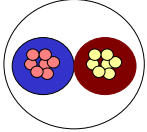
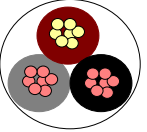
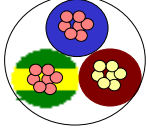
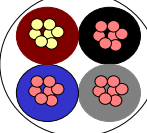
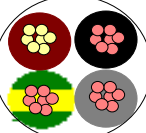
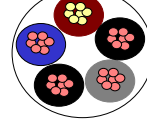
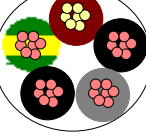
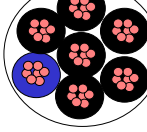
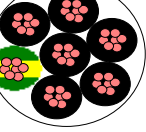
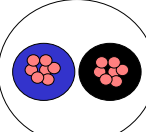
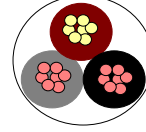
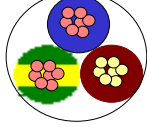
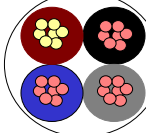
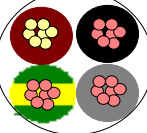
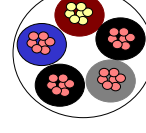
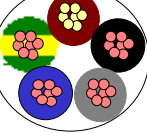
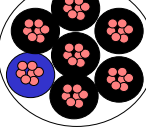
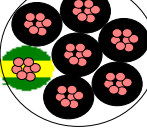


TESİSAT KABLOLARI INSTALLATION CABLES		
Damar Sayısı Number of Core	Yeşil/Sarı dahil With Green/Yellow	Yeşil/Sarı hariç Without Green/Yellow
2	 Mavi-Kahve (Blue-Brown)	-
3	 Kahve-Siyah-Gri (Brown-Black-Grey)	 Mavi-Kahve-Ye/Sa (Blue-Brown-Grn/Ye)
4	 Kahve-Siyah-Gri-Mavi (Brown-Black-Grey-Blue)	 Kahve-Siyah-Gri-Ye/Sa (Brown-Black-Grey-Grn/Ye)
5	 Kahve-Siyah-Gri-Siyah-Mavi (Brown-Black-Grey-Black-Blue)	 Kahve-Siyah-Gri-Ye/Sa (Brown-Black-Grey-Black-Grn/Ye)
>5	 Mavi-Siyah üzerine numaralı (Blue-Black with white num)	 Ye/Sa-Siyah üzerine numaralı Grn/Ye-Black ins. With white num)

0,6/1 KV GÜÇ KABLOLARI 0,6/1 KV LOW VOLTAGE POWER CABLES		
Damar Sayısı Number of Core	Yeşil/Sarı dahil With Green/Yellow	Yeşil/Sarı hariç Without Green/Yellow
2	 -	-
3	 Kahve-Siyah-Gri (Brown-Black-Grey)	 Mavi-Kahve-Ye/Sa (Blue-Brown-Grn/Ye)
3½-4	 Kahve-Siyah-Gri-Mavi (Brown-Black-Grey-Blue)	 Kahve-Siyah-Gri-Ye/Sa (Brown-Black-Green-Grn/Ye)
5	 Kahve-Siyah-Gri-Siyah-Mavi (Brown-Black-Grey-Black-Blue)	 Kahve-Siyah-Gri-Mavi-Ye/Sa (Brown-Black-Grey-Blue-Grn/Ye)
>5	 Mavi-Siyah üzerine numaralı (Blue-Black with white num.)	 Ye/Sa-Siyah üzerine numaralı (Grn/Ye-Black with white num)

