

# Teknik Veriler Technical Information





## Teknik Veriler Technical Information

### DIN - 47100'E GÖRE ZOLASYON RENK KODLARI COLOUR CODE ACCORDING TO DIN - 47100

DAMAR NO	ZOLASYON RENK KODU	DAMAR NO	ZOLASYON RENK KODU	CORE NR.	INSULATION COLOUR CODES	CORE NR.	INSULATION COLOUR CODES
1	BEYAZ	23	BEYAZ/KIRMIZI	1	WHITE	23	WHITE/RED
2	KAHVE	24	KAHVE/KIRMIZI	2	BROWN	24	BROWN/RED
3	YE L	25	BEYAZ/S YAH	3	GREEN	25	WHITE/BLACK
4	SARI	26	KAHVE/S YAH	4	YELLOW	26	BROWN/BLACK
5	GR	27	GR /YE L	5	GREY	27	GREY/GREEN
6	PEMBE	28	SARI/GR	6	PINK	28	YELLOW/GREY
7	MAV	29	PEMBE/YE L	7	BLUE	29	PINK/GREEN
8	KIRMIZI	30	SARI/PEMBE	8	RED	30	YELLOW/PINK
9	S YAH	31	YE L/MAV	9	BLACK	31	GREEN/BLUE
10	MOR	32	SARI/MAV	10	VIOLET	32	YELLOW/BLUE
11	GR /PEMBE	33	YE L/KIRMIZI	11	GREY/PINK	33	GREEN/RED
12	KIRMIZI/PEMBE	34	SARI/KIRMIZI	12	RED/BLUE	34	YELLOW/RED
13	BEYAZ/YE L	35	YE L/S YAH	13	WHITE/GREEN	35	GREEN/BLACK
14	KAHVE/YE L	36	SARI/S YAH	14	BROWN/GREEN	36	YELLOW/BLACK
15	BEYAZ/SARI	37	GR /MAV	15	WHITE/YELLOW	37	GREY/BLUE
16	SARI/KAHVE	38	PEMBE/MAV	16	YELLOW/BROWN	38	PINK/BLUE
17	BEYAZ/GR	39	GR /KIRMIZI	17	WHITE/GREY	39	GREY/RED
18	GR /KAHVE	40	PEMBE/KIRMIZI	18	GREY/BROWN	40	PINK/RED
19	BEYAZ/PEMBE	41	GR /S YAH	19	WHITE/PINK	41	GREY/BLACK
20	PEMBE/KAHVE	42	PEMBE/S YAH	20	PINK/BROWN	42	PINK/BLACK
21	BEYAZ/MAV	43	MAV /S YAH	21	WHITE/BLUE	43	BLUE/BLACK
22	KAHVE/MAV	44	KIRMIZI/S YAH	22	BROWN/BLUE	44	RED/BLACK

### DIN - 47100'E GÖRE BÜKÜLÜ Ç FTLER N ZOLASYON RENK KODLARI COLOUR CODE FOR TWISTED PAIRS ACCORDING TO DIN - 47100

DAMAR NO	ZOLASYON RENK KODU A DAMARI	ZOLASYON RENK KODU B DAMARI	CORE NR.	INSULATION COLOUR CODES A CORE	INSULATION COLOUR CODES B CORE
1	BEYAZ	KAHVE	1	WHITE	BROWN
2	YE L	SARI	2	GREEN	YELLOW
3	GR	PEMBE	3	GREY	PINK
4	MAV	KIRMIZI	4	BLUE	RED
5	S YAH	MOR	5	BLACK	VIOLET
6	GR /PEMBE	KIRMIZI/MAV	6	GREY/PINK	RED/BLUE
7	BEYAZ/YE L	KAHVE/YE L	7	WHITE/GREEN	BROWN/GREEN
8	BEYAZ/SARI	SARI/KAHVE	8	WHITE/YELLOW	YELLOW/BROWN
9	BEYAZ/GR	GR /KAHVE	9	WHITE/GREY	GREY/BROWN
10	BEYAZ/PEMBE	PEMBE/KAHVE	10	WHITE/PINK	PINK/BROWN
11	BEYAZ/MAV	KAHVE/MAV	11	WHITE/BLUE	BROWN/BLUE
12	BEYAZ/KIRMIZI	KAHVE/KIRMIZI	12	WHITE/RED	BROWN/RED
13	BEYAZ/S YAH	KAHVE/S YAH	13	WHITE/BLACK	BROWN/BLACK
14	GR /YE L	SARI/GR	14	GREY/GREEN	YELLOW/GREY
15	PEMBE/YE L	SARI/PEMBE	15	PINK/GREEN	YELLOW/PINK
16	YE L/MAV	SARI/MAV	16	GREEN/BLUE	YELLOW/BLUE
17	YE L/KIRMIZI	SARI/KIRMIZI	17	GREEN/RED	YELLOW/RED
18	YE L/S YAH	SARI/S YAH	18	GREEN/BLACK	YELLOW/BLACK
19	GR /MAV	PEMBE/MAV	19	GREY/BLUE	PINK/BLUE
20	GR /KIRMIZI	PEMBE/KIRMIZI	20	GREY/RED	PINK/BLUE
21	GR /S YAH	PEMBE/S YAH	21	GREY/BLACK	PINK/BLUE
22	MAV /S YAH	KIRMIZI/S YAH	22	BLUE/BLACK	PINK/BLUE

23 Ç FT VE ÜZER ZOLE DURUMUNDA Ç FT RENKLER BA TAN T BAREN TEKRARLANIR.

