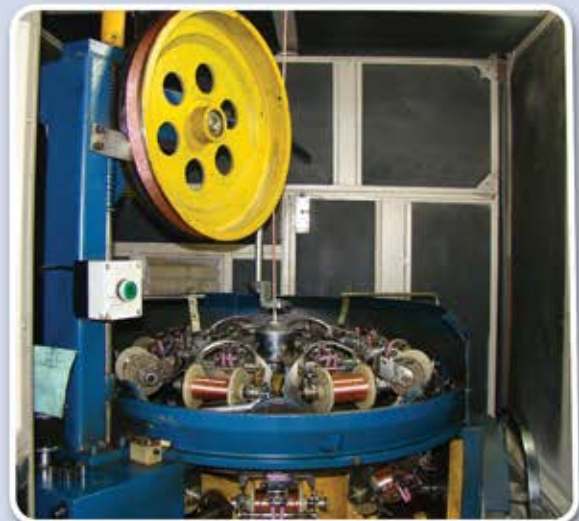




سیم و کابل ستاره یزد نهایی برآمده از ریشه کهن









دارنده گواهینامه سیستم مدیریت یکپارچه
ISO 9001, ISO 14001, OHSAS 18001
از MIC انگلستان



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Copper Conductor Wires & Cables



SETAREH YAZD Wire & Cable Co.



Flexible Wire with PVC Insulated

CU/PVC

Code: NYAF , H05V-K , H07V-K

Rated voltage : 300/500 V & 450/750 V

Reference standard : ISIRI (607) 02 , ISIRI (607) 06 , IEC 60227 , BS 6004
VDE 0250

Application : For internal wiring of switching boxes and electrical appliance.

For installation in conduits and tubes. Not for direct installation under plaster.

Construction :

1-Conductor: Fine stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084
or VDE 0295 class 5 .

2-Insulation : PVC/C

3-Color of insulation : red, blue , Yellow ,Green , black or As request

Technical Specification :

1-Max. conductor temperature : 70 °C

2-Conductor resistant : Refer to table (1)

3-Test voltage : For 300/500V: 2000 V ac for 5 min

For 450/750V: 2500 V ac for 5 min.

4-Current carrying capacity : refer to table (2)

5-Bending radius : Refer to table (3)

6-Permissible short circuit temperature : 160 °C

7-Flame retardant : acc. to IEC 60332-1



Flexible Wire with PVC Insulated

Size mm ²	Insulation thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)	Packaging (m)
0.5	0.6	2.2	9	100
0.75	0.6	2.4	10	100
1.0	0.6	2.6	14	100
1.5	0.7	3.0	20	100
2.5	0.8	3.6	32	100
4.0	0.8	4.2	46	100
6.0	0.8	4.8	65	100
10	1.0	6.1	115	100
16	1.0	7.1	170	100 , 1000
25	1.2	9.3	260	100 , 1000
35	1.2	10.7	360	100 , 1000
50	1.4	12.6	515	1000
70	1.4	14.4	710	1000
95	1.6	16.4	940	1000
120	1.6	18.2	1210	1000
150	1.8	20.2	1520	500
185	2.0	22.4	1874	500
240	2.2	25.4	2420	500

*The above data is approximate and subject to manufacturing tolerances



SETAREH YAZD CO.

SETAREH YAZD Wire & Cable Co.



Single & Multi Core Wire with PVC Insulated

CU/PVC

Code: NYA (re , rm) , H05V-U , H07V-U , H07V-R

Rated voltage : 300/500 V & 450/750 V

Reference standard : IEC 60227 , VDE 0281 , BS 6004 , ISIRI (607) 01 ,
ISIRI (607) 05

Application : Use for lighting and commercial building. Suitable for covered and dry places, use for fixed installation, in distribution panel, on and under plaster as laid in conduit, or on insulating support.

Construction : Insulated wire with solid or stranded copper conductors.

1-Conductor : Solid or Stranded plain annealed copper acc. to IEC 60228 or
ISIRI 3084 or VDE 0295 , class 1 & 2.

2-Insulation : PVC/C

3-Color of insulation : As request

Technical Specification :

1-Max. conductor temperature : 70 °C

2- Conductor resistant : Refer to table (1)

3-Test voltage : For 300/500V: 2000 V ac for 5 min

For 450/750V: 2500 V ac for 5 min.

4- Current carrying capacity : Refer to table (2)

5- Bending radius : Refer to table (3)

6- Permissible short circuit temperature : 160 °C

7- Flame retardant : acc. to IEC 60332-1



Single & Multi Core Wire with PVC Insulated

Size mm ²	Cond. N × d	Insulation thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
1.5 re	1 × 1.38	0.7	2.9	21
1.5 rm	7 × 0.52	0.7	3.1	22
2.5 re	1 × 1.78	0.8	3.5	33
2.5 rm	7 × 0.67	0.8	3.7	34
4 re	1 × 2.25	0.8	3.9	48
4 rm	7 × 0.85	0.8	4.2	51
6 re	1 × 2.76	0.8	4.4	65
6 rm	7 × 1.04	0.8	4.8	69
10 re	1 × 3.57	1.0	5.57	110
10 rm	7 × 1.35	1.0	6.1	119
16 rm	7 × 1.7	1.0	7.1	176
25 rm	7 × 2.14	1.2	8.9	280
35 rm	7 × 2.52	1.2	10.1	370
50 rm	19 × 1.78	1.4	11.7	502
70 rm	19 × 2.16	1.4	13.5	710
95 rm	19 × 2.52	1.6	16.0	975
120rm	37 × 2.05	1.6	17.6	1220
150rm	37 × 2.25	1.8	19.5	1505
185rm	37 × 2.52	2.0	21.8	1885
240rm	61 × 2.22	2.2	24.7	2410
300rm	61 × 2.52	2.4	27.6	3010
400rm	61 × 2.89	2.6	31.2	3870

*The above data is approximate and subject to manufacturing tolerances





Single Core Flexible Cable with PVC Insulated and PVC Sheathed

Cu/PVC/PVC

Code: NYY , H1VV-F

Rated voltage : 0.6/1 KV

Reference standard : ISIRI 3569-1 , IEC 60502-1

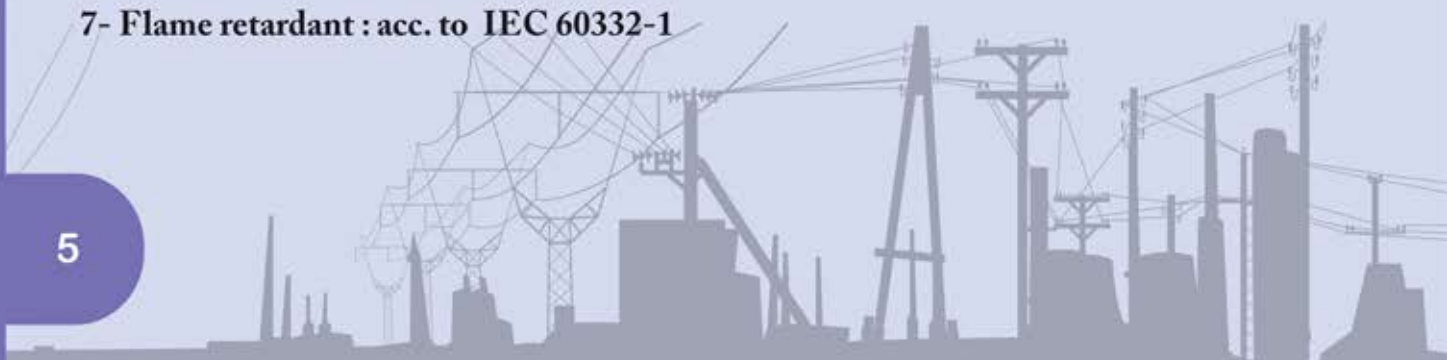
Application : For indoor or outdoor in cable, duct or tray. These cables are suitable for switching boxes, industrial plants, and commercial buildings.

Construction : Insulated wire with solid or stranded copper conductors.

- 1- Conductor : Fine Stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084 or VDE 0295, Class 5
- 2- Insulation : PVC
- 3- Color of Insulation : Black (or as request)
- 4- Outer sheath : PVC

Technical Specification :

- 1- Max. conductor temperature : 70 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 3.5 KV AC or 8.4 KV DC for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 160 °C
- 7- Flame retardant : acc. to IEC 60332-1





Single Core Flexible Cable with PVC Insulated and PVC Sheathed

Size mm ²	Insulation thickness (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
1 × 16	1.0	1.4	10.2	230
1 × 25	1.2	1.4	12.6	340
1 × 35	1.2	1.4	13.9	450
1 × 50	1.4	1.4	16.3	612
1 × 70	1.4	1.5	18.2	850
1 × 95	1.6	1.6	21	1110
1 × 120	1.6	1.6	23	1390
1 × 150	1.8	1.7	25.4	1720
1 × 185	2.0	1.8	28.3	2100
1 × 240	2.2	1.9	31.8	2730
1 × 300	2.4	2.0	35.2	3400
1 × 400	2.6	2.2	40	4440

*The above data is approximate and subject to manufacturing tolerances





Multi Core Flexible Cable with PVC Insulated and PVC Sheathed

Cu/PVC/PVC

Code: NYMHY , H05VV-F

Rated voltage : 300/500 V

Reference standard : ISIRI (607) 53 , 60227 IEC 53 , BS 6500 , VDE 0250

Application : For the connection of lighting, kitchen appliances, domestic, office appliances, at low mechanical stresses. Not for the connection of heating appliances in connection with the hot parts. For use in dry and damp locations

Construction :

- 1- Conductor : Fine stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084 or VDE 0295 , class 5 .
- 2- Insulation : PVC /D , PVC/YI2 , PVC/TI2
- 3- Color of insulation : As request
- 4- Protective conductor : Green/Yellow (if any)
- 5- Assembly : Cores twisted together ,(with filler if necessary)
- 6- Outer sheath : PVC/ST5 , PVC/YM2 , PVC/TM2

Technical Specification :

- 1- Max. conductor temperature : 70 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 1500 , 2000 V ac , for 5 min.
- 4- Current carrying capacity : refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 160 °C
- 7- Flame retardant : ac. to IEC 60332-1



Multi Core Flexible Cable with PVC Insulated and PVC Sheathed

Cu/PVC/PVC

Code: NYMHY , H05VV-F

Rated voltage : 300/500 V

Reference standard : ISIRI (607) 53 , 60227 IEC 53 , BS 6500 , VDE 0250

Application : For the connection of lighting, kitchen appliances, domestic, office appliances, at low mechanical stresses. Not for the connection of heating appliances in connection with the hot parts. For use in dry and damp locations

Construction :

- 1- Conductor : Fine stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084 or VDE 0295 , class 5 .
- 2- Insulation : PVC /D , PVC/YI2 , PVC/TI2
- 3- Color of insulation : As request
- 4- Protective conductor : Green/Yellow (if any)
- 5- Assembly : Cores twisted together ,(with filler if necessary)
- 6- Outer sheath : PVC/ST5 , PVC/YM2 , PVC/TM2

Technical Specification :

- 1- Max. conductor temperature : 70 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 1500 , 2000 V ac , for 5 min.
- 4- Current carrying capacity : refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 160 °C
- 7- Flame retardant : ac. to IEC 60332-1



Multi Core Flexible Cable with PVC Insulated and PVC Sheathed

Size mm ²	Insulation thickness (mm)	Sheath thickness (mm)	Overall dia. approx. (mm) Min Max		Weight approx. (Kg/Km)
2 × 0.5	0.6	0.7	5.2	6.5	50
2 × 0.75	0.6	0.8	5.7	7.2	61
2 × 1	0.6	0.8	5.9	7.5	70
2 × 1.5	0.7	0.8	6.8	8.6	91
2 × 2.5	0.8	1.0	8.4	10.6	138
3 × 0.5	0.6	0.7	5.5	6.9	60
3 × 0.75	0.6	0.8	6	7.6	72
3 × 1	0.6	0.8	6.3	8	84
3 × 1.5	0.7	0.9	7.4	9.4	112
3 × 2.5	0.8	1.1	9.2	11.4	172
4 × 0.5	0.6	0.8	6	7.6	73
4 × 0.75	0.6	0.8	6.6	8.3	90
4 × 1	0.6	0.9	7.1	9	104
4 × 1.5	0.7	1.0	8.4	10.5	142
4 × 2.5	0.8	1.1	10.1	12.5	210
5 × 0.5	0.6	0.8	6.8	8.5	84
5 × 0.75	0.6	0.9	7.4	9.3	110
5 × 1	0.6	0.9	7.8	9.8	130
5 × 1.5	0.7	1.1	9.3	11.6	180
5 × 2.5	0.8	1.2	11.2	13.9	265

*The above data is approximate and subject to manufacturing tolerances





Multi Core Cable with PVC Insulated & PVC Sheathed 2, 3, 4 and 5 Cores

NYM- O (re , rm) , NYM – J (re , rm)

Code: CU/PVC/PVC

Rated voltage : 300/500 V

Reference standard : 60227 IEC 10 , ISIRI (607) 10

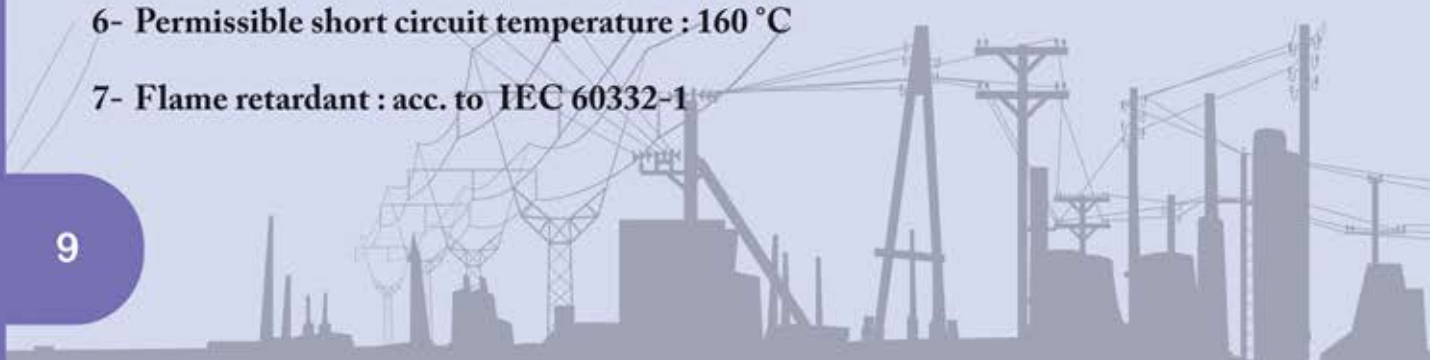
Application : For fixed installation, indoors and outdoors, in cable duct , In ground and water, Used for electric network, industrial plants and switchgear.

Construction :

- 1- Conductor : Solid or Stranded plain annealed copper acc. to IEC 60228
or ISIRI 3084 or VDE 0295, class 1& 2 .
- 2- Insulation : PVC /C , PVC/YI1 , PVC/TI1
- 3- Color of insulation : As request
- 4- Inner covering : Extruded PVC
- 5- Outer sheath : Black PVC/ST4 , PVC/YM1 , PVC/TM1

Technical Specification :

- 1- Max. conductor temperature : 70 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 2000 V ac for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 160 °C
- 7- Flame retardant : acc. to IEC 60332-1





Multi Core Cable with PVC Insulated & PVC Sheathed 2 , 3 , 4 and 5 Cores

Size	Cond. n.d (mm)	Insulation Thickness (mm)	Inner covering (mm)	Sheath Thickness (mm)	Overall dia. approx.		Weight approx. (Kg/Km)
					Min. (mm)	Max.	
2×1.5re	1×1.38	0.7	0.4	1.2	8.4	10.0	119
2×2.5re	1×1.78	0.8	0.4	1.2	9.6	11.5	164
2×4 re	1×2.25	0.8	0.4	1.2	10.5	12.5	216
2×6 re	1×2.76	0.8	0.4	1.2	11.5	13.5	278
2×10 re	1×3.57	1.0	0.6	1.4	14.5	16.5	457
2×10rm	7×1.35	1.0	0.6	1.4	15	17.5	462
3×1.5re	1×1.38	0.7	0.4	1.2	8.8	10.5	140
3×2.5re	1×1.78	0.8	0.4	1.2	10	12	197
3×4 re	1×2.25	0.8	0.4	1.2	11	13	265
3×6 re	1×2.76	0.8	0.4	1.4	12.5	14.5	360
3×10 re	1×3.57	1.0	0.6	1.4	15.5	17.5	573
3×10rm	7×1.35	1.0	0.6	1.4	15.5	19	565
3×16rm	7×1.7	1.0	0.8	1.4	18	21.5	822
3×25rm	7×2.14	1.2	0.8	1.6	22	26	1235
3×35rm	7×2.52	1.2	1.0	1.6	24.5	29	1638
4×1.5re	1×1.38	0.7	0.4	1.2	9.6	11.5	167
4×2.5re	1×1.78	0.8	0.4	1.2	11	13	237
4×4 re	1×2.25	0.8	0.4	1.4	12	14.5	335
4×6 re	1×2.76	0.8	0.6	1.4	14	16	458
4×10 re	1×3.57	1.0	0.6	1.4	16.5	19	709
4×10rm	7×1.35	1.0	0.6	1.4	17	20.5	694
4×16rm	7×1.7	1.0	0.8	1.4	20	23.5	1016
4×25rm	7×2.14	1.2	1.0	1.6	24.5	28.5	1560
4×35rm	7×2.52	1.2	1.0	1.6	27	32	2042
5×1.5re	1×1.38	0.7	0.4	1.2	10	12	196
5×2.5re	1×1.78	0.8	0.4	1.2	11.5	14	281
5×4 re	1×2.25	0.8	0.4	1.4	13.5	16	414
5×6 re	1×2.76	0.8	0.6	1.4	15	17.5	547
5×10 re	1×3.57	1.0	0.6	1.4	18	21	851
5×10rm	7×1.35	1.0	0.6	1.4	18.5	22	828
5×16rm	7×1.7	1.0	1.0	1.6	21	26	1240
5×25rm	7×2.14	1.2	1.0	1.6	27	31.5	1874
5×35rm	7×2.52	1.2	1.2	1.6	30	35	2495

*The above data is approximate and subject to manufacturing tolerances





Multi Core Flexible Power Cable with PVC Insulated & PVC Sheathed

Cu/PVC/PVC

Code: NYY-J , NYY-O , H1VV-F

Rated voltage : 0.6/1 KV

Reference standard : ISIRI 3569-1 , IEC 60502-1

Application : For indoor or outdoor in cable duct or tray. These cable are suitable for switching boxes, industrial plants, and commercial buildings. These cables are suitable for direct burial if there is no mechanical stresses.

Construction :

- 1- Conductor : Fine stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084 or VDE 0295 , class 5
- 2- Insulation : PVC /A
- 3- Color of insulation : As request
- 4- Protective conductor : Green/Yellow (if any)
- 5- Assembly : Cores twisted together ,(with filler if necessary)
- 6- Inner covering : PVC
- 7- Outer sheath : PVC/ST1 , PVC/YM3 , PVC/TM3

Technical Specification :

- 1- Max. conductor temperature : 70 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 3.5 KV AC or 8.4 KV DC for 5 min
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 160 °C
- 7- Flame retardant : ac. to IEC 60332-1



Multi Core Flexible Power Cable with PVC Insulated & PVC Sheathed

Size mm ²	Insulation thickness (mm)	Inner covering (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
2×1.5	0.8	-	1.8	10	134
2×2.5	0.8	-	1.8	11	174
2× 4	1.0	-	1.8	12	221
2× 6	1.0	-	1.8	13.2	284
2×10	1.0	-	1.8	15.8	460
3×1.5	0.8	-	1.8	10.5	132
3×2.5	0.8	-	1.8	11.5	204
3× 4	1.0	-	1.8	12.7	270
3× 6	1.0	-	1.8	14	360
3×10	1.0	-	1.8	16.8	540
3×16	1.0	-	1.8	19	755
3×25	1.2	-	1.8	23.5	1170
3×35	1.2	-	1.8	26.5	1532
4×1.5	0.8	-	1.8	11.3	185
4×2.5	0.8	-	1.8	12.4	245
4× 4	1.0	-	1.8	13.8	325
4× 6	1.0	-	1.8	15.2	425
4×10	1.0	-	1.8	18.4	670
4×16	1.0	-	1.8	20.8	950
4×25	1.2	-	1.8	26	1460
4×35	1.2	-	1.8	29	1935
3×25+16	1.2-1.0	-	1.8	24.5	1320
3×35+16	1.2-1.0	-	1.8	27.3	1630
3×50+25	1.4-1.2	-	1.9	32	2310
3×70+35	1.4-1.2	-	2.0	36.4	3117
3×95+50	1.6-1.4	-	2.1	42	4216
3×120+70	1.6-1.4	-	2.2	46.2	5275

*The above data is approximate and subject to manufacturing tolerances





Cu/PVC/PVC

Code: NYSLY

Rated voltage : 300/500 V

Reference standard : 60227 IEC 75 ,VDE 0250 , ISIRI (607) 75

Application : For use in dry, damp and wet places, as measurement and control cables for internal installations where there are no mechanical stresses, in machinery, production lines and control equipments.