Teknik Bilgiler ve Tablolar

Tecnical Informations and Tables

Tablo-7 / Table-7

Kısa devre akım yoğunlukları
Short circuit current density

1 s ortalama kısa devre akım yoğunluğu (A / mm ²) / 1 s average short circuit current density (A/mm ²)											
Kablo Tipi Cable Type	Max.İşletme Sıcaklığı Max.Operating Temp.	Max.Kısa Dev. Sıcaklığı Max.Short Circuit Temp.	Kısa devre başlangıcındaki iletken sıcaklığı °C Conductor temperature at the start of short circuit °C								
			90	80	70	65	60	50	40	30	20
Bakır İletkenli XLPE izoleli Copper Conductor XLPE insulation	90	250	143	149	154	157	159	165	170	176	181
Aliminyum İletkenli XLPE izoleli Aliminium Conductor XLPE insulation	90	250	94	98	102	104	105	109	113	116	120
Bakır İletkenli PVC izoleli Copper Conductor PVC insulation ≤ 300 mm ²	70	160	-	-	115	119	122	129	136	143	150
	70	140	-	-	103	107	111	118	126	133	140
Aliminyum İletkenli PVC izoleli Aliminium Conductor PVC insulation ≤ 300 mm ²	70	160	-	-	76	78	81	85	90	95	99
	70	140	-	-	68	71	73	78	83	88	93

Çeşitli açma süreleri için kısa devre akımı I_{th}
Short circuit time for differance switching time I_{th}

$$I_{th} = \frac{I_{thN}}{\sqrt{Tk}}$$

I_{thN} = 1 s için kısa devre akımı
Short circuit current for 1 s

T_k = Açma süresi (s)
Switching time (s)

I_{thN} = İletken kesiti (mm²) x 1 s kısa devre akım yoğunluğu (A/mm²) x 10⁻³
Conductor area (mm²) x 1s short circuit current density (A/mm²) x 10⁻³

KABLOLARIN MIN.BÜKÜLME YARIÇAPLARI / BENDING RADIUS OF CABLES

Çok Damarlı Kablolar : -0,6/1 kV'a kadar : 12D
Multi Core Cables : -Up to 0,6/1 kV : 12D

