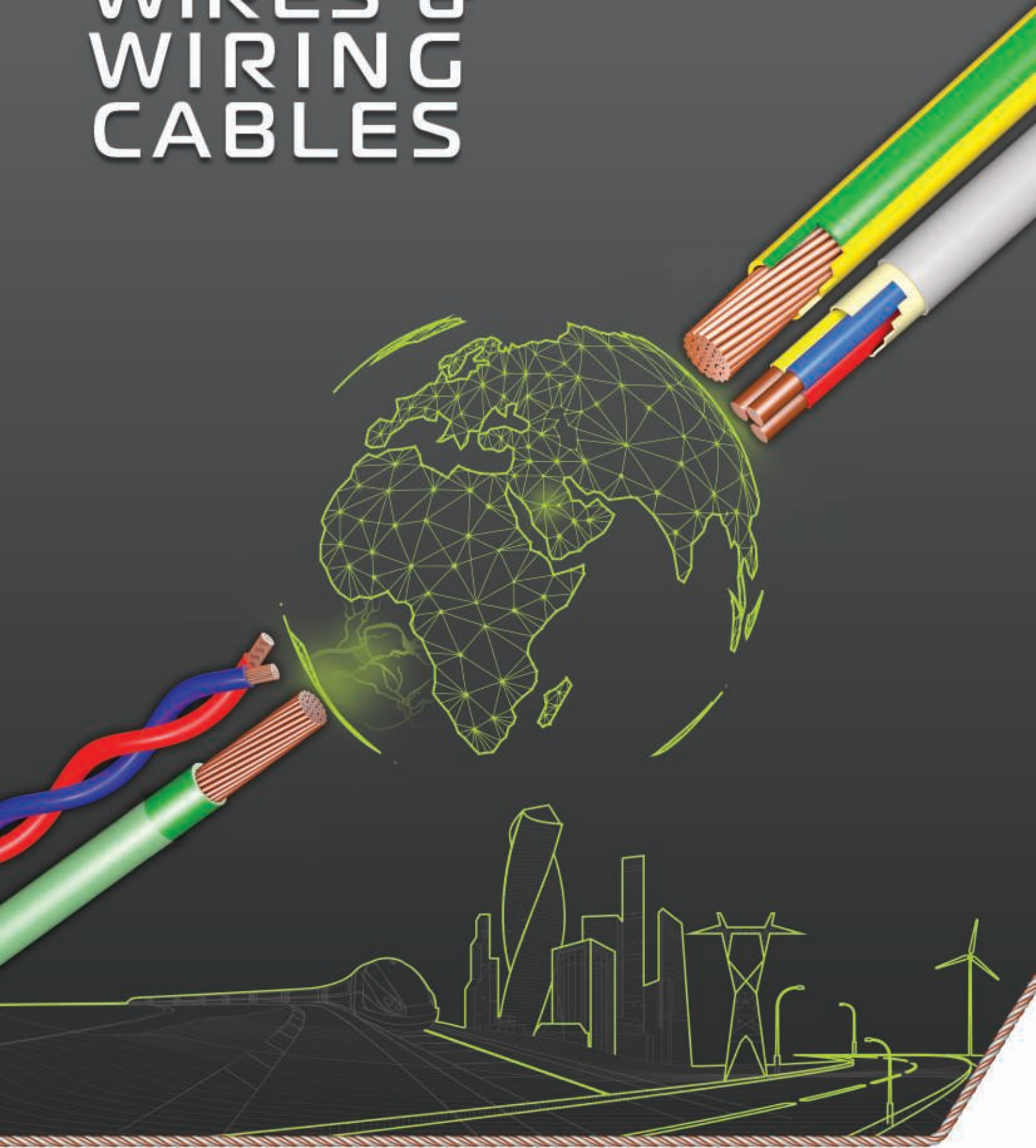


# WIRES & WIRING CABLES



شركة مجموعة كابلات الرياض  
Riyadh Cables Group Company

450 - 750 VOLTS - Copper conductor PVC insulated SSA 1320, IEC 60227 & BS 6004  
 HO 7V - U With Solid Conductor - TYPE 60227 IEC 01



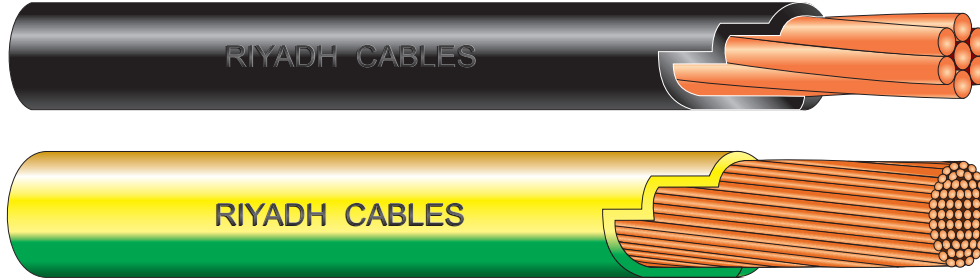
For internal wiring of equipment rated voltage up to 1000 V AC and up to 750 V DC to earth.

Catalogue Number	Nominal Cross Section	Conductor		Insulation Thickness	Overall Diameter	Weight of Finished Cable Approx.	Maximum DC Resistance at 20°C	Standard Packing Length
		Number of Wires in Conductor	Diameter of Conductor Approx.					
	mm <sup>2</sup>		mm	mm	mm	Kg / Km	Ohm / Km	M ± 5%
OC 010004xx	1 x 1.5	1	1.38	0.7	3.2	21	12.1	100 C
OC 010005xx	1 x 2.5	1	1.78	0.8	3.9	34	7.41	100 C
OC 010006xx	1 x 4	1	2.25	0.8	4.4	50	4.61	100 C
OC 010007xx	1 x 6	1	2.76	0.8	5.0	70	3.08	100 C
OC 010008xx	1 x 10	1	3.57	1.0	6.4	115	1.83	100 C

Color: green / yellow, blue, black, green, red, yellow, brown, grey, orange, white,  
 Code: 01 02 03 04 05 06 07 08 09 10

For required colour replace the last two digits - xx, by color code.

450 - 750 VOLTS - Copper conductor PVC insulated SSA 1320, IEC 60227 & BS 6004  
HO 7V - R With Stranded Conductor - TYPE 60227 IEC 01



For internal wiring of equipment rated voltage up to 1000 V AC and up to 750 V DC to earth.

