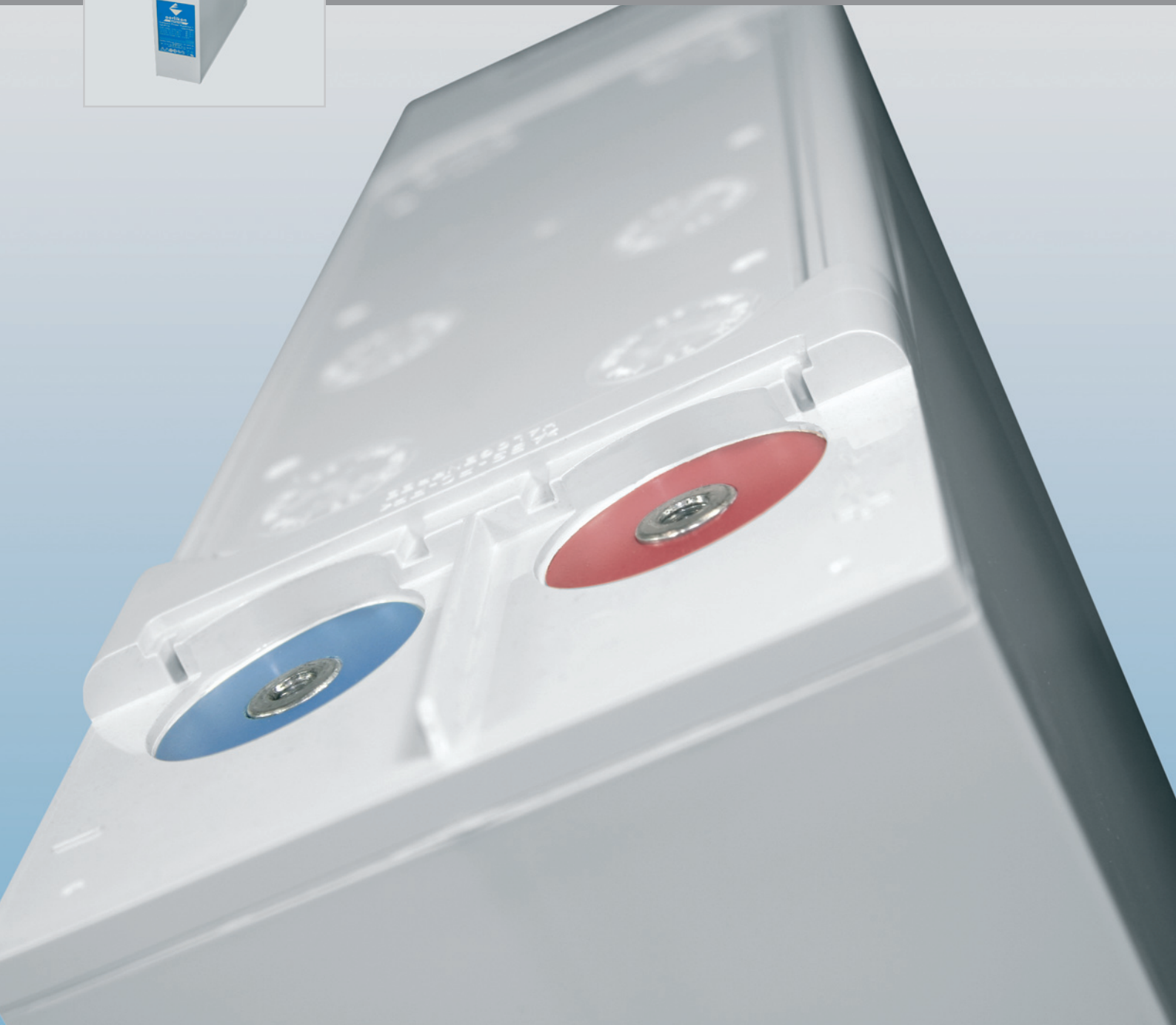




# 12CP115/19

Compact-Power Rackline™



# Technical specifications

## Type

# 12CP115/19

Part number

6630 0115


### Electrical Data

Nominal voltage	12 V	
Number of cells	6	
Rated capacity C <sub>10</sub> to 1.80 Vpc at 20 °C	115 Ah	
Rated capacity C <sub>8</sub> to 1.75 Vpc at 25 °C	115.2 Ah	
Current/Power for 0.5 h back-up time 1.65 Vpc 20 °C	142 A	1590 W
Current/Power for 1.0 h back-up time 1.67 Vpc 20 °C	81.9 A	984 W
Current/Power for 2.0 h back-up time 1.80 Vpc 20 °C	44.6 A	564 W
Current/Power for 4.0 h back-up time 1.80 Vpc 20 °C	25.1 A	324 W
Current/Power for 8.0 h back-up time 1.80 Vpc 20 °C	13.9 A	171 W
Current/Power for 10.0 h back-up time 1.80 Vpc 20 °C	11.5 A	137.4 W
Current/Power for 20.0 h back-up time 1.80 Vpc 20 °C	6.4 A	69 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	5.0 mΩ	
Short circuit current (± 10%) to IEC/EN 60896-21	2.4 kA	
Self discharge at 20 °C to IEC/EN60896-21	max. 3%/month	
Heat loss during float service	≈ 0.66 W	