-0,6/1 kV'un üzeri : 15D
-more than 0,6/1 kV : 15D

Tek Damarlı Kablolar : Tümünde 15D
Single Wire Cables : All rated voltage 15D

D= Kablo Dış Çapı
D= Outer diameter of cable

MÜSAADE EDİLEN MİN.ÇEVRE SICAKLIĞI +3°C
MIN.PERMISSIBLE AMBIENT TEMPERATURE AT DURING THE LAYING +3°C

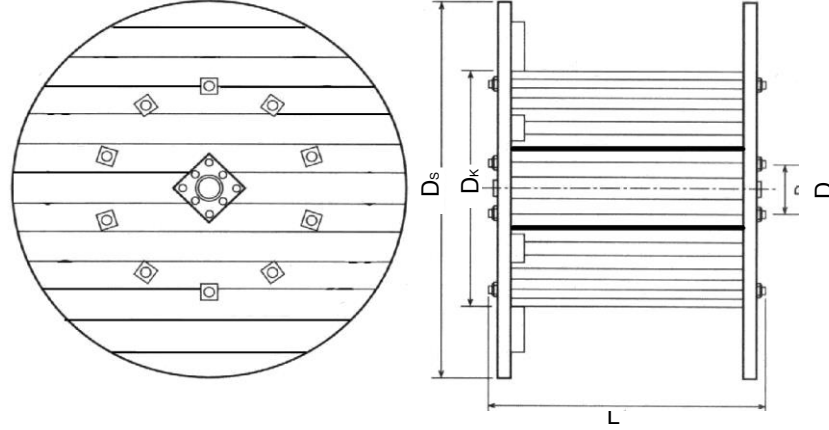
Makaraların kablo sarma kapasiteleri

Capacity of cable drums

Kablo Çapı Cable dia. (mm)	Makara flanş çapı - D _s - (cm) / Reel flange diameter - D _s - (cm)																			
	70	80	90	100	110	120	130	140	150	160	180	200	210	220	230	240	250	260	280	290
5	3000																			
6	2000																			
7	1500	2050																		
8	1150	1570																		
9	920	1250	2300																	
10	750	1030	1850	2350																
11	600	830	1500	1900																
12	500	700	1250	1600	2100															
13	440	600	1100	1400	1850															
14	380	520	950	1200	1580	2250														
15	330	450	830	1050	1400	2000														
16	280	380	700	890	1200	1700	2170													
17	250	350	620	790	1050	1550	1950	2150												
18	230	310	570	730	950	1380	1750	1950												
19	210	290	500	640	850	1240	1570	1750	2120											
20	190	260	460	590	780	1110	1400	1560	1900											
21	170	230	420	530	700	990	1250	1390	1700											
22	150	210	370	470	620	920	1160	1290	1570	2120										
23	140	190	340	430	570	850	1070	1190	1450	1910										
24	130	180	330	410	550	790	990	1100	1350	1780	2100									
25	120	160	300	380	500	700	880	980	1200	1660	1900									
26	110	150	280	350	450	650	820	910	1100	1500	1760	2020								
27	100	140	250	320	420	630	790	880	1080	1410	1660	1900	2210							
28		130	230	290	390	580	730	820	990	1310	1540	1700	2000							
29		120	220	280	370	540	680	750	920	1220	1440	1650	1950							
30		110	200	260	340	500	630	700	850	1140	1340	1540	1800							
31		110	190	250	320	450	580	640	780	1050	1230	1410	1670	2020						
32		100	180	230	300	440	560	620	760	980	1150	1320	1560	1910						
33			170	220	290	410	510	570	700	960	1080	1240	1460	1800	2120					
34			160	200	270	380	480	530	650	890	1050	1150	1350	1700	1980	2100				
35			150	190	260	370	460	510	630	830	970	1120	1320	1600	1860	1970				
36			140	180	230	340	430	470	580	810	910	1050	1220	1500	1750	1850	2120			
37			130	170	220	330	420	460	560	750	880	970	1140	1460	1700	1730	2000	2100		
38			120	160	210	300	380	430	520	700	830	950	1100	1380	1600	1680	1950	2050		
39			120	150	200	290	380	420	500	680	800	870	1030	1280	1510	1600	1830	1920		
40			110	150	190	270	340	380	460	630	750	850	1000	1250	1460	1480	1710	1800		
41			100	140	170	260	330	360	450	610	680	780	920	1160	1360	1440	1640	1730		
42			100	130	170	250	320	350	440	570	660	760	890	1090	1270	1340	1550	1630		
43				120	160	230	290	320	400	550	650	700	830	1060	1240	1250	1440	1520	2100	
44				120	160	230	290	320	390	510	600	690	810	990	1160	1220	1410	1490	2000	
45				110	140	220	280	310	380	500	580	670	790	960	1140	1150	1310	1380	1920	2100
46				100	140	200	260	280	340	480	530	610	730	900	1060	1120	1280	1350	1820	2000
47					140	200	250	270	330	440	520	600	710	870	1040	1100	1260	1320	1710	1880
48					130	190	240	270	330	440	510	550	650	820	960	1020	1170	1230	1670	1830
49					120	170	220	240	300	400	470	540	640	800	940	990	1150	1200	1570	1730
50					110	170	210	240	290	390	460	530	620	750	870	920	1070	1120	1540	1680
51					110	160	200	230	280	370	440	470	570	710	850	890	1030	1080	1420	1580
52					110	150	190	210	250	350	410	470	550	700	820	830	970	1020	1410	1480
53					110	140	180	200	250	340	400	460	540	660	770	820	940	990	1310	1460
54						140	180	200	240	330	390	440	530	630	750	790	920	960	1280	1370
55						140	170	190	240	320	350	410	480	590	700	740	860	900	1210	1350
56						130	170	190	230	300	350	400	480	580	690	730	830	880	1180	1280
57						120	150	170	210	290	340	400	460	570	670	700	820	870	1160	1240
58						120	150	160	210	290	340	390	460	560	660	660	760	800	1080	1220
59						110	140	160	200	280	310	350	420	520	610	650	750	780	1060	1150
60						110	140	160	200	260	300	350	410	510	600	640	740	780	1050	1140
61							140	160	190	250	290	330	400	490	580	580	670	700	970	1050
62							130	140	170	250	290	330	390	460	540	570	660	700	960	1030
63							120	140	170	240	280	300	350	450	530	560	650	690	940	1020
64							120	130	170	240	260	300	350	450	520	550	640	680	880	960
65							120	130	160	210	250	290	340	440	510	510	590	620	870	940
66							110	130	160	210	250	280	330	400	470	500	580	610	850	920
67							110	130	160	210	240	280	330	390	460	490	560	590	780	860
68								120	150	200	240	270	320	380	450	480	550	580	770	850
69								110	130	200	210	240	290	370	440	470	550	570	760	830
70								110	130	180	210	240	290	370	420	440	500	530	740	790
71								110	130	170	200	230	280	340	400	420	490	520	690	760
72									130	170	200	230	270	330	390	410	480	510	680	750
73									130	170	200	230	270	330	390	410	470	500	670	710
74									120	160	190	200	240	320	380	380	430	450	650	700
75									120	160	180	200	240	300	350	370	430	450	620	680
76									110	150	170	200	230	290	340	360	420	450	600	670
77									100	140	170	190	230	290	340	360	420	440	590	630
78									100	140	170	190	230	280	330	350	410	430	580	620
79									100	140	160	190	220	270	330	340	400	420	570	600
80										130	160	180	220	270	320	320	370	390	530	600
81										130	160	180	220	250	290	310	360	380	520	560
82										130	150	160	190	240	290	300	350	370	510	540
83										130	140	160	190	240	290	300	350	360	500	530
84										110	130	150	190	230	280	300	350	360	500	530
85										110	130	150	180	230	270	290	340	360	460	520
86										110	130	150	180	230	270	290	330	350	450	490
87										110	130	150	180	230	270	270	300	320	450	470
88										110	130	150	180	200	240	260	300	310	440	470
89																				

