

WELDON CABLES



Table-1

1.1KV SINGLE CORE ALUMINIUM CONDUCTOR,PVC INSULATED,HARD DRAWN ALUMINIUM ARMoured / UNARMoured CABLES AS PER IS:1554(PART-1)

UNARMoured CABLES					ARMoured CABLES								
AYY					Single Layer - Wire (AYWaY)				Single Layer - Strip (AYFaY)				
Nominal Area of conductor	Nominal thickness of insulation	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of insulation	Nominal diameter of armour wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable
Sq.mm.	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km
4	1.0	1.8	8.0	75	1.3	1.4	1.24	10.50	145	-	-	-	-
6	1.0	1.8	9.0	100	1.3	1.4	1.24	12.0	180	-	-	-	-
10	1.0	1.8	10.0	120	1.3	1.4	1.24	13.0	200	-	-	-	-
16	1.0	1.8	11.0	160	1.3	1.4	1.24	14.0	250	-	-	-	-
25	1.2	1.8	13.0	210	1.5	1.4	1.24	15.0	300	-	-	-	-
35	1.2	1.8	14.0	250	1.5	1.4	1.24	16.0	350	-	-	-	-
50	1.4	1.8	16.0	300	1.7	1.4	1.24	18.0	450	-	-	-	-
70	1.4	1.8	17.0	400	1.7	1.4	1.4	20.0	550	-	-	-	-
95	1.6	1.8	19.0	500	1.9	1.6	1.4	22.0	700	1.0	1.4	21.0	650
120	1.6	2.0	21.0	600	1.9	1.6	1.4	24.0	800	1.0	1.4	23.0	750
150	1.8	2.0	23.0	750	2.1	1.6	1.4	26.0	950	1.0	1.4	24.0	900
185	2.0	2.0	25.0	900	2.3	1.6	1.4	29.0	1100	1.0	1.4	27.0	1050
240	2.2	2.0	28.0	1100	2.5	1.6	1.56	32.0	1400	1.0	1.4	30.0	1300
300	2.4	2.0	30.0	1350	2.7	1.6	1.56	33.0	1650	1.0	1.56	32.0	1600
400	2.6	2.2	35.0	1700	3.0	2.0	1.56	39.0	2100	1.0	1.56	37.0	1950
500	3.0	2.2	38.0	2150	3.4	2.0	1.72	42.0	2700	1.0	1.56	40.0	2400
630	3.4	2.4	43.0	2750	3.9	2.0	1.88	48.0	3300	1.0	1.72	45.0	3100
800	3.4	2.4	48.0	3300	3.9	2.0	1.88	52.0	4000	1.0	1.88	49.0	3700
1000	3.4	2.6	52.0	4100	3.9	2.5	2.04	59.0	4900	1.0	2.04	54.60	4600

Table-2

1.1 KV TWO CORE ALUMINIUM CONDUCTOR, PVC INSULATED, ARMoured / UNARMoured CABLES AS PER IS:1554 (PART-I)

UNARMoured CABLES						ARMoured CABLES							
AYY						Single Layer - Wire (AYWY)			Single Layer - Strip (AYFY)				
Nominal Area of conductor	Nominal thickness of insulation	Minimum thickness of inner sheath	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal diameter of armour wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable
Sq.mm.	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km	mm	mm	mm	kg/km
4	1.0	0.3	1.8	13.50	220	1.4	1.24	15.50	500	-	-	-	-
6	1.0	0.3	1.8	17.0	300	1.4	1.24	19.0	660	-	-	-	-
10	1.0	0.3	1.8	18.0	400	1.4	1.24	20.0	750	-	-	-	-
16	1.0	0.3	1.8	17.0	330	1.6	1.4	20.0	760	0.8	1.4	18.0	580
25	1.2	0.3	2.0	19.0	450	1.6	1.4	22.0	900	0.8	1.4	20.0	700
35	1.2	0.3	2.0	21.0	550	1.6	1.4	23.0	1060	0.8	1.4	22.0	800
50	1.4	0.3	2.0	24.0	700	1.6	1.56	26.0	1300	0.8	1.4	25.0	1000
70	1.4	0.3	2.0	26.0	850	1.6	1.56	29.0	1500	0.8	1.56	27.0	1200
95	1.6	0.4	2.2	30.0	1150	2.0	1.56	33.0	2050	0.8	1.56	30.0	1500
120	1.6	0.4	2.2	32.0	1300	2.0	1.72	35.0	2400	0.8	1.56	32.0	1800
150	1.8	0.4	2.4	34.0	1600	2.0	1.72	37.0	2760	0.8	1.72	35.0	2100
185	2.0	0.5	2.4	38.0	2000	2.0	1.88	41.0	3200	0.8	1.88	38.0	2500
240	2.2	0.5	2.6	42.0	2500	2.5	2.04	47.0	4200	0.8	2.04	43.0	3100
300	2.4	0.6	2.8	46.0	3000	2.5	2.20	50.0	5000	0.8	2.20	48.0	3700
400	2.6	0.7	3.2	52.0	3800	3.15	2.52	58.0	6600	0.8	2.36	53.0	4500
500	3.0	0.7	3.4	54.0	4800	3.15	2.84	64.0	8000	0.8	2.68	56.0	5600
630	3.4	0.7	3.8	65.0	6000	4.0	3.00	72.0	11000	0.8	2.84	66.0	6900

