



ADDITIONAL TECHNICAL INFORMATION

MOTOR CURRENT CONVERSION TABLE

Rated Power		3 Phase 4 Pole Motors 50 - 60 Hz			Star Delta FLC x 0.58		
KW	HP	230V	400V	500V	400V	440V	500V
0.37	0.5	2.9A	0.98A	0.79A	N/A	N/A	N/A
0.55	0.75	4.6A	1.5A	1.2A	N/A	N/A	N/A
0.75	1	5.7A	1.9A	1.5A	N/A	N/A	N/A
1.1	1.5	7.3A	2.4A	2.1A	N/A	N/A	N/A
1.5	2	9.9A	3.3A	2.7A	N/A	N/A	N/A
2.2	3	14.4A	4.7A	4.8A	N/A	N/A	N/A
3	4	19.1A	6.2A	5.1A	N/A	N/A	N/A
4	5.5	24A	8.1A	6.4A	4.6A	4.3A	3.78A
5.5	7.5	33A	10.9A	9.1A	6.4A	6.1A	5.37A
7.5	10	44.7A	14.7A	11.7A	8.5A	7.8A	6.8A
10	13.5	57.3A	19A	15.2A	10.9A	10A	8.8A
11	15	65A	20.9A	17.7A	12.2A	11.7A	10.3A
15	20	86.1A	28.5A	23.3A	16.5A	15.4A	13.5A
18.5	25	106.1A	35.5A	28.8A	20.4A	19A	16.7A
22	30	124.3A	41.8A	34.3A	24.2A	22.6A	19.8A
30	40	170.3A	57A	48.4A	33A	31.9A	28A
37	50	208.5A	68.4A	56.3A	39.5A	37A	32.5A
45	60	242.9A	80.7A	66.8A	46.6A	43.9A	38.6A
55	75	301.3A	99.7A	79.2A	57.6A	52A	45.7A
75	100	396A	131.1A	110A	76A	72.2A	63.5A
90	125	N/A	161.5A	128.4A	93A	84A	73.9A
110	150	N/A	194.7A	156.6A	112.1A	102A	89.7A
132	180	N/A	232.7A	189.2A	134.4A	124A	109.1A
160	220	N/A	285A	225.2A	164.5A	147.8A	130A
200	270	N/A	351.5A	282.4A	203A	185A	162.8A
220	300	N/A	389A	311A	225.6A	204.7A	180.3A
250	340	N/A	442A	353A	256A	233A	205.A
315	430	N/A	551A	440A	319A	290A	255A
355	480	N/A	617A	490A	358A	325A	284A
375	500	N/A	660A	530A	383A	339A	307A
425	580	N/A	742A	594A	430A	391A	344A



ADDITIONAL TECHNICAL INFORMATION



DEGREE OF PROTECTION - IP RATING FOR ENCLOSURES - IEC 529

FIRST CHARACTERISTIC NUMERAL

Protection against ingress of solid foreign objects and against access to dangerous parts

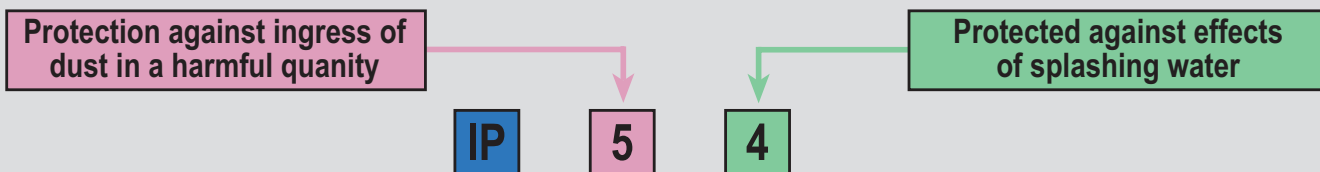
MEANING	0	1	2	3	4	5	6
Protection against ingress of:	No Protection	Solid objects larger than ø 50mm	Solid objects larger than ø 12.5mm	Solid objects larger than ø 2.5mm	Solid objects larger than ø 1mm	Dust in a harmful quantity	Dust (total protection)
Personal protection against access with:	No Protection	Back of hand	Finger	Tool	N/A	Wire	N/A

SECOND CHARACTERISTIC NUMERAL

Protection against penetration of liquids / water

MEANING	0	1	2	3	4	5	6	7	8
Protection against effects of:	No Protection	Virtually falling drops of water	Virtually falling drops of water with maximum inclination of 15°	Rain	Splashing water	Water jet	Powerful water jet	Temporary immersion	Continuous immersion