Catalogue Number	Nominal Cross Section	Conductor		Insulation Thickness	Overall Diameter	Weight of Finished Cable Approx.	Maximum DC Resistance at 20°C	Standard Packing Length
		Number of Wires in Conductor	Diameter of Conductor Approx.					
	mm <sup>2</sup>		mm	mm	mm	Kg / Km	Ohm / Km	M ± 5%
OC 010104xx	1 x 1.5	7	1.50	0.7	3.3	22	12.1	100 C
OC 010105xx	1 x 2.5	7	2.01	0.8	4.0	35	7.41	100 C
OC 010106xx	1 x 4	7	2.55	0.8	4.6	52	4.61	100 C
OC 010107xx	1 x 6	7	3.12	0.8	5.2	71	3.08	100 C
OC 010108xx	1 x 10	7	4.05	1.0	6.7	116	1.83	100 C
OC 010109xx	1 x 16	7	5.10	1.0	7.8	185	1.15	100 C
OC 010110xx	1 x 25	7	6.42	1.2	9.7	290	0.727	100 C
OC 010111xx	1 x 35	7	7.65	1.2	10.9	390	0.524	100 C
000101xx12	1 x 50	19	8.90	1.4	12.8	525	0.387	3000 D
000101xx13	1 x 70	19	10.70	1.4	14.6	735	0.268	3000 D
000101xx14	1 x 95	19	12.60	1.6	17.1	1010	0.193	3000 D
000101xx15	1 x 120	37	14.21	1.6	18.8	1260	0.153	2000 D
000101xx16	1 x 150	37	15.75	1.8	20.9	1540	0.124	2000 D
000101xx17	1 x 185	37	17.64	2.0	23.3	1940	0.0991	2000 D
000101xx18	1 x 240	61	20.25	2.2	26.6	2550	0.0754	1000 D
000101xx19	1 x 300	61	22.68	2.4	29.6	3180	0.0601	1000 D
000101xx20	1 x 400	61	25.65	2.6	33.2	4050	0.0470	500 D
000101xx21	1 x 500	61	28.80	2.8	37.0	5050	0.0366	500 D
000101xx22	1 x 630	127/91	32.76	2.8	41.0	6050	0.0283	500 D

Color: green / yellow, blue, black, green, red, yellow, brown, grey, orange, white,  
Code: 01 02 03 04 05 06 07 08 09 10

For required colour replace the last two digits - xx, by color code.

450 - 750 VOLTS - Copper conductor PVC insulated SSA 1320, IEC 60227 & BS 6004  
HO 7V - K With Flexible Conductor - TYPE 60227 IEC 02



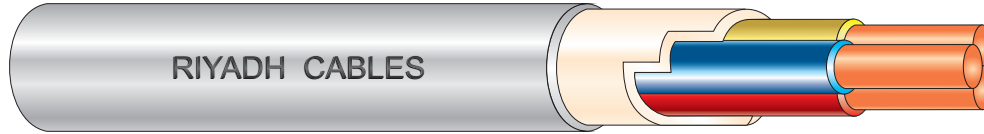
For internal wiring of equipment rated voltage up to 1000 V AC and up to 750 V DC to earth.

Catalogue Number	Nominal Cross Section	Conductor		Insulation Thickness	Overall Diameter	Weight of Finished Cable Approx.	Max. DC Resistance at 20°C	Standard Packing Length
		Approx No & Nom. strand Diameter.	Diameter of Conductor Approx.					
	mm <sup>2</sup>	No x mm	mm	mm	mm	Kg / Km	Ohm / Km	M ± 5%
OC 010504xx	1 x 1.5	28 x 0.25	1.7	0.7	3.4	23	13.3	100 C
OC 010505xx	1 x 2.5	46 x 0.25	2.2	0.8	4.1	35	7.98	100 C
OC 010506xx	1 x 4	51 x 0.30	3.1	0.8	4.8	51	4.95	100 C
OC 010507xx	1 x 6	77 x 0.30	3.8	0.8	5.3	71	3.30	100 C
OC 010508xx	1 x 10	74 x 0.40	5.0	1.0	6.8	125	1.91	100 C
OC 010509xx	1 x 16	118 x 0.40	6.3	1.0	8.1	195	1.21	100 C
OC 010510xx	1 x 25	183 x 0.40	6.4	1.2	9.2	300	0.780	100 C
OC 010511xx	1 x 35	257 x 0.40	9.2	1.2	10.5	410	0.554	100 C
000105xx12	1 x 50	371 x 0.40	11.0	1.4	13.9	585	0.386	1000 D
000105xx13	1 x 70	337 x 0.50	13.0	1.4	16.0	810	0.272	1000 D
000105xx14	1 x 95	444 x 0.50	15.2	1.6	18.2	1065	0.206	1000 D
000105xx15	1 x 120	570 x 0.50	17.0	1.6	20.2	1335	0.161	1000 D
000105xx16	1 x 150	712 x 0.50	19.0	1.8	22.5	1600	0.129	1000 D
000105xx17	1 x 185	864 x 0.50	21.0	2.0	24.9	2000	0.106	1000 D
000105xx18	1 x 240	1140x0.50	24.0	2.2	28.4	2500	0.0801	1000 D

Color: green / yellow, blue, black, green, red, yellow, brown, grey, orange, white,  
Code: 01 02 03 04 05 06 07 08 09 10

For required colour replace the last two digits - xx, by color code.