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Table-3

1.1 KV THREE CORE ALUMINIUM CONDUCTOR, PVC INSULATED, ARMoured / UNARMoured CABLES AS PER IS:1554 (PART-I)

UNARMoured CABLES						ARMoured CABLES							
Ayy						Single Layer - Wire (AYWY)				Single Layer - Strip (AYFY)			
Nominal Area of conductor	Nominal thickness of insulation	Minimum thickness of Inner sheath	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal diameter of armour wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable
Sq.mm.	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km	mm	mm	mm	kg/km
4	1.0	0.3	1.8	14.0	250	1.4	1.24	16.30	550	-	-	-	-
6	1.0	0.3	1.8	16.0	360	1.4	1.24	18.0	700	-	-	-	-
10	1.0	0.3	1.8	18.0	460	1.4	1.4	20.80	900	-	-	-	-
16	1.0	0.3	1.8	18.2	440	1.6	1.4	21.0	950	0.8	1.4	20.0	700
25	1.2	0.3	2.0	21.8	620	1.6	1.4	23.0	1100	0.8	1.4	23.0	900
35	1.2	0.3	2.0	23.0	740	1.6	1.4	26.0	1300	0.8	1.4	24.0	1000
50	1.4	0.3	2.0	27.0	940	1.6	1.56	29.0	1600	0.8	1.56	27.0	1300
70	1.4	0.3	2.2	30.0	1200	1.6	1.56	33.0	2150	0.8	1.56	31.0	1600
95	1.6	0.4	2.2	33.8	1600	2.0	1.72	37.5	2650	0.8	1.56	35.0	2000
120	1.6	0.4	2.2	36.6	1900	2.0	1.72	39.60	3000	0.8	1.72	37.0	2401
150	1.8	0.4	2.4	40.0	2300	2.0	1.88	43.0	3550	0.8	1.88	41.0	2800
185	2.0	0.5	2.6	44.5	2750	2.0	2.04	49.0	4600	0.8	2.04	46.0	3400
240	2.2	0.5	2.8	50.0	3500	2.5	2.2	54.0	5600	0.8	2.20	51.0	4200
300	2.4	0.6	3.0	55.0	4300	2.5	2.36	59.0	6600	0.8	2.36	56.0	5050
400	2.6	0.7	3.4	60.2	5450	3.15	2.68	68.0	8700	0.8	2.68	63.0	6300
500	3.0	0.7	3.6	68.0	6900	3.15	3.0	75.0	11000	0.8	2.84	70.0	7800
630	3.4	0.7	4.0	78.0	8700	4.0	3.0	84.0	14000	0.8	3.0	78.0	9700

Table-4

1.1 KV 3½ CORE ALUMINIUM CONDUCTOR, PVC INSULATED, ARMoured / UNARMoured CABLES AS PER IS:1554 (PART-I)

UNARMoured CABLES						ARMoured CABLES							
Ayy						Single Layer - Wire (AYWY)				Single Layer - Strip (AYFY)			
Nominal Area of conductor	Nominal thickness of insulation (main/Neutral)	Minimum thickness of Inner sheath	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal diameter of armour wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable
Sq.mm.	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km	mm	mm	mm	kg/km
25	1.2/1.0	0.3	2.0	24.0	700	1.6	1.4	26.0	1300	0.8	1.4	24.0	1000
35	1.2/1.0	0.3	2.0	26.0	850	1.6	1.4	28.0	1450	0.8	1.4	26.0	1200
50	1.4/1.2	0.3	2.0	29.0	1050	1.6	1.56	31.0	1800	0.8	1.56	30.0	1500
70	1.4/1.2	0.3	2.2	32.0	1400	2.0	1.56	36.0	2400	0.8	1.56	34.0	1800
95	1.6/1.4	0.4	2.2	36.0	1800	2.0	1.72	39.0	3000	0.8	1.56	37.0	2300
120	1.6/1.4	0.4	2.2	40.0	2200	2.0	1.72	43.0	3500	0.8	1.72	41.0	2800
150	1.8/1.4	0.4	2.4	44.0	2600	2.0	1.88	47.0	4000	0.8	1.88	45.0	3200
185	2.0/1.6	0.5	2.6	48.0	3200	2.5	2.04	53.0	5200	0.8	2.04	49.0	3900
240	2.2/1.6	0.5	2.8	54.0	4100	2.5	2.2	58.0	6400	0.8	2.20	55.0	4800
300	2.4/1.8	0.6	3.0	62.0	5000	3.15	2.36	66.0	8200	0.8	2.36	61.0	5800
400	2.6/2.0	0.7	3.4	68.2	6300	3.15	2.68	75.0	9900	0.8	2.68	69.0	7300
500	3.0/2.2	0.7	3.6	77.0	8000	4.0	3.0	84.0	13500	0.8	2.84	77.0	9000
630	3.4/2.4	0.7	4.0	87.0	10000	4.0	3.0	92.0	16000	0.8	3.0	87.0	11500