Construction :

- 1- Conductor : Fine stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084 or VDE 0295 , class 5 .
- 2- Insulation : PVC / D
- 3- Core identification : Black with numbered
- 4- Protective conductor : Green/Yellow (if any)
- 5- Assembly : Cores twisted together ,(covered with PP tape or PET if necessary)
- 6- Outer sheath : PVC / ST9

Technical Specification :

- 1- Max. conductor temperature : 70 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 2000 V ac for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 160 °C
- 7- Flame retardant : acc. to IEC 60332-1



Flexible Control Cables with PVC Insulated & PVC Sheathed

Size mm ²	Insulation thickness (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
7 × 1	0.6	1.0	10	174
8 × 1	0.6	1.1	12	210
10 × 1	0.6	1.2	12.6	240
12 × 1	0.6	1.2	13.2	280
14 × 1	0.6	1.2	13.8	312
16 × 1	0.6	1.2	14.6	360
20 × 1	0.6	1.4	16.5	384
24 × 1	0.6	1.5	18.5	530
27 × 1	0.6	1.5	19	580
30 × 1	0.6	1.6	19.6	640
34 × 1	0.6	1.7	21	710
37 × 1	0.6	1.7	21.6	760
40 × 1	0.6	1.8	22.4	788
50 × 1	0.6	1.9	25	980
61 × 1	0.6	2.1	26.8	1150
7 × 1.5	0.7	1.2	10.8	215
8 × 1.5	0.7	1.2	13	285
10 × 1.5	0.7	1.2	13.6	300
12 × 1.5	0.7	1.2	14	345
14 × 1.5	0.7	1.4	15	385
16 × 1.5	0.7	1.5	16.2	470
20 × 1.5	0.7	1.6	18.6	605
24 × 1.5	0.7	1.8	20	695
27 × 1.5	0.7	1.8	21	760
30 × 1.5	0.7	1.8	21.6	835
34 × 1.5	0.7	1.8	23	970
37 × 1.5	0.7	2.0	23.2	1020
40 × 1.5	0.7	2.0	25	1105
50 × 1.5	0.7	2.1	27.8	1380
61 × 1.5	0.7	2.1	29.5	1620

*The above data is approximate and subject to manufacturing tolerances





Flexible Control Cables with PVC Insulated & PVC Sheathed

Size mm ²	Insulation thickness (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
7 × 2.5	0.8	1.2	13	320
8 × 2.5	0.8	1.4	16.1	420
10 × 2.5	0.8	1.5	17	470
12 × 2.5	0.8	1.5	17.6	545
14 × 2.5	0.8	1.6	18.8	615
16 × 2.5	0.8	1.7	20	720
20 × 2.5	0.8	1.8	23	910
24 × 2.5	0.8	2.0	25	1090
27 × 2.5	0.8	2.1	25.8	1140
30 × 2.5	0.8	2.1	26.8	1250
34 × 2.5	0.8	2.1	28.2	1520
37 × 2.5	0.8	2.3	28.8	1590
40 × 2.5	0.8	2.3	31	1770
50 × 2.5	0.8	2.4	34.4	2140
61 × 2.5	0.8	2.7	37	2560

*The above data is approximate and subject to manufacturing tolerances





SETAREH YAZD Wire & Cable Co.



SETAREH YAZD Wire & Cable Co.





CU/PVC/CWB/PVC

Code: NYCY , HO5VC4V-K , NYSLCY-J , NYSLCY-O

Rated voltage : 300/500 V

Reference standard : 60227 IEC 74, VDE 0250

Application : For use in dry, damp and wet places, where a protection against electromagnetic effects is necessary, as measurement and control cables for internal installations where there are no mechanical stresses, in machinery, production lines and control equipments.

Construction :

- 1- Conductor : Fine stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084 or VDE 0295 , class 5 .
- 2- Insulation : PVC/D
- 3- Core identification : Black with numbered
- 4- Protective conductor : Green/Yellow (if necessary)
- 5- Assembly : Cores twisted together ,(covered with PP tape or PET if necessary)
- 6- Screen : Tinned or plain annealed copper wire braid
- 7- Outer sheath : PVC /ST9

Technical Specification:

- 1- Max. conductor temperature : 70 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 2000 V ac for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 160 °C
- 7- Flame retardant : acc. to IEC 60332-1



Flexible Shielded Control Cables with PVC Insulated & PVC Sheathed

Size mm ²	Insulation thickness (mm)	Inner sheath thickness (mm)	Wire screen dia. (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
7 × 1	0.6	0.7	0.16	1.2	12	240
8 × 1	0.6	1.0	0.16	1.2	12.5	280
10 × 1	0.6	1.0	0.21	1.2	14.2	360
12 × 1	0.6	1.0	0.21	1.5	16.2	410
14 × 1	0.6	1.0	0.21	1.5	16.9	450
16 × 1	0.6	1.0	0.21	1.8	18.2	505
20 × 1	0.6	1.0	0.21	1.8	20.2	610
24 × 1	0.6	1.2	0.21	1.8	22	710
27 × 1	0.6	1.2	0.21	1.8	22.2	760
30 × 1	0.6	1.2	0.21	2.0	23.3	820
34 × 1	0.6	1.2	0.21	2.1	25	940
37 × 1	0.6	1.2	0.26	2.1	25.2	990
40 × 1	0.6	1.4	0.26	2.1	26.8	1060
50 × 1	0.6	1.4	0.26	2.1	29	1320
61 × 1	0.6	1.4	0.26	2.4	31.2	1530
7 × 1.5	0.7	0.8	0.16	1.2	13	340
8 × 1.5	0.7	0.8	0.16	1.2	15.2	370
10 × 1.5	0.7	1.0	0.21	1.5	17	480
12 × 1.5	0.7	1.0	0.21	1.5	17.5	520
14 × 1.5	0.7	1.0	0.21	1.5	18.2	610
16 × 1.5	0.7	1.0	0.21	1.8	19.6	690
20 × 1.5	0.7	1.2	0.21	1.8	22.2	850
24 × 1.5	0.7	1.2	0.21	2.1	24.2	980
27 × 1.5	0.7	1.2	0.21	2.1	24.6	1050
30 × 1.5	0.7	1.2	0.21	2.1	25.4	1140
34 × 1.5	0.7	1.2	0.26	2.1	27.2	1350
37 × 1.5	0.7	1.2	0.26	2.1	27.2	1390
40 × 1.5	0.7	1.4	0.26	2.3	29.2	1490
50 × 1.5	0.7	1.4	0.26	2.4	32.2	1810
61 × 1.5	0.7	1.4	0.26	2.4	34	2100
7 × 2.5	0.8	0.8	0.21	1.2	14.8	480
8 × 2.5	0.8	1.0	0.21	1.6	19	550
10 × 2.5	0.8	1.0	0.21	1.6	19.8	710
12 × 2.5	0.8	1.0	0.21	1.8	20.5	780
14 × 2.5	0.8	1.0	0.21	1.8	21.5	870
16 × 2.5	0.8	1.2	0.21	2.0	23.2	980
20 × 2.5	0.8	1.2	0.26	2.1	26.4	1130
24 × 2.5	0.8	1.4	0.26	2.1	28.5	1430
27 × 2.5	0.8	1.4	0.26	2.2	29	1570
30 × 2.5	0.8	1.4	0.26	2.2	30	1700
34 × 2.5	0.8	1.4	0.26	2.4	32.5	1950
37 × 2.5	0.8	1.4	0.26	2.4	32.5	2010
40 × 2.5	0.8	1.6	0.31	2.7	35.3	2140
50 × 2.5	0.8	1.6	0.31	2.7	38.4	2640
61 × 2.5	0.8	1.6	0.31	2.7	40	3030

* The above data is approximate and subject to manufacturing tolerances





Single Core Power Cables with PVC Insulated & PVC Sheathed

NYY- re , NYY- rm

Code: CU/PVC/PVC

Rated voltage : 0.6/1 KV

Reference standard : IEC 60502- 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

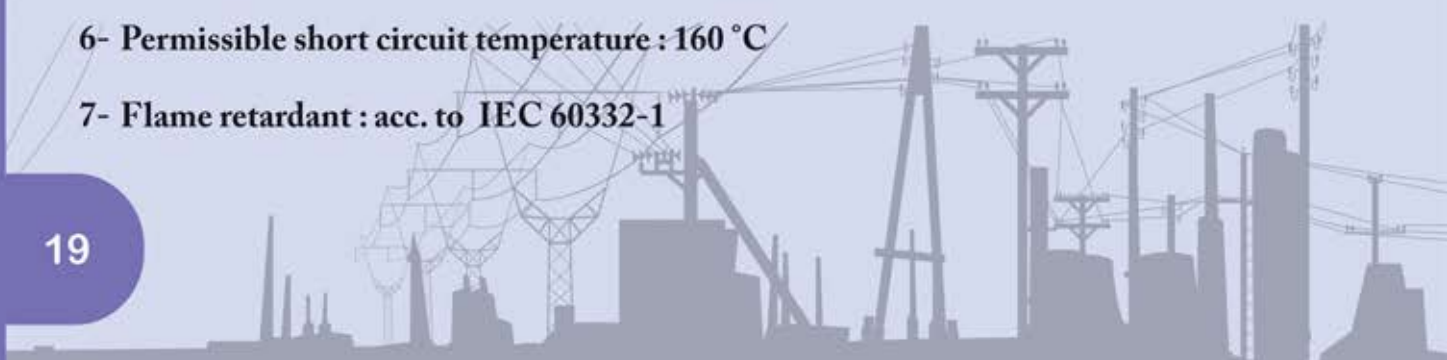
Application : For fixed installation, indoors and outdoors, in cable duct , In ground and water, Used for electric network, industrial plants and switchgear.

Construction :

- 1- Conductor: Solid or Stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084 or VDE 0295, class 1& 2
- 2- Insulation : PVC/A
- 3- Color of insulation : As request
- 4- Inner covering : Extruded PVC
- 5- Outer sheath : Black PVC/ST1

Technical Specification:

- 1- Max. conductor temperature : 70 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 160 °C
- 7- Flame retardant : acc. to IEC 60332-1





Single Core Power Cables with PVC Insulated & PVC Sheathed

Size (mm ²)	No. × dia.(mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
1 × 1.5	1 × 1.38	0.8	1.4	5.8	49.6
1 × 1.5	7 × 0.52	0.8	1.4	6.0	52
1 × 2.5	1 × 1.78	0.8	1.4	6.2	62.5
1 × 2.5	7 × 0.67	0.8	1.4	6.4	65
1 × 4	1 × 2.25	1.0	1.4	7.1	78.5
1 × 4	7 × 0.85	1.0	1.4	7.4	92
1 × 6	1 × 2.76	1.0	1.4	7.6	110
1 × 6	7 × 1.04	1.0	1.4	7.9	116
1 × 10	1 × 3.57	1.0	1.4	8.4	155
1 × 10	7 × 1.35	1.0	1.4	8.8	162
1 × 16	7 × 1.7	1.0	1.4	9.9	230
1 × 25	7 × 2.14	1.2	1.4	11.6	339
1 × 35	7 × 2.52	1.2	1.4	12.8	445
1 × 50	19 × 1.78	1.4	1.4	14.8	610
1 × 70	19 × 2.16	1.4	1.4	16.4	811
1 × 95	19 × 2.52	1.6	1.5	18.8	1090
1 × 120	37 × 2.05	1.6	1.5	20.4	1338
1 × 150	37 × 2.27	1.8	1.6	22.7	1675
1 × 185	37 × 2.52	2.0	1.7	25	2055
1 × 240	61 × 2.22	2.2	1.8	28.1	2639
1 × 300	61 × 2.5	2.4	1.9	31.1	3309
1 × 400	61 × 2.88	2.6	2.0	35.1	4333
1 × 500	61 × 3.23	2.8	2.1	38.9	5404
1 × 630	91 × 2.96	2.8	2.2	42.6	6940
1 × 1000	91 × 3.74	3.0	2.5	52.1	10879

*The above data is approximate and subject to manufacturing tolerances





Single Core Power Cables with XLPE Insulated & PVC Sheathed

N2XY-re , N2XY-rm

Code: CU/XLPE/PVC

Rated voltage : 0.6/1 KV

Reference standard : IEC 60502- 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

Application : For fixed installation, indoors and outdoors, in cable duct , In ground and water

Used for electric network, industrial plants and switchgear

Construction :

- 1- Conductor: Solid or Stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084 or VDE 0295, class 1& 2 .
- 2- Insulation : XLPE
- 3- Color of insulation : As request
- 4- Outer sheath : Black PVC/ST1 or PVC/ST2

Technical Specification:

- 1- Max. conductor temperature : 90 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 250 °C
- 7- Flame retardant : acc. to IEC 60332-1

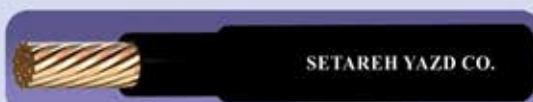




Single Core Power Cables with XLPE Insulated & PVC Sheathed

Size (mm ²)	No. & dia. (mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
1 × 1.5 RE	1 × 1.38	0.7	1.4	5.6	44.5
1 × 1.5 RM	7 × 0.52	0.7	1.4	5.8	47
1 × 2.5 RE	1 × 1.78	0.7	1.4	5.9	55.5
1 × 2.5 RM	7 × 0.67	0.7	1.4	6.2	59
1 × 4 RE	1 × 2.25	0.7	1.4	6.5	74
1 × 4 RM	7 × 0.85	0.7	1.4	6.	78
1 × 6 RE	1 × 2.76	0.7	1.4	7.0	96
1 × 6 RM	7 × 1.04	0.7	1.4	7.2	105
1 × 10 RE	1 × 3.57	0.7	1.4	7.6	137
1 × 10 RM	7 × 1.35	0.7	1.4	8.0	142
1 × 16 RM	7 × 1.7	0.7	1.4	9.0	205
1 × 25 RM	7 × 2.14	0.9	1.4	11.0	305
1 × 35 RM	7 × 2.52	0.9	1.4	12.0	405
1 × 50 RM	19 × 1.78	1.0	1.4	13.4	525
1 × 70 RM	19 × 2.16	1.1	1.4	16.0	765
1 × 95 RM	19 × 2.52	1.1	1.5	17.5	1005
1 × 120 RM	37 × 2.05	1.2	1.5	19.5	1265
1 × 150 RM	37 × 2.27	1.4	1.6	21.3	1543
1 × 185 RM	37 × 2.52	1.6	1.6	24.0	1935
1 × 240 RM	61 × 2.22	1.7	1.7	27.0	2500
1 × 300 RM	61 × 2.5	1.8	1.8	30.0	3100
1 × 400 RM	61 × 2.88	2.0	1.9	33.0	3970
1 × 500 RM	61 × 3.23	2.2	2.1	37.0	5000

* The above data is approximate and subject to manufacturing tolerances



SETAREH YAZD CO.

SETAREH YAZD Wire & Cable Co.



CU/PVC/PVC CU/XPLE/PVC

Code: NYY- O , NYY – J . N2XY – O , N2XY - J

Rated voltage : 0.6/1 KV

Reference standard : IEC 60502- 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

Application : For fixed installation, indoors and outdoors, in cable duct , In ground and water

Used for electric network, industrial plants and switchgear.

Construction :

- 1- Conductor : Solid or Stranded plain annealed copper acc. To IEC 60228 or ISIRI 3084
or VDE 0295, class 1 & 2
- 2- Insulation : PVC/A or XLPE
- 3- Color of insulation : As request
- 4- Inner covering: Extruded PVC for round conductor and sector shape covered with PP tape.
- 5- Outer sheath : Black PVC/ST1 or PVC/ST2

Technical Specification:

- 1- Max. conductor temperature : for PVC insulation 70 °C for XLPE insulation 90 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : for PVC insulation 160 °C
for XLPE insulation 250 °C
- 7- Flame retardant : acc. to IEC 60332-1



Multi Core Power Cables with PVC or XLPE Insulated & PVC Sheathed

a) NYY- O , NYY – J

Size	Cond. n × d (mm)	Insulation Thickness (mm)	Inner covering (mm)	Sheath Thickness(mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
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2 Core NYY

2 × 1.5 re	1 × 1.38	0.8	1.0	1.8	11.4	185
2 × 1.5 rm	7 × 0.52	0.8	1.0	1.8	12	194
2 × 2.5 re	1 × 1.78	0.8	1.0	1.8	12.4	215
2 × 2.5 rm	7 × 0.67	0.8	1.0	1.8	12.8	230
2 × 4 re	1 × 2.25	1.0	1.0	1.8	13.8	285
2 × 4 rm	7 × 0.85	1.0	1.0	1.8	14.6	300
2 × 6 re	1 × 2.76	1.0	1.0	1.8	14.8	354
2 × 6 rm	7 × 1.04	1.0	1.0	1.8	15.6	385
2 × 10 re	1 × 3.57	1.0	1.0	1.8	16.4	480
2 × 10 rm	7 × 1.35	1.0	1.0	1.8	17.5	510
2 × 16 rm	7 × 1.7	1.0	1.0	1.8	19.3	705
2 × 25 rm	7 × 2.14	1.2	1.0	1.8	22.7	1015

3 Core NYY

3 × 1.5 re	1 × 1.38	0.8	1.0	1.8	12	205
3 × 1.5 rm	7 × 0.52	0.8	1.0	1.8	12.4	215
3 × 2.5 re	1 × 1.78	0.8	1.0	1.8	13	245
3 × 2.5 rm	7 × 0.67	0.8	1.0	1.8	13.4	265
3 × 4 re	1 × 2.25	1.0	1.0	1.8	14.5	340
3 × 4 rm	7 × 0.85	1.0	1.0	1.8	15.4	360
3 × 6 re	1 × 2.76	1.0	1.0	1.8	15.6	420
3 × 6 rm	7 × 1.04	1.0	1.0	1.8	16.6	455
3 × 10 re	1 × 3.57	1.0	1.0	1.8	17.4	585
3 × 10 rm	7 × 1.35	1.0	1.0	1.8	18.6	620
3 × 16 rm	7 × 1.7	1.0	1.0	1.8	21	840
3 × 25 rm	7 × 2.14	1.2	1.0	1.8	24.6	1220
3 × 35 rm	7 × 2.52	1.2	1.0	1.8	27	1590
3 × 50 sm	19 × 1.83	1.4	-----	1.8	26.0	1685
3 × 70 sm	19 × 2.22	1.4	-----	1.8	30.0	2370
3 × 95 sm	19 × 2.56	1.6	-----	1.9	33.2	3280
3 × 120 sm	37 × 2.08	1.6	-----	2.1	35.5	3910
3 × 150 sm	37 × 2.30	1.8	-----	2.2	39.5	4785
3 × 185 sm	37 × 2.57	2.0	-----	2.4	45.0	5980
3 × 240 sm	37 × 2.93	2.2	-----	2.6	50.0	7855



SETAREH YAZD CO.

