



6CP200

Compact-Power Blockline™



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Compact-Power Blockline™ 6CP200

Float voltage: 6.81V ± 1% @ -25°C
20 A for 10 h @ 5.25V @ -25°C
25 A for 8 h @ 5.25V @ -25°C
Connection torque: 11 Nm - 8.1 lbf ft



Technical specifications

Type

6CP200

Part number

6302 0200 (ABS – UL 94 HB [std.])

Part number

6332 0200 (ABS-PC – UL 94 V-0 [opt.])


Electrical Data

Nominal voltage	6 V	
Number of cells	3	
Rated capacity C ₁₀ to 1.80 Vpc at 20 °C	200 Ah	
Rated capacity C ₈ to 1.75 Vpc at 25 °C	200.8 Ah	
Current/Power for 0.5 h back-up time 1.65 Vpc 20 °C	227 A	621 W
Current/Power for 1.0 h back-up time 1.67 Vpc 20 °C	137 A	798 W
Current/Power for 2.0 h back-up 1.80 Vpc 20 °C	77.6 A	445.8 W
Current/Power for 4.0 h back-up 1.80 Vpc 20 °C	43.6 A	252 W
Current/Power for 8.0 h back-up 1.80 Vpc 20 °C	24.2 A	139.8 W
Current/Power for 10.0 h back-up time 1.80 Vpc 20 °C	20.0 A	115.8 W
Current/Power for 20.0 h back-up time 1.80 Vpc 20 °C	11.0 A	61.8 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	1.6 mΩ	
Short circuit current (± 10%) to IEC/EN 60896-21	4.0 kA	
Self discharge at 20 °C to IEC/EN 60896-21	max. 3%/month	
Heat loss during float service	≈ 0.60 W	

Mechanical Data

Weight ready for use	37 kg	
Height of monobloc	250 mm	
Depth over terminal connector	365 mm	
Width	133 mm	
Depth	362 mm	
Number of terminals	1⊕/1⊖	
Dimension of connector screw hole	M8	
Suggested/maximum cable cross-section	70 mm ²	
Connection torque	11 Nm	
Terminal insulation class according to IEC/EN 60529	IP20	
Diameter of diagnostic hole for voltage probe	–	
Connector (copper, tin-coated) rigid and insulated	40 mm ²	
Complete connector and terminal connection accessories	available (as 24/48 V-Set)	

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



K-Rack™ with 6CP200

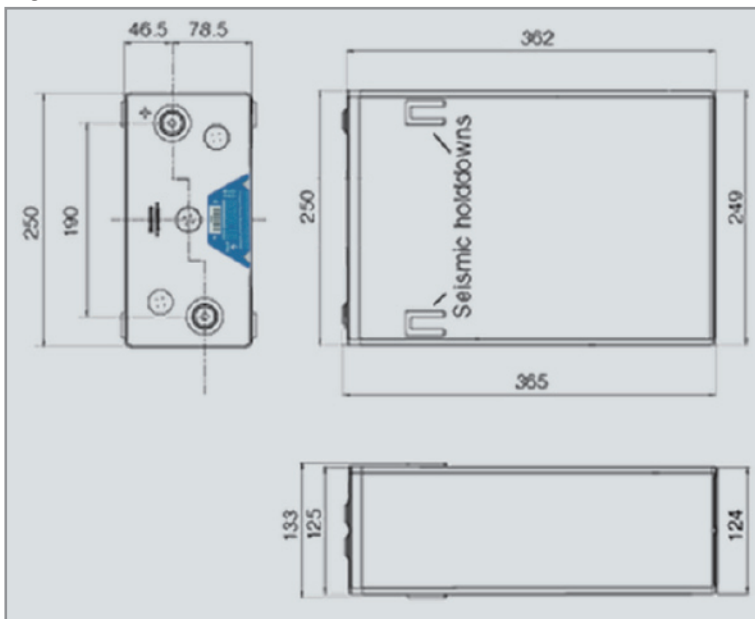
12480 W for 1h to 42.0 V

Footprint: 620 x 410 mm (WxD)