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Table-5

1.1 KV FOUR CORE ALUMINIUM CONDUCTOR, PVC INSULATED, ARMoured / UNARMoured CABLES AS PER IS:1554 (PART-I)

Nominal Area of conductor	UNARMoured CABLES						ARMoured CABLES							
	AYY			Single Layer - Wire (AYWY)			Single Layer - Strip (AYFY)							
	Nominal thickness of Insulation	Minimum thickness of Inner sheath	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal diameter of wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	
Sq.mm.	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km	mm	mm	mm	kg/km	
4	1.0	0.3	1.8	15.0	290	1.4	1.24	17.0	580	-	-	-	-	
6	1.0	0.3	1.8	18.0	390	1.4	1.24	21.0	880	-	-	-	-	
10	1.0	0.3	1.8	20.0	540	1.6	1.4	22.0	900	0.8	1.4	21.0	750	
16	1.0	0.3	2.0	20.0	560	1.6	1.4	23.0	1120	0.8	1.4	22.0	860	
25	1.2	0.3	2.0	25.0	750	1.6	1.4	27.0	1400	0.8	1.4	25.0	1100	
35	1.2	0.3	2.0	27.0	940	1.6	1.4	30.0	1600	0.8	1.4	28.0	1300	
50	1.4	0.3	2.2	31.0	1250	2.0	1.56	34.0	2200	0.8	1.56	32.0	1600	
70	1.4	0.3	2.2	34.0	1550	2.0	1.56	37.0	2650	0.8	1.56	35.0	2000	
95	1.6	0.4	2.4	39.0	2050	2.0	1.72	42.0	3300	0.8	1.72	41.0	2600	
120	1.6	0.4	2.4	43.0	2400	2.0	1.72	47.0	3850	0.8	1.88	43.0	3050	
150	1.8	0.4	2.6	47.0	2950	2.5	1.88	51.0	4850	0.8	1.88	48.0	3600	
185	2.0	0.5	2.8	52.5	3650	2.5	2.04	56.0	5800	0.8	2.04	53.0	4300	
240	2.2	0.5	3.0	58.0	4600	2.5	2.2	62.0	7000	0.8	2.36	59.0	5400	
300	2.4	0.6	3.4	60.0	5000	3.15	2.36	72.0	9200	0.8	2.52	67.0	6600	
400	2.6	0.7	3.6	68.2	6250	3.15	2.68	79.0	11000	0.8	2.84	74.0	8200	
500	3.0	0.7	4.0	77.0	8000	4.0	3.0	90.0	15000	0.8	3.0	83.0	10500	
630	4.0	0.7	4.0	87.0	10000	4.0	3.0	99.0	18000	0.8	3.0	93.0	13000	

Table-6

CURRENT RATINGS FOR ALUMINIUM CONDUCTOR ARMoured/UNARMoured PVC POWER CABLES (IN AMPS)

Nominal Area Of Conductor	Single Core Cables			Twin Core Cables			Multi Core Cables			
	Sq.mm.	Direct In Ground	In Ducts	In Air	Direct In Ground	In Ducts	In Air	Direct In Ground	In Ducts	In Air
1.5	17	17	15	18	16	16	16	16	14	13
2.5	24	24	21	25	21	21	21	21	18	18
4	31	30	27	32	27	27	28	28	23	23
6	39	37	35	40	34	35	35	35	30	30
10	51	51	47	55	45	47	46	46	39	40
16	66	65	64	70	58	59	60	60	50	51
25	86	84	84	90	76	78	76	76	63	70
35	100	100	105	110	92	99	92	92	77	86
50	120	115	130	135	115	125	110	110	95	105
70	140	135	155	160	140	150	135	135	115	130
95	175	155	190	190	170	165	165	165	140	155
120	195	170	220	210	190	210	185	185	155	180
150	220	190	250	240	210	240	210	210	175	205
185	240	210	290	275	240	275	235	235	200	240
240	270	225	335	320	275	325	275	275	235	280
300	295	245	380	355	305	365	305	305	260	315
400	325	275	435	385	345	420	335	335	290	375
500	345	295	480	-	-	-	-	-	-	-
630	390	320	550	-	-	-	-	-	-	-
800	440	350	640	-	-	-	-	-	-	-
1000	490	380	720	-	-	-	-	-	-	-