**300 - 500 VOLTS - Copper conductor PVC insulated and Sheathed**  
**SSA 1450, IEC 60227(IEC 10)**



Catalogue Number	Nominal Cross Section	Number of Wires in Conductor	Diameter of Conductor Approx.	Insulation Thickness	Sheath Thickness	Overall Diameter	Weight of Finished Cable Approx.	Max. DC Resistance at 20°C	Standard Packing Length
	mm <sup>2</sup>		mm	mm	mm	mm	Kg/Km	Ohm/Km	M ± 5%
OB 01002408	2 x 1.5	1	1.38	0.7	1.2	10.0	120	12.1	100 C
OB 01002508	2 x 2.5	1	1.78	0.8	1.2	11.5	165	7.41	100 C
OB 01002608	2 x 4	1	2.25	0.8	1.2	12.5	215	4.61	100 C
OB 01002708	2 x 6	1	2.76	0.8	1.2	13.5	270	3.08	100 C
OB 01002808	2 x 10	1	3.57	1.0	1.4	16.5	440	1.83	1000/2000
OB 01003408	3 x 1.5	1	1.38	0.7	1.2	10.5	140	12.1	100 C
OB 01003508	3 x 2.5	1	1.78	0.8	1.2	12.0	195	7.41	100 C
OB 01003608	3 x 4	1	2.25	0.8	1.2	13.0	250	4.61	100 C
OB 01003708	3 x 6	1	2.76	0.8	1.4	14.5	345	3.08	100 C
OB 01003808	3 x 10	1	3.57	1.0	1.4	17.5	540	1.83	1000/2000
OB 01004408	4 x 1.5	1	1.38	0.7	1.2	11.5	165	12.1	100 C
OB 01004508	4 x 2.5	1	1.78	0.8	1.2	13.0	235	7.41	100 C
OB 01004608	4 x 4	1	2.25	0.8	1.4	14.5	325	4.61	100 C
OB 01004708	4 x 6	1	2.76	0.8	1.4	16.0	430	3.08	1000/2000
OB 01004808	4 x 10	1	3.57	1.0	1.4	19.0	665	1.83	1000/2000
OB 01005408	5 x 1.5	1	1.38	0.7	1.2	12.0	195	12.1	100 C
OB 01005508	5 x 2.5	1	1.78	0.8	1.2	14.0	285	7.41	100 C
OB 01005608	5 x 4	1	2.25	0.8	1.4	16.0	405	4.61	100 C
OB 01005708	5 x 6	1	2.78	0.8	1.4	17.5	530	3.08	1000/2000
OB 01005808	5 x 10	1	3.57	1.0	1.4	21.0	810	1.83	1000/2000

**Color code:**

2 cores : Red, Black	2 cores : light Blue, Brown
3 cores : Red, Yellow and Blue	3 cores : light Blue, Black, Brown
4 cores : Red, Yellow, Blue and Black	4 cores : light Blue, Black, Brown, Black
5 cores : Red, Yellow, Blue, Black and Green	5 cores : light Blue, Black, Brown, Brown, Black

For Green / Yellow Core - Replace 5th digits by 3.

For green / yellow Core - add letter "J" at the end of item code.

**outer sheath**

**Gray.**

**300 - 500 VOLTS - Copper conductor PVC insulated and Sheathed**  
**SSA 1450, IEC 60227 (IEC 10)**



Catalogue Number	Nominal Cross Section	Number of Wires in Conductor	Diameter of Conductor Approx.	Insulation Thickness	Sheath Thickness	Overall Diameter	Weight of Finished Cable Approx.	Max. DC Resistance at 20°C	Standard Packing Length
	mm <sup>2</sup>		mm	mm	mm	mm	Kg/Km	Ohm/Km	M ± 5%
OB 01012408	2 x 1.5	7	1.50	0.7	1.2	10.5	125	12.1	100 C
OB 01012508	2 x 2.5	7	2.01	0.8	1.2	12.0	170	7.41	100 C
OB 01012608	2 x 4	7	2.55	0.8	1.2	13.0	220	4.61	100 C
OB 01012708	2 x 6	7	3.12	0.8	1.2	14.0	280	3.08	100 C
OB 01012808	2 x 10	7	4.05	1.0	1.4	17.5	470	1.83	1000/2000
OB 01012908	2 x 16	7	5.10	1.0	1.4	20.0	650	1.15	1000/2000
OB 01012108	2 x 25	7	6.42	1.2	1.4	24.0	980	0.727	1000
OB 01012118	2 x 35	7	7.65	1.2	1.6	27.5	1300	0.524	1000
OB 01013408	3 x 1.5	7	1.50	0.7	1.2	11.0	145	12.1	100 C
OB 01013508	3 x 2.5	7	2.01	0.8	1.2	12.5	200	7.41	100 C
OB 01013608	3 x 4	7	2.55	0.8	1.2	13.5	270	4.61	100 C
OB 01013708	3 x 6	7	3.12	0.8	1.4	15.5	360	3.08	100 C
OB 01013808	3 x 10	7	4.05	1.0	1.4	19.0	570	1.83	1000/2000
OB 01013908	3 x 16	7	5.10	1.0	1.4	21.5	830	1.15	1000/2000
OB 01013108	3 x 25	7	6.42	1.2	1.6	26.0	1255	0.727	1000
OB 01013118	3 x 35	7	7.65	1.2	1.6	29.0	1640	0.524	1000
OB 01014408	4 x 1.5	7	1.50	0.7	1.2	12.0	165	12.1	100 C
OB 01014508	4 x 2.5	7	2.01	0.8	1.2	13.5	240	7.41	100 C
OB 01014608	4 x 4	7	2.55	0.8	1.4	15.0	330	4.61	100 C
OB 01014708	4 x 6	7	3.12	0.8	1.4	17.0	460	3.08	1000/2000
OB 01014808	4 x 10	7	4.05	1.0	1.4	20.5	700	1.83	1000/2000
OB 01014908	4 x 16	7	5.10	1.0	1.4	23.5	1025	1.15	1000/2000
OB 01014108	4 x 25	7	6.42	1.2	1.6	28.5	1590	0.727	1000
OB 01014118	4 x 35	7	7.65	1.2	1.6	32.0	2040	0.524	1000
OB 01015408	5 x 1.5	7	1.50	0.7	1.2	12.0	200	12.1	100 C
OB 01015508	5 x 2.5	7	2.01	0.8	1.2	14.5	290	7.41	100 C
OB 01015608	5 x 4	7	2.55	0.8	1.4	17.0	410	4.61	100 C
OB 01015708	5 x 6	7	3.12	0.8	1.4	18.5	550	3.08	1000/2000
OB 01015808	5 x 10	7	4.05	1.0	1.4	22.0	850	1.83	1000/2000
OB 01015908	5 x 16	7	5.10	1.0	1.6	26.0	1250	1.15	1000/2000
OB 01015108	5 x 25	7	6.42	1.2	1.6	31.5	1860	0.727	1000
OB 01015118	5 x 35	7	7.65	1.2	1.6	35.0	2540	0.524	1000