SETAREH YAZD Wire & Cable Co.



Multi Core Power Cables with PVC or XLPE Insulated & PVC Sheathed

Size	Cond. n×d (mm)	Insulation Thickness (mm)	Inner covering (mm)	Sheath Thickness(mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
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3 1/2 Core NYY

3× 25/16 rm	7×2.14/7×1.7	1.2 - 1.0	1	1.8	26.2	1510
3× 35/16 rm	7×2.52/7×1.7	1.2 - 1.0	1	1.8	28	1880
3× 50/25 sm	19×1.83/7×2.18	1.4 - 1.2	...	1.8	27.3	2110
3× 70/35 sm	19×2.22/7×2.57	1.4 - 1.2	...	1.9	31.11	2845
3× 95/50 sm	19×2.57/19×1.83	1.6 - 1.4	...	2.1	34.7	3920
3×120/70 sm	37×2.08/19×2.22	1.6 - 1.4	...	2.2	38.2	4880
3×150/70 sm	37×2.30/19×2.22	1.8 - 1.4	...	2.3	44	5870
3×185/95 sm	37×2.57/19×2.57	2.0 - 1.6	...	2.4	47.4	7395
3×240/120sm	37×2.93/37×2.08	2.2 - 1.6	...	2.5	53.6	9550

4 Core NYY

4 × 1.5 re	1 × 1.38	0.8	1.0	1.8	13	235
4 × 1.5 rm	7 × 0.52	0.8	1.0	1.8	13.4	250
4 × 2.5 re	1 × 1.78	0.8	1.0	1.8	14	300
4 × 2.5 rm	7 × 0.67	0.8	1.0	1.8	14.5	315
4 × 4 re	1 × 2.25	1.0	1.0	1.8	15.6	415
4 × 4 rm	7 × 0.85	1.0	1.0	1.8	16.6	420
4 × 6 re	1 × 2.76	1.0	1.0	1.8	16.8	520
4 × 6 rm	7 × 1.04	1.0	1.0	1.8	18	530
4 × 10 re	1 × 3.57	1.0	1.0	1.8	18.8	720
4 × 10 rm	7 × 1.35	1.0	1.0	1.8	20.2	750
4 × 16 rm	7 × 1.7	1.0	1.0	1.8	22.7	1030
4 × 25 rm	7 × 2.14	1.2	1.0	1.8	26.8	1540
4 × 35 rm	7 × 2.52	1.2	1.0	1.8	29	2040
4 × 50 sm	19×1.83	1.4	-----	1.9	28.5	2180
4 × 70 sm	19×2.22	1.4	-----	2.0	33.0	3100
4 × 95 sm	19×2.57	1.6	-----	2.1	37.5	4160
4 × 120sm	37×2.08	1.6	-----	2.2	40.0	5130
4 × 150sm	37×2.30	1.8	-----	2.4	44.5	6325
4 × 185sm	37×2.57	2.0	-----	2.6	49.0	7670

*The above data is approximate and subject to manufacturing tolerances





Multi Core Power Cables with PVC or XLPE Insulated & PVC Sheathed

b) N2XY – O , N2XY – J

Size	Cond. n d (mm)	Insulation Thickness (mm)	Inner covering (mm)	Sheath Thickness(mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
2 Core N2XY						
2 × 1.5 re	1 × 1.38	0.7	1.0	1.8	11	170
2 × 1.5 rm	7 × 0.52	0.7	1.0	1.8	11.5	180
2 × 2.5 re	1 × 1.78	0.7	1.0	1.8	12	205
2 × 2.5 rm	7 × 0.67	0.7	1.0	1.8	12.5	215
2 × 4 re	1 × 2.25	0.7	1.0	1.8	13	257
2 × 4 rm	7 × 0.85	0.7	1.0	1.8	13.5	264
2 × 6 re	1 × 2.76	0.7	1.0	1.8	14	310
2 × 6 rm	7 × 1.04	0.7	1.0	1.8	14.5	336
2 × 10 re	1 × 3.57	0.7	1.0	1.8	15.5	425
2 × 10 rm	7 × 1.35	0.7	1.0	1.8	16.5	456
3 Core N2XY						
3 × 1.5 re	1 × 1.38	0.7	1.0	1.8	11.5	186
3 × 1.5 rm	7 × 0.52	0.7	1.0	1.8	12	195
3 × 2.5 re	1 × 1.78	0.7	1.0	1.8	12.5	227
3 × 2.5 rm	7 × 0.67	0.7	1.0	1.8	13	236
3 × 4 re	1 × 2.25	0.7	1.0	1.8	13.5	294
3 × 4 rm	7 × 0.85	0.7	1.0	1.8	14	300
3 × 6 re	1 × 2.76	0.7	1.0	1.8	14.5	363
3 × 6 rm	7 × 1.04	0.7	1.0	1.8	15.5	390
3 × 10 re	1 × 3.57	0.7	1.0	1.8	16	510
3 × 10 rm	7 × 1.35	0.7	1.0	1.8	17.5	542
3 × 16 rm	7 × 1.7	0.7	1.0	1.8	19.5	756
3 × 25 rm	7 × 2.14	0.9	1.0	1.8	23	1105
3 × 35 rm	7 × 2.52	0.9	1.0	1.8	25.5	1470
3 × 50 sm	19 × 1.83	1.0	...	1.8	24.1	1570
3 × 70 sm	19 × 2.22	1.1	...	1.9	27.2	2250
3 × 95 sm	19 × 2.57	1.1	...	2.0	30.2	3010
3 × 120 sm	37 × 2.08	1.2	...	2.1	34.1	3740
3 × 150 sm	37 × 2.30	1.4	...	2.2	38.0	4585
3 × 185 sm	37 × 2.57	1.6	...	2.3	42.2	5715
3 × 240 sm	37 × 2.93	1.7	...	2.5	48.0	7595
3 1/2 Core N2XY						
3 × 25/16 rm	7 × 2.14/7 × 1.7	0.9 – 0.7	1	1.8	24	1390
3 × 35/16 rm	7 × 2.52/7 × 1.7	0.9 – 0.7	1	1.8	26.5	1750
3 × 50/25 sm	19 × 1.83/7 × 2.18	1.0 – 0.9	...	1.8	26	1935
3 × 70/35 sm	19 × 2.22/7 × 2.57	1.1 – 0.9	...	1.9	29	2685
3 × 95/50 sm	19 × 2.57/19 × 1.83	1.1 – 1.0	...	2.0	32	3660
3 × 120/70 sm	37 × 2.08/19 × 2.22	1.2 – 1.1	...	2.1	36	4625
3 × 150/70 sm	37 × 2.30/19 × 2.22	1.4 – 1.1	...	2.3	41	5560





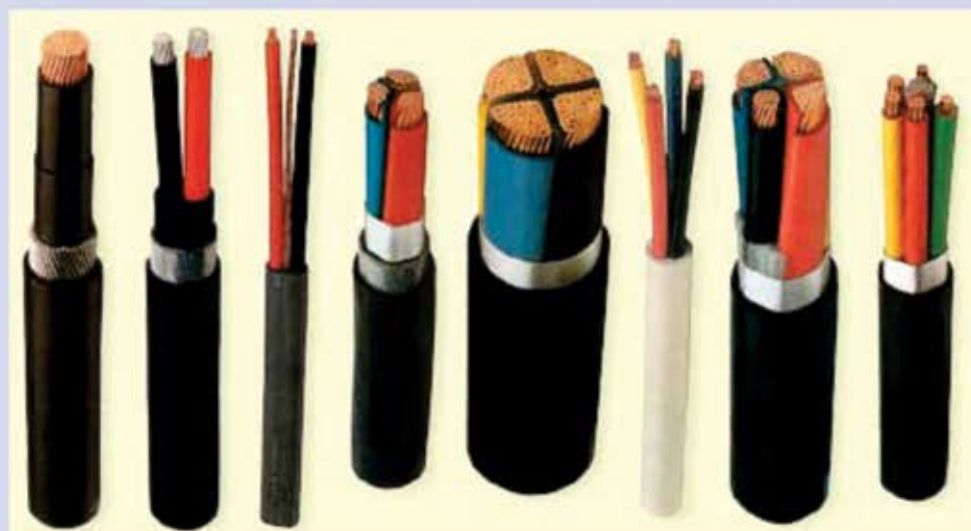
Multi Core Power Cables with PVC or XLPE Insulated & PVC Sheathed

Size	Cond. n × d (mm)	Insulation Thickness (mm)	Inner covering (mm)	Sheath Thickness(mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
3 × 185 /95 sm	37 × 2.57/19 × 2.57	1.6 – 1.1	...	2.4	43	7020
3 × 240/120sm	37 × 2.93/37 × 2.08	1.7 – 1.2	...	2.6	48	9065

4 Core N2XY

4 × 1.5 re	1 × 1.38	0.7	1.0	1.8	12.5	212
4 × 1.5 rm	7 × 0.52	0.7	1.0	1.8	13	221
4 × 2.5 re	1 × 1.78	0.7	1.0	1.8	13.4	267
4 × 2.5 rm	7 × 0.67	0.7	1.0	1.8	14	276
4 × 4 re	1 × 2.25	0.7	1.0	1.8	14.5	346
4 × 4 rm	7 × 0.85	0.7	1.0	1.8	15	352
4 × 6 re	1 × 2.76	0.7	1.0	1.8	15.5	434
4 × 6 rm	7 × 1.04	0.7	1.0	1.8	16.5	465
4 × 10 re	1 × 3.57	0.7	1.0	1.8	17.5	623
4 × 10 rm	7 × 1.35	0.7	1.0	1.8	18.5	660
4 × 16 rm	7 × 1.7	0.7	1.0	1.8	21	925
4 × 25 rm	7 × 2.14	0.9	1.0	1.8	25	1368
4 × 35 rm	7 × 2.52	0.9	1.0	1.8	28	1845
4 × 50 sm	19 × 1.83	1.0	-----	1.8	27.0	2030
4 × 70 sm	19 × 2.22	1.1	-----	2.0	30.0	2940
4 × 95 sm	19 × 2.57	1.1	-----	2.1	34.0	3910
4 × 120sm	37 × 2.88	1.2	-----	2.2	38.2	4900
4 × 150sm	37 × 2.30	1.4	-----	2.4	42.5	6040
4 × 185sm	37 × 2.57	1.6	-----	2.5	46.5	7530

* The above data is approximate and subject to manufacturing tolerances





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Single & Multi Core Wire Armored Cables with PVC Insulated & PVC Sheathed

CU/PVC/AWA/PVC (single core)
CU/PVC/SWA/PVC (Multi core)

Code: NYRY

Rated voltage : 0.6/1 KV

Reference standard : 60502 IEC - 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

Application : PVC insulated and PVC sheathed wire armored cable for indoors and outdoors
in cable duct, underground and water, if greater mechanical protection is required.

Construction :

- 1- Conductor: Solid or Stranded plain annealed copper acc. To IEC 60228 or ISIRI 3084 or VDE 0295, class 1& class2
- 2- Insulation: PVC/A
- 3- Color of insulation : As request
- 4- Inner covering : Extruded PVC In sector shape cable , the cores covered with PP Tape
- 5- Armore : Aluminum wire armor for single core cables Galvanized Steel Wire armor for multi core cables
- 6- Outer sheath: Black PVC/ST1

Technical Specification:

- 1- Max. conductor temperature : 70 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature ; 160 °C
- 7- Flame retardant : acc. to IEC 60332-1



Single & Multi Core Wire Armored Cables with PVC Insulated & PVC Sheathed

Size (mm ²)	No. × dia.(mm)	Insulation thickness (mm)	Aarmor dia.(mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
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Single core NYRY-re, rm

1 × 1.5 re	1 × 1.38	0.8	0.9	1.8	10.7	146
1 × 1.5 rm	7 × 0.52	0.8	0.9	1.8	10.9	150
1 × 2.5 re	1 × 1.78	0.8	0.9	1.8	11.1	162
1 × 2.5 rm	7 × 0.67	0.8	0.9	1.8	11.3	170
1 × 4 re	1 × 2.25	1.0	0.9	1.8	12.0	200
1 × 4 rm	7 × 0.85	1.0	0.9	1.8	12.4	206
1 × 6 re	1 × 2.76	1.0	0.9	1.8	12.6	230
1 × 6 rm	7 × 1.04	1.0	0.9	1.8	12.8	237
1 × 10 re	1 × 3.57	1.0	0.9	1.8	13.4	283
1 × 10 rm	7 × 1.35	1.0	0.9	1.8	13.7	297
1 × 16 rm	7 × 1.7	1.0	0.9	1.8	14.8	375
1 × 25 rm	7 × 2.14	1.2	1.2	1.8	16.5	506
1 × 35 rm	7 × 2.52	1.2	1.2	1.8	17.7	628
1 × 50 rm	19 × 1.78	1.4	1.2	1.8	20.4	856
1 × 70 rm	19 × 2.16	1.4	1.2	1.8	21.7	1081
1 × 95 rm	19 × 2.52	1.6	1.6	1.8	24.2	1379
1 × 120 rm	37 × 2.03	1.6	1.6	1.8	26.5	1700
1 × 150 rm	37 × 2.27	1.8	1.6	1.8	28.6	2062
1 × 185 rm	37 × 2.52	2.0	1.6	1.9	30.7	2465
1 × 240 rm	61 × 2.22	2.2	2.0	2.1	33.8	3099
1 × 300 rm	61 × 2.5	2.4	2.0	2.2	38.0	3928

2 core NYRY-re, rm

2 × 1.5 re	1 × 1.38	0.8	0.9	1.8	13.7	337
2 × 1.5 rm	7 × 0.52	0.8	0.9	1.8	14.0	346
2 × 2.5 re	1 × 1.78	0.8	0.9	1.8	14.5	385
2 × 2.5 rm	7 × 0.67	0.8	0.9	1.8	14.9	407
2 × 4 re	1 × 2.25	1.0	0.9	1.8	16.2	491
2 × 4 rm	7 × 0.85	1.0	0.9	1.8	16.8	520

*The above data is approximate and subject to manufacturing tolerances





Single & Multi Core Wire Armored Cables with PVC Insulated & PVC Sheathed

Size (mm ²)	No.xdia.(mm)	Insulation thickness (mm)	Armor dia.(mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
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2 × 6 re	1 × 2.76	1.0	1.2	1.8	17.9	651
2 × 6 rm	7 × 1.04	1.0	1.2	1.8	18.6	696
2 × 10 re	1 × 3.57	1.0	1.2	1.8	19.5	810
2 × 10 rm	7 × 1.35	1.0	1.2	1.8	20.4	863

3core NYRY- re , rm

3 × 1.5 re	1 × 1.38	0.8	0.9	1.8	14.1	360
3 × 1.5 rm	7 × 0.52	0.8	0.9	1.8	14.5	380
3 × 2.5 re	1 × 1.78	0.8	0.9	1.8	15	428
3 × 2.5 rm	7 × 0.67	0.8	0.9	1.8	15.5	442
3 × 4 re	1 × 2.25	1.0	0.9	1.8	16.9	552
3 × 4 rm	7 × 0.85	1.0	0.9	1.8	17.5	583
3 × 6 re	1 × 2.76	1.0	1.2	1.8	18.6	740
3 × 6 rm	7 × 1.04	1.0	1.2	1.8	19.4	787
3 × 10 re	1 × 3.57	1.0	1.2	1.8	20.4	936
3 × 10 rm	7 × 1.35	1.0	1.2	1.8	21.3	992
3 × 16 rm	7 × 1.7	1.0	1.2	1.8	23.7	1290
3 × 25 rm	7 × 2.14	1.2	1.6	1.8	28	1916
3 × 35 rm	7 × 2.52	1.2	1.6	1.8	30.5	2351

4 core NYRY- re , rm

4 × 1.5 re	1 × 1.38	0.8	0.9	1.8	14.9	414
4 × 1.5 rm	7 × 0.52	0.8	0.9	1.8	15.3	426
4 × 2.5 re	1 × 1.78	0.8	0.9	1.8	15.9	483
4 × 2.5 rm	7 × 0.67	0.8	0.9	1.8	16.4	510
4 × 4 re	1 × 2.25	1.0	1.2	1.8	18.7	727
4 × 4 rm	7 × 0.85	1.0	1.2	1.8	19.4	771
4 × 6 re	1 × 2.76	1.0	1.2	1.8	19.9	851
4 × 6 rm	7 × 1.04	1.0	1.2	1.8	20.7	903
4 × 10 re	1 × 3.57	1.0	1.2	1.8	21.8	1109
4 × 10 rm	7 × 1.35	1.0	1.2	1.8	22.9	1173
4 × 16 rm	7 × 1.7	1.0	1.6	1.8	26.2	1670
4 × 25 rm	7 × 2.14	1.2	1.6	1.8	30.3	2297
4 × 35 rm	7 × 2.52	1.2	1.6	1.9	33.3	2854





Single & Multi Core Wire Armored Cables with PVC Insulated & PVC Sheathed

Size (mm ²)	No.xdia.(mm)	Insulation thickness (mm)	Aarmor dia.(mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
3 1/2 core NYRY - sm						
3 × 25 /16 rm	7 × 2.14 - 7 × 1.7	1.2 - 1.0	1.6	1.8	29.3	2105
3 × 35 /16 rm	7 × 2.52 - 7 × 1.7	1.2 - 1.0	1.6	1.9	31.6	2509
3 × 50 /25 sm	19 × 1.83 / 7 × 2.18	1.4 - 1.2	2.0	2.0	34.7	3242
3 × 70 /35 sm	19 × 2.22 / 7 × 2.57	1.4 - 1.2	2.0	2.1	38.5	4196
3 × 95 /50 sm	19 × 2.57 / 19 × 1.83	1.6 - 1.4	2.0	2.3	43.5	5411
3 × 120 /70 sm	37 × 2.08 / 19 × 2.22	1.6 - 1.4	2.5	2.4	48.4	6975
3 × 150 /70 sm	37 × 2.30 / 19 × 2.22	1.8 - 1.4	2.5	2.6	52.2	8054
3 × 185 /95 sm	37 × 2.57 / 19 × 2.57	2.0 - 1.6	2.5	2.7	57.1	9824

*The above data is approximate and subject to manufacturing tolerances





CU/XLPE/AWA/PVC (single core)
CU/XLPE/SWA/PVC (Multi core)

Code: N2XRY

Rated voltage : 0.6/1 KV

Reference standard : IEC 60502- 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

Application : XLPE insulated and PVC sheathed wire armored cable for indoors and outdoors, in cable duct, underground and water, if greater mechanical protection is required.