Table-7
CURRENT RATINGS FOR COPPER CONDUCTOR ARMoured/UNARMoured
PVC POWER CABLES (IN AMPS)

Nominal Area Of Conductor	Single Core Cables			Twin Core Cables			Multi Core Cables		
	Direct			Direct			Direct		
	In Ground	In Ducts	In Air	In Ground	In Ducts	In Air	In Ground	In Ducts	In Air
Sq.mm.									
1.5	22	21	20	23	20	20	21	17	17
2.5	30	29	27	32	27	27	27	24	24
4	39	38	35	41	35	35	36	30	30
6	49	48	44	50	44	45	45	38	39
10	65	64	60	70	58	60	60	50	52
16	85	83	82	90	75	78	77	64	66
25	110	110	110	115	97	105	99	81	90
35	130	125	130	140	120	125	120	99	110
50	155	150	165	165	145	155	145	125	135
70	190	175	205	205	180	195	175	150	165
95	220	200	245	240	215	230	210	175	200
120	250	220	280	275	235	265	240	195	230
150	280	245	320	310	270	305	270	225	265
185	305	260	370	350	300	350	300	255	305
240	345	285	425	405	345	410	345	295	355
300	375	310	475	450	385	465	385	335	400
400	400	335	550	490	425	530	425	360	455
500	425	355	590	-	-	-	-	-	-
630	470	375	660	-	-	-	-	-	-

Table-8
SHORT CIRCUIT RATING OF 1.1 KV GRADE PVC INSULATED CABLES (FOR DURATION OF ONE SECOND)

Nominal Area Of Conductor	Aluminium Conductor		Copper Conductor	
	With General Purpose Insulation	With Heat Resisting Insulation	With General Purpose Insulation	With Heat Resisting Insulation
	K Amps	K Amps	K Amps	K Amps
Sq.mm.				
1.5	0.114	0.103	0.173	0.156
2.5	0.190	0.172	0.288	0.260
4	0.304	0.274	0.460	0.416
6	0.456	0.412	0.690	0.624
10	0.760	0.686	1.150	1.040
16	1.216	1.098	1.840	1.664
25	1.900	1.715	2.875	2.600
35	2.660	2.401	4.025	3.640
50	3.800	3.430	5.750	5.200
70	5.320	4.802	8.050	7.280
95	7.220	6.517	10.925	9.880
120	9.120	8.232	13.800	12.480
150	11.400	10.290	17.250	15.600
185	14.060	12.691	21.275	19.240
240	18.240	16.464	27.600	24.960
300	22.800	20.580	34.500	31.200
400	30.400	27.440	46.000	41.600
500	38.000	34.300	57.500	52.000
630	47.880	43.218	72.450	65.520
800	60.800	54.880	92.000	83.200
1000	76.000	68.600	115.000	104.000

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Table-9

MAXIMUM A.C/D.C. RESISTANCE OF CONDUCTOR FOR PVC CABLES IN OHM/KM

Nominal Area Of Conductor	Aluminium Conductor		Aluminium Conductor	
	Plain Copper Conductor	Aluminium Conductor	Plain Copper Conductor	Aluminium Conductor
Sq.mm.	Ohm/Km	Ohm/Km	Ohm/Km	Ohm/Km
1.5	12.1	18.1	14.52	21.72
2.5	7.41	12.1	8.89	14.52
4	4.61	7.41	5.53	8.89
6	3.08	4.61	3.70	5.53
10	1.83	3.08	2.20	3.70
16	1.15	1.91	1.38	2.29
25	0.727	1.20	0.872	1.440
35	0.524	0.868	0.629	1.042
50	0.387	0.641	0.464	0.769
70	0.268	0.443	0.322	0.532
95	0.193	0.320	0.232	0.384
120	0.153	0.253	0.184	0.304
150	0.124	0.206	0.149	0.247
185	0.0991	0.164	0.1189	0.1968
240	0.0754	0.125	0.0905	0.1500
300	0.0601	0.1000	0.0721	0.1200
400	0.0470	0.0778	0.0564	0.0934
500	0.0366	0.0605	0.0439	0.0726
630	0.0283	0.0469	0.0340	0.0563
800	0.0221	0.0367	0.0265	0.0440
1000	0.0176	0.0291	0.0211	0.0349