### Mechanical Data

Weight ready for use	43.1 kg	
Height of monobloc	320 mm	
Height over gas collection system GCS™	329 mm	
Height over terminal connector	355 mm	
Width	105 mm	
Depth	392 mm	
Number of terminals	1 <sub>+</sub> /1 <sub>-</sub>	
Dimension of connector screw hole	term.: M6 termin. conn.: M6 & M8/M10	
Suggested/maximum cable cross-section	70 mm <sup>2</sup>	
Connection torque	6 Nm	
Terminal insulation class according to IEC/EN 60529	IP20	
Diameter of diagnostic hole for voltage probe	5 mm Ø	
Connector (copper, tin-coated ) rigid and insulated	40 mm <sup>2</sup>	
Complete connector and terminal connection accessories	available (as 48 V/60 V-Set)	

### Environmental Data

Shelves, cabinets and racks	available upon request
Installation	vertically/horizontally
Distance for cooling and ventilation (preset with the rigid connectors)	9 mm
Flame retardancy rating case/cover according to Underwriters Laboratories (UL) USA	ABS-PC – UL 94 V-0 with LOI > 32%, halogen-free
Flame barriers at vents	installed
Gas collection system GCS™ UL V-0 quality	available upon request
UL file number 	MH 26065
Service life expected at 20 °C	15 years

# Operating specifications

Figure 1



Figure 2

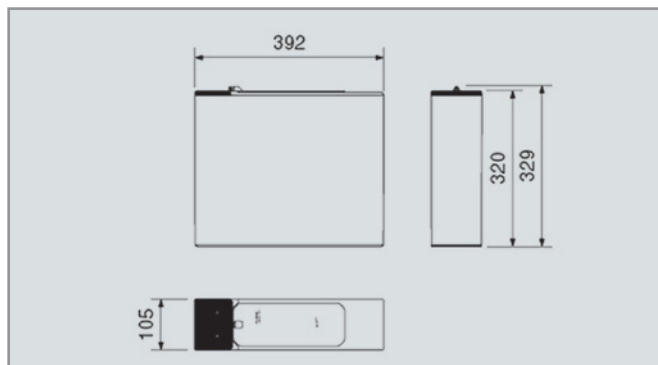
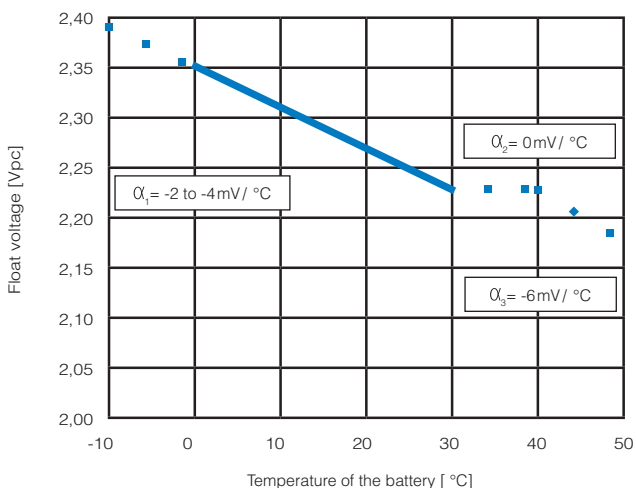


Figure 3



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

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

2.27 Vpc 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

**Air exchange**

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

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

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

e.g. 48 V: 0.138 m<sup>3</sup>/h = 4.87 cu.ft/h (at 2.27 Vpc)

Preferred operating temperature range

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

Maximum long term operating temperature

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

Maximum short term operating temperature (for hours)