Construction :

- 1- Conductor : Solid or Stranded plain annealed copper acc. to IEC 60228 or ISIRI 3084 or VDE 0295, class 1 & 2
- 2- Insulation : XLPE
- 3- Color of insulation : As request
- 4- Inner covering : Extruded PVC Or In sector shape cable , the cores covered with PP Tape
- 5- Armored : Aluminum wire armor for single core cables, Galvanized Steel Wire armor for multi core cables
- 7- Outer sheath : Black PVC

Technical Specification:

- 1- Max. conductor temperature : 90 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 250 °C
- 7- Flame retardant : acc. to IEC 60332-1



Single & Multi Core Wire Armored Cables with XLPE Insulated & PVC Sheathed

Size (mm ²)	No.xdia.(mm)	Insulation thickness (mm)	Aarmor dia.(mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
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Single core N2XRY - rm

1 × 1.5 rm	7 × 0.52	0.7	0.9	1.8	10.5	214
1 × 2.5 rm	7 × 0.67	0.7	0.9	1.8	11	237
1 × 4 rm	7 × 0.85	0.7	0.9	1.8	11.7	278
1 × 6 rm	7 × 1.04	0.7	0.9	1.8	12.0	312
1 × 10 rm	7 × 1.35	0.7	0.9	1.8	13.1	356
1 × 16 rm	7 × 1.7	0.7	0.9	1.8	14.2	382
1 × 25 rm	7 × 2.14	0.9	0.9	1.8	15.8	475
1 × 35 rm	7 × 2.52	0.9	1.2	1.8	17.3	625
1 × 50 rm	19 × 1.78	1.0	1.2	1.8	18.5	765
1 × 70 rm	19 × 2.16	1.1	1.2	1.8	21.2	1035
1 × 95 rm	19 × 2.52	1.1	1.6	1.8	23.2	1330
1 × 120 rm	37 × 2.03	1.2	1.6	1.8	25.6	1620
1 × 150 rm	37 × 2.27	1.4	1.6	1.8	27.5	1980
1 × 185 rm	37 × 2.52	1.6	1.6	1.9	29.8	2320
1 × 240 rm	61 × 2.22	1.7	2.0	2.1	32.8	3130
1 × 300 rm	61 × 2.5	1.8	2.0	2.2	36.5	3690
1 × 400 rm	61 × 2.85	2.0	2.0	2.3	40.0	4680

2core N2XRY - rm

2 × 1.5 rm	7 × 0.52	0.7	0.9	1.8	13.5	365
2 × 2.5 rm	7 × 0.67	0.7	0.9	1.8	14.3	505
2 × 4 rm	7 × 0.85	0.7	0.9	1.8	15.6	415
2 × 6 rm	7 × 1.04	0.7	1.2	1.8	17.0	665
2 × 10 rm	7 × 1.35	0.7	1.2	1.8	18.2	815
2 × 16 rm	7 × 1.7	0.7	1.2	1.8	20.0	1030
2 × 25 rm	7 × 2.14	0.9	1.6	1.8	24.0	1530
2 × 35 rm	7 × 2.52	0.9	1.6	1.8	27.5	1970

*The above data is approximate and subject to manufacturing tolerances





Single & Multi Core Wire Armored Cables with XLPE Insulated & PVC Sheathed

Size (mm ²)	No. x dia. (mm)	Insulation thickness (mm)	Aarmor dia. (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
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3 core N2XRY - rm , sm

3 × 1.5 rm	7 × 0.52	0.7	0.9	1.8	13.2	355
3 × 2.5 rm	7 × 0.67	0.7	0.9	1.8	15.0	445
3 × 4 rm	7 × 0.85	0.7	1.2	1.8	16.5	615
3 × 6 rm	7 × 1.04	0.7	1.2	1.8	18.0	765
3 × 10 rm	7 × 1.35	0.7	1.2	1.8	19.5	935
3 × 16 rm	7 × 1.7	0.7	1.2	1.8	22.0	1210
3 × 25 rm	7 × 2.14	0.9	1.6	1.8	25.0	1810
3 × 35 rm	7 × 2.52	0.9	1.6	1.9	29.0	2320
3 × 50 sm	19 × 1.83	1.0	1.6	2.0	30.0	2530
3 × 70 sm	19 × 2.22	1.1	2.0	2.1	34.5	3620
3 × 95 sm	19 × 2.57	1.1	2.0	2.2	37.5	4480
3 × 120 sm	37 × 2.08	1.2	2.0	2.3	39	5340
3 × 150 sm	37 × 2.30	1.4	2.5	2.5	45	6830
3 × 185 sm	37 × 2.57	1.6	2.5	2.6	51	8200
3 × 240 sm	37 × 2.93	1.7	2.5	2.8	56.5	10230

3 1/2 core N2XRY -rm , sm

3 × 25 / 16 rm	7 × 2.14 - 7 × 1.7	0.9 - 0.7	1.6	1.8	26.0	2010
3 × 35 / 16 rm	7 × 2.52 - 7 × 1.7	0.9 - 0.7	1.6	1.9	31.0	2720
3 × 50 / 25 sm	19 × 1.83 / 7 × 2.18	1.0 - 0.9	1.6	2.0	31.5	2800
3 × 70 / 35 sm	19 × 2.22 / 7 × 2.57	1.1 - 0.9	2.0	2.1	35.5	3910
3 × 95 / 50 sm	19 × 2.57 / 19 × 1.83	1.1 - 1.0	2.0	2.2	39.5	4975
3 × 120 / 70 sm	37 × 2.08 / 19 × 2.22	1.2 - 1.1	2.0	2.3	42.0	6080
3 × 150 / 70 sm	37 × 2.30 / 19 × 2.22	1.4 - 1.1	2.5	2.5	47.5	7540
3 × 185 / 95 sm	37 × 2.57 / 19 × 2.57	1.6 - 1.1	2.5	2.7	52.0	9180
3 × 240 / 120 sm	37 × 2.93 / 37 × 2.08	1.7 - 1.2	2.5	2.8	57.5	11430

4 core N2XRY - rm , sm

4 × 1.5 rm	7 × 0.52	0.7	0.9	1.8	15.2	452
4 × 2.5 rm	7 × 0.67	0.7	0.9	1.8	15.8	512
4 × 4 rm	7 × 0.85	0.7	1.2	1.8	18.3	715
4 × 6 rm	7 × 1.04	0.7	1.2	1.8	19.0	855
4 × 10 rm	7 × 1.35	0.7	1.6	1.8	22.0	1200
4 × 16 rm	7 × 1.7	0.7	1.6	1.8	24.0	1600
4 × 25 rm	7 × 2.14	0.9	1.6	1.8	27.2	2145
4 × 35 rm	7 × 2.52	0.9	1.6	2.0	30.2	2765
4 × 50 sm	19 × 1.83	1.0	1.6	2.0	31.2	3025
4 × 70 sm	19 × 2.22	1.1	2.0	2.2	36.0	4280
4 × 95 sm	19 × 2.57	1.1	2.0	2.3	39.0	5410
4 × 120 sm	37 × 2.08	1.2	2.0	2.4	42.0	6545
4 × 150 sm	37 × 2.30	1.4	2.5	2.6	48.5	8270
4 × 185 sm	37 × 2.57	1.6	2.5	2.7	54.5	9950



SETAREH YAZD Wire & Cable Co.



CU/XLPE/STA/PVC

Code: N2XBY

Rated voltage : 0.6/1 KV

Reference standard : IEC 60502- 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

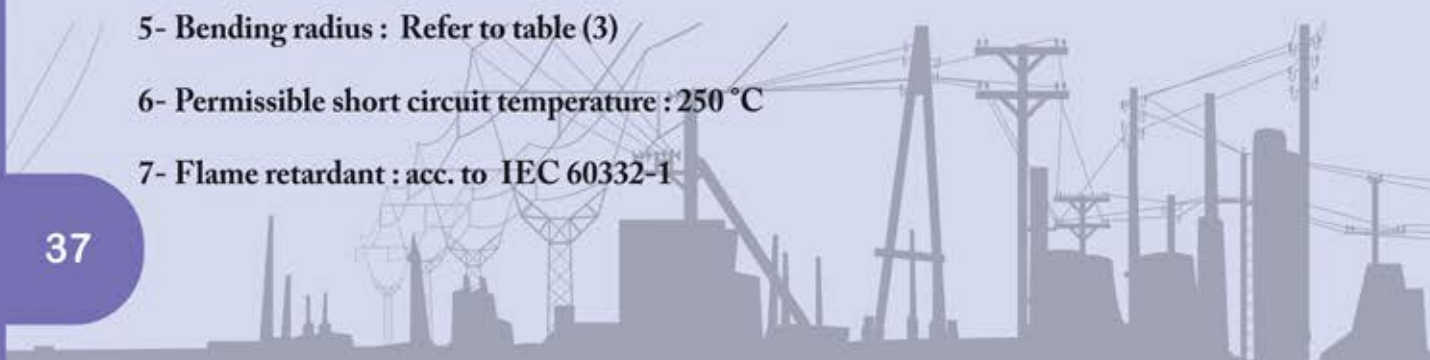
Application : XLPE insulated and PVC sheathed TAPE armored cable for indoors and outdoors, in cable duct, underground ,power plant and switchgear ,industrial plant and distribution systems. if greater mechanical protection is required.

Construction :

- 1- Conductor: Stranded plain annealed copper acc. To IEC 60228 or ISIRI 3084 or VDE0295, class 2
- 2- Insulation : XLPE
- 3- Color of insulation : As request
- 4- Inner covering : Extruded PVC Or In sector shape cable , the cores covered with PP Tape
- 5- Armore : Aluminum tape armor for single core cables
Galvanized Steel tape armor for multi core cables
- 6- Outer sheath : Black PVC

Technical Specification:

- 1- Max. conductor temperature : 90 °C
- 2- Conductor resistant : Refer to table (1)
- 3- Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4- Current carrying capacity : Refer to table (2)
- 5- Bending radius : Refer to table (3)
- 6- Permissible short circuit temperature : 250 °C
- 7- Flame retardant : acc. to IEC 60332-1





Multi Core Tape Armored Cables with XLPE Insulated & PVC Sheathed

Size (mm ²)	No. × dia.(mm)	Insulation thickness (mm)	Aarmor dia.(mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
2core N2XBY - rm						
2 × 1.5 rm	7 × 0.52	0.7	0.2	1.8	12.5	256
2 × 2.5 rm	7 × 0.67	0.7	0.2	1.8	13.5	300
2 × 4 rm	7 × 0.85	0.7	0.2	1.8	14.2	356
2 × 6 rm	7 × 1.04	0.7	0.2	1.8	16.2	450
2 × 10 rm	7 × 1.35	0.7	0.2	1.8	17.6	575
2 × 16 rm	7 × 1.7	0.7	0.2	1.8	19.2	735
2 × 25 rm	7 × 2.14	0.9	0.2	1.8	23.0	1050
2 × 35 rm	7 × 2.52	0.9	0.2	1.8	25.5	1405
3 core N2XBY-rm , sm						
3 × 1.5 rm	7 × 0.52	0.7	0.2	1.8	13.2	282
3 × 2.5 rm	7 × 0.67	0.7	0.2	1.8	14.2	338
3 × 4 rm	7 × 0.85	0.7	0.2	1.8	15.2	408
3 × 6 rm	7 × 1.04	0.7	0.2	1.8	16.4	527
3 × 10 rm	7 × 1.35	0.7	0.2	1.8	18.2	685
3 × 16 rm	7 × 1.7	0.7	0.2	1.8	20.2	905
3 × 25 rm	7 × 2.14	0.9	0.2	1.8	23.4	1275
3 × 35 rm	7 × 2.52	0.9	0.2	1.8	26.0	1645
3 × 50 sm	19 × 1.83	1.0	0.2	1.9	29.5	1962
3 × 70 sm	19 × 2.22	1.1	0.2	2.0	33.5	2630
3 × 95 sm	19 × 2.57	1.1	0.5	2.2	36.5	3850
3 × 120 sm	37 × 2.08	1.2	0.5	2.3	39.0	4655
3 × 150 sm	37 × 2.30	1.4	0.5	2.4	45.0	5645
3 × 185 sm	37 × 2.57	1.6	0.5	2.6	49.0	6960
3 × 240 sm	37 × 2.93	1.7	0.5	2.8	54.6	8820
3 1/2 core N2XBY- rm , sm						
3 × 25 / 16 rm	7 × 2.14 - 7 × 1.7	0.9 - 0.7	0.2	1.8	24.3	1455
3 × 35 / 16 rm	7 × 2.52 - 7 × 1.7	0.9 - 0.7	0.2	1.8	27.0	1815
3 × 50 / 25 sm	19 × 1.83 / 7 × 2.18	1.0 - 0.9	0.2	1.9	30.5	2280
3 × 70 / 35 sm	19 × 2.22 / 7 × 2.57	1.1 - 0.9	0.2	2.1	34.0	3070
3 × 95 / 50 sm	19 × 2.57 / 19 × 1.83	1.1 - 1.0	0.5	2.2	38.0	4470
3 × 120 / 70 sm	37 × 2.08 / 19 × 2.22	1.2 - 1.1	0.5	2.4	41.0	5520
3 × 150 / 70 sm	37 × 2.30 / 19 × 2.22	1.4 - 1.1	0.5	2.5	46.0	6560
3 × 185 / 95 sm	37 × 2.57 / 19 × 2.57	1.6 - 1.1	0.5	2.7	50.0	8145
3 × 240 / 120 sm	37 × 2.93 / 37 × 2.08	1.7 - 1.2	0.5	2.8	55.2	10340



Multi Core Tape Armored Cables with XLPE Insulated & PVC Sheathed

Size (mm ²)	No.xdia.(mm)	Insulation thickness (mm)	Aarmor dia.(mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
4 core N2XBY-rm , sm						
4 × 1.5rm	7 × 0.52	0.7	0.2	1.8	13.5	312
4 × 2.5rm	7 × 0.67	0.7	0.2	1.8	14.5	375
4 × 4 rm	7 × 0.85	0.7	0.2	1.8	15.5	465
4 × 6 rm	7 × 1.04	0.7	0.2	1.8	18.0	615
4 × 10 rm	7 × 1.35	0.7	0.2	1.8	19.4	805
4 × 16 rm	7 × 1.7	0.7	0.2	1.8	21.4	1090
4 × 25 rm	7 × 2.14	0.9	0.2	1.8	25.7	1590
4 × 35 rm	7 × 2.52	0.9	0.2	1.9	30.8	2270
4 × 50 sm	19 × 1.83	1.0	0.2	2.0	32.0	2530
4 × 70 sm	19 × 2.22	1.1	0.5	2.2	35.7	3785
4 × 95 sm	19 × 2.57	1.1	0.5	2.3	39.2	4980
4 × 120sm	37 × 2.08	1.2	0.5	2.4	40.5	6035
4 × 150sm	37 × 2.30	1.4	0.5	2.6	47.0	7355
4 × 185sm	37 × 2.57	1.6	0.5	2.8	53.1	9065

*The above data is approximate and subject to manufacturing tolerances





Aluminum Conductor Cables 0.6/1 KV



SETAREH YAZD Wire & Cable Co.



AL/PVC/PVC

Code: NAYY

Rated voltage: 0.6/1 KV

Reference standard: IEC 60502-1 , BS 6346 , ISIRI 3569-1 , VDE 0271

Application : For fixed installation, indoors and outdoors, in cable duct , In ground and water, Used for electric network, industrial plants and switchgear.

Construction:

- 1- Conductor: Stranded plain Aluminum acc. To IEC 60228 or ISIRI 3084 or VDE 0295, class 2
- 2- Insulation : PVC/A
- 3- Color of insulation : Black (or as request)
- 4- Outer sheath: Black PVC/ST1

Technical Specification:

- 1-Max. conductor temperature : 70 °C
- 2-Conductor resistant : Refer to table (1)
- 3-Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4-Current carrying capacity : Refer to table (2)
- 5-Bending radius : Refer to table (3)
- 6-Permissible short circuit temperature : 160 °C
- 7-Flame retardant : acc. to IEC 60332-1

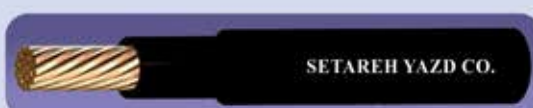


Single Core Power Cables with PVC Insulated & PVC Sheathed

Single core NAYY

Size (mm ²)	No.xdia.(mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
1 × 16 rm	7 × 1.7	1.0	1.4	9.9	126
1 × 25 rm	7 × 2.14	1.2	1.4	11.6	178
1 × 35 rm	7 × 2.52	1.2	1.4	12.8	220
1 × 50 rm	19 × 1.78	1.4	1.4	14.8	285
1 × 70 rm	19 × 2.16	1.4	1.4	16.4	365
1 × 95 rm	19 × 2.52	1.6	1.5	18.8	484
1 × 120 rm	19 × 2.83	1.6	1.5	20.4	578
1 × 150 rm	37 × 2.27	1.8	1.6	22.7	695
1 × 185 rm	37 × 2.52	2.0	1.7	25	865
1 × 240 rm	37 × 2.87	2.2	1.8	28.1	1095
1 × 300 rm	61 × 2.5	2.4	1.9	31.1	1354
1 × 400 rm	61 × 2.85	2.6	2.0	35.1	1710
1 × 500 rm	61 × 3.20	2.8	2.1	38.5	2110

*The above data is approximate and subject to manufacturing tolerances





AL/XLPE/PVC

Code: NA2XY

Rated voltage: 0.6/1 KV

Reference standard :IEC 60502- 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

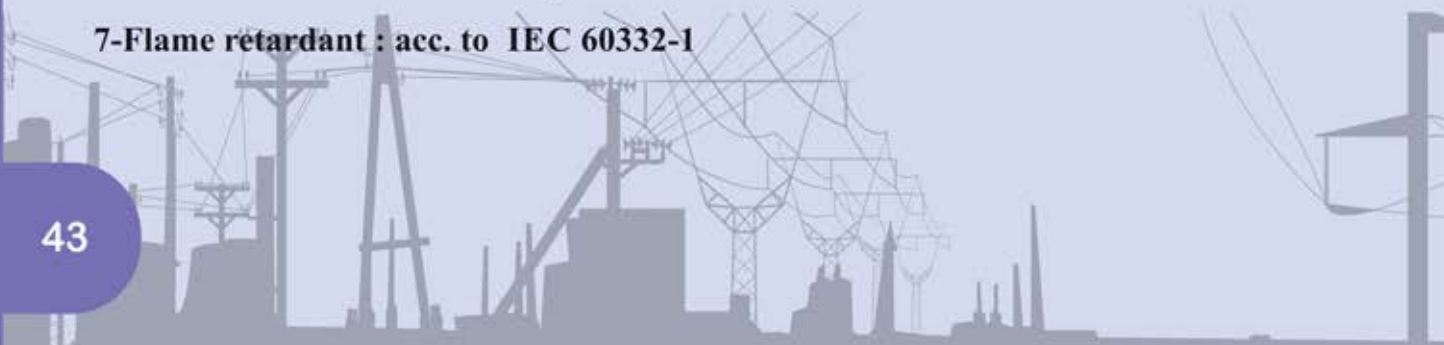
Application : For fixed installation, indoors and outdoors, in cable duct , In ground and water, Used for electric network, industrial plants and switchgear.

Construction :

- 1- Conductor: Stranded plain Aluminum acc. To IEC 60228 or ISIRI 3084 or VDE 0295, class 2
- 2- Insulation: XLPE
- 3- Color of insulation: Black (or as request)
- 4- Outer sheath: Black PVC

Technical Specification:

- 1-Max. conductor temperature: 90 °C
- 2-Conductor resistant: Refer to table (1)
- 3-Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4-Current carrying capacity: Refer to table (2)
- 5-Bending radius : Refer to table (3)
- 6-Permissible short circuit temperature: 250°C
- 7-Flame retardant : acc. to IEC 60332-1





Single Core Power Cables with XLPE Insulated & PVC Sheathed

Single core NA2XY

Size (mm ²)	No.xdia.(mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
1 × 16 rm	7 × 1.7	0.7	1.4	9.0	114
1 × 25 rm	7 × 2.14	0.9	1.4	11.0	163
1 × 35 rm	7 × 2.52	0.9	1.4	12.0	200
1 × 50 rm	19 × 1.78	1.0	1.4	13.4	252
1 × 70 rm	19 × 2.16	1.1	1.4	16.0	332
1 × 95 rm	19 × 2.52	1.1	1.5	17.5	441
1 × 120 rm	19 × 2.83	1.2	1.5	19.5	542
1 × 150 rm	37 × 2.27	1.4	1.6	21.3	665
1 × 185 rm	37 × 2.52	1.6	1.6	24.0	815
1 × 240 rm	37 × 2.87	1.7	1.7	27.0	1055
1 × 300 rm	61 × 2.5	1.8	1.8	30.0	1285
1 × 400 rm	61 × 2.85	2.0	1.9	33.0	1590
1 × 500 rm	61 × 3.2	2.2	2.1	37.0	2075

* The above data is approximate and subject to manufacturing tolerances





AL/PVC/PVC AL/XLPE/PVC

Code: NAYY- O , NAYY – J , NA2XY – O , NA2XY - J
Rated voltage : 0.6/1 KV

Reference standard : IEC 60502- 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

Application : For fixed installation, indoors and outdoors, in cable duct , In ground and water, Used for electric network, industrial plants and switchgear.