**Color code:**

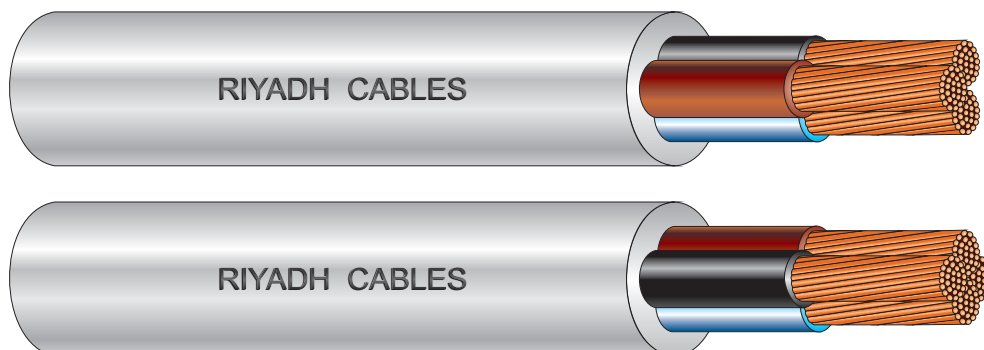
- |  |  |
|--|--|
| 2 cores : Red, Black                         | 2 cores : light Blue, Brown                      |
| 3 cores : Red, Yellow and Blue               | 3 cores : light Blue, Black, Brown               |
| 4 cores : Red, Yellow, Blue and Black        | 4 cores : light Blue, Black, Brown, Black        |
| 5 cores : Red, Yellow, Blue, Black and Green | 5 cores : light Blue, Black, Brown, Brown, Black |

For Green / Yellow Core - Replace 5th digits by 3.

For green / yellow Core - add letter "J" at the end of item code.

**outer sheath** **Gray.**

**300 - 500 VOLTS - Flexible Copper conductor PVC insulated and Sheathed  
HO5VV-F, BS 6500, IEC 60227 (IEC 53)**



Catalogue Number	Nominal Cross Section Approx.	Number & dia of wires in Conductor	Diameter of Conductor Approx.	Weight of Insulation Thickness	Thickness of Sheath Approx.	Overall Diameter	Weight of Finished Cable Approx.	Max DC Resistance at 20°C	Packing
	mm <sup>2</sup>	no x mm	mm	mm	mm	mm	Kg/Km	Ohm/Km	M ± 5%
OB 01052210	2 x 0.75	22 x 0.20	1.1	0.6	0.8	7.2	56	26.0	100
OB 01052310	2 x 1	29 x 0.20	1.3	0.6	0.8	7.5	65	19.5	100
OB 01052410	2 x 1.5	28 x 0.25	1.6	0.7	0.8	8.6	80	13.3	100
OB 01052510	2 x 2.5	46 x 0.25	2.1	0.8	1.0	10.6	130	7.98	100
OB 01053210	3 x 0.75	22 x 0.20	1.1	0.6	0.8	7.6	65	26.0	100
OB 01053310	3 x 1	29 x 0.20	1.3	0.6	0.8	8.0	80	19.5	100
OB 01053410	3 x 1.5	28 x 0.25	1.6	0.7	0.9	9.4	100	13.3	100
OB 01053510	3 x 2.5	46 x 0.25	2.1	0.8	1.1	11.4	155	7.98	100
OB 01054210	4 x 0.75	22 x 0.20	1.1	0.6	0.8	8.3	80	26.0	100
OB 01054310	4 x 1	29 x 0.20	1.3	0.6	0.9	9.0	95	19.5	100
OB 01054410	4 x 1.5	28 x 0.25	1.6	0.7	1.0	10.5	130	13.3	100
OB 01054510	4 x 2.5	46 x 0.25	2.1	0.8	1.1	12.5	200	7.98	100
OB 01055210	5 x 0.75	22 x 0.20	1.1	0.6	0.9	9.3	105	26.0	100
OB 01055310	5 x 1	29 x 0.20	1.3	0.6	0.9	9.8	125	19.5	100
OB 01055410	5 x 1.5	28 x 0.25	1.6	0.7	1.1	11.6	160	13.3	100
OB 01055510	5 x 2.5	46 x 0.25	2.1	0.8	1.2	13.9	245	7.98	100

**Color code:**

2 cores : light blue, brown  
 3 cores : light blue, black, brown  
 4 cores : light blue, black, brown, black  
 5 cores : light blue, black, brown, brown, Black

3 cores : light blue, brown, green / yellow  
 4 cores : light blue, black, brown and green / yellow  
 5 cores : light blue, black, brown, black and green / yellow

For Green / Yellow Core - add letter "J" at the end of item Code.

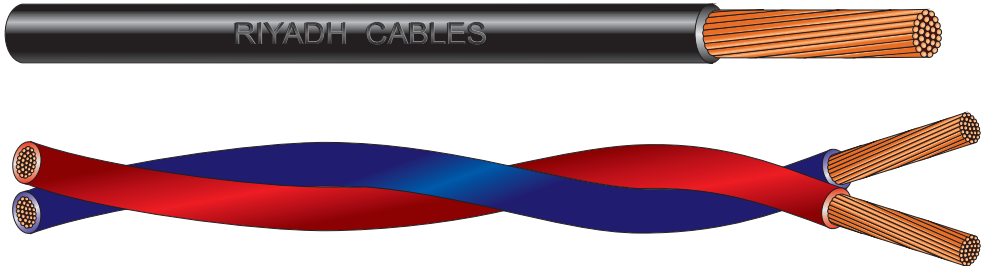
**outer sheath**

**White.**



PVC insulated, Non-sheathed Flexible Cords for Internal Wiring. Single Core and Twisted Twin  
 COPPER CONDUCTOR - STANDARD(S) : BS 6004 IEC 60227 (IEC 06)

300 / 500 VOLTS HO5V-K



Conductor		Radial Thickness of insulation	Mean Overall diameter (upper limit) single	Maximum DC Resistance at 20°C	Approximate weight	
Nom. cross sectional area	Nominal diameter of wire				Single	Twin
mm <sup>2</sup>	mm	mm	mm	Ω / Km	Kg / Km	Kg / Km
0.5	0.20	0.6	2.4	39.0	9	19
0.75	0.20	0.6	2.6	26.0	12	24
1.0	0.20	0.6	2.8	19.5	15	29

**Note :**

- The cord may be available in twin twisted form.
- For solid wire conductor equivalent cables, please refer to BS 6004 or IEC 60227.
- For larger sizes of flexible conductor cables, please refer to BS 6004 or IEC 60227.

**Construction :**

- Annealed Copper conductor as per IEC 60228, CLASS 5.
- PVC Insulation.

**Core Identification :**

Green / Yellow, Blue or any other colour.