Table-10

**CURRENT RATINGS FOR 1.1 KV
COPPER CONDUCTOR XLPE INSULATED
CONTROL CABLES (In Amp)**

No. of Cores	1.5 Sq. mm		2.5 Sq. mm	
	In Ground	In Air	In Ground	In Air
2	33	29	39	32
3	25	22	34	30
4	25	22	34	30
5	24	21	31	28
6	22	19	29	26
7	21	18	27	25
10	18	16	24	21
12	17	15	22	20
14	16	14	21	19
16	16	14	20	18
19	15	13	19	17
24	13	12	17	16
27	13	11	16	16
30	12	11	16	14
37	11	10	15	13
44	11	9	14	12
52	10	9	13	12
61	9	8	12	11

Table-11

**CURRENT RATINGS FOR 1.1 KV XLPE INSULATED
ALUMINIUM CONDUCTOR CABLES (In Amp)**

Nominal Area Of Conductor	Single Core		Twin Core		Multi Core	
	In Ground	In Air	In Ground	In Air	In Ground	In Air
Sq. mm	In Ground	In Air	In Ground	In Air	In Ground	In Air
4	36	32	33	27	28	23
6	44	39	50	44	43	50
10	59	53	69	59	57	67
16	76	73	88	74	73	70
25	96	98	112	98	94	96
35	114	121	138	124	113	117
50	135	150	169	156	133	142
70	166	187	200	188	164	179
95	198	230	238	231	196	221
120	225	268	262	262	223	257
150	253	309	300	300	249	292
185	286	360	344	344	282	337
240	332	433	400	406	326	399
300	376	501	444	456	367	455
400	431	596	481	525	418	530
500	490	693	523	678	470	612
630	557	814	592	786	529	707
800	600	890	-	-	-	-
1000	650	1050	-	-	-	-

WELDON CABLES



Table-12

CURRENT RATINGS OF 1.1 KV XLPE INSULATED COPPER CONDUCTOR CABLES (IN Amp)

Nominal Area Of Conductor	Single Core		Twin Core		Multi Core	
	In Ground	In Air	In Ground	In Air	In Ground	In Air
Sq. mm						
1.5	27	22	38	29	25	22
2.5	36	29	43	39	34	30
4.0	46	40	56	51	44	40
6	59	53	63	56	54	47
10	78	72	88	75	72	62
16	102	98	113	98	92	79
25	132	132	144	131	119	108
35	156	156	175	150	144	132
50	186	198	206	194	174	162
70	228	246	256	244	210	198
95	264	294	300	288	252	240
120	300	336	344	331	288	276
150	336	384	388	381	324	318
185	366	444	438	438	360	366
240	414	510	506	512	414	426
300	450	570	562	581	462	480
400	480	660	612	662	510	546
500	570	708	-	-	-	-
630	594	825	-	-	-	-
800	660	945	-	-	-	-
1000	723	1063	-	-	-	-



Table-13

CAPACITANCE OF 1.1 KV GRADE XLPE INSULATED CABLES

Nominal Area Of Conductor	Single Core Cable		Twin Core Cable	Multi Core Cable
	Unarmoured	Armoured		
Sq. mm	uF/Km	uF/Km	uF/Km	uF/Km
1.5	0.19	-	0.15	0.051
2.5	0.24	-	0.18	0.058
4	0.29	-	0.22	0.065
6	0.34	-	0.25	0.071
10	0.43	0.32	0.31	0.081
16	0.51	0.38	0.36	0.088
25	0.53	0.38	0.41	0.089
35	0.57	0.44	0.47	0.096
50	0.58	0.46	0.50	0.098
70	0.63	0.51	0.53	0.10
95	0.73	0.59	0.61	0.11
120	0.74	0.61	0.63	0.11
150	0.76	0.61	0.64	0.11
185	0.78	0.59	0.65	0.11
240	0.79	0.65	0.66	0.11
300	0.80	0.69	0.67	0.12
400	0.83	0.70	0.67	0.12
500	0.83	0.71	0.69	0.12
630	0.87	0.75	0.73	0.11
800	0.92	0.78	-	-
1000	0.94	0.81	-	-