Construction :

- 1-Conductor : Stranded plain Aluminum acc. To IEC 60228 or ISIRI 3084 or VDE 0295,. class2
- 2-Insulation : PVC or XLPE
- 3-Color of insulation : As request
- 4-Inner covering : Extruded PVC for round conductor and sector shape covered with PP tape.
- 5-Outer sheath : Black PVC

Technical Specification

- 1-Max. conductor temperature : For PVC insulation 70 °C
For XLPE insulation 90 °C
- 2-Conductor resistant : Refer to table (1)
- 3-Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4-Current carrying capacity : Refer to table (2)
- 5-Bending radius : Refer to table (3)
- 6-Permissible short circuit temperature : For PVC insulation 160 °C
For XLPE insulation 250 °C
- 7-Flame retardant : acc. to IEC 60332-1



Multi Core Power Cables with PVC or XLPE Insulated & PVC Sheathed

a) Multi Core Cables NAYY

Size (mm ²)	Cond. nxd (mm)	Insulation Thickness (mm)	Inner covering (mm)	Sheath Thickness(mm)	Overall dia. approx.(mm)	Weight approx. (Kg/Km)
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3 Core NAYY

3 × 50 sm	19 × 1.83	1.4	-----	1.8	26.0	825
3 × 70 sm	19 × 2.22	1.4	-----	1.8	30.0	1045
3 × 95 sm	19 × 2.56	1.6	-----	1.9	33.2	1420
3 × 120 sm	19 × 2.87	1.6	-----	2.1	35.5	1700
3 × 150 sm	37 × 2.30	1.8	-----	2.2	39.5	2080
3 × 185 sm	37 × 2.57	2.0	-----	2.4	45.0	2500
3 × 240 sm	37 × 2.93	2.2	-----	2.6	50.0	3245

3 1/2 Core NAYY

3 × 25 / 16 rm	7 × 2.14 / 7 × 1.7	1.2-1.0	1.0	1.8	26.2	900
3 × 35 / 16 rm	7 × 2.52 / 7 × 1.7	1.2-1.0	1.0	1.8	28	1070
3 × 50 / 25 sm	19 × 1.83 / 7 × 2.18	1.4-1.2	-----	1.8	27.3	920
3 × 70 / 35 sm	19 × 2.22 / 7 × 2.57	1.4-1.2	-----	1.9	31.11	1170
3 × 95 / 50 sm	19 × 2.56 / 19 × 1.83	1.6-1.4	-----	2.1	34.7	1610
3 × 120 / 70 sm	19 × 2.87 / 19 × 2.22	1.6-1.4	-----	2.2	38.2	1960
3 × 150 / 70 sm	37 × 2.30 / 19 × 2.22	1.8-1.4	-----	2.3	44	2350
3 × 185 / 95 sm	37 × 2.57 / 19 × 2.57	2.0-1.6	-----	2.4	47.4	2880
3 × 240 / 120 sm	37 × 2.93 / 19 × 2.87	2.2-1.6	-----	2.5	53.6	3700

4 Core NAYY

4 × 16 rm	7 × 1.7	1.0	1.0	1.8	22.7	685
4 × 25 rm	7 × 2.14	1.2	1.0	1.8	26.8	955
4 × 35 rm	7 × 2.52	1.2	1.0	1.8	29	1180
4 × 50 sm	19 × 1.83	1.4	-----	1.9	28.5	1080
4 × 70 sm	19 × 2.22	1.4	-----	2.0	33.0	1390
4 × 95 sm	19 × 2.56	1.6	-----	2.1	37.5	1870
4 × 120 sm	19 × 2.87	1.6	-----	2.2	40.0	2250
4 × 150 sm	37 × 2.30	1.8	-----	2.4	44.5	2770
4 × 185 sm	37 × 2.57	2.0	-----	2.6	49.0	3360



SETAREH YAZD CO.

SETAREH YAZD Wire & Cable Co.



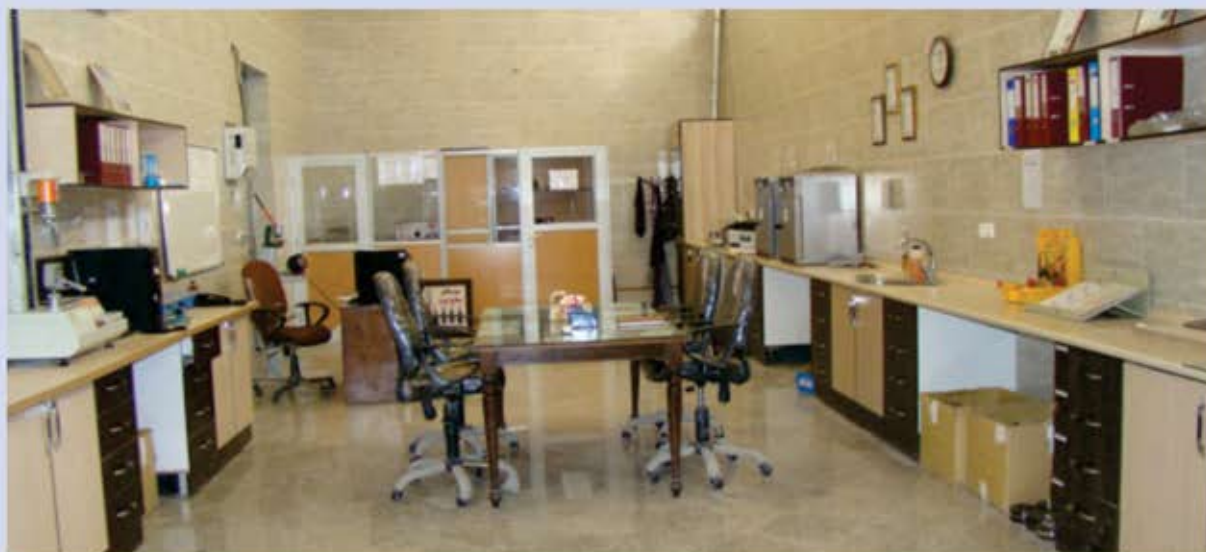
Multi Core Power Cables with PVC or XLPE Insulated & PVC Sheathed

b) Multi core cables NA2XY

Size (mm ²)	Cond. nxd (mm)	Insulation Thickness (mm)	Inner covering (mm)	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
3 Core NA2XY						
3 × 16 rm	7 × 1.7	0.7	1.0	1.8	19.5	504
3 × 25 rm	7 × 2.14	0.9	1.0	1.8	23	700
3 × 35 rm	7 × 2.52	0.9	1.0	1.8	25.5	865
3 × 50 sm	19 × 1.83	1.0	-----	1.8	24.1	725
3 × 70 sm	19 × 2.22	1.1	-----	1.9	27.2	950
3 × 95 sm	19 × 2.56	1.1	-----	2.0	30.2	1230
3 × 120 sm	19 × 2.87	1.2	-----	2.1	34.1	1490
3 × 150 sm	37 × 2.30	1.4	-----	2.2	38.0	1840
3 × 185 sm	37 × 2.57	1.6	-----	2.3	42.2	2300
3 × 240 sm	37 × 2.93	1.7	-----	2.5	48.0	2930
3 1/2 Core NA2XY						
3 × 25 / 16 rm	7 × 2.14 / 7 × 1.7	0.9 – 0.7	1.0	1.8	24	775
3 × 35 / 16 rm	7 × 2.52 / 7 × 1.7	0.9 – 0.7	1.0	1.8	26.5	935
3 × 50 / 25 sm	19 × 1.83 / 7 × 2.18	1.0 – 0.9	-----	1.8	26	850
3 × 70 / 35 sm	19 × 2.22 / 7 × 2.57	1.1 – 0.9	-----	1.9	29	1150
3 × 95 / 50 sm	19 × 2.56 / 19 × 1.83	1.1 – 1.0	-----	2.0	32	1510
3 × 120 / 70 sm	19 × 2.87 / 19 × 2.22	1.2 – 1.1	-----	2.1	36	1900
3 × 150 / 70 sm	37 × 2.30 / 19 × 2.22	1.4 – 1.1	-----	2.3	41	2270
3 × 185 / 95 sm	37 × 2.57 / 19 × 2.57	1.6 – 1.1	-----	2.4	43	2830
3 × 240 / 120 sm	37 × 2.93 / 19 × 2.87	1.7 – 1.2	-----	2.6	48	3500
4 Core NA2XY						
4 × 16 rm	7 × 1.7	0.7	1.0	1.8	21	540
4 × 25 rm	7 × 2.14	0.9	1.0	1.8	25	780
4 × 35 rm	7 × 2.52	0.9	1.0	1.8	28	960
4 × 50 sm	19 × 1.83	1.0	-----	1.8	27.0	935
4 × 70 sm	19 × 2.22	1.1	-----	2.0	30.0	1240
4 × 95 sm	19 × 2.56	1.1	-----	2.1	34.0	1630
4 × 120 sm	19 × 2.87	1.2	-----	2.2	38.2	2040
4 × 150 sm	37 × 2.30	1.4	-----	2.4	42.5	2480
4 × 185 sm	37 × 2.57	1.6	-----	2.5	46.5	3120

*The above data is approximate and subject to manufacturing tolerances





SETAREH YAZD Co.

SETAREH YAZD Wire & Cable Co.



AL/PVC/AWA/PVC (single core)

AL/PVC/SWA/PVC (Multi core)

Code: NAYRY

Rated voltage : 0.6/1 KV

Reference standard : IEC 60502-1 , BS 6346 , ISIRI 3569-1 , VDE 0271

Application : PVC insulated and PVC sheathed wire armored cable for indoors and outdoors, in cable duct, underground and water, if greater mechanical protection is required.

Construction :

- 1-Conductor : Stranded plain Aluminum acc. to IEC 60228 or ISIRI 3084 or VDE 0295 class2
- 2-Insulation : PVC/A
- 3-Color of insulation : As request
- 4-Inner covering : Extruded PVC for round cables and In sector shape cables , the cores covered with PP Tape
- 5-Armore : Aluminum Wire armor (single core)
Galvanized Steel Wire armor (Multi core)
- 6-Outer sheath : Black PVC/ST1

Technical Specification :

- 1-Max. conductor temperature : 70 °C
- 2-Conductor resistant : Refer to table (1)
- 3-Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4-Current carrying capacity : Refer to table (2)
- 5-Bending radius : Refer to table (3)
- 6-Permissible short circuit temperature : 160 °C
- 7-Flame retardant : acc. to IEC 60332-1





Single & Multi Core Wire Armored Cables with PVC Insulated & PVC Sheathed

Size (mm ²)	No.xdia. (mm)	Insulation Thickness (mm)	Aarmor dia (mm)	Sheath Thickness(mm)	Overall dia. approx.(mm)	Weight approx. (Kg/Km)
Single core NAYRY - rm						
1 × 16 rm	7 × 1.7	1.0	0.9	1.8	14.4	260
1 × 25 rm	7 × 2.14	1.2	0.9	1.8	16.0	325
1 × 35 rm	7 × 2.52	1.2	0.9	1.8	17.0	377
1 × 50 rm	19 × 1.78	1.4	1.2	1.8	19.0	495
1 × 70 rm	19 × 2.14	1.4	1.2	1.8	21.0	597
1 × 95 rm	19 × 2.52	1.6	1.2	1.8	23.0	730
1 × 120 rm	19 × 2.83	1.6	1.6	1.8	25.0	884
1 × 150 rm	37 × 2.27	1.8	1.6	1.8	27.0	1028
1 × 185 rm	37 × 2.52	2.0	1.6	1.8	29.0	1205
1 × 240 rm	37 × 2.82	2.2	1.6	1.9	32.1	1472
1 × 300 rm	61 × 2.5	2.4	2.0	2.0	36.0	1874
3 core NAYRY- sm						
3 × 50 sm	19 × 1.83	1.4	1.6	2.0	32.5	1932
3 × 70 sm	19 × 2.22	1.4	2.0	2.1	37.0	2615
3 × 95 sm	19 × 2.56	1.6	2.0	2.2	41.0	3220
3 × 120 sm	19 × 2.87	1.6	2.0	2.3	44.0	3682
3 × 150 sm	37 × 2.30	1.8	2.5	2.5	48	4790
3 × 185 sm	37 × 2.57	2.0	2.5	2.7	52.7	5545
3 × 240 sm	37 × 2.93	2.2	2.5	2.9	59.3	6680





Single & Multi Core Wire Armored Cables with PVC Insulated & PVC Sheathed

Size (mm ²)	No.xdia. (mm)	Insulation Thickness (mm)	Aarmor dia (mm)	Sheath Thickness(mm)	Overall dia. approx.(mm)	Weight approx. (Kg/Km)
3 1/2 Core NAYRY- rm , sm						
3 × 25 / 16rm	7 × 2.14/ 7 × 1.7	1.2-1.0	1.6	1.8	31	1775
3 × 35 / 16rm	7 × 2.52/ 7 × 1.7	1.2-1.0	1.6	1.9	34.2	2070
3 × 50 / 25sm	19 × 1.83/ 7 × 2.18	1.4-1.2	2.0	2	35.1	2370
3 × 70 / 35sm	19 × 2.22/ 7 × 2.57	1.4-1.2	2.0	2.1	38.5	2830
3 × 95 / 50sm	19 × 2.56/19×1.83	1.6-1.4	2.0	2.3	43.9	3310
3 × 120/ 70sm	19 × 2.87/19×2.22	1.6-1.4	2.5	2.4	48.3	4509
3 × 150/ 70sm	37 × 2.30/19×2.22	1.8-1.4	2.5	2.6	52.3	5230
3 × 185/ 95sm	37 × 2.57/19×2.56	2.0-1.6	2.5	2.7	56.8	6105
3 × 240/120sm	37 × 2.93/37×2.08	2.2-1.6	2.5	2.9	63.8	7420
4 Core NA2XRY –rm , sm						
4 × 16 rm	7 × 1.7	1.0	1.6	1.8	26.8	1380
4 × 25 rm	7 × 2.14	1.2	1.6	1.8	31.2	1805
4 × 35 rm	7 × 2.52	1.2	1.6	1.9	34.4	2140
4 × 50 sm	19 × 1.83	1.4	2	2.1	36.1	2620
4 × 70 sm	19 × 2.22	1.4	2	2.2	40.7	3190
4 × 95 sm	19 × 2.56	1.6	2.5	2.4	46.1	4320
4 × 120 sm	19 × 2.87	1.6	2.5	2.5	49.8	4985
4 × 150 sm	37 × 2.30	1.8	2.5	2.7	54	5785
4 × 185 sm	37 × 2.57	2.0	2.5	2.9	58.9	6795

*The above data is approximate and subject to manufacturing tolerances





SETAREH YAZD Co.

SETAREH YAZD Wire & Cable Co.



AL/XLPE/PVC/SWA/PVC

Code: NA2XYRY

Rated voltage : 0.6/1 KV

Reference standard : IEC 60502- 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

Application : XLPE insulated and PVC sheathed wire armored cable for indoors and outdoors, in cable duct, underground and water, if greater mechanical protection is required.

Construction :

1-Conductor: Stranded plain Aluminum acc. To IEC 60228 or ISIRI 3084 or VDE 0295 class2

2-Insulation: XLPE

3-Color of insulation: As request

4-Inner covering: Extruded PVC for round cables and In sector shape cables , the cores covered with PP Tape

5-Armore: Galvanized Steel Wire armore

6-Outer sheath: Black PVC

Technical Specification:

1-Max. conductor temperature : 90 °C

2-Conductor resistant : Refer to table (1)

3-Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.

4-Current carrying capacity : Refer to table (2)

5-Bending radius : Refer to table (3)

6-Permissible short circuit temperature : 250 °C

7-Flame retardant : acc. to IEC 60332-1





Multi Core Tape Armored Cables with XLPE Insulated & PVC Sheathed

Multi core cables NA2XYRY

Size (mm ²)	No.xdia. (mm)	Insulation Thickness (mm)	Aarmor dia (mm)	Sheath Thickness(mm)	Overall dia. approx.(mm)	Weight approx. (Kg/Km)
3 Core NA2XYRY- rm , sm						
3 × 16 rm	7 × 1.7	0.7	1.2	1.8	21.5	808
3 × 25 rm	7 × 2.14	0.9	1.6	1.8	25.7	1218
3 × 35 rm	7 × 2.52	0.9	1.6	1.8	27.8	1425
3 × 50 sm	19 × 1.83	1.0	1.6	1.8	30.0	1580
3 × 70 sm	19 × 2.22	1.1	2.0	2.0	34.8	2185
3 × 95 sm	19 × 2.56	1.1	2.0	2.1	37.5	2700
3 × 120 sm	19 × 2.87	1.2	2.0	2.2	39.5	3120
3 × 150 sm	37 × 2.30	1.4	2.5	2.3	45.5	4020
3 × 185 sm	37 × 2.57	1.6	2.5	2.5	50.0	4790
3 × 240 sm	37 × 2.93	1.7	2.5	2.6	56.0	5830
3 1/2 Core NA2XYRY- rm , sm						
3 × 25 / 16 rm	7 × 2.14/ 7 × 1.7	0.9 – 0.7	1.6	1.8	26.7	1285
3 × 35 / 16 rm	7 × 2.52/ 7 × 1.7	0.9 – 0.7	1.6	1.8	28.5	1425
3 × 50 / 25 sm	19 × 1.83/ 7 × 2.18	1.0 – 0.9	1.6	2.0	31.4	1850
3 × 70 / 35 sm	19 × 2.22/ 7 × 2.57	1.1 – 0.9	2.0	2.0	35.5	2580
3 × 95 / 50 sm	19 × 2.56/19 × 1.83	1.1 – 1.0	2.0	2.2	39.0	3060
3 × 120/ 70 sm	19 × 2.87/19 × 2.22	1.2 – 1.1	2.5	2.3	42.1	3660
3 × 150/ 70 sm	37 × 2.30/19 × 2.22	1.4 – 1.1	2.5	2.5	47.5	4655
3 × 185/ 95 sm	37 × 2.57/19 × 2.56	1.6 – 1.1	2.5	2.6	52.4	5510
3 × 240/120sm	37 × 2.93/37 × 2.08	1.7 – 1.2	2.5	2.7	56.5	6500
4 Core NA2XYRY- rm , sm						
4 × 16 rm	7 × 1.7	0.7	1.2	1.8	23.1	928
4 × 25 rm	7 × 2.14	0.9	1.6	1.8	27.7	1370
4 × 35 rm	7 × 2.52	0.9	1.6	1.9	30.3	1657
4 × 50 sm	19 × 1.83	1.0	1.6	2.0	32.2	2010
4 × 70 sm	19 × 2.22	1.1	2.0	2.2	35.5	2730
4 × 95 sm	19 × 2.56	1.1	2.0	2.3	39.0	3300
4 × 120 sm	19 × 2.87	1.2	2.5	2.4	41.5	4280
4 × 150 sm	37 × 2.30	1.4	2.5	2.6	48.5	5040
4 × 185 sm	37 × 2.57	1.6	2.5	2.7	54.2	5840

*The above data is approximate and subject to manufacturing tolerances





AL/PVC/STA/PVC

Code: NAYBY

Rated voltage : 0.6/1 KV

Reference standard : IEC 60502- 1 , BS 6346 , ISIRI 3569-1 , VDE 0271

Application : PVC insulated and PVC sheathed tape armored cable for indoors and outdoors, in cable duct, underground and water, if greater mechanical protection is required.