WITH COLOUR REPETITION FROM PA RS NO. 23 AND ABOVE

# Teknik Veriler

## Technical Information

### AWG AMER KAN TEL ÖLÇÜ S STEM

#### AMER KAN TEL ÖLÇÜ S STEM MONO BAKIR TELLER

AWG NO.	KES T CROSS SECTION mm <sup>2</sup>	LETKEN N NOM NAL ÇAPI ONOMINAL DIAMETER OF CONDUCTOR mm	NOM NAL A IRLI I NOM NAL WEIGHT Kg/Km
40	0,0049	0,079	0,0433
39	0,0062	0,089	0,0552
38	0,0081	0,102	0,0720
37	0,0103	0,114	0,0912
36	0,0127	0,127	0,113
35	0,0159	0,142	1,141
34	0,0201	0,16	0,179
33	0,0255	0,18	0,228
32	0,0324	0,203	0,289
31	0,0401	0,226	0,357
30	0,0507	0,254	0,451
29	0,0649	0,287	0,576
28	0,0806	0,32	0,716
27	0,102	0,361	0,908
26	0,128	0,404	1,14
25	0,162	0,455	1,44
24	0,205	0,511	1,82

#### AMER KAN TEL ÖLÇÜ S STEM MONO BAKIR TELLER

AWG NO.	KES T CROSS SECTION mm <sup>2</sup>	LETKEN N NOM NAL ÇAPI ONOMINAL DIAMETER OF CONDUCTOR mm	NOM NAL A IRLI I NOM NAL WEIGHT Kg/Km
23	0,259	0,574	2,31
22	0,324	0,643	2,89
21	0,411	0,724	3,66
20	0,519	0,813	4,61
19	0,653	0,912	5,8
18	0,823	1,02	7,32
18	0,897	1,22	8,26
17	1,04	1,15	9,24
16	1,31	1,29	11,6
16	1,31	1,47	11,8
14	2,08	1,63	18,5
14	2,08	1,85	18,9
12	3,31	2,052	29,5
12	3,3	2,052	30,1
12	3,08	1,99	28,9
10	5,26	2,59	46,8

#### AMER KAN TEL ÖLÇÜ S STEM BÜKÜLÜ BAKIR TELLER

AWG NO.	BÜKÜM STRANDING	NKES T CROSS-SECT ON mm <sup>2</sup>	ORT. ÇAP APROX. OD		A IRLIK SWEIGHT Kg/Km
			INCHES	mm	
36	7x44	0.014	0.006	0.152	0.249
34	7x42	0.022	0.075	0.191	0.397
32	7x40	0.034	0.093	0.236	0.639
32	19x44	0.035	0.010	0.254	0.639
30	7x38	0.057	0.012	0.305	0.997
30	19x42	0.059	0.012	0.305	0.997
28	7x36	0.089	0.015	0.381	1.588
28	19x40	0.090	0.016	0.406	1.588
27	7x35	0.110	0.017	0.432	2.014
26	7x34	0.141	0.019	0.483	2.526
26	10x36	0.126	0.021	0.533	2.526
26	19x38	0.155	0.020	0.508	2.526
24	7x32	0.227	0.024	0.610	4.032
24	10x34	0.200	0.024	0.610	4.032
24	19x36	0.240	0.024	0.610	4.032
24	42x40	0.205	0.023	0.584	4.032
22	7x30	0.355	0.030	0.762	6.388
22	19x34	0.382	0.031	0.787	6.388
22	26x36	0.330	0.030	0.762	6.388
20	7x28	0.563	0.038	0.965	10.191
20	10x30	0.506	0.037	0.940	10.181
20	19x32	0.614	0.037	0.940	10.181
20	26x34	0.522	0.036	0.914	10.181

#### AMER KAN TEL ÖLÇÜ S STEM BÜKÜLÜ BAKIR TELLER

AWG NO.	BÜKÜM STRANDING	NKES T CROSS-SECT ON mm <sup>2</sup>	ORT. ÇAP APROX. OD		A IRLIK SWEIGHT Kg/Km
			INCHES	mm	
20	42x36	0.531	0.038	0.965	10.181
18	7x26	0.897	0.048	1.22	16.175
18	16x30	0.810	0.047	1.19	16.175
18	19x30	0.963	0.049	1.24	16.175
18	42x34	0.844	0.047	1.19	16.175
18	65x36	0.822	0.047	1.19	16.175
16	7x24	1.430	0.060	1.52	25.756
16	19x29	1.228	0.058	1.47	25.756
16	26x30	1.316	0.059	1.50	25.756
16	65x34	1.306	0.059	1.50	25.756
16	105x36	1.329	0.059	1.50	25.756
14	7x22	2.271	0.076	1.93	41.012
14	19x26	2.434	0.071	1.80	41.012
14	42x30	2.127	0.075	1.91	41.012
14	105x34	2.110	0.075	1.91	41.012
12	7x20	3.630	0.096	2.44	65.160
12	19x25	3.087	0.093	2.36	65.160
12	65x30	3.291	0.095	2.41	65.160
12	165x34	3.315	0.095	2.41	103.613
10	37x26	4.740	0.115	2.92	103.613
10	65x28	5.224	0.120	3.05	103.613
10	105x30	5.317	0.118	3.00	103.613