PVC insulated, Non-sheathed Flexible Cords for Internal Wiring - Parallel Twin  
 COPPER CONDUCTOR - STANDARD (S) : IEC 60227 (IEC 42)

300 / 300 VOLTS

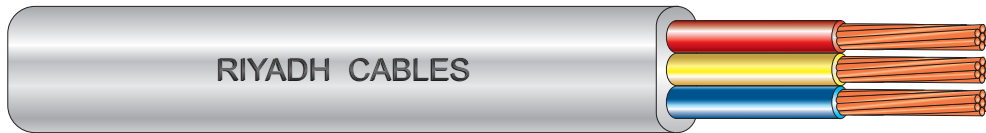


Conductor		Radial Thickness of insulation	Mean overall dimensions		Maximum DC Resistance at 20°C	Approx. Weight
Nom. Cross Sectional area	Maximum diameter of Wire		Lower Limit	Upper Limit		
mm <sup>2</sup>	mm	mm	mm	mm	Ω / Km	Kg / Km
2 x 0.50	0.16	0.8	2.5 x 5.0	3.0 x 6.0	39.0	22
2 x 0.75	0.16	0.8	2.7 x 5.4	3.2 x 6.4	26.0	28

**Construction :**

- Annealed Copper conductor as per IEC 60228 Class 6.
- The conductors shall be laid parallel and covered with PVC Insulation
- The insulation shall be provided with a groove on each side between the conductors to facilitate separation of the cores.

PVC insulated, PVC Sheathed Cables, Single core, Flat Twin and Three cores  
 COPPER CONDUCTOR - STANDARD(S) : BS 6004 - 300 / 500 VOLTS



No. & Cross sectional area of conductor	No. of wires in conductor	Radial Thickness of insulation	Radial Thickness of sheath	Mean overall dia. or dimensions.		Max. DC Resist ance at 20°C	Approx. Weight
				Lower Limit	Upper Limit		
mm <sup>2</sup>	mm	mm	mm	mm	mm	Ω / Km	Kg / Km
1 x 1.0	1	0.6	0.8	3.8	4.5	18.1	28
1 x 1.5	1	0.7	0.8	4.2	4.9	12.1	36
1 x 2.5	1	0.8	0.8	4.8	5.8	7.41	51
1 x 4	7	0.8	0.9	5.4	6.8	4.61	74
1 x 6	7	0.8	0.9	6.0	7.4	3.08	96
1 x 10	7	1.0	0.9	7.2	8.8	1.83	150
1 x 16	7	1.0	1.0	8.4	10.5	1.15	220
1 x 25	7	1.2	1.1	10.0	12.5	0.727	335
1 x 35	7	1.2	1.1	11.0	13.5	0.524	440
2 x 1.0	1	0.6	0.9	4.0 x 6.2	4.7 x 7.4	18.1	53
2 x 1.5	1	0.7	0.9	4.4 x 7.0	5.4 x 8.4	12.1	71
2 x 2.5	1	0.8	1.0	5.2 x 8.4	6.2 x 9.8	7.41	106
2 x 4	7	0.8	1.0	5.6 x 9.6	7.2 x 11.5	4.61	150
2 x 6	7	0.8	1.1	6.4 x 10.5	8.0 x 13.0	3.08	200
2 x 10	7	1.0	1.2	7.8 x 13.0	9.6 x 16.0	1.83	320
2 x 16	7	1.0	1.3	9.0 x 15.5	11.0 x 18.5	1.15	460
3 x 1.0	1	0.6	0.9	4.0 x 8.4	4.7 x 9.8	18.1	76
3 x 1.5	1	0.7	0.9	4.4 x 9.8	5.4 x 11.5	12.1	106
3 x 2.5	1	0.8	1.0	5.2 x 11.5	6.2 x 13.5	7.41	160
3 x 4	7	0.8	1.1	5.8 x 13.5	7.4 x 16.5	4.61	230
3 x 6	7	0.8	1.1	6.4 x 15.0	8.0 x 18.0	3.08	300
3 x 10	7	1.0	1.2	7.8 x 19.0	9.6 x 22.5	1.83	475
3 x 16	7	1.0	1.3	9.0 x 22.0	11.0 x 26.5	1.15	690

**Construction :**

Plain annealed copper conductor Class 1 & 2 as per IEC 60228.

- PVC Insulation.
- PVC Sheath.
- The sheath shall be closely fitting but shall not adhere to the cores and in the case of twin and three-core, the cores shall be laid parallel.

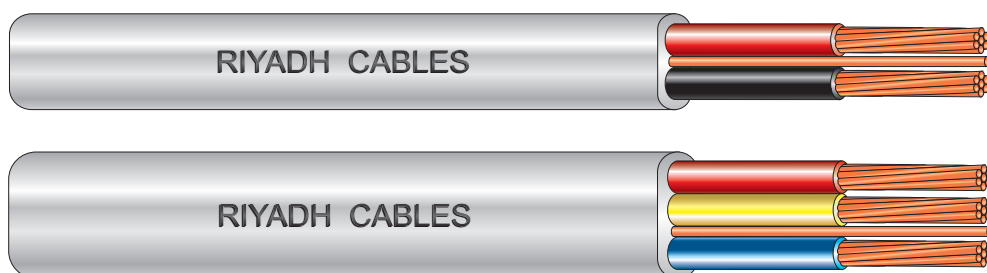
**Core Identification :**

Single	: Brown or Blue,	Single	: Red or Black
Twin	: Brown, Blue	Twin	: Red, Black
Three-core	: Brown, Black (Centre core), Gray	Three-core	: Red, Yellow (centre core), Blue

**Colour of sheath**

Single : Gray, (other colour on request)  
 Flat Twin and three core : Gray

PVC insulated, PVC Sheathed Cables with Earth Continuity Conductor, Flat Twin and Three cores  
COPPER CONDUCTOR - STANDARD : BS 6004 300 / 500 VOLTS