Makaraların taşıma kapasiteleri,ölçüleri,ağırlıkları ve hacimleri

Cables drums carrying capacity,size,weight, volume



Makara Tipi	Ölçüler				Taşıma Kapasitesi (kg)	Ağırlıklar					Hacim (m³)
	Ds (mm)	Dk (mm)	L (mm)	D (mm)		Boş (a)	Kapalı 50% (a+b)	Toplam 50% (a+b)	Kapalı 100% (c)	Toplam 100% (a+c)	
Drum Type	Size				Carrying Capacity (kg)	Weights					Volume (m³)
	Ds (mm)	Dk (mm)	L (mm)	D (mm)		Empty (a)	Closed 50% (a+b)	Total 50% (a+b)	Closed 100% (c)	Total 100% (a+c)	
070	700	350	515	85	500	23	7	30	14	37	.25
080	800	400	515	85	650	36	8	44	16	52	.33
090	900	450	665	85	800	50	11	61	22	72	.54
100	1000	500	665	85	1000	60	15	75	30	90	.67
110	1100	500	677	85	1200	75	16	91	32	107	.82
120	1200	600	840	85	1400	90	17	107	34	124	1.21
130	1300	600	840	85	1600	100	19	119	38	138	1.42
140	1400	700	840	85	1800	115	20	135	40	155	1.65
150	1500	700	840	85	2000	150	23	173	46	196	1.89
160	1600	800	1080	108	2500	210	25	235	50	260	2.76
180	1800	1000	1080	108	2800	270	30	300	60	330	3.50
200	2000	1200	1080	108	3500	350	35	385	70	420	4.32
210	2100	1200	1080	108	3700	380	38	418	76	456	4.76
220	2200	1400	1360	108	4000	420	40	460	80	500	6.58
230	2300	1400	1360	108	4500	450	45	495	90	540	7.19
240	2400	1500	1360	108	5000	480	48	528	96	576	7.83
250	2500	1500	1360	108	5500	550	52	602	104	654	8.50
260	2600	1600	1360	108	6000	650	55	705	110	760	9.19
280	2800	1800	1635	108	7500	850	80	930	160	1010	12.82
290	2900	2000	1865	108	8000	1000	90	1090	180	1180	15.68