## Teknik Veriler Technical Information

### YUVARLAK BAKIR TELLER A İRLİK VE D RENÇLER ROUND COPPER WIRES WEIGHT AND RESISTANCES

ÇAP DIAMETER mm <sup>2</sup>	KES T CROSS - SECT ON mm <sup>2</sup>	A İRLİK WEIGHT Kg/Km	UZUNLUK LENGHT m/Kg	D.C. D RENÇ D.C. RESISTANCE Ω/Km
0,05	0,0019	0,0175	56970	8763
0,06	0,0028	0,0253	39590	6098
0,07	0,0038	0,0344	29065	4480
0,08	0,0050	0,0450	22222	3430
0,09	0,0063	0,0569	17584	2710
0,10	0,0078	0,0702	14242	2195
0,11	0,0095	0,0849	11760	1814
0,12	0,0113	0,101	9901	1524
0,13	0,0132	0,119	8403	1299
0,14	0,0153	0,138	7247	1120
0,15	0,0176	0,158	6330	975,7
0,16	0,0201	0,180	5556	857,5
0,17	0,0226	0,203	4926	759,6
0,18	0,0254	0,228	4386	677,5
0,19	0,0283	0,253	3953	608,1
0,20	0,0314	0,281	3559	548,8
0,21	0,0346	0,310	3226	497,8
0,22	0,0380	0,340	2941	453,6
0,23	0,0415	0,371	2695	415,0
0,24	0,0452	0,404	2477	381,1
0,25	0,0490	0,439	2278	351,2
0,26	0,0530	0,475	2105	324,7
0,27	0,0572	0,512	1953	301,1
0,28	0,0615	0,551	1815	280,0
0,29	0,0660	0,590	1695	261,0
0,30	0,0706	0,632	1582	243,9
0,31	0,0754	0,675	1481	228,4
0,32	0,0804	0,719	1391	214,4
0,33	0,0855	0,765	1307	201,6
0,34	0,0907	0,812	1232	189,9
0,35	0,0962	0,860	1163	179,2
0,36	0,1017	0,910	1100	169,4
0,37	0,1075	0,961	1041	160,4
0,38	0,1134	1,014	986	152,0
0,39	0,1194	1,067	937	144,3
0,40	0,1256	1,123	890	137,2
0,41	0,1320	1,180	847	130,6
0,42	0,1385	1,239	807	124,4
0,43	0,1452	1,298	771	118,7
0,44	0,1520	1,359	736	113,4
0,45	0,1590	1,422	703	108,4
0,46	0,1661	1,486	673	103,7
0,47	0,1734	1,551	645	99,38
0,48	0,1809	1,618	618	95,28
0,49	0,1885	1,686	593	91,43
0,50	0,1963	1,755	570	87,81
0,51	0,2042	1,826	548	84,40
0,52	0,2123	1,899	527	81,18
0,53	0,2206	1,972	507	78,15
0,54	0,2290	2,047	489	75,28
0,55	0,2375	2,124	471	72,57
0,56	0,2463	2,202	454	70,00
0,57	0,2551	2,281	439	67,56
0,58	0,2642	2,362	423	65,25
0,59	0,2734	2,444	409	63,06
0,60	0,2827	2,528	396	61,00
0,61	0,2922	2,613	383	58,99
0,62	0,3019	2,699	371	57,11
0,63	0,3117	2,787	359	55,31
0,64	0,3217	2,876	348	53,59
0,65	0,3318	2,967	337	51,96
0,66	0,3421	3,059	327	50,39
0,67	0,3525	3,152	317	48,90
0,68	0,3631	3,247	308	47,47
0,69	0,3739	3,343	299	46,11
0,70	0,3848	3,441	291	44,80
0,71	0,3959	3,540	282	43,55
0,72	0,4071	3,640	275	42,35
0,73	0,4185	3,742	267	41,19
0,74	0,4300	3,845	260	40,09
0,75	0,4417	3,950	253	39,03



## Teknik Veriler Technical Information

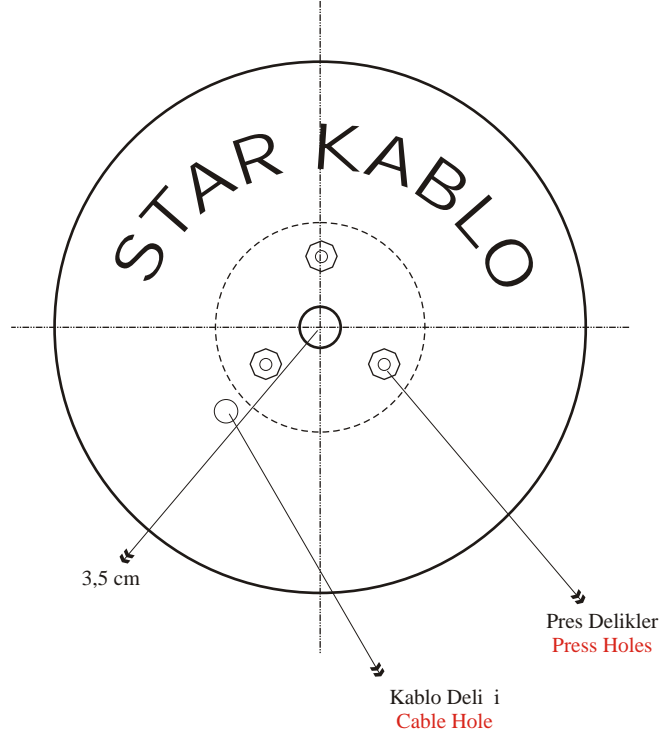
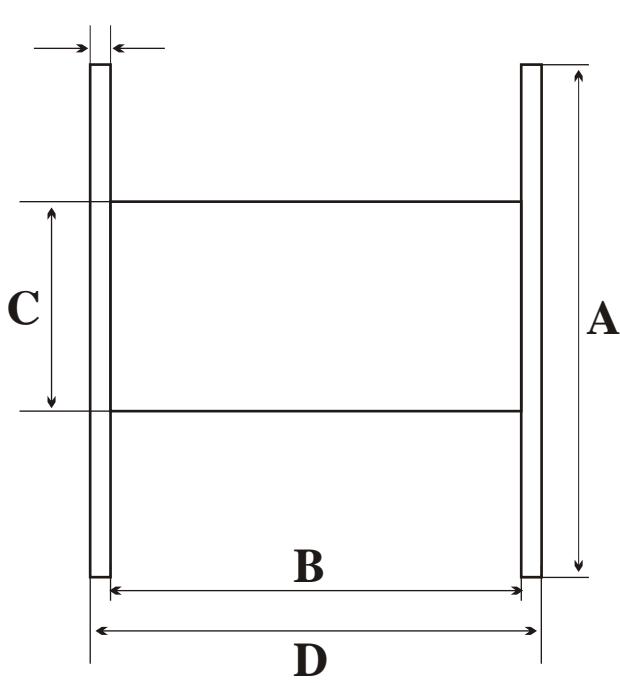
### YUVARLAK BAKIR TELLER A İRLİK VE D RENÇLER ROUND COPPER WIRES WEIGHT AND RESISTANCES