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

Minimum fully charged operating temperature

-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	240	229	210	194	174	148	130	116	105	89	77	68	52	41.5	30.3	24.0	20.1	17.3	13.5	11.2	9.6	6.3	5.3
	25 °C	252	240	221	204	183	155	137	122	110	93	81	72	53	42.7	31.2	24.7	20.7	17.8	13.9	11.5	9.9	6.5	5.5
1.87	20 °C	289	273	247	224	197	165	143	127	114	95	82	72	53	42.7	30.9	24.4	20.4	17.5	13.7	11.4	9.8	6.3	5.5
	25 °C	303	287	259	235	207	173	150	133	120	99	86	75	55	44.0	31.8	25.1	21.0	18.0	14.1	11.7	10.1	6.5	5.7
1.85	20 °C	322	302	270	244	213	175	151	132	118	98	84	74	54	43.4	31.3	24.7	20.6	17.5	13.8	11.4	9.8	6.3	5.5
	25 °C	338	317	284	256	224	184	159	139	124	103	88	77	56	44.7	32.2	25.4	21.2	18.0	14.2	11.7	10.1	6.5	5.7
1.84	20 °C	339	318	282	253	220	181	154	135	120	100	85	75	55	43.7	31.5	24.7	20.6	17.7	13.8	11.4	9.8	6.3	5.5
	25 °C	356	334	296	266	231	190	162	142	126	104	89	78	56	45.0	32.4	25.4	21.2	18.2	14.2	11.7	10.1	6.5	5.7
1.83	20 °C	355	332	293	262	226	185	158	138	123	101	86	75	55	44.0	31.6	24.9	20.6	17.7	13.8	11.5	9.8	6.3	5.5
	25 °C	373	349	308	275	237	194	166	145	129	106	90	79	57	45.3	32.5	25.6	21.2	18.2	14.2	11.8	10.1	6.5	5.7
1.82	20 °C	372	346	305	271	233	190	161	140	124	102	87	76	56	44.2	31.7	24.9	20.7	17.7	13.9	11.5	9.8	6.3	5.4
	25 °C	391	363	320	285	245	200	169	147	130	107	91	80	57	45.5	32.7	25.6	21.3	18.2	14.3	11.8	10.1	6.5	5.6
1.80	20 °C	403	373	326	288	245	198	167	144	128	104	89	77	56	44.6	31.9	25.1	20.8	17.8	13.9	11.5	9.8	6.4	5.4
	25 °C	423	392	342	302	257	208	175	151	134	109	93	81	58	45.9	32.9	25.9	21.4	18.3	14.3	11.8	10.1	6.6	5.6
1.77	20 °C	448	411	354	310	261	208	174	150	132	107	91	79	57	45.1	32.2	25.2	20.9	17.9	13.9	11.5	9.8	6.4	5.4
	25 °C	470	432	372	326	274	218	183	158	139	112	95	83	59	46.5	33.2	26.0	21.5	18.4	14.3	11.8	10.1	6.6	5.6
1.75	20 °C	476	434	371	323	270	214	178	153	134	109	92	80	58	45.4	32.3	25.3	20.9	17.9	14.0	11.5	9.9	6.4	5.5
	25 °C	500	456	390	339	284	225	187	161	141	114	96	84	59	46.8	33.3	26.1	21.5	18.4	14.4	11.8	10.2	6.6	5.7
1.72	20 °C	515	466	394	339	282	221	183	157	137	111	93	81	58	45.7	32.5	25.4	21.0	18.0	13.9	11.5	9.9	6.3	5.5
	25 °C	541	489	414	356	296	232	192	165	144	117	98	85	60	47.1	33.5	26.2	21.6	18.5	14.3	11.8	10.2	6.5	5.7
1.70	20 °C	538	485	408	350	289	225	186	159	139	112	94	81	58	45.9	32.6	25.5	21.0	18.0	14.0	11.6	9.9	6.4	5.5
	25 °C	565	509	428	368	303	236	195	167	146	118	98	85	60	47.3	33.6	26.3	21.6	18.5	14.4	11.9	10.2	6.6	5.7
1.67	20 °C	570	511	426	363	298	231	189	161	141	113	95	82	59	46.1	32.7	25.5	21.1	18.0	14.0	11.6	9.9	6.4	5.5
	25 °C	599	537	447	381	313	243	198	169	148	119	100	86	60	47.5	33.7	26.3	21.7	18.5	14.4	11.9	10.2	6.6	5.7
1.65	20 °C	589	526	437	371	303	234	191	163	142	114	95	82	59	46.3	32.8	25.6	21.1	18.0	14.1	11.6	9.9	6.4	5.5
	25 °C	618	552	459	390	318	246	201	171	149	120	100	86	61	47.7	33.8	26.4	21.7	18.5	14.5	11.9	10.2	6.6	5.7
1.63	20 °C	606	540	446	378	308	236	193	164	143	114	96	83	59	46.4	32.8	25.6	21.1	18.0	14.1	11.6	9.9	6.4	5.5
	25 °C	636	567	468	397	323	248	203	172	150	120	100	87	61	47.8	33.8	26.4	21.7	18.5	14.5	11.9	10.2	6.6	5.7
1.60	20 °C	630	559	459	387	314	240	196	166	144	115	96	83	59	46.5	32.9	25.7	21.2	18.1	14.1	11.6	9.9	6.4	5.5
	25 °C	662	587	482	406	330	252	206	174	151	121	101	87	61	47.9	33.9	26.5	21.8	18.6	14.5	11.9	10.2	6.6	5.7