Construction :

- 1-Conductor : Stranded plain Aluminum acc. To IEC 60228 or ISIRI 3084 or VDE 0295 class2
- 2-Insulation : PVC
- 3-Color of insulation : As request
- 4-Inner covering : Extruded PVC for round cables and In sector shape cables , the cores covered with PP Tape
- 5-Armore : Galvanized Steel Tape armore
- 6-Outer sheath : Black PVC/ST1

Technical Specification :

- 1-Max. conductor temperature : 70 °C
- 2-Conductor resistant : Refer to table (1)
- 3-Test voltage : 3.5 KV ac or 8.4 KV dc for 5 min.
- 4-Current carrying capacity : Refer to table (2)
- 5-Bending radius : Refer to table (3)
- 6-Permissible short circuit temperature : 160 °C
- 7-Flame retardant : acc. to IEC 60332-1





Multi Core Tape Armored Cables with PVC Insulated & PVC Sheathed

Size (mm ²)	No. & dia. (mm)	Insulation Thickness (mm)	Aarmor dia (mm)	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
3 core NAYBY – sm						
3 × 50 sm	19 × 1.83	1.4	0.2	2.0	29.8	1317
3 × 70 sm	19 × 2.22	1.4	0.2	2.1	33.3	1640
3 × 95 sm	19 × 2.56	1.6	0.5	2.3	38.7	2505
3 × 120 sm	19 × 2.87	1.6	0.5	2.4	41.2	2880
3 × 150 sm	37 × 2.30	1.8	0.5	2.5	45.5	3450
3 × 185 sm	37 × 2.57	2.0	0.5	2.7	49.2	4115
3 × 240 sm	37 × 2.93	2.2	0.5	2.9	54.8	5030
3 1/2 Core NAYBY- rm , sm						
3 × 25/16 rm	7 × 2.14/7 × 1.7	1.2-1.0	0.2	1.8	26.4	1126
3 × 35/16 rm	7 × 2.52/7 × 1.7	1.2-1.0	0.2	1.9	30.9	1370
3 × 50/25 sm	19 × 1.83/7 × 2.18	1.4-1.2	0.2	2	31.5	1435
3 × 70/35 sm	19 × 2.22/7 × 2.57	1.4-1.2	0.5	2.1	35.8	2150
3 × 95/50 sm	19 × 2.56/19 × 1.83	1.6-1.4	0.5	2.3	40.6	2740
3 × 120/70 sm	19 × 2.87/19 × 2.22	1.6-1.4	0.5	2.4	43.7	3208
3 × 150/70 sm	37 × 2.30/19 × 2.22	1.8-1.4	0.5	2.6	48	3790
3 × 185/95 sm	37 × 2.57/19 × 2.56	2.0-1.6	0.5	2.7	52.5	4550
3 × 240/120 sm	37 × 2.93/37 × 2.08	2.2-1.6	0.5	2.9	58.8	5650
4 Core NAYBY- rm , sm						
4 × 16 rm	7 × 1.7	1.0	0.2	1.8	23.8	870
4 × 25 rm	7 × 2.14	1.2	0.2	1.8	27.9	1180
4 × 35 rm	7 × 2.52	1.2	0.2	1.9	33.9	1445
4 × 50 sm	19 × 1.83	1.4	0.2	2.1	32.5	1622
4 × 70 sm	19 × 2.22	1.4	0.5	2.2	38	2445
4 × 95 sm	19 × 2.56	1.6	0.5	2.4	42.6	3085
4 × 120 sm	19 × 2.87	1.6	0.5	2.5	45.8	3592
4 × 150 sm	37 × 2.30	1.8	0.5	2.7	50.1	4280
4 × 185 sm	37 × 2.57	2.0	0.5	2.9	54.8	5117

*The above data is approximate and subject to manufacturing tolerances



Coaxial & Instrument Cables





SETAREH YAZD Wire & Cable Co.



High Frequency coaxial cables

505T3V, 705T3V

50 Ω & 75 Ω

Reference standard : JIS 3501

Construction :

- 1- Inner conductor : plain or tinned annealed copper**
- 2- Insulation : Solid or Foam Polyethylene**
- 3- Shield (outer conductor) : Copper wire braid**
- 4- Outer sheath : PVC or PE**

Technical Specification :

- 1- Operating Temperature : -20 °C to 70 °C**
- 2- Conductor resistant : acc. to JIS 3501**
- 3- Insulation resistance : Min. 1000 M Ω .Km**
- 4- Mutual capacitance : acc. to JIS 3501**
- 5- Attenuation : acc. to JIS 3501**
- 6- Characteristic impedance : 50 Ω & 75 Ω**





High Frequency coaxial cables

a) 50 Ω coaxial cable

Symbol	Inner conductor (mm)	Insulation thickness (mm)	Shield n $\times$ s $\times$ d	Sheath thickness (mm)	Overall dia.(mm)	Weight approx. Kg/Km	Cond. Resistance Ω /km	Mutual capacitance @ 1KHz nf/Km	Attenuation @ 10 MHZ db/Km
1.5D-2V	7 $\times$ 0.18	0.53	5 $\times$ 16 $\times$ 0.10	0.4	2.9 $\pm$ 0.4	14	110	104 $\pm$ 5	85
2.5D-2V	1 $\times$ 0.8	0.95	7 $\times$ 16 $\times$ 0.12	0.5	4.3 $\pm$ 0.5	35	35.9	100 $\pm$ 5	45
3 D-2V	7 $\times$ 0.32	1.02	5 $\times$ 24 $\times$ 0.14	0.8	5.3 $\pm$ 0.5	44	33.3	100 $\pm$ 4	47
5 D-2V	1 $\times$ 1.4	1.7	7 $\times$ 24 $\times$ 0.14	0.9	7.3 $\pm$ 0.5	80	11.7	100 $\pm$ 4	27
8 D-2V	7 $\times$ 0.8	2.7	8 $\times$ 24 $\times$ 0.18	1.2	11.1 $\pm$ 0.5	180	5.13	100 $\pm$ 4	20
10 D-2V	1 $\times$ 2.9	3.4	10 $\times$ 24 $\times$ 0.20	1.2	13.1 $\pm$ 0.6	260	2.67	102 $\pm$ 4	14

n: number of wire on each spindle , s: number of spindle , d: diameter of wire

b) 75 Ω coaxial cable

Symbol	Inner conductor (mm)	Insulation thickness (mm)	Shield n $\times$ s $\times$ d	Sheath thickness (mm)	Overall dia.(mm)	Weight approx. Kg/Km	Cond. Resistance Ω /km	Mutual capacitance @ 1KHz nf/Km	Attenuation @ 10 MHZ db/Km
1.5C-2V	1 $\times$ 0.26	0.67	5 $\times$ 16 $\times$ 0.10	0.4	2.9 $\pm$ 0.4	13	968	69 $\pm$ 4	96
2.5C-2V	1 $\times$ 0.4	1.0	6 $\times$ 16 $\times$ 0.12	0.5	4.0 $\pm$ 0.5	25	145	69 $\pm$ 4	52
3 C-2V	1 $\times$ 0.5	1.3	5 $\times$ 24 $\times$ 0.14	0.8	5.4 $\pm$ 0.5	42	91.4	67 $\pm$ 3	42
5 C-2V	1 $\times$ 0.8	2.05	7 $\times$ 24 $\times$ 0.14	0.9	7.4 $\pm$ 0.5	74	35.9	67 $\pm$ 3	27
7 C-2V	7 $\times$ 0.4	3.05	8 $\times$ 24 $\times$ 0.18	1.1	10.4 $\pm$ 0.5	140	20.7	67 $\pm$ 3	22
10 C-2V	7 $\times$ 0.5	3.95	10 $\times$ 24 $\times$ 0.20	1.3	13.0 $\pm$ 0.6	220	13.1	67 $\pm$ 3	18

* n: number of wire on each spindle , s: number of spindle , d: diameter of wire





Instrument Cables

CU/PVC/ISCR & OSCR/PVC

CU/PVC/ISCR & OSCR/SWA/PVC

CU/PE/ISCR & OSCR/PVC

CU/PE/ISCR & OSCR/SWA/PVC

CU/XLPE/ISCR & OSCR/PVC

CU/XLPE/ISCR & OSCR/SWA/PVC

Reference standard : BS 5308 Part 1 & 2 , IEC 60288

Rated voltage : 300/500 V

Application :

For transmission analogue and digital signals. For use in signaling and data systems at power station, petrochemical plants, and in places that protection against external electrical fields and electromagnetic interference is necessary. These cables suitable for indoors and outdoors, on cable trays, in pipes or underground.

Construction :

1. **Conductor:** Annealed Copper conductor class 1,2,5 acc. to IEC 60228 , BS 6360
2. **Insulation:** PVC or PE or XLPE
3. **Core identification :** acc. to BS 5308
4. **Twisting :** The cores twisted together to form pair , triple and quad .
5. **Static screen :** Polyester tape + plain or tinned copper drain wire+ aluminum polyester tape (Al/PE) use as individual and overall screen .
6. **Inner sheath:** PVC or PE only for armored cables
7. **Armored:** Galvanized steel wire
8. **Sheath:** PVC , PE
9. **Color of sheath :** Black or as request

Technical Data:

- 1- **Temperature :** -40 °C to 70 °C
- 2- **Conductor resistance :** acc. to table (1)
- 3- **Max. short circuit temperature :** 160 °C
- 4- **Test voltage :** 1000 V r.m.s or 2400 V dc for 1 min.
- 5- **Insulation resistance :** Min. 5000 MΩ.Km
- 6- **Mutual capacitance at 1 KHz :** for one or two pair- 115 nf/Km and for other Cables 75 nf/Km
- 7- **L/R ratio :** acc. to BS 5308
- 8- **Min bending radius:** For non armored cables 7.5× cable ø & For armored cables 20× cable ø
- 9- **Flame retardant :** acc. to IEC 60332-1



Instrument Cables

Single and multi pair PVC insulated with collective screen and PVC sheathed
RE-Y(St)Y, PIMF

No. of pair × Cross Section	Cond. No. × dia. (mm)	Insulation Thickness (mm)	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
0.5 mm², class 5					
1 × 2 × 0.5	16 × 0.20	0.6	0.8	6.2	40
2 × 2 × 0.5	16 × 0.20	0.6	0.8	7.6	70
5 × 2 × 0.5	16 × 0.20	0.6	1.1	12.4	160
10 × 2 × 0.5	16 × 0.20	0.6	1.2	16.5	275
15 × 2 × 0.5	16 × 0.20	0.6	1.3	19.2	380
20 × 2 × 0.5	16 × 0.20	0.6	1.3	21.5	442
30 × 2 × 0.5	16 × 0.20	0.6	1.5	26.2	710
0.75 mm², class 5					
1 × 2 × 0.75	24 × 0.20	0.6	0.8	6.7	50
2 × 2 × 0.75	24 × 0.20	0.6	0.8	8.2	78
5 × 2 × 0.75	24 × 0.20	0.6	1.2	13.7	195
10 × 2 × 0.75	24 × 0.20	0.6	1.3	18.2	345
15 × 2 × 0.75	24 × 0.20	0.6	1.3	21.1	480
20 × 2 × 0.75	24 × 0.20	0.6	1.5	24.3	650
30 × 2 × 0.75	24 × 0.20	0.6	1.7	29.2	950
1.5 mm², class 2					
1 × 2 × 1.5	7 × 0.52	0.6	0.8	7.5	68
2 × 2 × 1.5	7 × 0.52	0.6	0.9	9.4	126
5 × 2 × 1.5	7 × 0.52	0.6	1.2	15.6	292
10 × 2 × 1.5	7 × 0.52	0.6	1.3	21	532
15 × 2 × 1.5	7 × 0.52	0.6	1.5	24.6	798
20 × 2 × 1.5	7 × 0.52	0.6	1.7	28	1020
30 × 2 × 1.5	7 × 0.52	0.6	2.0	33.5	1495

* The above data is approximate and subject to manufacturing tolerances





Multi pair PVC insulated with individual & collective screen and PVC sheathed RE-Y(St)Y, PIMF

No. of pair × Cross Section	Cond. No. × dia. (mm)	Insulation Thickness (mm)	Sheath Thickness(mm)	Overall dia. approx.(mm)	Weight approx. (Kg/Km)
0.5 mm² , class 5					
2 × 2 × 0.5	16 × 0.20	0.6	1.1	11.2	118
5 × 2 × 0.5	16 × 0.20	0.6	1.2	14.3	205
10 × 2 × 0.5	16 × 0.20	0.6	1.3	19.0	362
15 × 2 × 0.5	16 × 0.20	0.6	1.5	22.3	530
20 × 2 × 0.5	16 × 0.20	0.6	1.5	25.4	680
30 × 2 × 0.5	16 × 0.20	0.6	1.7	29.8	942
0.75 mm² , class 5					
2 × 2 × 0.75	24 × 0.20	0.6	1.1	12.2	127
5 × 2 × 0.75	24 × 0.20	0.6	1.2	15.6	243
10 × 2 × 0.75	24 × 0.20	0.6	1.3	20.7	442
15 × 2 × 0.75	24 × 0.20	0.6	1.5	24.3	642
20 × 2 × 0.75	24 × 0.20	0.6	1.7	27.8	840
30 × 2 × 0.75	24 × 0.20	0.6	2.0	34.2	1252
1.5 mm² , class 2					
2 × 2 × 1.5	7 × 0.52	0.6	1.2	13.2	186
5 × 2 × 1.5	7 × 0.52	0.6	1.3	17.2	353
10 × 2 × 1.5	7 × 0.52	0.6	1.5	23.6	660
15 × 2 × 1.5	7 × 0.52	0.6	1.7	27.5	954
20 × 2 × 1.5	7 × 0.52	0.6	2.0	31.0	1240
30 × 2 × 1.5	7 × 0.52	0.6	2.2	38.1	1825

* The above data is approximate and subject to manufacturing tolerances





Single and multi pair PE or XLPE insulated with collective screen
and PVC sheathed RE-2Y(St)Y PIMF, RE- 2X(St)Y, PIMF

No. of pair × Cross Section	Cond. No. × dia. (mm)	Insulation Thickness (mm)	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
0.5 mm² , class 1					
1 × 2 × 0.5	1 × 0.8	0.5	0.8	5.3	33
2 × 2 × 0.5	1 × 0.8	0.5	0.8	6.3	52
5 × 2 × 0.5	1 × 0.8	0.5	1.1	10.2	120
10 × 2 × 0.5	1 × 0.8	0.5	1.2	13.9	210
15 × 2 × 0.5	1 × 0.8	0.5	1.2	15.8	293
20 × 2 × 0.5	1 × 0.8	0.5	1.3	18.1	378
30 × 2 × 0.5	1 × 0.8	0.5	1.3	21.5	538
1 mm² , class 1					
1 × 2 × 1	1 × 1.12	0.6	0.8	6.4	47
2 × 2 × 1	1 × 1.12	0.6	0.8	7.7	77
5 × 2 × 1	1 × 1.12	0.6	1.2	12.8	201
10 × 2 × 1	1 × 1.12	0.6	1.2	17.2	343
15 × 2 × 1	1 × 1.12	0.6	1.3	20.1	493
20 × 2 × 1	1 × 1.12	0.6	1.5	23.4	662
30 × 2 × 1	1 × 1.12	0.6	1.5	27.8	968
0.5 mm² , class 5					
1 × 2 × 0.5	16 × 0.20	0.6	0.8	6.1	42
2 × 2 × 0.5	16 × 0.20	0.6	0.8	7.2	57
5 × 2 × 0.5	16 × 0.20	0.6	1.1	12.1	141
10 × 2 × 0.5	16 × 0.20	0.6	1.2	16.2	235
15 × 2 × 0.5	16 × 0.20	0.6	1.3	18.8	335
20 × 2 × 0.5	16 × 0.20	0.6	1.3	21.2	430
30 × 2 × 0.5	16 × 0.20	0.6	1.5	26.2	640
0.75 mm² , class 5					
1 × 2 × 0.75	24 × 0.20	0.6	0.8	6.7	50
2 × 2 × 0.75	24 × 0.20	0.6	0.9	8.4	75
5 × 2 × 0.75	24 × 0.20	0.6	1.2	13.7	181
10 × 2 × 0.75	24 × 0.20	0.6	1.3	18.2	325
15 × 2 × 0.75	24 × 0.20	0.6	1.3	21.0	440
20 × 2 × 0.75	24 × 0.20	0.6	1.5	24.3	594
30 × 2 × 0.75	24 × 0.20	0.6	1.7	29.2	830
1.5 mm² , class 2					
1 × 2 × 1.5	7 × 0.52	0.6	0.8	7.2	68
2 × 2 × 1.5	7 × 0.52	0.6	0.9	9.4	117
5 × 2 × 1.5	7 × 0.52	0.6	1.2	15.2	276
10 × 2 × 1.5	7 × 0.52	0.6	1.3	21	515
15 × 2 × 1.5	7 × 0.52	0.6	1.5	24.2	734
20 × 2 × 1.5	7 × 0.52	0.6	1.5	27.4	934
30 × 2 × 1.5	7 × 0.52	0.6	1.7	33.2	1372





Instrument Cables

Multi pair PE or XLPE insulated with Individual & collective screen and PVC sheathed
RE- 2Y(St)Y PIMF, RE- 2X(St)Y PIMF

No. of pair × Cross Section	Cond. No. × dia. (mm)	Insulation Thickness (mm)	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
0.5 mm², class 1					
2 × 2 × 0.5	1 × 0.8	0.5	0.9	9.4	92
5 × 2 × 0.5	1 × 0.8	0.5	1.2	12.5	176
10 × 2 × 0.5	1 × 0.8	0.5	1.2	16.4	305
15 × 2 × 0.5	1 × 0.8	0.5	1.3	19.3	434
20 × 2 × 0.5	1 × 0.8	0.5	1.3	21.8	553
30 × 2 × 0.5	1 × 0.8	0.5	1.5	26.5	812
1 mm², class 1					
2 × 2 × 1	1 × 1.12	0.6	1.1	11.5	132
5 × 2 × 1	1 × 1.12	0.6	1.2	14.9	245
10 × 2 × 1	1 × 1.12	0.6	1.3	19.8	445
15 × 2 × 1	1 × 1.12	0.6	1.5	23.5	674
20 × 2 × 1	1 × 1.12	0.6	1.7	27.2	872
30 × 2 × 1	1 × 1.12	0.6	2.0	33.2	1280
0.5 mm², class 5					
2 × 2 × 0.5	16 × 0.20	0.6	1.1	11	105
5 × 2 × 0.5	16 × 0.20	0.6	1.2	14.1	192
10 × 2 × 0.5	16 × 0.20	0.6	1.3	18.7	342
15 × 2 × 0.5	16 × 0.20	0.6	1.5	22.1	503
20 × 2 × 0.5	16 × 0.20	0.6	1.5	25.2	612
30 × 2 × 0.5	16 × 0.20	0.6	1.7	30.2	890
0.75 mm², class 5					
2 × 2 × 0.75	24 × 0.20	0.6	1.1	11.8	128
5 × 2 × 0.75	24 × 0.20	0.6	1.2	15.2	236
10 × 2 × 0.75	24 × 0.20	0.6	1.3	20.2	415
15 × 2 × 0.75	24 × 0.20	0.6	1.5	24.0	605
20 × 2 × 0.75	24 × 0.20	0.6	1.5	27.3	795
30 × 2 × 0.75	24 × 0.20	0.6	2.0	33.7	1172
1.5 mm², class 2					
2 × 2 × 1.5	7 × 0.52	0.6	1.2	14.0	170
5 × 2 × 1.5	7 × 0.52	0.6	1.3	18.1	321
10 × 2 × 1.5	7 × 0.52	0.6	1.5	25.2	605
15 × 2 × 1.5	7 × 0.52	0.6	1.7	29.6	880
20 × 2 × 1.5	7 × 0.52	0.6	1.7	33.6	1120
30 × 2 × 1.5	7 × 0.52	0.6	2.0	39.5	1670

*The above data is approximate and subject to manufacturing tolerances



SETAREH YAZD CO.