ÇAP DIAMETER mm <sup>2</sup>	KES T CROSS - SECT ON mm <sup>2</sup>	A İRLİK WEIGHT Kg/Km	UZUNLUK LENGHT m/Kg	D.C. D RENÇ D.C. RESISTANCE Ω/Km
0,76	0,4536	4,056	247	38,01
0,77	0,4656	4,163	240	37,02
0,78	0,4778	4,272	234	36,08
0,79	0,4901	4,382	228	35,17
0,80	0,5026	4,494	223	34,30
0,81	0,5153	4,607	217	33,46
0,82	0,5281	4,721	212	32,65
0,83	0,5410	4,837	207	31,87
0,84	0,5541	4,954	202	31,11
0,85	0,5674	5,073	197	30,38
0,86	0,5808	5,193	193	29,68
0,87	0,5944	5,315	188	29,00
0,88	0,6082	5,437	184	28,35
0,89	0,6221	5,562	180	27,71
0,90	0,6361	5,687	176	27,10
0,91	0,6503	5,814	172	26,51
0,92	0,6647	5,943	168	25,87
0,93	0,6792	6,073	165	25,38
0,94	0,6939	6,204	161	24,84
0,95	0,7088	6,337	158	24,32
0,96	0,7238	6,471	155	23,82
0,97	0,7389	6,606	151	23,31
0,98	0,7543	6,743	148	22,86
0,99	0,7697	6,882	145	22,40
1,00	0,7854	7,021	142,42	21,95
1,10	0,9503	8,496	117,60	18,14
1,20	1,1310	10,111	99,01	15,24
1,30	1,3237	11,866	84,03	12,99
1,40	1,5394	13,762	72,47	11,20
1,50	1,7672	15,799	63,30	9,756
1,60	2,0106	17,975	55,56	8,575
1,70	2,2698	20,292	49,26	7,596
1,80	2,5447	22,750	43,86	6,775
1,90	2,8353	25,348	39,53	6,081
2,00	3,1416	28,086	35,59	5,488
2,10	3,4636	30,965	32,26	4,978
2,20	3,8013	33,984	29,41	4,536
2,30	4,1548	37,144	26,95	4,150
2,40	4,5239	40,444	24,77	3,811
2,50	4,9088	43,885	22,78	3,512
2,60	5,3093	47,465	21,05	3,247
2,70	5,7256	51,187	19,53	3,011
2,80	6,1575	55,048	18,15	2,800
2,90	6,6052	59,050	16,95	2,610
3,00	7,0686	63,193	15,82	2,439
3,10	7,5477	67,476	14,81	2,285
3,20	8,0425	71,900	13,91	2,144
3,30	8,5530	76,464	13,07	2,016
3,40	9,0792	81,168	12,32	1,899
3,50	9,6212	86,014	11,63	1,792
3,60	10,179	90,998	11,00	1,694
3,70	10,752	96,124	10,41	1,604
3,80	11,344	101,418	9,86	1,520
3,90	11,946	106,796	9,37	1,443
4,00	12,566	112,344	8,90	1,372
4,10	13,203	118,031	8,47	1,306
4,20	13,855	123,859	8,07	1,244
4,30	14,522	129,827	7,71	1,187
4,40	15,205	135,935	7,36	1,134
4,50	15,904	142,185	7,03	1,084
4,60	16,619	148,575	6,73	1,037



# Teknik Veriler Technical Information

## MAKARA ÖLÇÜLER DRUM DIMENSIONS



MAKARA T P DRUM TYPE	BOYUTLAR / DIMENSIONS mm				YÜK HACM VOLUME OF THE LOAD dm <sup>3</sup>
	A	B	C	D	
S-KP 350	350	250	150	266	20
S-KP 400	400	250	150	266	27
S-KP 450	450	250	150	266	35
S-KP 500	500	250	150	270	45
S-KP 600	600	250	150	274	66
S-T 700	700	500	350	580	144
S-T 800	800	500	350	580	203
S-T 900	900	500	400	580	255
S-T 1000	1000	650	500	750	383
S-T 1100	1100	650	500	750	490
S-T 1200	1200	650	600	770	551
S-T 1300	1300	700	650	840	697
S-T 1400	1400	800	700	1000	923
S-T 1500	1500	800	750	1000	1060
S-T 1800	1800	1000	900	1100	1908
S-T 2000	2000	1100	1000	1200	2592



