



HC21P - Cell data sheet

Classification

Brand	
Cell type	HC21P
Cell P/N	310451051
Capacity at 5 hours rate	21 Ah
IEC Designation	KH21P
According to IEC 60623	



Wiring principle

Normal



Physical data

Overall height	270 mm		
Cell height	267 mm		
Width	121 mm	Weight per cell	3,0 Kg
Length	66 mm		

Construction

Container material	Polypropylene	No. of terminals/polarity	1
Separator type	Grid	Terminal material	Steel
Connection torque	11,0 +/- 1,1 Nm	Vent type	Flame arresting vent (small)
Terminal size	M6 SW 10 mm	Handle	No

Plates

Positive		Negative	
Type of plates	Pocket	Type of plates	Pocket

Electrolyte

Electrolyte type: Renewal	E13	Max/Min	35 mm
Electrolyte type: Initial	E22	Vent oil quantity	
Electrolyte per cell: Liquid	1,1 liters		

Connection

Cable area of internal connection cables	35 mm ²	End-lug (and external cable)	25 mm ²
--	--------------------	------------------------------	--------------------



HC21P - Cell data sheet

Charging

Float voltage	1,4 V/Cell	High rate voltage (min)	1,45 V/Cell
Single-level voltage	1,43 V/Cell		

Resistance/Short circuit

Internal resistance	1,43 mOhm	Short circuit current	711 A
---------------------	-----------	-----------------------	-------

Performance data

Current discharge

After prolonged float charge of fully charged cells. Available amperes at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	2,10	2,62	4,20	6,90	10,2	13,5	19,7	35,7	47,6	54,8	65,3	81,0	109	123	156	165
1,05	2,08	2,60	4,13	6,80	10,0	13,3	19,2	33,9	40,7	47,0	55,6	66,4	89,8	106	129	139
1,1	2,04	2,55	4,03	6,62	9,7	12,7	17,9	27,3	32,5	36,8	41,9	51,8	71,4	82,9	105	111
1,14	1,96	2,45	3,89	6,34	8,89	11,3	14,8	21,8	26,0	29,5	34,0	41,9	57,4	66,9	81,4	97,6
1,16	1,91	2,38	3,79	6,09	8,16	10,1	12,0	17,8	21,7	24,2	27,2	34,3	48,7	56,0	67,5	83,0

Engine starting performance

For a fully charged cell by a constant current charge according to IEC 60623 standard at +20°C +/- 5°C (+68°F +/- 9°F), 30 seconds discharge down to 0,85 V

Available amperes 197 A

Power discharge

Available power (W), after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	2,54	3,18	5,02	8,18	12,1	15,3	21,4	37,1	48,8	55,7	65,8	81,0	109	123	156	165
1,05	2,52	3,14	4,94	8,06	11,8	15,2	21,3	36,5	43,4	49,9	58,7	69,7	94,3	111	135	146
1,1	2,46	3,08	4,82	7,84	11,5	14,7	20,4	30,5	36,1	40,7	46,2	57,0	78,6	91,3	116	122
1,14	2,38	2,97	4,64	7,51	10,5	13,2	17,2	25,0	29,8	33,8	38,8	47,8	65,4	76,3	92,8	111
1,16	2,31	2,89	4,53	7,22	9,6	11,9	14,1	20,8	25,2	28,1	31,6	39,8	56,5	65,0	78,3	96,3

Engine starting performance

For a fully charged cell by a constant current charge according to IEC 60623 standard at +20°C +/- 5°C (+68°F +/- 9°F), 30 seconds discharge down to 0,85 V

Available amperes 197 A



HC21P - Cell data sheet

Kt Factor

Current discharge

After prolonged float charge of fully charged cells. Kt factor at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	10,0	8,00	5,00	3,04	2,05	1,55	1,07	0,59	0,44	0,38	0,32	0,26	0,19	0,17	0,13	0,13
1,05	10,1	8,08	5,08	3,09	2,09	1,58	1,10	0,62	0,52	0,45	0,38	0,32	0,23	0,20	0,16	0,15
1,1	10,3	8,25	5,21	3,17	2,16	1,65	1,17	0,77	0,65	0,57	0,50	0,41	0,29	0,25	0,20	0,19
1,14	10,7	8,56	5,41	3,31	2,36	1,86	1,41	0,97	0,81	0,71	0,62	0,50	0,37	0,31	0,26	0,22
1,16	11,0	8,81	5,54	3,45	2,57	2,08	1,74	1,18	0,97	0,87	0,77	0,61	0,43	0,38	0,31	0,25

Engine starting performance

For a fully charged cell by a constant current charge according to IEC 60623 standard at +20°C +/- 5°C (+68°F +/- 9°F), 30 seconds discharge down to 0,85 V

Available amperes 197 A

Power discharge

Kt factor power, after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	8,26	6,61	4,18	2,57	1,74	1,37	0,98	0,57	0,43	0,38	0,32	0,26	0,19	0,17	0,13	0,13
1,05	8,35	6,68	4,25	2,61	1,77	1,38	0,99	0,58	0,48	0,42	0,36	0,30	0,22	0,19	0,16	0,14
1,1	8,52	6,82	4,36	2,68	1,83	1,43	1,03	0,69	0,58	0,52	0,45	0,37	0,27	0,23	0,18	0,17
1,14	8,84	7,07	4,52	2,80	2,00	1,59	1,22	0,84	0,71	0,62	0,54	0,44	0,32	0,28	0,23	0,19
1,16	9,10	7,28	4,64	2,91	2,18	1,77	1,49	1,01	0,83	0,75	0,66	0,53	0,37	0,32	0,27	0,22

Engine starting performance

Kt factor power, after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

Available amperes 197 A