No. & Cross sectional area of conductor	No. of wires in conductor	Radial Thickness of insulation	Radial Thickness of sheath	Mean overall dia. or dimensions.		Earth continuity cond. cross section	Max. DC Resist ance at 20°C	Approx. Weight
				Lower Limit	Upper Limit			
mm <sup>2</sup>	mm	mm	mm	mm	mm	mm <sup>2</sup>	Ω / Km	Kg / Km
2 x 1.0	1	0.6	0.9	4.0 x 7.2	4.7 x 8.6	1.0	18.1	68
2 x 1.5	1	0.7	0.9	4.4 x 8.2	5.4 x 9.6	1.0	12.1	87
2 x 2.5	1	0.8	1.0	5.2 x 9.8	6.2 x 11.5	1.5	7.41	135
2 x 4	7	0.8	1.0	5.6 x 10.5	7.2 x 13.0	1.5	4.61	170
2 x 6	7	0.8	1.1	6.4 x 12.5	8.0 x 15.0	2.5	3.08	240
2 x 10	7	1.0	1.2	7.8 x 15.5	9.6 x 19.0	4	1.83	380
2 x 16	7	1.0	1.3	9.0 x 18.0	11.0 x 22.5	6	1.15	550
3 x 1.0	1	0.6	0.9	4.0 x 9.6	4.7 x 11.0	1.0	18.1	90
3 x 1.5	1	0.7	1.1	4.4 x 10.5	5.4 x 12.5	1.0	12.1	120
3 x 2.5	1	0.8	0.9	5.2 x 12.5	6.2 x 14.5	1.0	7.41	180
3 x 4	7	0.8	1.0	5.8 x 14.5	7.4 x 18.0	1.5	4.61	250
3 x 6	7	0.8	1.1	6.4 x 16.5	8.0 x 20.0	2.5	3.08	330
3 x 10	7	1.0	1.2	7.8 x 21.0	9.6 x 25.5	4	1.83	540
3 x 16	7	1.0	1.3	9.0 x 24.5	11.0 x 29.5	6	1.15	770

**Construction :**

Plain annealed copper conductor Class 1 & 2 as per IEC 60228.

- PVC Insulation.
- PVC Sheath.
- The sheath shall be closely fitting but shall not adhere to the cores, which shall be laid parallel with uninsulated earth continuity conductor.

**Colour for Core Identification**

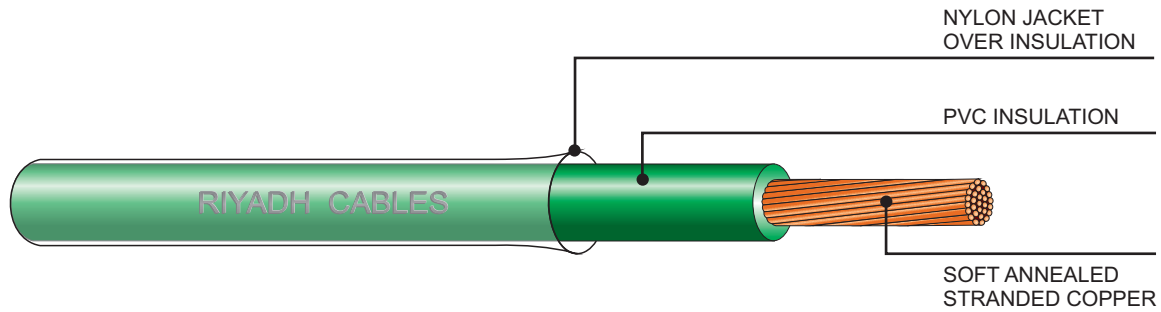
Twin : Brown, Blue Twin : Red, Black.  
Three-core : Brown, Black (Centre core), Gray Three-core : Red, Yellow (centre core), Blue.

**Position of continuity conductor**

Twin : Centrally placed between cores in same plane.  
Three cores : Centrally placed between black and gray cores in same plane (OR) placed between yellow and blue.

**Colour of outer sheath**

Gray.



### Construction :

- Conductor** - Soft drawn annealed copper conductors as per UL 83. Available in solid or stranded Type for sizes 14, 12 and 10 AWG. Sizes 8 AWG and larger available in stranded only.
- Insulation** - Extruded Polyvinyl Chloride (PVC) compound rated 75 and 90 deg. C.
- Jacket** - Tough, smooth, heat and light stabilized, low moisture absorption nylon conforming to UL requirements for type THHN or THWN. This jacket offers a great degree of protection to the PVC insulation from abrasion and cut through which may be encountered in pulling wire through conduits. Nylon has long been recognized as one of the toughest jacketing material used in wire and cable manufacturing.

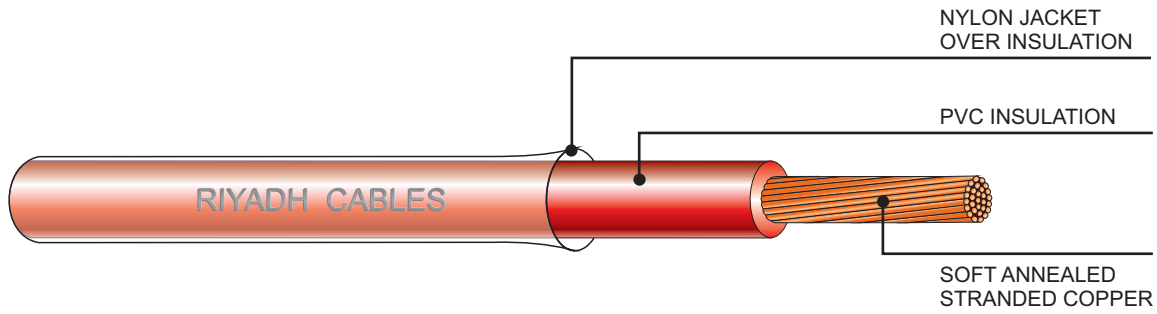
### FEATURES :

- 1.Meets UL 'VW - 1' Flame Test requirements.
- 2.Wet or dry locations - Rated 90 deg. C dry, 75 deg. C wet.
- 3.Resistant to gas and oil exposure - Rated gasoline and oil resistant II per UL.
- 4.Versatile - Can be used as follows:
  - a) THHN - 90 deg. C dry building wire
  - b) THWN - 75 deg. C wet and dry building wire
  - c) MTW - 90 deg. C machine tool wire
- 5.Pulls easier - tough, smooth nylon jacket over PVC insulation.
- 6.Small diameter - more conductors per conduit.

### APPLICATIONS :

Type THHN - THWN building wires are intended for general purpose applications and may be installed in conduit, duct or other recognized raceways in wet or dry locations. Type THHN - THWN wires are designed to operate at conductor temperatures of 75 deg. C for 600 volts service in wet and dry locations. Applicable for both new work and rewiring installations where the smaller wire diameter permits additional circuits or larger conductors to be installed in the conduit without exceeding maximum fill limitations.