WELDON CABLES



Table-14

REACTANCE OF 1.1 KV GRADE XLPE INSULATED CABLES AT 50 HZ

Nominal Cross Sectional Area of Conductor	Single Core Cable		Twin & Multicore Cable
	Unarmoured	Armoured	
Sq.mm.	Ohm/Km	Ohm/Km	Ohm/Km
1.5	0.1550	-	0.1070
2.5	0.1420	-	0.0985
4	0.1320	-	0.0927
6	0.1230	-	0.0881
10	0.1140	0.1340	0.0837
16	0.1080	0.1250	0.0808
25	0.1030	0.1200	0.0805
35	0.0986	0.1400	0.0783
50	0.0937	0.1080	0.0750
70	0.0900	0.1020	0.0740
95	0.0865	0.1000	0.0724
120	0.0841	0.0968	0.0712
150	0.0839	0.0941	0.0716
185	0.0836	0.0932	0.0718
240	0.0813	0.0900	0.0710
300	0.0795	0.0881	0.0705
400	0.0787	0.0873	0.0704
500	0.0779	0.0859	0.0702
630	0.0785	0.0843	0.0698
800	0.0755	0.0826	-
1000	0.0752	0.0825	-



Table-15

1.1 KV SINGLE CORE ALUMINIUM CONDUCTOR, XLPE INSULATED, HARD DRAWN ALUMINIUM ARMoured / UNARMoured CABLES AS PER IS:7098 (PART-I)

Nominal Area of conductor	UNARMoured CABLES				ARMoured CABLES								
	A2XY				Single Layer - Wire (A2XWaY)					Single Layer - Strip (A2XFY)			
	Nominal thickness of insulation	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of insulation	Nominal diameter of wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable
Sq.mm.	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km
4	0.7	1.8	7.5	70	1.0	1.4	1.24	10.0	120	-	-	-	-
6	0.7	1.8	8.2	80	1.0	1.4	1.24	10.5	130	-	-	-	-
10	0.7	1.8	9.2	100	1.0	1.4	1.24	11.5	160	-	-	-	-
16	0.7	1.8	10.5	130	1.0	1.4	1.24	13.0	200	-	-	-	-
25	0.9	1.8	12.0	180	1.2	1.4	1.24	14.0	300	-	-	-	-
35	0.9	1.8	13.0	230	1.2	1.4	1.24	15.0	350	-	-	-	-
50	1.0	1.8	15.0	300	1.3	1.4	1.24	17.0	420	-	-	-	-
70	1.1	1.8	16.0	370	1.4	1.4	1.24	19.0	520	-	-	-	-
95	1.1	1.8	18.0	460	1.4	1.6	1.4	22.0	650	0.80	1.4	21.0	600
120	1.2	1.8	20.0	550	1.5	1.6	1.4	24.0	750	0.80	1.4	23.0	700
150	1.4	2.0	22.0	620	1.7	1.6	1.4	25.0	850	0.80	1.4	24.0	800
185	1.6	2.0	24.0	830	1.9	1.6	1.4	28.0	1000	0.80	1.4	26.0	950
240	1.7	2.0	27.0	1000	2.0	1.6	1.4	30.0	1250	0.80	1.4	30.0	1200
300	1.8	2.0	30.0	1200	2.1	1.6	1.56	33.0	1500	0.80	1.56	32.0	1400
400	2.0	2.2	33.0	1550	2.4	2.0	1.56	38.0	1900	0.80	1.56	36.0	1750
500	2.2	2.2	36.0	1900	2.6	2.0	1.56	41.0	2350	0.80	1.56	39.0	2150
630	2.4	2.2	40.0	2400	2.8	2.0	1.72	46.0	2900	0.80	1.72	44.0	2700
800	2.6	2.4	47.0	3000	3.1	2.0	1.88	51.0	3600	0.80	1.72	48.0	3350
1000	2.8	2.6	51.0	3750	3.3	2.5	2.04	56.0	4600	0.80	1.88	54.0	4100