## Teknik Veriler Technical Information

### VDE TANIMLARINDA KULLANILAN KISALTMALAR ABBREVIATIONS OF VDE IDENTIFICATIONS

<b>A</b>	Dı tesisat kablosu	<i>Outdoor cable</i>
<b>b</b>	Zırh	<i>Armouring</i>
<b>Bd</b>	Grup ekinde sıralanmı	<i>Unit type lay-up</i>
<b>C</b>	Bakır tellerden örgü ekran	<i>Copper wire braided screen</i>
<b>f</b>	Süper ince telli bükülmü iletken	<i>Stranded conductor with super fine wires</i>
<b>F</b>	Su geçmesini önleyen jelly-dolgu	<i>Jelly-filling for water penetration</i>
<b>H</b>	Halojensiz, alev geciktiren yalıtım	<i>Halogen-free, flame-retardant material</i>
<b>J</b>	Tesisat kablosu	<i>Installation cable</i>
<b>JE-</b>	Endüstriyel elektronik tesisat kablosu	<i>Installation cable for industrial electronic</i>
<b>-J</b>	Toprak koruma damarlı kablo	<i>Earth cored cable</i>
<b>-JZ</b>	Toprak koruma damarlı numaralı kablo	<i>Numbered cable with earth conductor</i>
<b>(L)</b>	Alüminyum folyo ekran	<i>Aluminium foil shield</i>
<b>Lg</b>	Katlar ekinde bükülmü kablo	<i>Cable, stranded with layer</i>
<b>LI</b>	Çok telli bükülmü kablo	<i>Multi-wire stranded conductor</i>
<b>N</b>	A ır artlara dayanıklı kablo	<i>Cable for use at heavy operation conditions</i>
<b>-O</b>	Toprak koruma damarsız kablo	<i>Cable, without earth-core</i>
<b>-OZ</b>	Toprak koruma damarsız numaralı kablo	<i>Numbered cable, without earth-core</i>
<b>PimF</b>	Bireysel AL-PES ekranlı çift (pair)	<i>Individual AL-PES tape screen</i>
<b>Q</b>	Çelik tellerden örgülü	<i>Steel-wires braiding</i>
<b>(St)</b>	AL-PES band ekran	<i>AL-PES tape screen</i>
<b>2X</b>	Çapraz ba lı polietilen yalıtım	<i>Cross-linked polyethylene insulation</i>
<b>Y</b>	PVC (polivinilklorür)	<i>PVC (polyethylene)</i>
<b>2Y</b>	PE (polietilen)	<i>PE (polyethylene)</i>
<b>02Y</b>	Köpüklü polietilen	<i>Foam-polyethylene</i>
<b>02YS</b>	Foam-skin polietilen	<i>Foam-skin polyethylene</i>
<b>4Y</b>	Polyamid (nylon)	<i>Polyamid (nylon)</i>
<b>5Y</b>	PTFE (teflon) polytetrafluoroethylene	<i>PTFE (teflon) polytetrafluoroethylene</i>
<b>6Y</b>	FEP fluorethylenepropylene	<i>FEP fluorethylenepropylene</i>
<b>7Y</b>	ETFE tetrafluoroethylene	<i>ETFE tetrafluoroethylene</i>
<b>9Y</b>	PP (polypropylene)	<i>PP (polyethylene)</i>
<b>11Y</b>	PUR polyurethane	<i>PUR polyethylene</i>
<b>(Z)</b>	Yüksek mukavemetli çelik tel örgü	<i>High-strength steel wire braiding</i>



## Teknik Veriler Technical Information

### S NYAL - KUMANDA KABLOLARI TANITIM KODLARI (300 V. max.) DESIGNATION CODES FOR SIGNAL - CONTROL CABLES (300 V. Max.)

 
 
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<b>1 KABLO T P</b>		<i>BASIC CABLE TYPE</i>
<b>J-</b>	Tesisat kablosu	<i>Installation cable</i>
<b>JE</b>	Endüstriyel elektronik T.K.	<i>I.C. For industrial electronic</i>
<b>LI</b>	Çok telli fleksibl kablo	<i>Flexible conductor</i>
<b>2 ZOLASYON T P</b>		<i>TYPE OF INSULATION</i>
<b>Y</b>	PVC (Polyvinylchloride)	<i>PVC (Polyvinylchloride)</i>
<b>2Y</b>	PE (Polyethylene)	<i>PE (Polyethylene)</i>
<b>02Y</b>	Köpüklü PE	<i>Foam PE</i>
<b>02YS</b>	Foam-Skin	<i>Foam-Skin</i>
<b>H</b>	Halojensiz alev geciktiren	<i>Halogen-free retardant</i>
<b>3 EKRAN T P</b>		<i>TYPE OF SCREEN</i>
<b>C....</b>	Bakır tellerden örgü ekran	<i>Copper wire braid screen</i>
<b>(St)</b>	AL-PES band ekran	<i>AL-PES tape screen</i>
<b>4 KILIF</b>		<i>SHEATH</i>
<b>Y</b>	PVC (Polyvinylchloride)	<i>PVC (Polyvinylchloride)</i>
<b>2Y</b>	PE (Polyethylene)	<i>PE (Polyethylene)</i>
<b>H</b>	Halojensiz alev geciktiren	<i>Halogen-free retardant</i>
<b>5 LAVE B LG LER</b>		<i>ADDITIONAL INFORMATION</i>
<b>2</b>	kili bükülmü (özel tanıtım)	<i>Pair twisted(Special identification)</i>
<b>6 DAMAR VEYA Ç FT SAYISI</b>		<i>NUMBER OF CORE OR PAIR</i>
<b>7 ALT B R M ELEMANI</b>		<i>SUB-UNIT ELEMENT</i>
	Tekli damar	<i>single core</i>
<b>x2</b>	kili	<i>Pair</i>
<b>8 LETKEN ÇAPI(mm)</b>		<i>CONDUCTOR DIAMETER (mm)</i>
<b>VEYA KES T (mm2)</b>		<i>OR CROSS-SECTION (mm2)</i>
<b>9 BÜKÜM ELEMANLARININ T P</b>		<i>TYPE OF STRANDING ELEMENT</i>
<b>St III</b>	Yıldız dörtlü	<i>Star quad</i>
<b>10 BÜKÜM DÜZEN</b>		<i>STRANDING LAYOUT</i>
<b>Lg</b>	Katlar ekinde bükülmü	<i>Stranded in layers</i>
<b>Bd</b>	Gruplar ekinde bükülmü	<i>Unit stranding</i>





