



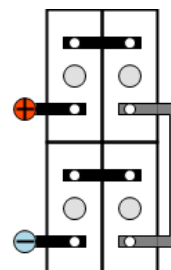
# MC190P - Cell data sheet

## Classification

Brand	Alcad
Cell type	MC190P
Cell P/N	311038451
Capacity at 5 hours rate	190 Ah
IEC Designation	KM190P
According to IEC 60623	



Wiring principle      Normal



## Physical data

Overall height	413 mm		
Cell height	405 mm		
Width	192 mm	Weight per cell	11,9 Kg
Length	93 mm		

## Construction

Container material	Polypropylene	No. of terminals/polarity	1
Separator type	Grid	Terminal material	Steel
Connection torque	30,0 +/- 3,0 Nm	Vent type	
Terminal size	M10 SW 16 mm	Handle	No

## Plates

Positive		Negative	
Type of plates	Pocket	Type of plates	Pocket

## Electrolyte

Electrolyte type: Renewal	E13	Max/Min	50 mm
Electrolyte type: Initial	E22	Vent oil quantity	
Electrolyte per cell: Liquid	3,8 liters		

## Connection

Cable area of internal connection cables	95 mm <sup>2</sup>	End-lug (and external cable)	95 mm <sup>2</sup>
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## 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	0,45 mOhm	Short circuit current	2985 A
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## 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	19,3	23,9	38,0	62,1	90,8	113	159	217	251	272	310	365	492	550	656	694
1,05	19,2	23,8	37,7	61,4	85,3	109	144	184	216	236	258	299	418	470	554	597
1,1	18,8	23,4	37,0	57,4	79,5	96,2	117	146	178	185	211	253	353	393	464	493
1,14	18,3	22,7	35,8	54,0	69,5	80,2	94,2	115	131	142	163	204	285	315	365	376
1,16	17,8	21,8	33,0	50,0	58,5	63,4	78,4	97,9	112	117	131	163	239	266	299	318

### 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	23,0	28,3	44,4	69,4	96,7	118	164	220	253	273	311	365	492	550	656	694
1,05	22,9	28,1	44,1	68,7	93,6	118	154	195	229	249	271	314	439	494	582	626
1,1	22,5	27,8	43,5	65,7	89,9	108	130	162	196	204	233	278	388	433	511	543
1,14	21,9	27,0	42,2	62,8	80,4	92,3	108	131	150	162	186	232	324	360	416	428
1,16	21,3	26,0	38,9	58,6	68,3	73,9	91,2	114	130	136	152	189	277	308	347	369



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## 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	9,8	7,94	5,00	3,06	2,09	1,68	1,19	0,88	0,76	0,70	0,61	0,52	0,39	0,35	0,29	0,27
1,05	9,9	8,00	5,05	3,09	2,23	1,74	1,32	1,03	0,88	0,81	0,74	0,64	0,45	0,40	0,34	0,32
1,1	10,1	8,12	5,14	3,31	2,39	1,98	1,62	1,30	1,07	1,03	0,90	0,75	0,54	0,48	0,41	0,39
1,14	10,4	8,36	5,31	3,52	2,73	2,37	2,02	1,66	1,45	1,34	1,16	0,93	0,67	0,60	0,52	0,51
1,16	10,7	8,70	5,77	3,80	3,25	3,00	2,42	1,94	1,69	1,62	1,45	1,17	0,80	0,71	0,64	0,60

### 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	8,24	6,72	4,28	2,74	1,96	1,60	1,16	0,86	0,75	0,70	0,61	0,52	0,39	0,35	0,29	0,27
1,05	8,31	6,75	4,31	2,76	2,03	1,61	1,23	0,98	0,83	0,76	0,70	0,61	0,43	0,38	0,33	0,30
1,1	8,45	6,84	4,37	2,89	2,11	1,76	1,46	1,17	0,97	0,93	0,82	0,68	0,49	0,44	0,37	0,35
1,14	8,68	7,03	4,50	3,03	2,36	2,06	1,76	1,45	1,27	1,17	1,02	0,82	0,59	0,53	0,46	0,44
1,16	8,92	7,31	4,88	3,24	2,78	2,57	2,08	1,67	1,46	1,40	1,25	1,01	0,69	0,62	0,55	0,52