Table-16

1.1 KV TWO CORE ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMoured / UNARMoured AS PER IS:7098(PART-I)

UNARMoured CABLES						ARMoured CABLES							
A2XY						Single Layer - Wire (A2XWY)				Single Layer - Strip (A2XFY)			
Nominal Area of conductor	Nominal thickness of insulation	Minimum thickness of Inner sheath	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal diameter of armour wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable
Sq.mm.	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km	mm	mm	mm	kg/km
4	0.7	0.3	1.8	13.0	220	1.4	1.24	15.0	450	-	-	-	-
6	0.7	0.3	1.8	14.5	330	1.4	1.24	16.0	550	-	-	-	-
10	0.7	0.3	1.8	17.0	350	1.4	1.24	18.0	650	-	-	-	-
16	0.7	0.3	1.8	17.0	370	1.4	1.40	18.5	700	-	-	-	-
25	0.9	0.3	2.0	19.0	400	1.6	1.40	21.0	850	0.8	1.40	20.0	650
35	0.9	0.3	2.0	20.0	480	1.6	1.40	23.0	950	0.8	1.40	21.0	750
50	1.0	0.3	2.0	22.0	590	1.6	1.40	25.0	1100	0.8	1.40	23.0	900
70	1.1	0.3	2.0	25.0	760	1.6	1.56	28.0	1400	0.8	1.56	26.0	1100
95	1.1	0.4	2.2	28.0	1000	2.0	1.56	31.0	1850	0.8	1.56	29.0	1350
120	1.2	0.4	2.2	31.0	1200	2.0	1.56	34.0	2150	0.8	1.56	31.0	1600
150	1.4	0.4	2.2	33.0	1400	2.0	1.72	37.0	2450	0.8	1.72	34.0	1900
185	1.6	0.5	2.4	37.0	1750	2.0	1.88	40.0	2900	0.8	1.72	37.0	2250
240	1.7	0.5	2.6	41.0	2000	2.5	2.04	45.0	3850	0.8	1.88	42.0	2800
300	1.8	0.6	2.8	44.0	2700	2.5	2.20	49.0	4450	0.8	2.04	45.0	3300
400	2.0	0.6	3.0	48.0	3550	2.5	2.36	52.0	5350	0.8	2.36	50.0	4100
500	2.2	0.7	3.4	54.0	4200	3.15	2.68	60.0	7100	0.8	2.52	55.0	5000
630	2.4	0.7	3.6	62.0	5300	3.15	2.84	66.0	8500	0.8	2.68	63.0	6100

Table-17

1.1 KV THREE CORE ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMoured / UNARMoured CABLES AS PER IS:7098 (PART-I)

UNARMoured CABLES						ARMoured CABLES							
A2XY						Single Layer - Wire (A2XWY)				Single Layer - Strip (A2XFY)			
Nominal Area of conductor	Nominal thickness of insulation	Minimum thickness of Inner sheath	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal diameter of armour wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable
Sq.mm.	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km	mm	mm	mm	kg/km
4	0.7	0.3	1.8	12.4	225	1.4	1.24	15.5	440	-	-	-	-
6	0.7	0.3	1.8	16.0	330	1.4	1.24	18.5	650	-	-	-	-
10	0.7	0.3	1.8	18.0	400	1.4	1.24	20.0	750	-	-	-	-
16	0.7	0.3	1.8	18.5	420	1.6	1.40	20.5	800	0.8	1.40	19.0	590
25	0.9	0.3	2.0	21.0	530	1.6	1.40	23.0	1000	0.8	1.40	21.0	800
35	0.9	0.3	2.0	22.0	640	1.6	1.40	25.0	1200	0.8	1.40	23.0	950
50	1.0	0.3	2.0	25.0	800	1.6	1.56	29.0	1450	0.8	1.40	26.0	1100
70	1.1	0.4	2.2	30.0	1100	2.0	1.56	32.0	2000	0.8	1.56	29.0	1450
95	1.1	0.4	2.2	32.0	1350	2.0	1.56	35.0	2350	0.8	1.56	32.0	1750
120	1.2	0.4	2.2	35.0	1650	2.0	1.72	39.0	2750	0.8	1.56	35.0	2100
150	1.4	0.5	2.4	39.0	2050	2.0	1.88	43.0	3250	0.8	1.72	40.0	2500
185	1.6	0.5	2.6	43.0	2500	2.5	2.04	48.0	4200	0.8	1.88	44.0	3000
240	1.7	0.6	2.8	49.0	3150	2.5	2.20	53.0	5100	0.8	2.04	50.0	3750
300	1.8	0.6	3.0	53.0	3850	2.5	2.36	58.0	6000	0.8	2.20	54.0	4500
400	2.0	0.7	3.2	59.0	4850	3.15	2.68	65.0	7950	0.8	2.52	60.0	5650
500	2.2	0.7	3.6	66.0	6100	3.15	2.84	72.0	9500	0.8	2.68	66.0	6900
630	2.4	0.7	3.8	73.0	7650	4.0	3.00	81.0	12600	0.8	2.84	74.0	8550