## Teknik Veriler Technical Information

### HARMON ZE KABLOLAR TANITIM KODLARI DESIGNATION CODES FOR HARMONIZED CABLES

	TEMEL T P	BASIC TYPE
H	Harmonize tip	Harmonized type
A	Milli tip	National type
	NOM NAL VOLTAJ	RATED VOLTAGE
03	300/300 Volt	300/300 Volt
05	300/500 Volt	300/500 Volt
07	450/750 Volt	450/750 Volt
	ZOLASYON MALZEMES	INSULATION MATERIAL
V	PVC	PVC
V2	PVC+90 C	PVC+90 C
V3	PVC so ukta esnek	PVC cold-flexible
B	Ethlenpropylen kauçuk	Ethlenpropylen rubber
E	Polietilen	Polyethylene
X	XPE, yapısı de i tirilmi polietilen	XPE, crosslinked PE
R	Kauçuk	Rubber
S	Silikon kauçuk	Silicone rubber
	Ç/Dİ ZOLASYON MALZEMES	OUTER/INNER SHEATH MAER AL
V	PVC	PVC
V2	PVC+90 C	PVC+90 C
V3	PVC so ukta esnek	PVC cold-flexible
V5	PVC yüksek dereceli ya a dayanımlı	PVC with enhanced oil resistance
R	Kauçuk	Rubber
N	Choropren kauçuk	Chloroprene rubber
Q	Poliüretan	Polyurethane
J	Camelyaf örgü	Glass fibre braid
T	Tekstil örgü	Textile braid
	ÖZELL KLER	SPEC AL FEATURES
C4	Bakır tel örgü	Copper screen braiding
H	Yassı kablo ayrılabilir	Flat cable, separable
H2	Yassı kablo ayrılamaz	Flat cable, not separable
H6	Yassı kablo ayrılamaz asansör için	Flat cable, not separable for lifts
	LETKEN T P	CONDUCTOR TYPE
U	Tek damar	single wire
R	Çok telli	Multi-wire
K	nce telli (sabit dö eme)	Fine wire (Static)
F	nce telli (esnek)	Fine wire (flexible)
H	Çok ince telli	Super fine wire
Y	nce yassı tel	Tinsel wire



## Teknik Veriler Technical Information

**KABLO DI ÇAPINA BA LI OLARAK MAKARALARA SARILAB LECEK MAX. KABLO UZUNLUKLARI**  
**MAX. DRUM CAPACITIES FOR CABLES IN METERS DEPEND ON THE OVERALL DIAMETERS OF CABLES**

5	520	800	1080	1400	1800	2200	3400	5760	8120	10200	15320	19600					
6	360	555	750	970	1250	1525	2360	4000	5630	7080	10630	13600	15300	19350			
7	265	408	550	714	918	1120	1730	2935	4140	5204	7815	10000	11240	14200	18800		
8	200	310	420	540	700	850	1320	2250	3170	3980	5980	7650	8600	10890	14400		
9	160	245	330	430	550	675	1045	1775	2500	3140	4720	6040	6800	8680	11390	13080	
10	130	200	270	350	450	550	850	1440	2030	2550	3830	4900	5510	6970	9230	10060	
11	107	165	220	285	370	450	700	1190	1670	2100	3160	4040	4550	5750	7620	8750	
12		138	185	240	310	380	590	1000	1400	1770	2650	3400	3820	4840	6400	7350	
13		118	158	207	265	325	500	850	1200	1500	2260	2890	3250	4120	5450	6250	11250
14		100	137	176	225	280	430	730	1030	1300	1950	2500	2800	3550	4700	5400	9700
15			120	155	200	240	375	640	900	1125	1700	2170	2440	3090	4100	4700	8450
16							330	560	790	990	1490	1900	2150	2700	3600	4100	7400
17							290	490	700	880	1320	1690	1900	2400	3180	3650	6600
18							260	440	620	780	1180	1500	1700	2150	2800	3250	5850
19							230	390	560	700	1050	1350	1500	1900	2530	2910	5250
20							210	360	500	630	950	1220	1370	1740	2300	2650	4750
21								325	460	575	860	1100	1230	1570	2080	2400	4300
22								295	415	520	790	1000	1125	1420	1900	2150	3900
23								270	380	475	720	920	1025	1300	1700	2000	3600
24									440	660	840	950	1200	1600	1800	3300	4500
25									400	600	780	880	1100	1470	1680	3000	4100
26									370	550	710	800	1020	1350	1550	2800	3800
27										520	660	750	950	1250	1540	2600	3500
28										480	620	700	880	1170	1350	2400	3300
29										450	570	650	820	1080	1250	2250	3000
30										420	540	610	770	1020	1150	2100	2850
31										390	500	570	720	950	1100	1950	2650
32										370	470	530	680	900	1020	1850	2500
33										350	440	500	640	840	970	1750	2300
34											420	470	600	790	900	1650	2200
35											400	440	560	750	860	1550	2100
36											370	420	530	700	800	1450	2000
37											350	400	500	670	770	1380	1850
38											330	370	470	620	730	1300	1700
39											310	350	450	600	680	1200	1600
40											300	335	420	570	650	1100	1500
41												310	400	520	610	1040	1450
42												300	380	500	580	980	1350
43												280	360	480	550	960	1300
44													350	460	520	950	1250
44													330	440	500	920	1200
46													310	410	480	880	1150
47														400	460	850	1050
48														380	440	800	1000
49														360	420	770	970
50														350	400	750	950
51															380	700	930
52															370	680	900
53															350	650	870
54															335	620	840
55															315	600	800
56															300	570	750
57																540	700
58																520	680
59																500	650
60																480	610
61																	570
62																	520
63																	470
64																	440
65																	400
66																	380