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	472	449	412	379	338	288	252	226	205	175	154	138	106	87.5	65.0	51.7	42.7	36.5	27.9	22.5	18.8	11.4	9.6
	25 °C	496	471	433	398	355	302	265	237	215	184	162	145	109	90.1	67.0	53.3	44.0	37.6	28.7	23.2	19.4	11.7	9.9
1.87	20 °C	563	530	480	435	382	319	276	245	221	186	162	145	110	90.2	66.5	52.7	43.3	36.9	28.1	22.7	19.0	11.5	9.6
	25 °C	591	557	504	457	401	335	290	257	232	195	170	152	113	92.9	68.5	54.3	44.6	38.0	28.9	23.4	19.6	11.8	9.9
1.85	20 °C	623	583	523	470	409	338	290	255	229	192	167	148	113	91.7	67.3	53.1	43.8	37.1	28.3	22.7	19.0	11.5	9.6
	25 °C	654	612	549	494	429	355	305	268	240	202	175	155	116	94.5	69.3	54.7	45.1	38.2	29.2	23.4	19.6	11.8	9.9
1.84	20 °C	653	609	543	486	421	346	296	260	233	195	169	150	113	92.1	67.5	53.3	44.0	37.3	28.3	22.7	19.0	11.5	9.7
	25 °C	686	639	570	510	442	363	311	273	245	205	177	158	116	94.9	69.5	54.9	45.3	38.4	29.2	23.4	19.6	11.8	10.0
1.83	20 °C	681	634	563	502	433	354	302	265	237	198	171	151	114	92.7	67.9	53.5	44.0	37.3	28.3	22.9	19.1	11.5	9.7
	25 °C	715	666	591	527	455	372	317	278	249	208	180	159	117	95.5	69.9	55.1	45.3	38.4	29.2	23.6	19.7	11.8	10.0
1.82	20 °C	708	657	581	517	443	361	307	269	240	200	173	153	115	93.1	68.1	53.5	44.2	37.3	28.5	22.9	19.1	11.5	9.7
	25 °C	743	690	610	543	465	379	322	282	252	210	182	161	118	95.9	70.1	55.1	45.5	38.4	29.4	23.6	19.7	11.8	10.0
1.80	20 °C	758	700	614	543	462	373	316	275	245	204	175	155	116	94.0	68.5	54.0	44.4	37.5	28.5	22.9	19.1	11.5	9.7
	25 °C	796	735	645	570	485	392	332	289	257	214	184	163	119	96.8	70.6	55.6	45.7	38.6	29.4	23.6	19.7	11.8	10.0
1.77	20 °C	821	753	655	575	485	388	326	284	252	208	178	157	118	95.0	69.0	54.2	44.6	37.7	28.5	22.9	19.1	11.5	9.7
	25 °C	862	791	688	604	509	407	342	298	265	218	187	165	122	97.9	71.1	55.8	45.9	38.8	29.4	23.6	19.7	11.8	10.0
1.75	20 °C	856	783	677	591	497	396	332	288	255	210	180	158	118	95.4	69.2	54.4	44.6	37.7	28.5	22.9	19.2	11.6	9.7
	25 °C	899	822	711	621	522	416	349	302	268	221	189	166	122	98.3	71.3	56.0	45.9	38.8	29.4	23.6	19.8	11.9	10.0
1.72	20 °C	899	818	703	611	511	405	338	292	259	213	182	160	119	95.8	69.6	54.6	44.8	37.7	28.8	23.1	19.2	11.6	9.7
	25 °C	944	859	738	642	537	425	355	307	272	224	191	168	123	98.7	71.7	56.2	46.1	38.8	29.7	23.8	19.8	11.9	10.0
1.70	20 °C	924	839	719	623	519	408	341	295	261	214	183	161	120	96.3	69.6	54.6	44.8	37.9	28.8	23.1	19.2	11.6	9.7
	25 °C	970	881	755	654	545	428	358	310	274	225	192	169	124	99.2	71.7	56.2	46.1	39.0	29.7	23.8	19.8	11.9	10.0
1.67	20 °C	958	867	739	638	530	408	344	296	262	216	186	164	126	96.5	69.8	54.8	44.8	37.9	28.8	23.1	19.2	11.6	9.7
	25 °C	1006	910	776	670	557	428	361	311	275	227	195	172	130	99.4	71.9	56.4	46.1	39.0	29.7	23.8	19.8	11.9	10.0
1.65	20 °C	980	885	753	648	537	420	349	300	265	217	185	162	120	96.7	70.0	54.8	45.0	37.9	28.8	23.1	19.2	11.6	9.7
	25 °C	1029	929	791	680	564																		