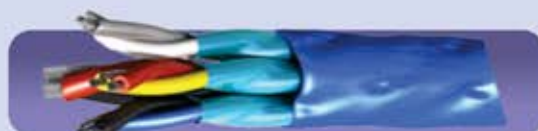


Instrument Cables

Multi pair PVC insulated with individual & collective screen , armored and PVC sheathed
RE- Y(St)YRY , PIMF

No. of pair × Cross Section	Cond. No. × dia. (mm)	Insulation Thickness (mm)	Bedding Thickness (mm)	Wire armor dia. (mm)	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
0.5 mm² , class 5							
2 × 2 × 0.5	16 × 0.20	0.6	1.1	0.9	1.5	15.5	455
5 × 2 × 0.5	16 × 0.20	0.6	1.2	1.2	1.6	19.8	750
10 × 2 × 0.5	16 × 0.20	0.6	1.3	1.6	1.8	25.6	1400
15 × 2 × 0.5	16 × 0.20	0.6	1.5	1.6	1.8	28.6	1550
20 × 2 × 0.5	16 × 0.20	0.6	1.5	1.6	1.9	31.6	1840
20 × 2 × 0.5	16 × 0.20	0.6	1.7	2	2.1	38.5	2750
0.75 mm² , class 5							
2 × 2 × 0.75	24 × 0.20	0.6	1.1	0.9	1.5	16.7	470
5 × 2 × 0.75	24 × 0.20	0.6	1.2	1.2	1.6	20.7	830
10 × 2 × 0.75	24 × 0.20	0.6	1.3	1.6	1.8	26.8	1365
15 × 2 × 0.75	24 × 0.20	0.6	1.5	1.6	1.9	30.4	1715
20 × 2 × 0.75	24 × 0.20	0.6	1.7	2.0	2.0	35.2	2430
30 × 2 × 0.75	24 × 0.20	0.6	2.0	2.0	2.2	41.3	3170
1.5 mm² , class 2							
2 × 2 × 1.5	7 × 0.52	0.6	1.2	1.2	1.6	18.6	752
5 × 2 × 1.5	7 × 0.52	0.6	1.3	1.6	1.7	22.7	1165
10 × 2 × 1.5	7 × 0.52	0.6	1.5	1.6	1.9	30.1	1822
15 × 2 × 1.5	7 × 0.52	0.6	1.7	2.0	2.0	34.8	2555
20 × 2 × 1.5	7 × 0.52	0.6	1.7	2.0	2.1	38.2	3070
30 × 2 × 1.5	7 × 0.52	0.6	2.0	2.5	2.4	46.5	4610

* The above data is approximate and subject to manufacturing tolerances





Multi pair PE or XLPE insulated with individual & collective screen, armored and PVC sheathed
RE-2Y(St)YRY , RE-2X(St)YRY

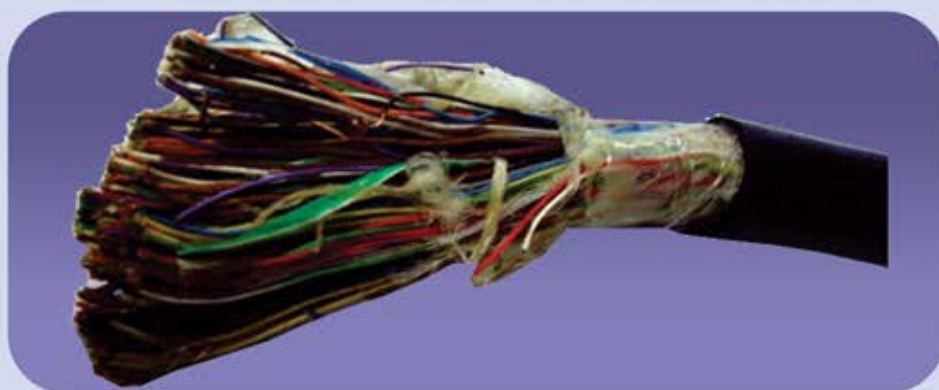
No. of pair × Cross Section	Cond. No. × dia. (mm)	Insulation Thickness (mm)	Bedding Thickness (mm)	Wire armor dia. (mm)	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
0.5 mm² , class 1							
2 × 2 × 0.5	1 × 0.8	0.5	0.9	0.9	1.4	14.2	345
5 × 2 × 0.5	1 × 0.8	0.5	1.2	1.2	1.5	18.3	601
10 × 2 × 0.5	1 × 0.8	0.5	1.2	1.2	1.7	22.3	867
15 × 2 × 0.5	1 × 0.8	0.5	1.3	1.6	1.7	26.2	1250
20 × 2 × 0.5	1 × 0.8	0.5	1.3	1.6	1.9	28.8	1458
30 × 2 × 0.5	1 × 0.8	0.5	1.9	1.6	1.9	33.7	1890
1 mm² , class 1							
2 × 2 × 1	1 × 1.12	0.6	1.1	0.9	1.5	16.3	434
5 × 2 × 1	1 × 1.12	0.6	1.2	1.2	1.6	20.8	748
10 × 2 × 1	1 × 1.12	0.6	1.3	1.6	1.8	26.8	1280
15 × 2 × 1	1 × 1.12	0.6	1.5	1.6	1.9	30.9	1645
20 × 2 × 1	1 × 1.12	0.6	1.7	2.0	2.0	35.1	2216
30 × 2 × 1	1 × 1.12	0.6	2.0	2.0	2.2	42.0	2915
0.5 mm² , class 5							
2 × 2 × 0.51	6 × 0.20	0.6	1.1	0.9	1.5	15.7	395
5 × 2 × 0.51	6 × 0.20	0.6	1.2	1.2	1.6	20.1	680
10 × 2 × 0.51	6 × 0.20	0.6	1.3	1.6	1.8	26.0	1162
15 × 2 × 0.51	6 × 0.20	0.6	1.5	1.6	1.8	29.0	1420
20 × 2 × 0.51	6 × 0.20	0.6	1.5	1.6	1.9	32.1	1675
30 × 2 × 0.51	6 × 0.20	0.6	1.7	2.0	2.1	38.6	2385
0.75 mm² , class 5							
2 × 2 × 0.75	24 × 0.20	0.6	1.1	0.9	1.5	16.7	435
5 × 2 × 0.75	24 × 0.20	0.6	1.2	1.2	1.6	21.1	748
10 × 2 × 0.75	24 × 0.20	0.6	1.3	1.6	1.7	27.0	1276
15 × 2 × 0.75	24 × 0.20	0.6	1.5	1.6	1.9	30.9	1655
20 × 2 × 0.75	24 × 0.20	0.6	1.5	1.6	1.9	34.3	2186
30 × 2 × 0.75	24 × 0.20	0.6	2.0	2.0	2.2	42.0	2856
1.5 mm² , class 2							
2 × 2 × 1.5	7 × 0.52	0.6	1.2	1.2	1.6	19.1	630
5 × 2 × 1.5	7 × 0.52	0.6	1.3	1.6	1.7	24.0	1065
10 × 2 × 1.5	7 × 0.52	0.6	1.5	1.6	1.9	30.4	1595
15 × 2 × 1.5	7 × 0.52	0.6	1.7	2.0	2.0	35.2	2245
20 × 2 × 1.5	7 × 0.52	0.6	1.7	2.0	2.1	39.4	2700
30 × 2 × 1.5	7 × 0.52	0.6	2.0	2.5	2.5	47.8	4020

*The above data is approximate and subject to manufacturing tolerances





Telecommunication Cables



SETAREH YAZD Wire & Cable Co.



J – Y(st)Y:

According To: VDE 0815

Application: Suitable for measurment & control in the fields of electronics.

This cable is also used for data transmission in computers. Suitable for fixed installiation in dry & humid premises.

Construction:

Conductor: Solid Plain annealed copper conductor

Insulation: Extruded PVC

Insulation Colour : Refer to table (9)

Core Warp: One layer of non-hygroscopic non-wicking, dielectric material (Overlap %30 or 10mm)

Nominal Diameter Of Earth Wire: 0.6 mm

Screen: A Single layer of aluminium fiol (Overlap %30 or 10mm)

Jacket: Extruded PVC

Color Jacket: Grey or White

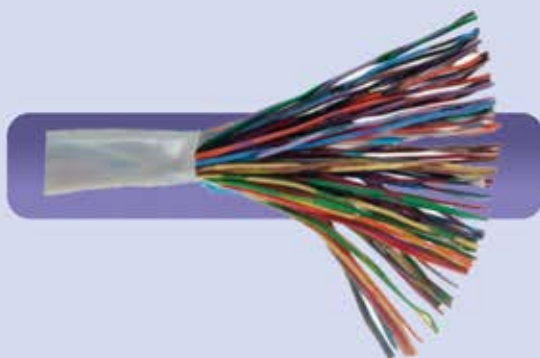
No.of pair ×dia	Insulation Thickness (mm)	core dia. (mm)	pst.size	Alt.size	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
1 × 2 × 0.6	0.2	1.05	10	10	0.6	3.5	19.3
2 × 2 × 0.6	0.2	1.05	12	12	0.6	4.3	28.9
3 × 2 × 0.6	0.2	1.05	12	12	0.6	5	37.9
4 × 2 × 0.6	0.2	1.05	15	15	0.6	5.5	47.5
5 × 2 × 0.6	0.2	1.05	15	15	0.6	6	56.1
6 × 2 × 0.6	0.2	1.05	15	15	0.6	6.5	64.5
10 × 2 × 0.6	0.2	1.05	20	20	1	8.7	113.4
15 × 2 × 0.6	0.2	1.05	25	25	1	10.1	156.9
20 × 2 × 0.6	0.2	1.05	25	25	1	11.3	198.8

**J – 2Y(st)Y:**

According To: VDE 0815

Application: Designed to provide service extensions from distribution cables.**Construction:****Conductor:** Solid Plain annealed copper conductor**Insulation:** Extruded HDPE**Insulation Colour :** Refer to table (9)**Core Warp:** One layer of non-hygroscopic non-wicking, dielectric material (Overlap %30 or 10mm)**Nominal Diameter Of Earth Wire:** 0.6 mm**Screen:** A Single layer of aluminium foil (Overlap %30 or 10mm)**Jacket:** Extruded PVC**Colour Jacket:** Grey

No.of pair ×dia	Insulation Thickness (mm)	core dia. (mm)	pst.size	Alt.size	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
1 × 2 × 0.6	0.2	1.05	10	10	0.6	3.5	18.6
2 × 2 × 0.6	0.2	1.05	12	12	0.6	4.3	27.6
3 × 2 × 0.6	0.2	1.05	12	12	0.6	5	36.3
4 × 2 × 0.6	0.2	1.05	15	15	0.6	5.5	44.8
5 × 2 × 0.6	0.2	1.05	15	15	0.6	6	53
6 × 2 × 0.6	0.2	1.05	15	15	0.6	6.5	60.6
10 × 2 × 0.6	0.2	1.05	20	20	1	8.7	107.1
15 × 2 × 0.6	0.2	1.05	25	25	1	10.1	147.8
20 × 2 × 0.6	0.2	1.05	25	25	1	11.3	187.3





A – 2Y(st)2Y:

According To: TCI

Application: These types of cables are used for connecting the distribution

Construction:

Conductor: Solid Plain annealed copper conductor

Insulation: Extruded HDPE, according to ASTM D 1248, type III class B, categories IV or V, grade E-8

Insulation Color : Refer to table (9)

Core Warp: One layer of non-hygroscopic non-wicking, dielectric material (Overlap %30 or 10mm)

Nominal Diameter Of Earth Wire: 0.6 mm

Screen: A Single layer of aluminium foil with a minimum thickness of 35 micron (Overlap %30 or 10mm)

Jacket: Extruded LDPE, according to ASTM D 1248, type I class C, categories IV or V, grade J-3

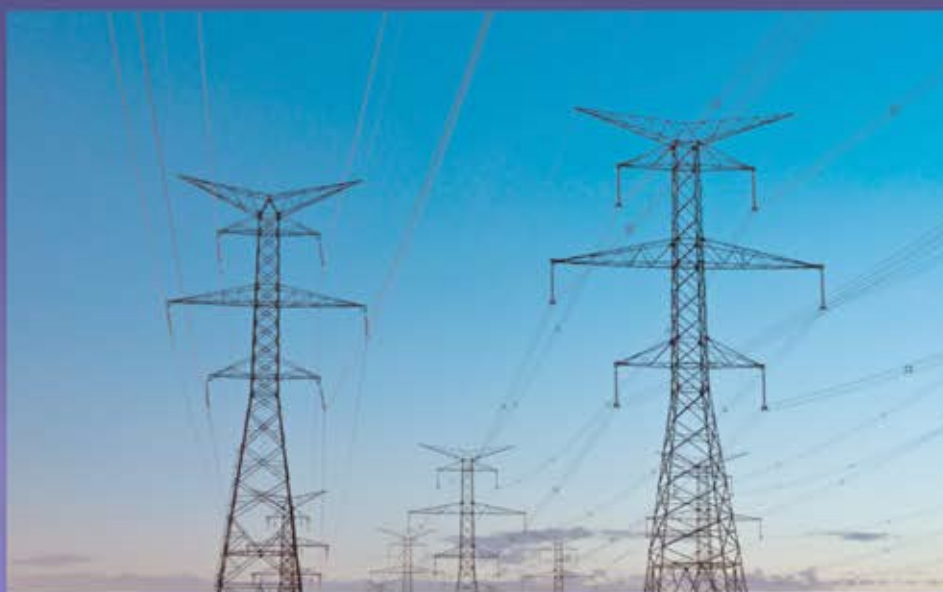
Color Jacket: Black

No. of pair × dia	Insulation Thickness (mm)	core dia. (mm)	pst.size	Alt.size	Sheath Thickness (mm)	Overall dia. approx. (mm)	Weight approx. (Kg/Km)
2 × 2 × 0.6	0.25	1.1	12	12	1	5.2	32.4
4 × 2 × 0.6	0.25	1.1	15	15	1	6.4	50.2
6 × 2 × 0.6	0.25	1.1	20	20	1	7.4	67.3
8 × 2 × 0.6	0.25	1.1	20	20	1	8.1	83.1
10 × 2 × 0.6	0.25	1.1	20	20	1	8.8	98.6
15 × 2 × 0.6	0.25	1.1	25	25	1.2	10.7	143.6
20 × 2 × 0.6	0.25	1.1	25	25	1.4	12.4	189.6





Aerial Bundled Cables – ABC



SETAREH YAZD Wire & Cable Co.



NFA2X

Reference standard : HD 626 S1 , NF C 33 – 209 , AS/NZ 3560-1 , EN 50397-1
BS EN 50183 , BS 7870-5 , 60502-1 IEC

Nominal voltage : 0.6/1 KV

Application: For overhead distribution lines , mainly for public distribution with
A highest voltage not above 1.2 KV

Construction :

- 1- Phase Conductor:** Aluminum EC grade 1350 H12-O , circular stranded compacted.
- 2- Null / Messenger:** AAAC , grade 6101 , circular stranded non-compacted. Or
ACSR (Aluminum Conductor Steel Reinforced) , or Messenger only
for 6 cores: Galvanized Steel wire
- 3- Lighting conductor:** Aluminum EC grade 1350 H12-O , circular stranded compacted.
- 4- Insulation:** Black XLPE type TIX5

Technical specification :

- 1- Operating temperature :** - 40 °C to +80 °C
- 2-Conductor resistant :** Refer to table (1)
- 3-Max. resistivity of aluminum grade 1350 :** 0.02808 $\Omega\text{mm}^2/\text{m}$
- 4- Max. resistivity of alloy aluminum grade 6101 :** 32.53 $\text{n}\Omega.\text{m}$
- 5-Spark Test Voltage :** (4500+7500 t) V dc (t : insulation thickness)
Or (3000+5000 t) V ac (t : insulation thickness)
- 6-Current carrying capacity :** refer to table (2)
- 7-Bending radius :** Refer to table (3)
- 8-Permissible short circuit temperature :** 250 °C



Phase Conductor : AAC Neutral conductor : ACSR Insulation : XLPE

size of cable ($n \times \text{mm}^2 + \text{mm}^2 + \text{mm}^2$)	Phase Conductor		Neutral Conductor			Lighting Core		Completed Cable	
	Structure (N x mm)	Insulation Thickness (mm)	Structure (N x mm)		Insulation Thickness (mm)	Structure (N x mm)	Insulation Thickness (mm)	Overall dia.(mm)	Weight Approx (Kg/km)
1×16+16-25	7×1.70	1.1	6×2.59	1×2.59	1.3	7×1.70	1.1	16.3	278
1×25+16-25	7×2.14	1.3	6×2.59	1×2.59	1/2	7×1.70	1.1	17.7	403
1×35+16-35	7×2.52	1.3	6×2.79	1×2.79	1/2	7×1.70	1.1	20.5	501
3×35+16-35	7×2.52	1.3	6×2.79	1×2.79	1/2	7×1.70	1.1	20.5	639
3×50+16-35	7×2.93	1.5	6×2.79	1×2.79	1/2	7×1.70	1.1	21.9	783
3×70+25-70	19×2.14	1.5	6×3.66	1×3.66	1/2	7×2.14	1.3	35	1154
3×95+25-70	19×2.52	1.7	6×3.66	1×3.66	1/2	7×2.14	1.3	38	1424

ACSR

Cross Section (mm ²)	Phase and Lighting dia. (mm)	Neutral Diameter (mm)	Phase and Lighting Resistance (Ω/Km)	Neutral Resistance (Ω/Km)	Max. Current Capacity at 25° C (A)	Breaking Load neutral (N)
16	4.7	...	1.91	...	86	...
25	5.94	7.77	1.2	0.907	115	11400
35	7	8.38	0.868	0.782	144	13200
50	8.09	9	0.641	0.676	175	15200
70	9.9	10.98	0.443	0.4564	222	21800
95	11.65	...	0.32	...	269	...
120	13.02	...	0.253	...	312	...

Phase Conductor : AAC Messenger : Steel Insulation : XLPE

size of cable ($n \times \text{mm}^2 + \text{mm}^2 + \text{mm}^2$)	Phase & Neutral Conductor			Lighting Core		Completed Cable	
	Conductor Structure (N x mm)	Insulation Thickness (mm)	Insulation Thickness (mm)	Structure (N x mm)	Insulation Thickness (mm)	Overall dia.(mm)	Weight Approx (Kg/km)
3×35+16+25-16	7×2.52/7×2.14	1/1.3	1	7×1.70	1.1	26.7	669
3×50+16+35-16	7×2.93/7×2.52	1.5/1.3	1	7×1.70	1.1	29.5	845
3×70+16+50-16	19×2.14/7×2.93	1.5/1.5	1	7×1.70	1.1	33.1	1097
3×95+25+70-25	19×2.52/19×2.14	1.7/1.5	1.1	7×2.14	1.3	38.8	1529

AAC with Steel Messenger

Cross Section (mm ²)	Phase and Lighting dia. (mm)	Steel Messenger Diameter (mm)	Conductor Electrical Resistance(Ω/Km)	Max. Current Capacity at 25° C (A)	Breaking Load neutral (N)
16	4.7	4.71	1.91	86	21350
25	5.94	5.79	1.2	115	28700
35	7	...	0.868	144	...
50	8.09	...	0.641	175	...
70	9.9	...	0.443	222	...
95	11.65	...	0.32	169	...



Aerial Bundled Cables

Phase and Lighting Conductor: AAC compacted Neutral Conductor : AAAC Insulation : XLPE

size of cable (n × mm ² + mm ² + mm ²)	Phase Conductor		Neutral Conductor		Lighting Core		Completed Cable	
	Structure (N × mm)	Insulation Thickness (mm)	Structure (N × mm)	Insulation Thickness (mm)	Structure (N × mm)	Insulation Thickness (mm)	Overall dia.(mm)	Weight Approx (kg/km)
1×16+16+ 35	7×1.70	1.2	7×2.54	1.6	7×1.70	1.2	18	278
1×25+16+ 35	7×2.14	1.4	7×2.54	1.6	7×1.70	1.2	20	314
1×35+16+ 35	7×2.52	1.6	7×2.54	1.6	7×1.70	1.2	23	408
3×35+16+54.6	7×2.52	1.6	7×3.15	1.6	7×1.70	1.2	33	684
3×50+16+54.6	7×2.93	1.6	7×3.15	1.6	7×1.70	1.2	36	803
3×70+16+ 70	19×2.14	1.8	7×3.61	1.6	7×1.70	1.2	41	1083
3×95+25+ 70	19×2.52	1.8	7×3.61	1.6	7×2.14	1.4	44	1362
3×120+25+70	19×2.83	1.8	7×3.61	1.6	7×2.14	1.4	46	1575

AAAC Conductor with AAAC Neutral Conductor

Cross Section (mm ²)	Phase and Lighting dia. (mm)	Neutral Diameter (mm)	Phase and Lighting Resistance (Ω/Km)	Neutral Resistance (Ω/Km)	Max. Current Capacity at 25° C (A)	Breaking Load neutral (N)
16	4.7	...	1.91	...	86	...
25	5.94	...	1.2	...	115	...
35	7	7.62	0.868	0.95	144	9940
50,54.6	8.09	9.45	0.641	0.63	175	15300
70	9.9	10.83	0.443	0.5	222	20000
95	11.65	...	0.32	...	269	...
120	13.02	...	0.253	...	312	...