Height: 1220 mm

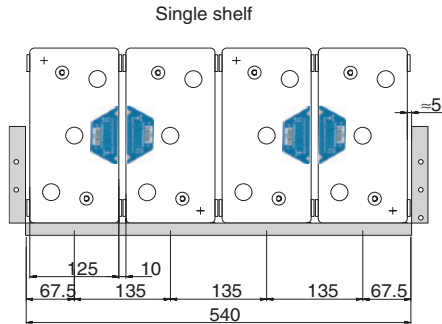
Weight: 660 kg

Figure 2



Operating specifications

Installation
(24 V unit)



Installation
(48 V unit)

Double shelf

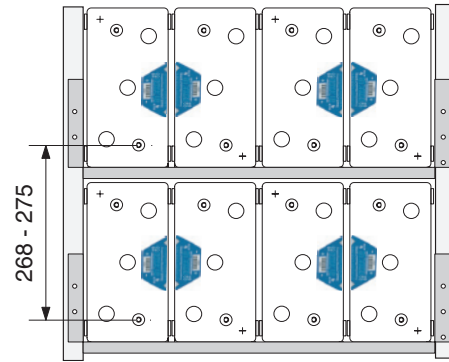
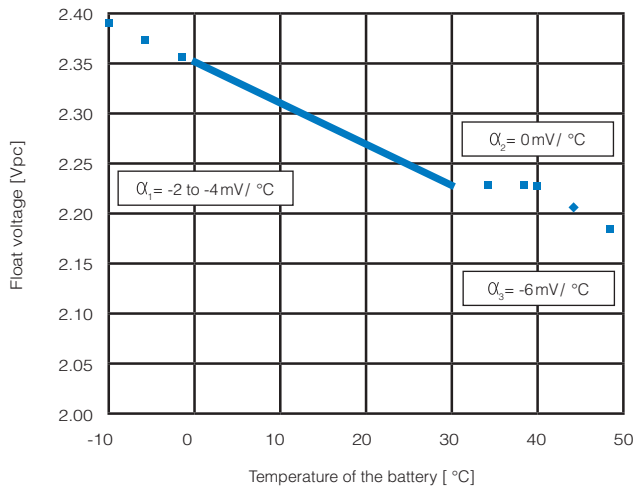


Figure 3



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

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

2.29 Vpc - 2.30 Vpc (no correction factor needed)

unlimited, otherwise $3 \cdot I_{10}$ 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 I_{10} max. for 24 h max. at $t < 30$ °C

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

$$Q = 0.05 \cdot N_{\text{cells}} \cdot I_{\text{gas}} \cdot C_{\text{Ah C10}} \cdot 10^{-3} \text{ [m}^3/\text{h]}$$

$$I_{\text{gas}} = 1 \text{ (at 2.27 Vpc)} \quad I_{\text{gas}} = 8 \text{ (at 2.40 Vpc)}$$

$$\text{e.g. 48 V: } 0.24 \text{ m}^3/\text{h} = 8.48 \text{ cu.ft/h (at 2.27 Vpc)}$$

