) and 25 °C (77 °F)

+40 °C (104 °F) with ventilation assured (reduced service life)

+50 °C (122 °F) with ventilation assured (reduced service life)

-40 °C (-40 °F)



Discharge data

Constant current performance (in amps) to the defined end-of-discharge voltage

Voltage [Vpc]	Temp	Discharge time [Minutes]																						
		1-2	3	5	7	10	15	20	25	30	40	50	60	90	120	180	240	300	360	480	600	720	1200	1440
1.90	20 °C	467	459	445	431	411	375	342	312	286	245	214	191	146	120	91.0	73.9	62.2	53.6	41.6	33.7	28.2	16.6	13.6
	25 °C	481	473	458	444	423	386	352	321	295	252	220	197	150	124	93.7	76.1	64.1	55.2	42.8	34.7	29.0	17.1	14.0
1.87	20 °C	545	534	515	497	469	424	381	345	314	265	229	203	153	125	93.6	75.6	63.4	54.5	42.1	34.1	28.4	16.7	13.6
	25 °C	561	550	530	512	483	437	392	355	323	273	236	209	158	129	96.4	77.9	65.3	56.1	43.4	35.1	29.3	17.2	14.0
1.85	20 °C	601	588	565	543	510	456	408	366	331	277	239	210	157	128	95.1	76.6	64.1	55.0	42.4	34.3	28.6	16.8	13.6
	25 °C	619	606	582	559	525	470	420	377	341	285	246	216	162	132	98.0	78.9	66.0	56.7	43.7	35.3	29.5	17.3	14.0
1.84	20 °C	629	615	590	566	530	473	421	377	340	283	243	213	159	129	95.7	77.0	64.4	55.2	42.5	34.3	28.6	16.8	13.6
	25 °C	648	633	608	583	546	487	434	388	350	291	250	219	164	133	98.6	79.3	66.3	56.9	43.8	35.3	29.5	17.3	14.0
1.83	20 °C	658	642	615	589	551	489	434	387	348	289	247	217	161	130	96.4	77.4	64.7	55.4	42.7	34.4	28.7	16.8	13.7
	25 °C	678	661	633	607	568	504	447	399	358	298	254	224	166	134	99.3	79.7	66.6	57.1	44.0	35.4	29.6	17.3	14.1
1.82	20 °C	687	670	640	612	571	505	446	397	356	294	251	220	162	131	97.0	77.8	65.0	55.6	42.8	34.5	28.8	16.8	13.7
	25 °C	707	690	659	631	588	520	459	409	367	303	259	226	167	135	100	80.1	66.9	57.3	44.1	35.5	29.6	17.3	14.1
1.80	20 °C	744	724	690	657	610	535	469	415	371	304	258	225	165	133	98.1	78.5	65.5	56.0	43.0	34.6	28.9	16.9	13.7
	25 °C	766	746	710	677	628	551	483	427	382	314	266	232	170	137	101	80.8	67.4	57.6	44.3	35.7	29.7	17.4	14.1
1.77	20 °C	825	801	758	720	663	575	500	439	390	317	268	232	169	135	99.4	79.3	66.0	56.4	43.3	34.8	29.0	16.9	13.7
	25 °C	850	825	781	741	683	593	515	452	401	327	276	239	174	140	102	81.7	68.0	58.1	44.6	35.8	29.8	17.4	14.1
1.75	20 °C	873	846	799	756	694	598	518	452	400	324	272	236	171	137	100	79.7	66.3	56.6	43.4	34.9	29.0	16.9	13.7
	25 °C	899	872	823	779	715	616	533	466	412	334	281	243	176	141	103	82.1	68.3	58.3	44.7	35.9	29.9	17.4	14.2
1.72	20 °C	934	903	850	802	732	626	539	468	412	332	278	240	173	138	101	80.2	66.6	56.8	43.5	35.0	29.1	16.9	13.8
	25 °C	962	930	876	826	754	645	555	482	424	342	286	247	178	142	104	82.6	68.6	58.5	44.8	36.1	30.0	17.4	14.2
1.70	20 °C	967	934	877	826	752	641	549	476	419	336	281	242	174	139	101	80.5	66.8	57.0	43.6	35.0	29.1	17.0	13.8
	25 °C	996	962	904	851	775	660	566	491	431	346	289	249	180	143	104	82.9	68.8	58.7	44.9	36.1	30.0	17.5	14.2
1.67	20 °C	1008	972	910	855	777	659	562	486	426	341	284	245	176	140	102	80.7	67.0	57.1	43.7	35.1	29.1	17.0	13.8
	25 °C	1038	1001	938	881	800	679	579	501	439	351	293	252	181	144	105	83.1	69.0	58.8	45.0	36.1	30.0	17.5	14.2
1.65	20 °C	1032	994	930	872	791	669	569	491	430	344	286	246	176	140	102	80.9	67.1	57.2	43.7	35.1	29.2	17.0	13.8
	25 °C	1063	1024	958	898	814	689	587	506	443	354	295	253	182	144	105	83.3	69.1	58.9	45.0	36.2	30.0	17.5	14.2
1.63	20 °C	1056	1017	949	890	805	679	577	497	435	346	288	247	177	141	102	81.0	67.2	57.2	43.8	35.1	29.2	17.0	13.8
	25 °C	1088	1047	978	916	829	699	594	512	448	357	297	255	182	145	105	83.4	69.2	59.0	45.1	36.2	30.1	17.5	14.2
1.60	20 °C	1102	1059	986	922	831	698	590	507	442	351	291	250	178	141	102	81.3	67.4	57.4	43.8	35.2	29.2	17.0	13.8
	25 °C	1135	1091	1016	950	856	719	608	522	455	362	300	257	184	146	106	83.7	69.4	59.1	45.2	36.2	30.1	17.5	14.2

