

Power cable current rating chart with conductor

NOMINAL AREA OF CONDUCTOR IN SQ.MM SIZE	CURRENT RATING OF BUILDING WIRES & INDUSTRIAL FLEXIBLE AMP.	3, 3.5, 4 Core 1.1.KV, PVC CABLES WITH Aluminium conductors Laid		3, 3.5, 4 Core 1.1.KV, XLPE CABLES WITH Aluminium conductors Laid		3 Core-3.3.KV, 6.6KV, 11KV, PVC Cables with Aluminium conductors Laid		1 Core-3.3.KV/ 6.6KV(E)/6.6/ 6.6KV(UE)/6.35/11KV(E)XPLE Cable with Al. conductors Laid		3 Core-1.9/3.3KV(E), 3.3KV(UE), 3.8/6.6KV(E)/6.35/ 11KV(E)-35 to 400 sq.mm, 11/11 KV(UE)-70 to 400 Sq.mm 12.7/22KV(E), 19/33KV (E)-95 to 400 Sq.mm and 33/33KV (UE) 120 to 400 Sq.mm XLPE Cables with Aluminium conductors laid	
		AMP.	AMP.	AMP.	AMP.	AMP.	AMP.	AMP.	AMP.	AMP.	AMP.
		IN AIR	IN GROUND	IN AIR	IN GROUND	IN AIR	IN GROUND	IN AIR	IN GROUND	IN AIR	IN GROUND
0.5	4	---	---	---	---	---	---	---	---	---	---
0.75	7	---	---	---	---	---	---	---	---	---	---
1	12	---	---	---	---	---	---	---	---	---	---
1.5	16	13	16	---	---	---	---	---	---	---	---
2.5	22	18	21	---	---	---	---	---	---	---	---
4	29	23	28	31	34	---	---	---	---	---	---
6	37	30	35	50	43	---	---	---	---	---	---
10	51	40	46	67	57	---	---	---	---	---	---
16	68	51	60	70	73	---	---	---	---	---	---
25	86	70	76	96	94	---	---	---	---	---	---
35	110	86	92	117	113	86	86	145	120	125	115
50	145	105	110	142	133	105	100	170	140	150	130
70	215	130	132	179	164	130	125	215	175	190	160
95	260	155	165	221	196	155	150	260	205	230	190
120	305	180	185	257	223	180	170	305	235	260	220
150	355	205	210	292	249	205	195	345	260	295	245
185	415	240	235	337	282	235	220	395	295	335	275
240	500	280	275	399	326	270	250	470	340	395	315
300	585	315	305	455	367	310	280	540	385	450	355
400	695	375	335	530	418	365	315	630	440	520	400
500	500	410	350	612	470	420	355	730	495	---	---
630	905	---	---	707	529	---	---	840	560	---	---
800	1050	---	---	---	---	---	---	960	620	---	---
1000	1185	---	---	---	---	---	---	1070	680	---	---

NOTE : 1) For Approx current rating for POWER CABLES with Copper conductor increase the above rating by 25%

NOTE : 2) The above rating are normal rating and will subject to derating factor for various conditions as per IS : 3961

CURRENT RATING OF POLYCAP COPPER, ARMoured / UNARMoured CABLES 1100 V GRADE IN AIR

AREA SQ. MM.	TWIN CORE AMP.	3,3½, 4 CORE AMP.
1.5	20	17
2.5	27	24
4	35	30
6	45	39
10	60	52
16	78	66
25	105	90
35	125	110
50	155	135
70	195	165
95	230	200
120	265	235
150	305	265
185	350	305
240	410	355
300	465	400
400	530	455

ESTIMATED FULL LOAD CURRENT FOR MOTORS

H.P.	K.W.	Single Phase Amp	Three Phase Amp	Recommended Cable size Sq. MM Copper / Aluminium	
0.5	0.37	3.7	1.0	1.5	2.5
0.75	0.55	5.0	1.3	1.5	2.5
1.00	0.75	6.5	1.9	1.5	2.5
1.50	1.10	11.5	2.6	1.5	2.5
2.00	1.50	--	3.7	1.5	2.5
3.00	2.20	--	4.8	1.5	2.5
5.00	3.70	--	7.8	1.5	2.5
7.5	5.50	--	11.2	1.5	2.5
10.0	7.50	--	16.0	2.5	4.0
12.5	9.30	--	19.0	2.5	4.0
15.0	11.00	--	22.0	4.0	6.0
20.0	15.00	--	29.0	6.0	10.0
25.0	18.50	--	34.0	10.0	16.0
30.0	22.00	--	41.0	10.0	16.0
35.0	26.00	--	47.0	16.0	25.0
40.0	30.00	--	54.0	16.0	25.0
50.0	37.00	--	67.0	25.0	35.0
60.0	45.00	--	80.0	35.0	50.0
75.0	55.00	--	97.0	50.0	70.0
100.0	75.00	--	131.0	70.0	95.0
125.0	90.00	--	152.0	95	120/150
150.0	110.0	--	191.0	150	185
180.0	132.0	--	229.0	185	240
192.0	143.0	--	248.0	185	240

EARTHING READY RECKONER

Sr. No.	Item	Copper	Aluminium	G.I.
	Weight of Conductor KG / MTR			
1	No.14 SWG Wire	0.028	-----	0.0254
2	No.12 SWG Wire	0.049	0.0162 (6 MM ²)	0.0043
3	No.8 SWG Wire	0.1155	0.02703 (10 MM ²)	0.102
4	No.6 SWG Wire	0.1668	-----	0.1465
5	No.4 SWG Wire	0.243	-----	0.224
6	No.2 SWG Wire	0.344	0.0945 (32 MM ²)	0.305
7	25 x 3 MM Flat	0.670	0.202	0.590
8	32 x 6 MM Flat	1.715	0.518	1.510
9	50 x 6 MM Flat	2.680	0.810	2.360
10	600 x 600 x 6 MM Thick Plate	19.30	5.83	17.00
11	600 x 600 x 12 MM Thick Plate	38.60	11.66	34.00
Recommend Earth Conductor for Motors				
1	Up to 15 H.P.	12 SWG	6 MM	8 SWG
2	Up 20 to 30 H.P.	8 SWG	10 MM	4 SWG
3	Up 35 to 50 H.P.	4 SWG	35 MM	25 X 3 MM Flat
4	Above 50 H.P.	25 X 3 MM Flat	25 X 6 MM Flat	32 X 6 MM Flat