Type THHN - THWN wires are also recommended for industrial installation where exceptional resistance to heat and corrosive atmospheres are needed, such as chemical plants, oil refineries, paper mills, etc.



### MARKINGS :

The wire is surface marked as follows :

Riyadh Electric wire, Year of manufacture, Type THHN or THWN or TFFN Gasoline and Oil Resistant II, 600 Volts, VW - 1

#### Standards :

UL 83-Underwriters Laboratories, Thermoplastic Insulated wires and Cables.  
 UL 1063-Underwriters Laboratories, Machine Tool Wires and Cables.  
 UL 1581-Underwriters Laboratories, Reference standard for Electrical wires, Cables and Flexible Cords.

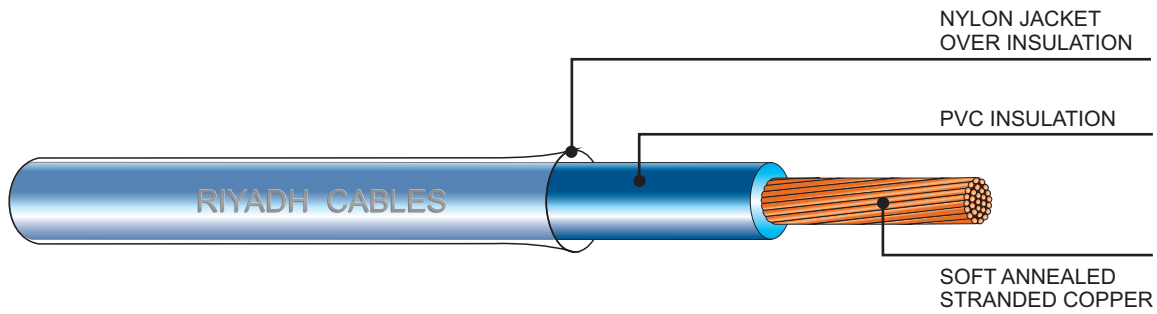
**600 Volts**

**Copper Conductor PVC Insulated NYLON Jacketed THHN/THWN Wires UL 83, 1581**

AWG	Equiv. mm <sup>2</sup>	CONDUCTOR		Insulation Thickness mm (Ave.)	Nylon Jacket Thickness mm (Min.)	Approx. Overall Diameter mm	Approx. Weight of Cond. Kg/Km	Standard DC Resistance at 20°C Ohm/Km	packing length M (± 5%)
		Stranding No x mm (Nom.)	Diameter mm (Nom.)						
18*	0.82	16 x 0.254	1.19	0.38	0.10	2.3	12	18.23	152 C
16*	1.31	19 x 0.296	1.48	0.38	0.10	2.5	17	13.42	152 C
14	2.08	19 x 0.373	1.86	0.38	0.10	2.9	25	8.62	152 C
12	3.31	19 x 0.47	2.35	0.38	0.10	3.4	37	5.43	152 C
10	5.26	19 x 0.594	2.97	0.51	0.10	4.3	59	3.409	152 C
8	8.37	19 x 0.749	3.75	0.76	0.13	5.6	96	2.144	152 C
6	13.30	19 x 0.945	4.72	0.76	0.13	6.6	146	1.348	152 C
4	21.15	19 x 1.19	5.95	1.02	0.15	8.4	233	0.8481	1000 C
2	33.63	19 x 1.50	7.50	1.02	0.15	9.9	356	0.5335	1000 C
1/0	53.48	37 x 1.36	9.52	1.27	0.18	12.5	567	0.3354	1000 C
2/0	67.43	37 x 1.52	10.64	1.27	0.18	13.6	697	0.266	1000 C

\* Listed as TFFN

Colour:Black, White, Red, Blue, Green, Yellow, Orange, Brown, etc.  
 Cutting Length:152 M (500 FT) in Coils 1000 M (3280 FT) in Drums



**TABLE 1**

Current carrying capacities of THWN and THHN insulated Copper Conductors rated 600 V not more than three conductors in raceway or cable or earth (Direct Buried) based on ambient temp. of 30 deg. C

Size	THWN	THHN
AWG	AMPS	AMPS
18		14
16		18
14	20	25
12	25	30
10	35	40
8	50	55
6	65	75
4	85	95
2	115	130
1/0	150	170
2/0	175	195

**TABLE 2**

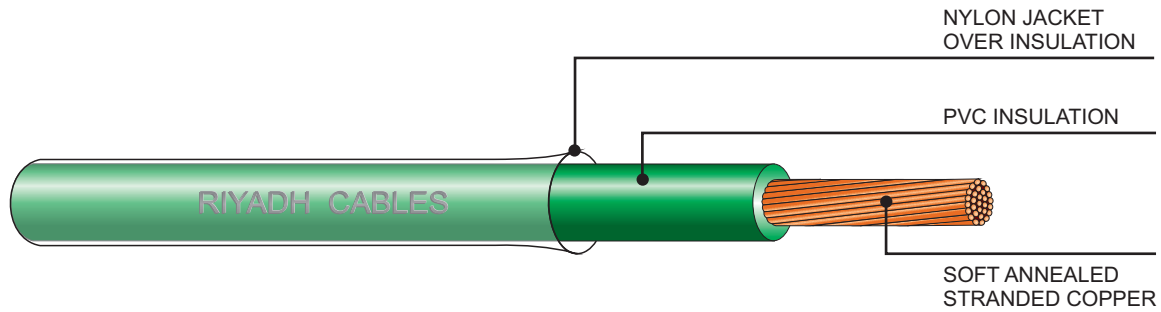
Current carrying capacities of THWN and THHN single insulated Copper Conductors rated 600 V in free air based on ambient air temp. of 30 deg. C

Size	THWN	THHN
AWG	AMPS	AMPS
18		18
16		24
14	30	35
12	35	40
10	50	55
8	70	80
6	95	105
4	125	140
2	170	190
1/0	230	260
2/0	265	300

**TABLE 3 - CORRECTION FACTORS**

Ambient Temp °C	THWN (75 °C)	THHN (90 °C)
21 - 25	1.05	1.04
26 - 30	1.00	1.00
31 - 35	0.94	0.96
36 - 40	0.88	0.91
41 - 45	0.82	0.87
46 - 50	0.75	0.82
51 - 55	0.67	0.76
56 - 60	0.58	0.71
61 - 70	0.33	0.58
71 - 80	-	0.41

For ambient temp. other than 30 deg. C. multiply the ampacities given in tablets 1 & 2 by the appropriate factor given in Table 3.