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 to 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	350	335	310	288	260	226	201	182	168	146	130	114	89.4	72.2	52.8	41.8	34.8	30.0	23.6	19.6	16.8	11.0	9.4
	25 °C	367	352	325	302	273	237	211	191	176	153	136	120	92.1	74.4	54.4	43.1	35.8	30.9	24.3	20.2	17.3	11.3	9.7
1.87	20 °C	421	398	364	332	296	252	220	198	181	156	138	120	92.8	74.4	53.8	42.6	35.4	30.4	23.8	19.8	17.0	11.0	9.4
	25 °C	442	418	382	349	311	265	231	208	190	164	145	126	95.6	76.6	55.4	43.9	36.5	31.3	24.5	20.4	17.5	11.3	9.7
1.85	20 °C	469	442	398	361	318	267	233	207	189	161	142	123	94.6	75.6	54.4	43.0	35.6	30.6	24.0	19.8	17.0	11.0	9.4
	25 °C	492	464	418	379	334	280	245	217	198	169	149	129	97.4	77.9	56.0	44.3	36.7	31.5	24.7	20.4	17.5	11.3	9.7
1.84	20 °C	494	464	415	375	329	274	238	213	192	164	144	124	95.4	76.0	54.8	43.2	35.8	30.6	24.0	19.8	17.0	11.0	9.4
	25 °C	519	487	436	394	345	288	250	224	202	172	151	130	98.3	78.3	56.4	44.5	36.9	31.5	24.7	20.4	17.5	11.3	9.7
1.83	20 °C	518	484	432	388	339	281	243	217	196	166	146	126	96.2	76.6	55.0	43.2	35.8	30.8	24.0	19.9	17.0	11.0	9.4
	25 °C	544	508	454	407	356	295	255	228	206	174	153	132	99.1	78.9	56.7	44.5	36.9	31.7	24.7	20.5	17.5	11.3	9.7
1.82	20 °C	541	504	448	402	349	288	249	220	198	168	147	127	96.8	77.0	55.2	43.4	36.0	30.8	24.2	20.0	17.0	11.0	9.4
	25 °C	568	529	470	422	366	302	261	231	208	176	154	133	99.7	79.3	56.9	44.7	37.1	31.7	24.9	20.6	17.5	11.3	9.7
1.80	20 °C	588	545	479	426	366	301	258	227	203	171	150	129	98.0	77.6	55.6	43.6	36.2	31.0	24.2	20.0	17.0	11.0	9.4
	25 °C	617	572	504	447	384	316	271	238	213	180	157	135	100.9	79.9	57.3	44.9	37.3	31.9	24.9	20.6	17.5	11.3	9.7
1.77	20 °C	653	600	521	458	390	316	268	235	211	176	153	132	99.4	78.6	56.0	44.0	36.4	31.0	24.2	20.0	17.2	11.0	9.4
	25 °C	686	630	547	481	409	332	281	247	222	185	161	139	102.4	81.0	57.7	45.3	37.5	31.9	24.9	20.6	17.7	11.3	9.7
1.75	20 °C	694	634	547	479	404	325	275	240	214	179	155	133	100.0	79.0	56.2	44.0	36.4	31.2	24.4	20.0	17.2	11.0	9.4
	25 °C	729	666	574	503	424	341	289	252	225	188	163	140	103.0	81.4	57.9	45.3	37.5	32.1	25.1	20.6	17.7	11.3	9.7
1.72	20 °C	749	681	580	504	421	336	282	245	218	181	157	134	101.0	79.6	56.6	44.2	36.6	31.2	24.4	20.2	17.2	11.0	9.4
	25 °C	786	715	609	529	442	353	296	257	229	190	165	141	104.0	82.0	58.3	45.5	37.7	31.2	25.1	20.8	17.7	11.3	9.7
1.70	20 °C	784	709	601	518	432	343	288	249	222	183	159	136	101.4	79.8	56.6	44.4	36.6	31.2	24.4	20.2	17.2	11.0	9.4
	25 °C	823	744	631	544	454	360	302	261	233	192	167	143	104.4	82.2	58.3	45.7	37.7	32.1	25.1	20.8	17.7	11.3	9.7
1.67	20 °C	829	746	628	538	446	351	293	253	225	186	160	137	102.2	80.2	56.8	44.4	36.6	31.4	24.4	20.2	17.2	11.0	9.4
	25 °C	870	783	659	565	468	369	308	266	236	195	168	144	105.3	82.6	58.5	45.7	37.7	32.3	25.1	20.8	17.7	11.3	9.7
1.65	20 °C	858	770	643	550	454	355	297	256	227	187	161	137	102.4	80.4	57.0	44.6	36.8	31.4	24.4	20.2	17.2	11.2	9.6
	25 °C	901	808	675	577	477	373	312	269	238	196	169	144	105.5	82.8	58.7	45.9	37.9	32.3	25.1	20.8	17.7	11.5	9.9
1.63	20 °C	883	790	657	560	461	360	298	258	227	188	162	138	102.8	80.6	57.0	44.6	36.8	31.4	24.4	20.2	17.2	11.2	9.6
	25 °C	927	829	690	588	484	378	313	271	238	197	170	145	105.9	83.0	58.7	45.9	37.9	32.3	25.1	20.8	17.7	11.5	9.9
1.60	20 °C	918	817	675	572	470	365	302	260	229	189	163	139	103.2	80.8	57.2	44.6	36.8	31.4	24.4	20.2	17.2	11.2	9.6
	25 °C	964	858	709	601	493	383	317	273	240	198	171	146	106.3	83.2	58.9	45.9	37.9	32.3	25.1	20.8	17.7	11.5	9.9