## Teknik Veriler Technical Information

### HARMON ZE KABLOLAR TANITIM KODLARI DESIGNATION CODES FOR HARMONIZED CABLES

Güç Power	Akım iddeti Load Current		Kesit / Cross- section (mm²)														
kW	A	Cos ø	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240
2,5	5	0,82	240	400	640												
3	6	↓	200	330	535	800											
3,5	7	↓	170	285	455	685											
4	8	↓	150	250	400	600	1000										
4,5	9	↓	135	223	355	530	890										
5	10	↓	120	200	320	480	800										
6	12	↓	100	166	265	400	670	1070									
7	14	↓	85	142	225	340	570	920									
8	16	↓	75	125	200	300	500	800									
9	18	↓	66	110	175	265	445	725	1120								
10	19	↓		100	160	240	400	640	1000								
12	23	↓		82	133	200	335	535	835	1170							
14	27	↓		70	113	170	285	460	720	1050							
16	31	↓			100	150	250	400	630	880							
18	35	↓			88	130	220	355	560	780							
20	37	↓				120	200	320	500	700	1000						
25	46	↓				95	160	255	400	560	800						
30	55	↓					130	215	335	470	670						
35	65	↓					115	189	285	400	570	805					
40	72	↓					100	160	250	350	500	705					
45	83	↓						140	220	310	445	625	850				
50	93	↓							200	280	400	580	770				
60	107	0,85							160	220	335	470	635	800			
70	125	↓								200	285	400	550	690			
80	143	↓								175	250	350	480	600	755		
90	160	↓									220	310	425	535	670		
100	180	↓									200	280	380	480	600	740	
110	197	↓										255	340	440	550	675	
130	232	↓										228	290	370	465	570	
150	268	↓											250	320	400	495	640
180	320	↓												265	335	410	535
200	350	↓													300	370	480
250	405	↓														295	385
300	500	↓															310

GER L M DÜ ÜMÜ (%5) SINIRI  
HVOLTAGE LOSS LIMIT (%5)

ISINMA SINIRI (30° C)  
HEATING LIMIT (30° C)

Uzaklıkların Birimi Metredir.  
The units are meters at the distances.

# Teknik Veriler

## Technical Information

### LETKEN D RENC - LETKEN YAPISI

### CONDUCTOR RESISTANCE - CONDUCTOR CONSTRUCTION

Nominal Kesit mm <sup>2</sup>	1 Km. deki 20°C için iletken direnci			
	Kalaylı Bakır tel		Kalaysız Bakır tel	
	Class 1+2	Class 5+6	Class 1+2	Class 5+6
0,08		250,0		243,0
0,14		142,0		138,0
0,25		82,0		79,0
0,34		59,0		57,0
0,50	36,7	40,1	36,0	39,0
0,75	24,8	26,7	24,5	26,0
1	18,2	20,0	18,1	19,5
1,5	12,2	13,7	12,1	13,3
2,5	7,56	8,21	7,41	7,98
4	4,70	5,09	4,61	4,95
6	3,11	3,39	3,08	3,30
10	1,84	1,95	1,83	1,91
16	1,16	1,24	1,15	1,21
25	0,734	0,795	0,727	0,780
35	0,529	0,565	0,524	0,554
50	0,391	0,93	0,387	0,386
70	0,270	0,277	0,268	0,272
95	0,195	0,210	0,193	0,206
120	0,154	0,164	0,153	0,161
150	0,126	0,132	0,124	0,129
185	0,100	0,108	0,0991	0,106
240	0,0762	0,0817	0,0754	0,0801
300	0,0607	0,0654	0,0601	0,0641
400	0,0475	0,0495	0,0470	0,0486
500	0,0369	0,0391	0,0366	0,0384

Nominal Kesit mm <sup>2</sup>	VDE 0295'e uygun çok telli	Çok telli iletken	nce telli iletken vde 0295	Çok ince telli VDE 0295		
	Class 2		Class 5	Class 6		
0,14				18 x 0,10	18 x 0,1	36 x 0,07
0,25				14 x 0,15	32 x 0,10	32 x 0,1
0,34		7 x 0,25	19 x 0,15	42 x 0,10	42 x 0,1	88 x 0,07
0,38		7 x 0,27	12 x 0,20	21 x 0,15	48 x 0,1	100 x 0,07
0,50	7 x 0,30	7 x 0,30	16 x 0,20	28 x 0,15	64 x 0,1	131 x 0,07
0,75	7 x 0,37	7 x 0,37	24 x 0,20	42 x 0,15	96 x 0,1	195 x 0,07
1	7 x 0,43	7 x 0,43	32 x 0,20	56 x 0,15	128 x 0,1	260 x 0,07
1,5	7 x 0,52	7 x 0,52	30 x 0,25	84 x 0,15	192 x 0,1	392 x 0,07
2,5	7 x 0,67	19 x 0,41	50 x 0,25	140 x 0,15	320 x 0,1	651 x 0,07
4	7 x 0,85	19 x 0,52	56 x 0,30	224 x 0,15	512 x 0,1	1040 x 0,07
6	7 x 1,05	19 x 0,64	84 x 0,30	192 x 0,20	768 x 0,1	1560 x 0,07
10	7 x 1,35	49 x 0,51	80 x 0,40	320 x 0,20	1280 x 0,1	2600 x 0,07
16	7 x 1,70	49 x 0,65	128 x 0,40	512 x 0,20	2048 x 0,1	
25	7 x 2,13	84 x 0,62	200 x 0,40	800 x 0,20	3200 x 0,1	
35	7 x 2,52	133 x 0,58	280 x 0,40	1120 x 0,20		
50	19 x 1,83	133 x 0,69	400 x 0,40	705 x 0,30		
70	19 x 2,17	189 x 0,69	356 x 0,50	990 x 0,30		
95	19 x 2,52	259 x 0,69	485 x 0,50	1340 x 0,30		
120	37 x 2,03	336 x 0,67	614 x 0,50	1690 x 0,30		
150	37 x 2,27	392 x 0,69	765 x 0,50	2123 x 0,30		
185	37 x 2,52	494 x 0,69	944 x 0,50	1470 x 0,40		
240	61 x 2,24	627 x 0,70	1225 x 0,50	1905 x 0,40		
300	61 x 2,50	790 x 0,70	1530 x 0,50	2385 x 0,40		
400	61 x 2,89		2035 x 0,50			
500	61 x 3,23		1768 x 0,60			