**THHN/THWN BUILDING WIRE 90 DEG. C 600 VOLTS**

**Table 4 : Conduit Fill**

Maximum number of THHN/THWN Conductors in conduit or tubing as per 1990 NEC

Size AWG	Conduit trade size (inches)											
	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	5	6
18*	19	34	55	97	132	216	-	-	-	-	-	-
16*	15	26	43	76	104	169	-	-	-	-	-	-
14	13	24	39	69	94	154	-	-	-	-	-	-
12	10	18	29	51	70	114	164	-	-	-	-	-
10	6	11	18	32	44	73	104	160	-	-	-	-
8	3	5	9	16	22	36	51	79	106	136	-	-
6	1	4	6	11	15	26	37	57	76	98	154	-
4	1	2	4	7	9	16	22	35	47	60	94	137
3	1	1	3	6	8	13	19	29	39	51	80	116
2	1	1	3	5	7	11	16	25	33	43	67	97
1	-	1	1	3	5	8	12	18	25	32	50	72
1/0	-	1	1	3	4	7	10	15	21	27	42	61
2/0	-	1	1	2	3	6	8	13	17	22	35	51

\* Listed as TFFN

**Table 5 : Combination of Conductors**

For groups or combinations of conductors, the conduit or tubing shall be of such size that the sum of the cross sectional areas of the individual conductors will not be more than percentage of the internal cross sectional area of the conduit or tubing as shown below :

No. of conductors	1	2	3	4	over 4
Percentage	53	31	40	40	40





**Soft Drawn Bare Copper Conductors  
IEC 60228.**

Nominal cross sectional area	Number of strands	Approx. Overall diameter	Approx. Weight	Max. Dc at 20°C	Standard packing
mm <sup>2</sup>	No .	Mm	kg/km	Ohm/km	m $\pm$ 5%
2.5	7	2.0	20	7.41	2000
4	7	2.55	35	4.61	2000
6	7	3.1	50	3.08	2000
10	7	4.0	85	1.83	2000
16	7	5.0	135	1.15	2000
25	7	6.3	210	0.727	2000
35	7	7.4	300	0.524	2000
50	19	8.8	400	0.387	1000
70	19	10.5	580	0.268	1000
95	19	12.4	810	0.193	1000
120	37	14.0	1030	0.153	1000
150	37	15.5	1270	0.124	1000
185	37	17.4	1600	0.0991	1000
240	61	20.0	2100	0.0754	1000
300	61	22.5	2640	0.0601	1000
400	61	25.4	3400	0.0470	1000
500	61	28.5	4370	0.0366	1000
630	91	32.8	5680	0.0283	1000

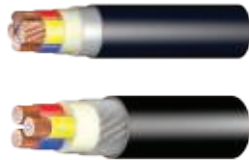
# OUR PRODUCTS

## Power Cable

Wires



Low Voltage  
Lead Sheathed



Medium Voltage  
Cables



High Voltage Cables



## Overhead Lines Conductors

Overhead Lines



Gap Conductor



## Fire Redundant Cables

Fire Survival Cable  
(fire resistant,  
redundant and low  
smoke Halogen Free  
Cables)



## Control Cables

Control Cables



## Communication Cables

Telephone Cables



Fiber Optic  
Cables



## Copper & Aluminum Rods

High Quality  
Copper Rods



High Quality  
Aluminum Rods



## Polymers

PVC Compounds



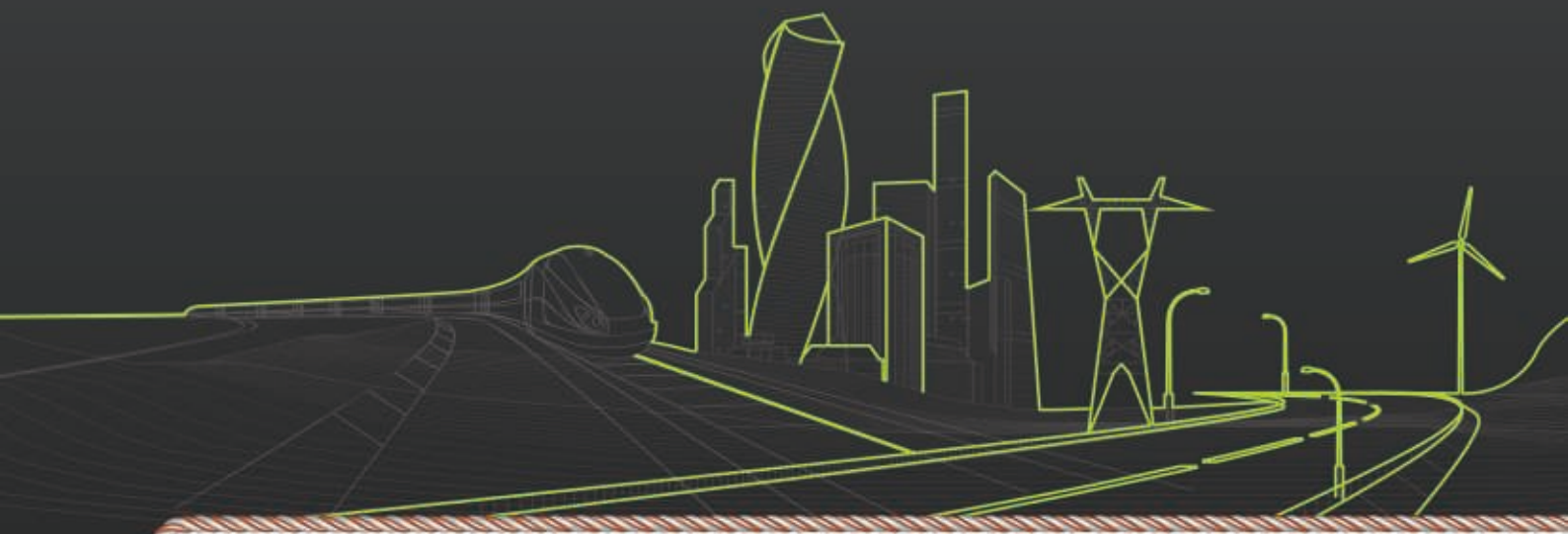
LV XLPE Compounds



## Wooden & Steel Drums

Wooden & Steel Drums





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