FOR EXAMPLE



CABLE RATINGS (3 & 4 CORE COPPER) - PVC/SWA/PVC 600/1000V CABLES TO SABS 1507/1990

Cable Size (mm ²)	Current Ratings			Volt Drop (mV / A / m)	Gland Size Type ACG		
	Ground A	Ducts A	Air A		3 Core	4 Core	5 Core
1.5	23	18	18	25.080	0	0	0
2.5	30	24	24	15.363	0	0/1	2
4	38	31	32	9.561	1	1	2
6	48	39	40	6.391	1	2	3
10	64	52	54	3.793	2	2	N/A
16	82	67	72	2.390	2	2/3	N/A
25	126	101	113	1.515	3	3	N/A
35	147	120	136	1.097	3	3/4	N/A
50	176	144	167	0.817	4	4	N/A
70	215	175	207	0.576	4	4/5	N/A
95	257	210	253	0.427	4/5	5	N/A
120	292	239	293	0.348	5	5/6	N/A
150	328	369	336	0.294	5	6	N/A
185	369	303	384	0.250	6	6	N/A
240	422	348	447	0.211	6	7	N/A
300	472	397	509	0.189	6/7	7	N/A



ADDITIONAL TECHNICAL INFORMATION

CURRENT RATINGS & VOLT DROP FOR SINGLE & MULTICORE CABLES TO SABS 0142 2001

Conductor Size	Single Core on or in a wall or Multicore in a wall				Conductor Size	Multicore in trunking or conduit surface mounted on a wall or floor			
	Single-Phase AC		Three-Phase AC			Single-Phase AC		Three-Phase AC	
mm	Rating (A)	Volt drop per A/m (mV)	Rating (A)	Volt drop per A/m (mV)	mm	Rating (A)	Volt drop per A/m (mV)	Rating (A)	Volt drop per A/m (mV)
1.0	12.5	44	10.5	38	1.0	12	44	10	38
1.5	16	29	13.5	25	1.5	14.5	29	12.5	25
2.5	22	18	18.5	15	2.5	19	18	17	15
4	30	11	25	9.5	4	26	11	23	9.5
6	38	7.3	32	6.4	6	31	7.3	29	6.4
10	53	4.4	45	3.8	10	47	4.4	41	3.8
16	71	2.8	61	2.4	16	63	2.8	55	2.4
25	94	1.8	80	1.55	25	84	1.8	69	1.55
35	117	1.3	100	1.10	35	103	1.3	85	1.10
50	141	1.0	120	0.85	50	125	1.0	106	0.85
70	180	0.72	154	0.61	70	157	0.72	134	0.61
95	218	0.56	186	0.48	95	188	0.56	161	0.48
120	252	0.47	215	0.41	120	218	0.47	185	0.41
150	282	0.41	236	0.36	150	242	0.41	203	0.36
185	320	0.37	267	0.32	185	276	0.37	230	0.32

ELECTRICAL FORMULA

Electical Data	AC Single Phase	AC Three Phase	Direct Current
Kilowatt Output:	$\frac{V \times I \times \%Eff \times P.F}{1000}$	$\frac{V \times I \times 1.73 \times \%Eff \times P.F}{1000}$	$\frac{1 \times V \times \%Eff}{1000}$
kVA:	$\frac{V \times I}{1000}$	$\frac{V \times I \times 1.73}{1000}$	N/A
Horsepower Output:	$\frac{V \times I \times \%Eff \times P.F}{746}$	$\frac{V \times I \times 1.73 \times \%Eff \times P.F}{746}$	$\frac{V \times I \times \%Eff}{746}$
Amperes when horsepower is known:	$\frac{HP \times 746}{V \times \%Eff \times P.F}$	$\frac{HP \times 746}{1.73 \times V \times \%Eff \times P.F}$	$\frac{HP \times 746}{V \times \%Eff}$
Amperes when kilowatts is known:	$\frac{kW \times 1000}{V \times \%Eff \times P.F}$	$\frac{kW \times 1000}{1.73 \times V \times \%Eff \times P.F}$	$\frac{kW \times 1000}{V \times \%Eff}$
Amperes when kVA is known:	$\frac{kVA \times 1000}{V}$	$\frac{kVA \times 1000}{1.73 \times V}$	N/A