Table-18

1.1 KV 3½ CORE ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMoured / UNARMoured CABLES AS PER IS:7098(PART-I)

UNARMoured CABLES						ARMoured CABLES							
A2XY						Single Layer - Wire (A2XWY)				Single Layer - Strip (A2XFY)			
Nominal Area of conductor	Nominal thickness of insulation (Main/Neutral)	Minimum thickness of Inner sheath	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal diameter of armour wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable
Sq.mm.	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km	mm	mm	mm	kg/km
25	0.9/0.7	0.3	2.0	22.0	610	1.6	1.40	25.0	1100	0.8	1.40	23.0	900
35	0.9/0.7	0.3	2.0	24.0	730	1.6	1.40	27.0	1300	0.8	1.40	25.0	1050
50	1.0/0.9	0.3	2.0	27.0	920	1.6	1.56	30.0	1600	0.8	1.40	28.0	1250
70	1.1/0.9	0.4	2.2	31.0	1250	2.0	1.56	35.0	2200	0.8	1.56	32.0	1650
95	1.1/1.0	0.4	2.2	34.0	1550	2.0	1.56	38.0	2650	0.8	1.56	35.0	2000
120	1.2/1.1	0.4	2.2	38.0	1900	2.0	1.72	42.0	3150	0.8	1.72	39.0	2450
150	1.4/1.1	0.5	2.4	43.0	2300	2.0	1.88	46.0	3650	0.8	1.72	43.0	2850
185	1.6/1.1	0.5	2.6	46.0	2850	2.5	2.04	51.0	4750	0.8	1.88	48.0	3450
240	1.7/1.2	0.6	2.8	52.0	3600	2.5	2.20	56.0	5750	0.8	2.04	53.0	4300
300	1.8/1.4	0.6	3.0	57.0	4400	2.5	2.36	60.0	6750	0.8	2.20	57.0	5100
400	2.0/1.6	0.7	3.4	65.0	5600	3.15	2.68	71.0	9000	0.8	2.52	66.0	6450
500	2.2/1.7	0.7	3.6	73.0	7000	3.15	2.84	79.0	11000	0.8	2.68	74.0	7950
630	2.4/1.8	0.7	4.0	82.0	8900	4.0	3.00	88.0	14500	0.8	3.00	82.0	9900

Table-19

1.1 KV FOUR CORE ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMoured / UNARMoured CABLES AS PER IS:7098 (PART-I)

UNARMoured CABLES						ARMoured CABLES							
A2XY						Single Layer - Wire (A2XWY)				Single Layer - Strip (A2XFY)			
Nominal Area of conductor	Nominal thickness of insulation	Minimum thickness of Inner sheath	Nominal thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal diameter of armour wire	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable	Nominal thickness of armour strip	Minimum thickness of outer sheath	Approx. overall diameter of cable	Approx. weight of cable
Sq.mm.	mm	mm	mm	mm	kg/km	mm	mm	mm	kg/km	mm	mm	mm	kg/km
4	0.7	0.3	1.8	13.7	245	1.4	1.24	16.0	515	-	-	-	-
6	0.7	0.3	1.8	18.5	350	1.4	1.24	19.5	600	-	-	-	-
10	0.7	0.3	1.8	20.0	400	1.4	1.40	21.0	670	-	-	-	-
16	0.7	0.3	1.8	22.0	450	1.6	1.40	22.5	925	0.8	1.40	20.0	700
25	0.9	0.3	2.0	24.0	660	1.6	1.40	26.0	1200	0.8	1.40	24.0	950
35	0.9	0.3	2.0	26.0	800	1.6	1.40	28.0	1450	0.8	1.40	27.0	1150
50	1.0	0.3	2.0	29.0	1000	1.6	1.56	32.0	1750	0.8	1.56	30.0	1400
70	1.1	0.4	2.2	34.0	1410	2.0	1.56	37.0	2400	0.8	1.56	34.0	1800
95	1.1	0.4	2.2	37.0	1750	2.0	1.72	40.0	2900	0.8	1.56	37.0	2200
120	1.2	0.5	2.4	41.0	2150	2.0	1.88	44.0	3500	0.8	1.72	41.0	2700
150	1.4	0.5	2.6	45.0	2650	2.5	2.04	49.0	4500	0.8	1.88	46.0	3200
185	1.6	0.5	2.8	50.0	3250	2.5	2.20	54.0	5250	0.8	2.04	51.0	3900
240	1.7	0.6	3.0	56.0	4100	2.5	2.36	61.0	6400	0.8	2.20	57.0	4850
300	1.8	0.7	3.2	63.0	5050	3.15	2.52	68.0	8350	0.8	2.36	63.0	5820
400	2.0	0.7	3.6	70.0	6400	3.15	2.84	76.0	10000	0.8	2.68	71.0	7300
500	2.2	0.7	3.8	79.0	8000	4.0	3.00	86.0	13500	0.8	2.84	79.0	9000
630	2.4	0.7	4.0	88.0	10000	4.0	3.00	94.0	16000	0.8	3.00	88.0	11000