

## CURRENT CARRYING CAPACITY AND VOLTAGE DROP

The tabulated readings below are in accordance with IEE regulations, where the cable is provided with coarse excess - current protection. In case of close excess - current protection, the factors below apply.

CONTINUOUS CONDUCTOR OPERATING TEMPERATURE; 70°C.

AMBIENT TEMPERATURE: 30°C

### Cable Type: Single Core PVC Insulated Unarmoured Cable to BS 6004

Conductor		Bunched and Enclosed in Conduit or Trunking				Clipped Direct to a surface or on a cable tray, Bunched and Unenclosed			
Nom. Area Sqmm.	No. and Dia. of Wires No./mm	2 Cables Single - Phase A.C. or D.C.		3 or 4 Cables, 3 - Phase A.C.		2 Cables Single - Phase A.C. or D.C.		3 or 4 Cables, 3 - Phase A.C.	
		Current Rating A	Volt Drop/ AMP/Meter mV.	Current Rating A	Volt Drop/ AMP/Meter mV.	Current Rating A	Volt Drop/ AMP/Meter mV.	Current Rating A	Volt Drop/ AMP/Meter mV.
1.5	1/1.38	17	28	14.5	23	19	27	16	24
1.5	7/0.54	17	28	14.5	23	19	27	16	24
2.5	1/1.78	24	17	21	14	25	16	26	15
2.5	7/0.67	24	17	21	14	25	16	26	15
4	7/0.85	31	11	27	9.0	35	10	30	9.1
6	7/1.04	41	7.2	34	6.0	45	6.9	40	6.3
10	7/1.35	55	4.3	49	3.6	62	4.1	56	3.7
16	7/1.70	75	2.7	63	2.3	83	2.7	78	2.3
25	7/2.14	98	1.7	87	1.5	110	1.7	100	1.5
35	7/2.52	124	1.3	107	1.1	139	1.2	126	1.1
		A.C./D.C.				A.C./D.C.			
50	19/1.78	147	0.95/0.90	126	0.82	178	0.92/0.91	159	0.82
70	19/2.14	187	0.71/0.62	160	0.58	228	0.63/0.61	198	0.59
95	19/2.52	230	0.55/0.45	194	0.42	268	0.48/0.45	240	0.45
120	37/2.03	260	0.48/0.36	220	0.42	310	0.40/0.36	280	0.38
150	37/2.25	300	0.40/0.29	297	0.36	355	0.34/0.29	320	0.34
185	37/2.52	340	0.37/0.22	348	0.32	405	0.29/0.24	365	0.30
240	61/2.25	400	0.33/0.18	395	0.29	480	0.24/0.18	430	0.27
300	61/2.52	460	0.30/0.145	467	0.27	560	0.22/0.14	500	0.25
400	61/2.85	545	0.29/0.102	535	0.25	680	0.20/0.12	610	0.24
500	61/3.20	625	0.28/0.066	610	0.25	800	0.18/0.086	710	0.23

Group and ambient temperature rating factors are given below:

#### Correction factor for temperature

Ambient temperature	25°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C
Rating factor for cables having coarse excess-current protection	1.02	0.97	0.94	0.91	0.88	0.77	0.63	0.63
Rating factor for cables having close excess-current protection	1.06	0.94	0.87	0.79	0.71	0.61	0.50	0.35

#### Correction factor for group

Arrangement of Cables	Number of Circuit or Multi-Core Cables														
	2	3	4	5	6	7	8	9	10	12	14	16	18	20	
Enclosed in conduit or trunking or bunched and clipped direct	0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.48	0.45	0.43	0.41	0.39	0.38	
Single layer clipped direct to or lying on a non-metallic surface	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70	0.70	0.70	0.70	0.70	0.70	0.70	
	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	