Constant power performance (in watt per cell) to the defined end-of-discharge voltage

Voltage [Vpc]	Temp	Discharge time [Minutes]																						
		1-2	3	5	7	10	15	20	25	30	40	50	60	90	120	180	240	300	360	480	600	720	1200	1440
1.90	20 °C	889	873	851	823	778	705	641	587	540	467	411	369	284	234	175	141	118	102	79.0	63.0	52.0	28.0	22.0
	25 °C	916	899	877	848	801	726	660	605	556	481	423	380	293	241	180	145	122	105	81.4	64.9	53.6	28.8	22.7
1.87	20 °C	1024	1002	973	937	879	788	709	642	587	501	438	390	297	242	180	144	121	103	80.0	64.0	53.0	28.0	22.0
	25 °C	1055	1032	1002	965	905	812	730	661	605	516	451	402	306	249	185	148	125	106	82.4	65.9	54.6	28.8	22.7
1.85	20 °C	1117	1092	1057	1015	947	842	752	678	617	523	454	403	304	247	183	146	122	104	80.0	64.0	53.0	28.0	22.0
	25 °C	1151	1125	1089	1045	975	867	775	698	636	539	468	415	313	254	188	150	126	107	82.4	65.9	54.6	28.8	22.7
1.84	20 °C	1164	1137	1099	1053	981	868	773	695	631	533	462	409	308	249	184	147	122	105	80.5	64.5	53.0	28.4	22.0
	25 °C	1199	1171	1132	1085	1010	894	796	716	650	549	476	421	317	257	189	151	126	108	82.9	66.4	54.6	29.2	22.7
1.83	20 °C	1211	1182	1141	1092	1014	894	794	711	644	542	469	414	311	251	185	147	123	105	80.7	64.6	53.1	28.4	22.0
	25 °C	1248	1217	1175	1124	1045	921	817	733	664	558	483	427	320	259	190	152	127	108	83.1	66.6	54.7	29.2	22.7
1.82	20 °C	1258	1226	1182	1129	1046	919	813	727	657	551	476	420	314	253	186	148	123	105	81.0	65.0	53.0	28.0	22.0
	25 °C	1296	1263	1217	1163	1077	947	837	749	677	568	490	433	323	261	192	152	127	108	83.4	67.0	54.6	28.8	22.7
1.80	20 °C	1347	1310	1260	1201	1107	966	850	756	681	568	488	429	319	257	188	149	124	106	81.0	65.0	53.0	28.0	22.0
	25 °C	1387	1349	1298	1237	1140	995	876	779	701	585	503	442	329	265	194	153	128	109	83.4	67.0	54.6	28.8	22.7
1.77	20 °C	1467	1424	1365	1295	1188	1026	896	793	710	588	503	441	325	261	190	151	125	107	82.0	65.0	54.0	29.0	22.0
	25 °C	1511	1467	1406	1334	1224	1057	923	817	731	606	518	454	335	269	196	156	129	110	84.5	67.0	55.6	29.9	22.7
1.75	20 °C	1536	1488	1424	1348	1232	1059	921	812	726	599	511	447	329	263	191	151	126	107	82.0	65.0	54.0	29.0	22.0
	25 °C	1582	1533	1467	1388	1269	1091	949	836	748	617	526	460	339	271	197	156	130	110	84.5	67.0	55.6	29.9	22.7
1.72	20 °C	1617	1564	1494	1410	1283	1097	950	834	743	611	520	453	332	265	192	152	126	107	82.0	66.0	54.0	29.0	22.0
	25 °C	1666	1611	1539	1452	1321	1130	979	859	765	629	536	467	342	273	198	157	130	110	84.5	68.0	55.6	29.9	22.7
1.70	20 °C	1657	1602	1528	1441	1309	1116	963	845	752	616	524	456	334	266	193	153	126	108	82.0	66.0	54.0	29.0	22.0
	25 °C	1707	1650	1574	1484	1348	1149	992	870	775	634	540	470	344	274	199	158	130	111	84.5	68.0	55.6	29.9	22.7
1.67	20 °C	1702	1644	1566	1475	1337	1136	979	857	761	623	528	460	336	267	193	153	127	108	82.0	66.0	54.0	29.0	22.0
	25 °C	1753	1693	1613	1519	1377	1170	1008	883	784	642	544	474	346	275	199	158	131	111	84.5	68.0	55.6	29.9	22.7
1.65	20 °C	1726	1667	1587	1493	1352	1147	986	863	766	626	530	462	336	2									