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

voltage [Vpc]	Temp	Discharge time [Minutes]																						
		1 to 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	675	646	596	550	497	430	382	346	319	278	249	226	171.4	139.4	102.0	81.4	68.0	58.6	46.0	38.0	32.0	20.6	17.4
	25 °C	709	678	625	577	522	451	401	363	335	292	261	237	176.5	143.6	105.1	83.8	70.0	60.4	47.4	39.1	33.0	21.2	17.9
1.87	20 °C	801	758	689	630	559	476	417	373	341	295	261	238	177.4	143.4	104.0	82.6	68.6	59.4	46.0	38.0	32.6	20.6	17.4
	25 °C	841	796	723	661	587	500	438	392	358	310	274	250	182.7	147.7	107.1	85.1	70.7	61.2	47.4	39.1	33.6	21.2	17.9
1.85	20 °C	883	830	750	680	597	502	437	390	354	304	268	244	180.6	145.4	105.4	83.4	69.4	59.4	46.6	38.0	32.6	20.6	17.4
	25 °C	927	871	787	714	627	527	459	409	372	319	281	256	186.0	149.8	108.6	85.9	71.5	61.2	48.0	39.1	33.6	21.2	17.9
1.84	20 °C	925	867	778	702	614	514	446	397	361	308	272	246	182.0	146.0	105.8	83.6	69.4	59.6	46.6	38.2	32.6	20.6	17.4
	25 °C	971	910	817	737	645	540	468	417	379	323	286	258	187.5	150.4	109.0	86.1	71.5	61.4	48.0	39.3	33.6	21.2	17.9
1.83	20 °C	963	901	805	724	631	526	455	404	365	312	274	248	183.4	146.8	106.2	84.0	69.6	59.6	46.6	38.4	32.6	20.6	17.4
	25 °C	1011	946	845	760	663	552	478	424	383	328	288	260	188.9	151.2	109.4	86.5	71.7	61.4	48.0	39.6	33.6	21.2	17.9
1.82	20 °C	1002	935	831	746	647	537	462	410	370	315	278	250	184.6	147.4	106.6	84.0	70.0	60.0	46.6	38.6	32.6	20.6	17.4
	25 °C	1052	982	873	783	679	564	485	430	388	331	292	262	190.1	151.8	109.8	86.5	72.1	61.8	48.0	39.8	33.6	21.2	17.9
1.80	20 °C	1076	999	882	785	676	556	476	420	379	321	282	254	186.6	148.6	107.4	84.0	70.0	60.0	46.6	38.6	32.6	20.6	17.4
	25 °C	1130	1049	926	824	710	584	500	441	398	337	296	267	192.2	153.1	110.6	86.5	72.1	61.8	48.0	39.8	33.6	21.2	17.9
1.77	20 °C	1174	1083	946	835	714	580	494	435	390	329	288	258	188.6	150.0	108.0	85.4	70.6	60.0	46.6	38.6	32.6	20.6	17.4
	25 °C	1233	1137	993	877	750	609	519	457	409	345	302	271	194.3	154.5	111.2	88.0	72.7	61.8	48.0	39.8	33.6	21.2	17.9
1.75	20 °C	1233	1131	983	864	735	593	504	442	396	332	290	260	190.0	151.4	108.6	85.4	70.6	60.6	47.4	38.6	32.6	20.6	17.4
	25 °C	1294	1188	1032	907	772	623	529	464	416	349	304	273	195.7	155.9	111.9	88.0	72.7	62.4	48.8	39.8	33.6	21.2	17.9
1.72	20 °C	1312	1197	1031	901	760	610	515	451	403	336	294	262	191.4	152.0	108.6	85.4	70.6	60.6	47.4	38.6	32.6	20.6	17.4
	25 °C	1378	1257	1083	946	798	640	541	474	423	353	309	275	197.1	156.6	111.9	88.0	72.7	62.4	48.8	39.8	33.6	21.2	17.9
1.70	20 °C	1357	1234	1059	922	774	619	522	455	407	340	296	264	192.0	152.6	109.4	86.0	70.6	60.6	47.4	38.6	32.6	20.6	17.4
	25 °C	1425	1296	1112	968	813	650	548	478	427	357	311	277	197.8	157.2	112.7	88.6	72.7	62.4	48.8	39.8	33.6	21.2	17.9
1.67	20 °C	1414	1283	1093	947	793	631	529	460	410	342	297	266	193.4	153.4	109.4	86.0	71.4	60.6	47.4	38.6	32.6	20.6	17.4
	25 °C	1485	1347	1148	994	833	663	555	483	430	359	312	279	199.2										