# Teknik Veriler

## Technical Information

### GENEL BOYUTLAR

### GENERAL DIMENSIONS

#### BASINÇ

#### PRESSURE

1 psi (lb/sq.)	: 68,95 mbar
	: $6,895 \times 10^{-3} \text{ Nmm}^2$
1 lb / sq.ft.	: 0,478 mbar
1 pdl / sg.ft.	: 1,489 N/m <sup>2</sup>
1 in Hg	: 33,86 mbar
1 ft H <sub>2</sub> O	: 29,89 mbar
1 in H <sub>2</sub> O	: 2,491 mbar
1 N / mm <sup>2</sup>	: 145 psi
	: 10 bar
1 kp / mm <sup>2</sup>	: 1422 psi
1 at	: 736 Torr
	: 1kp / cm <sup>2</sup>
1 Torr	: 1 mm Hg
1 bar	: 0,1 H Pa
1 Pa	: 1 N / m <sup>2</sup>

#### GÜÇ

#### FORCE

1 lb	: 4,448 N
1 brit ton	: 9954 N
1 pdl (Poundal)	: 0,1383 N
1 kp	: 9,81 N
1 N	: 1,02 kp

#### HACİM

#### VOLUME

1 cubic inch	: 16,39 cm <sup>3</sup>
1 cubic foot	: 0,0283 m <sup>3</sup>
1 cubic yard	: 0,7646 m <sup>3</sup>
1 liquid gallon	: 3,79 lt.
1 pint	: 0,473 lt.
1 quart	: 0,946 lt.
1 prit gallon	: 4,53 lt.
1 barrel	: 119,2 lt.

#### HIZ

#### VELOCITY

1 mile/h	: 1,609 km/h
1 Knoten	: 1,852 km/h
1 ft/s	: 0,305 m/s
1 ft/min	: $5,08 \times 10^{-3} \text{ m/s}$

#### SICAKLIK

#### TEMPERATURE

F (Fahrenheit)	: $(1,8 \times \text{C}) + 32^\circ$
C (Celsius)	: $0,5556 \times (\text{F} - 32^\circ)$

#### A İRLİK

#### WEIGHT

1 grain	: 64,8 mg
1 dram	: 1,77 g
1 oz (ounce)	: 28,35 g
1 lb (pound)	: 0,4536 Kp
1 stone	: 6,35 Kp
1 Us ton (short ton)	: 0,907 t
1 brit. Ton (long ton)	: 1,016 t

#### ENERJİ

#### ENERGY

1 lb/mile	: 0,282 kg/m
1 lb/yard	: 0,496 kg/m
1 lb/foot	: 1,488 kg/m
1 kcal	: $1,16 \times 10^3 \text{ kWh}$
1 Kwh	: 360 kcal

#### ALAN

#### AREA

1 CM(circ.Mil)	: $0,507 \times 10^{-3} \text{ mm}^2$
1 MCM	: 0,5067 mm <sup>2</sup>
1 sg.inch	: 645,16 mm <sup>2</sup>
1 sg.foot	: 0,0929 mm <sup>2</sup>
1 sg.yard	: 0,836 mm <sup>2</sup>
1 acre	: 4047 m <sup>2</sup>
1 sg.mile	: 2,59 km <sup>2</sup>

#### UZUNLUK

#### LENGHT

1 mil	: 0,0254 mm
1 in (inch)	: 25,4 mm
1 ft (foot)	: 0,3048 m
1 yd (yard)	: 0,9144 m
1 ch (chain)	: 20,1 m
1 mile (kara-land)	: 1,609 km
1 mile (deniz-sea)	: 1,852 km

#### YO UNLUK

#### DENS TY

1 lb/cu.ft.	: 16,02 kg/m <sup>3</sup>
1 lb/cu.in.	: 27,68 t/m <sup>3</sup>

#### GÜÇ ORANI

#### POWER RATE

1 PS	: 0,736 kW
1 kW	: 1,36 PS
1 hp	: 0,7457 kW
1 kW	: 1,31 hp

#### ELEKTRİK ÖLÇÜLER

#### ELECTRICAL UNITS

1 ohm/1000 yd	: 1,0936 O/km
1 ohm/100 ft	: 328 O/km
1 µf/mile	: 0,62 µF/km
1 MO/mile	: 1,61 MO/km
1 µF/foot	: 3,28 pF/m
1 decibel/mile	: 71,5 mN/m

#### BEYĞ R GÜCÜ

#### HORSE FORCE

1 hp <sub>xm</sub> h	: 1,0139 Ps <sub>xh</sub>
	: $2,684 \times 10^6 \text{ Joule}$
	: 746 W <sub>xh</sub>
1 BTU(brit.ther.unit)	: 1055 Joule
	: 0,252 kcal





Kablo San. Tic. Ltd. ti.

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