AAAC 20 KV

Conductor: Compact AAAC Insulation: XLPE Standard: EN 50397-1

Real Cross Section (mm ²)	Conductor Structure (n × mm)	Cover Thickness (mm)	Overall Diameter (mm)	Weight Approx (Kg /Km)	Conductor electrical Resistance at 20° C (Ω/Km)	Max. Current capacity at 25° C (A)	Min Breaking Load neutral (N)
77.3	7 × 3.75	2.3	15.1	308	0.4467	320	21670
124	7 × 4.75	2.3	18.2	456	0.2784	435	34760
182.8	19 × 3.5	2.3	21.3	642	0.19	558	51230

ACSR 20 KV

Conductor: Compact AAAC Insulation: XLPE Standard: EN 50397-1

Real Cross Section (mm ²)	Conductor Structure (mm)	Cover Thickness (mm)	Overall Diameter (mm)	Weight Approx (Kg /Km)	Conductor electrical Resistance at 20° C (Ω/Km)	Max. Current capacity at 25° C (A)	Min Breaking Load neutral (N)
40	6×2.79/1×2.79	2.3	12.6	217	0.8239	232	12540
70	6×3.66/1×3.66	2.3	14.8	348	0.4767	316	20590
120	7×4.39/7×1.93	2.3	18.2	569	0.2843	446	38860
187	30×2.59/7×2.59	2.3	21.5	867	0.192	564	65460
217	30×2.79/7×2.79	2.3	23.2	967	0.1659	620	75810



Aerial Bundled Cables

AAAC 33 kv

Conductor: AAAC

Insulation: XLPE

Standard: EN 50397-1

Real Cross Section (mm ²)	Conductor Structure (mm)	Cover Thickness (mm)	Overall Diameter (mm)	Weight Approx (Kg/Km)	Conductor electrical Resistance at 20°C (Ω/Km)	Max. Current capacity at 25°C (A)	Min Breaking Load neutral (N)
77.3	7 × 3.75	3.6	17.7	375	0.4467	318	21670
124	7 × 4.75	3.6	20.8	535	0.2784	431	34760
182.8	19 × 3.5	3.6	23.9	733	0.19	551	51230

ACSR 33 kv

Conductor: ACSR

Insulation: XLPE

Standard: EN 50397-1

Real Cross Section (mm ²)	Conductor Structure (n × mm)	Cover Thickness (mm)	Overall Diameter (mm)	Weight Approx (Kg/Km)	Conductor electrical Resistance at 20°C (Ω/Km)	Max. Current capacity at 25°C (A)	Min Breaking Load neutral (N)
40	6×2.79/1×2.79	3.6	15.2	217	0.8239	235	12540
73.6	6×3.66/1×3.66	3.6	17.4	413	0.4767	321	20590
126.4	7×4.39/7×1.93	3.6	20.8	647	0.2843	448	38860
194.9	30×2.59/7×2.59	3.6	24.1	959	0.192	556	65460
217	30×2.79/7×2.79	3.6	25.8	967	0.1659	623	75810



Technical Information





Technical Information

General Information:

Selecting a power cables:

The following factors are important when selecting a suitable cables construction which is required:

- Maximum operating voltage
- Insulation type
- Frequency
- Load to be carried
- Voltage drop
- Length of line
- Mode of installation
- Under ground (direct or in ducts)
- In air
- Magnitude and duration of possible overload
- Magnitude and duration of short circuit current
- Max. and Min. ambient air temperature and soil temperature
- Chemical and physical properties of soil
- Specification and requirements to be met

Weight and Dimension:

Weight and Dimension characteristics are approximate. The deviations are due to manufacturing tolerances.

Electrical Parameters of the Cables:

Voltages :

The standard rated voltage is denoted by $U_0 / U (U_m)$, where :

U_0 is the rated voltage between conductor and earth or metallic screen

U is the rated voltage between conductors

U_m is the maximum continuously permissible operating voltage of cable at any time or In any part of the network

U_0 / U	300/500 V	450/750 V	0.6/1 KV	3.6/6 KV	6/10 KV	8.7/15 KV	12/20 KV	18/30 KV
U_m	600V	900 V	1.2 KV	7.2 KV	12 KV	17.5 KV	24 KV	36 KV

Note : Cable design for 6/10 and 18/30 KV is applicable for 6.35/11 and 19/33 KV respectively.



Technical Information

DC Resistance of conductor :

The maximum DC resistance values of conductors at 20 °C are as per IEC 60228 or ISIRI 3084 .
DC resistance per unit length of the conductor at other temperature is given by :

$$R = R_0 [1 + \alpha_{20} (t - 20 \text{ }^{\circ}\text{C})]$$

Where : R DC resistance at temperature t °C Ω/Km

R₀ DC resistance at temperature 20 °C Ω/Km (given in table 1)

t Conductor temperature °C

α₂₀ Temperature coefficient at 20 °C 1/°C

For copper conductor α₂₀ = 0.00393

For aluminum conductor α₂₀ = 0.00403

AC Resistance of Conductor :

The AC resistance per unit length of the conductor (effective resistance) at its maximum operating temperature is made up of the DC resistance at this temperature and the extra resistance which takes into account additional losses caused by the current displacement in the conductor (skin effect, proximity effect), eddy currents in the metal sheath of screen and eddy currents as well as magnetic reversal in the armor. The AC resistance is given in the table 13.

Inductance:

The values of the inductance for both multi cores and three single core cables have been calculated based on the following presumption

$$L = k + 0.2 \ln (2S / d) \text{ mH/Km}$$

Where : L inductance

K a constant relating to the conductor formation.

d conductor diameter (mm)

S axial spacing between conductors for cables in trefoil formation (mm) and ,
1.26 x axial spacing between conductors for cables in flat formation (mm)

Capacitance :

The values of capacitance for cables have been calculated based on the following presumption :

$$C = \frac{\epsilon}{18 \ln (D/d)} \text{ } \mu\text{F/Km}$$

Where : ε relative permittivity of insulation

D outer diameter of insulation (mm)

d Conductor diameter (mm)

Charging Current :

The charging current is the capacitive current which flows when AC voltage is applied to the cable as a result of the capacitance between the conductors and earth and, for multi core cable in which the individual cores are not screened , between conductors. The value can be derived from the equation: $I_C = U_0 \omega C 10^{-6}$



Technical Information

Where : U_0 voltage between phase and earth (V)
 $\omega = 2\pi f$
 f frequency (Hz)
 C Capacitance to neutral ($\mu F/Km$)

Dielectric Losses :

The dielectric losses of an AC cable are proportional to the capacitance , the frequency, the phase voltage and the power factor. They are given by :

$$D = (2\pi f C U_0^2 \tan \delta) \times 10^{-6} \text{ watt/Km/phase}$$

Where : f frequency (Hz)
 C Capacitance to neutral ($\mu F/Km$)
 U_0 Voltage between phase and earth (V)
 $\tan \delta$ Dielectric power factor

Voltage Drop :

When current flows in a cable , conductor there is a voltage drop between the ends of the conductor which is the product of the current and the impedance . The following equations should be used to calculate the voltage drop :

1- Single phase system

$$V_d = 2 (R \cos \varphi + X \sin \varphi) \text{ mV/amp/meter}$$

2- Three phase system

$$V_d = \sqrt{3} (R \cos \varphi + X \sin \varphi) \text{ mV/amp/meter}$$

Where :

V_d : Voltage drop mV/amp/meter

R : AC resistance of conductor at a maximum conductor temperature Ω/Km

X : Inductive reactance of cable Ω/Km

$\cos \varphi$: Power factor of load

Voltage drop values are given in table 11

Permissible Short Circuit Capacity :

The permissible short – circuit current as presented in table 2 are calculated in accordance with IEC 60724 , which are based on the following conditions :

- 1- Short circuit starts from the maximum operating temperature
- 2- Maximum temperature during short circuit

$$XLPE = 250^\circ C$$

$$PVC = 160^\circ C$$

- 3- Maximum short circuit current duration is 5 seconds .

The short circuit current (I) shall be calculated from the formula



Technical Information

$$I^2 = (K^2 \times S^2 / T) \times \ln ((\theta 1 + \beta) / (\theta 2 + \beta)) \quad (A)$$

Where :

I = short circuit current (A)

T = Duration of short circuit (Sec)

K = Constant for the material of the conductor

S = Area of conductor (mm²)

$\theta 1$ = Final temperature (°C)

$\theta 2$ = initial temperature (°C)

β = Reciprocal of the temperature coefficient of resistance (α) of the conductor.

Current Rating Factors (Bellow 1 to 6) :

1- Rating Factors K for variation in GROUND temperature

Ground temperature °C	20	25	30	35	40	45	50	55
PVC insulation rated 70 °C	1.0	0.95	0.90	0.84	0.78	0.71	0.63	0.54
PVC insulation rated 90 °C	1.0	0.96	0.92	0.87	0.83	0.78	0.73	0.67
XLPE insulation rated 90 °C	1.0	0.96	0.92	0.88	0.88	0.79	0.75	0.70

2- Rating Factors K for variation in AIR temperature

Air temperature °C	25	30	35	40	45	50	55
PVC insulation rated 70 °C	1.07	1.0	0.93	0.87	0.79	0.70	0.61
PVC insulation rated 90 °C	1.04	1.0	0.95	0.90	0.85	0.80	0.74
XLPE insulation rated 90 °C	1.04	1.0	0.96	0.91	0.87	0.82	0.76

3- Rating Factors K for variation in GROUND depth

Depth of Laying (m)	0.6	0.7	0.8	0.9	1.0	1.1	1.2
K	1.05	1.03	1.02	1.01	1.0	0.99	0.98

4- Rating Factors K for variation in SOIL RESISTIVITY

Soil Resistivity (°C .Cm/W)	80	90	100	120	150	200	250
K	1.17	1.12	1.07	1.0	0.91	0.80	0.73





Technical Information

5- Trefoil or Flat formation rating factors for three single core cables laid direct in ground :

Number of Circuit						
	Touching		Spacing = 15 Cm		Spacing = 30 Cm	
NR	Trefoil	Flat	Trefoil	Flat	Trefoil	Flat
2	0.77	0.80	0.82	0.85	0.88	0.91
3	0.66	0.69	0.73	0.76	0.80	0.83
4	0.60	0.63	0.68	0.71	0.74	0.77
5	0.56	0.59	0.64	0.67	0.72	0.75
6	0.53	0.57	0.61	0.64	0.70	0.73

6- Trefoil or Flat formation rating factors for Multi core cables laid direct in ground :

Number of Circuit						
	Touching		Spacing = 15 Cm		Spacing = 30 Cm	
NR	Trefoil	Flat	Trefoil	Flat	Trefoil	Flat
2	0.81	0.81	0.87	0.87	0.91	0.91
3	0.69	0.70	0.76	0.78	0.82	0.84
4	0.62	0.63	0.72	0.74	0.77	0.81
5	0.58	0.60	0.66	0.70	0.73	0.78
6	0.54	0.56	0.63	0.67	0.70	0.76



Technical Information

Table 1 : Class 1 & 2 solid and stranded conductors for single and multi-core cables DC resistance

Nominal Cross – Sectional area (mm ²)	Maximum Resistance of conductor @ 20 °C		
	Annealed copper conductor		Aluminum or Aluminum Alloy Ω / km
	Plain wires Ω / km	Metal coated wires Ω / km	
0.5	36.0	36.7	-----
0.75	24.5	24.8	-----
1.0	18.1	18.2	-----
1.5	12.1	12.2	-----
2.5	7.41	7.56	-----
4	4.61	4.70	-----
6	3.08	3.11	-----
10	1.83	1.84	3.08
16	1.15	1.16	1.91
25	0.727	0.734	1.20
35	0.524	0.529	0.868
50	0.387	0.391	0.641
70	0.268	0.270	0.443
95	0.193	0.195	0.320
120	0.153	0.154	0.253
150	0.124	0.126	0.206
185	0.0991	0.100	0.164
240	0.0754	0.0762	0.125
300	0.0601	0.0607	0.100
400	0.0470	0.0475	0.0778
500	0.0366	0.0369	0.0605
630	0.0283	0.0289	0.0469
800	0.0221	0.0224	0.0367
1000	0.0176	0.0177	0.0291



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Table 1 (Continue) : Class 5 flexible copper conductors for single & multi-core cables DC resistance

Nominal Cross – Sectional area (mm ²)	Maximum Resistance of conductor @ 20 °C	
	Annealed copper conductor	
	Plain wires Ω / km	Metal coated wires Ω / km
0.5	39.0	40.1
0.75	26.0	26.7
1.0	19.5	20.0
1.5	13.3	13.7
2.5	7.98	8.21
4	4.95	5.09
6	3.30	3.39
10	1.91	1.95
16	1.21	1.24
25	0.780	0.795
35	0.554	0.565
50	0.386	0.393
70	0.272	0.270
95	0.206	0.210
120	0.161	0.164
150	0.129	0.132
185	0.106	0.108
240	0.0801	0.0817
300	0.0641	0.0654
400	0.0486	0.0495
500	0.0384	0.0391
630	0.0287	0.0292



Technical Information

Current Carrying capacity

Table 2 : Permissible Current Carrying Capacity for PVC Insulated Power Cables With CU Conductor

Cross Section (mm ²)	Single Core Cables in DC Systems		Two Core Cables		3 & 4 Core Cables		3 Single Core Cables In 3 Phase Systems			
	Ground	Air	Ground	Air	Ground	Air	Ground	Air	Ground	Air
							Flat Form		Trefoil Form	
1.5	40	26	32	20	26	18.5		25		20
2.5	54	35	42	27	34	25		34		27
4	70	46	54	37	44	34		45		37
6	90	58	68	48	56	43		57		48
10	122	79	90	66	75	60		78		66
16	160	105	116	89	98	80	127	103	107	89
25	206	140		118	128	106	163	137	137	118
35	249	174		145	157	131	195	169	165	145
50	296	212		176	185	159	230	206	195	176
70	365	269		224	228	202	282	261	239	224
95	438	331		271	275	244	336	321	287	271
120	499	386		314	313	282	382	374	326	314
150	561	442		361	353	324	428	428	366	361
185	637	511		412	399	371	483	494	414	412
240	743	612		484	464	436	561	590	481	484
300	843	707			524	481	632	678	542	549
400	986	859			600	560	730	817	624	657
500	1125	1000					823	940	698	749





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Table 2 (continue): Permissible Current Carrying Capacity for XLPE Insulated Power Cables With CU Conductor

Cross Section (mm ²)	Single Core Cables in DC Systems		Two Core Cables		3 & 4 Core Cables		3 Single Core Cables In 3 Phase Systems			
	Ground	Air	Ground	Air	Ground	Air	Ground	Air	Ground	Air
							Flat Form		Trefoil Form	
1.5	48	32	36	25	30	24	39		32	25
2.5	63	43	48	33	40	32	51	42	43	34
4	82	57	62	46	52	42	66	56	55	44
6	103	72	78	60	64	53	82	71	68	57
10	137	99	103	82	86	73	109	96	90	77
16	177	131	133	111	111	96	139	128	115	102
25	229	177		147	143	130	179	173	149	139
35	275	218		181	173	160	213	212	178	170
50	327	266		220	205	195	251	258	211	208
70	402	338		280	252	247	307	328	259	265
95	482	416		338	303	305	366	404	310	326
120	550	487		392	346	355	416	471	352	381
150	618	559		576	390	407	465	541	396	438
185	701	648		515	441	469	526	626	449	507
240	819	779		605	511	551	610	749	521	606
300	931	902			580	638	689	864	587	697
400	1073	1070			663	746	788	1018	669	816
500	1223	1246					889	1173	748	933

Table 2 (continue) : Permissible Current Carrying Capacity for XLPE Insulated Power Cables With AL Conductor

Cross Section (mm ²)	Single Core Cables in DC Systems		Two Core Cables		3 & 4 Core Cables		3 Single Core Cables In 3 Phase Systems			
	Ground	Air	Ground	Air	Ground	Air	Ground	Air	Ground	Air
							Flat Form		Trefoil Form	
25	177	137		97	111	100				
35	212	168		130	132	122	164	163	137	131
50	253	206		161	157	147	195	200	163	161
70	311	262		203	195	189	238	254	201	205
95	374	323		250	233	232	284	313	240	253
120	427	377		293	266	270	323	366	274	296
150	479	433		337	299	308	361	420	308	341
185	543	502		389	340	357	408	486	350	395
240	637	605		472	401	435	476	585	408	475
300	721	699			455	501	537	675	462	548
400	832	830			526	592	616	798	531	647
500	949	966					699	926	601	749



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Table (3) : Minimum Bending Radius during installation

1- Cable for Fixed wiring

Insulation	Conductor	Construction	Outer dia. (mm)	Min. Radius
PVC	Aluminum or Copper , solid circular or stranded	Unarmored	Up to 10	3 D
			10 – 25	4 D
		Armored	Above 25	6 D
			Any	6 D

2- PVC and XLPE insulated cables up to 3.6 KV

Insulation	Conductor	Construction	Outer dia. (mm)	Min. Radius
PVC and XLPE	Aluminum or Copper , solid circular or stranded	Armored or Unarmored	Any	8 D

3- XLPE insulated cables for 6 up to 30 KV

Type of Cable	Minimum Radius	
	During laying	Adjacent to joints or terminations
Single core		
- Unarmored	20 D	15 D
- Armored	20 D	12 D
Three core		
- Unarmored	15 D	12 D
- Armored	12 D	10 D

Maximum Tensile Forces During Laying

Maximum tensile force when pulling by cable stocking :

$$F = A \times 30 \text{ N/mm}^2$$

Cables with Aluminum conductor

$$F = A \times 50 \text{ N/mm}^2$$

Cables with Copper conductor

But The maximum value is 8500 N

Maximum tensile force when pulling by eye attached to the conductors :

$$F = A \times 30 \text{ N/mm}^2$$

Cables with Aluminum conductor

$$F = A \times 50 \text{ N/mm}^2$$

Cables with Copper conductor

Where A is the total cross section area of conductors (mm²)



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Table (4) : Short circuit current for Copper conductor and PVC insulation cables (KA)

Area (mm ²)	Time (S)									
	0.1	0.2	0.3	0.4	0.5	1	2	3	4	5
1.5	0.5	0.35	0.3	0.25	0.23	0.16	0.11	0.10	0.08	0.07
2.5	0.83	0.6	0.49	0.42	0.38	0.28	0.19	0.15	0.14	0.12
4	1.34	0.96	0.82	0.70	0.63	0.44	0.31	0.25	0.22	0.20
6	2.0	1.45	1.23	1.05	0.95	0.66	0.47	0.38	0.33	0.30
10	3.34	2.4	2.05	1.76	1.58	1.11	0.78	0.64	0.55	0.50
16	5.25	3.83	3.82	2.82	2.50	1.76	1.25	1.02	0.88	0.80
25	8.2	5.98	5.14	4.40	3.96	2.75	1.96	1.60	1.38	1.26
35	11.5	8.40	7.20	6.17	5.55	3.86	2.75	2.24	1.94	1.76
50	16.42	12.1	10.28	8.80	7.93	5.54	3.93	3.20	2.77	2.52
70	23.5	16.8	14.4	12.30	11.1	7.75	5.51	4.48	3.88	3.53
95	31.7	22.83	19.5	16.75	15.07	10.5	7.48	6.08	5.27	4.79
120	40	28.8	24.7	21.16	19.04	13.3	9.44	7.69	6.66	6.06
150	50	37.5	35.8	26.45	23.8	16.6	11.8	9.61	8.33	7.57
185	61.8	46.7	38.0	32.60	29.36	20.5	14.56	11.85	10.27	9.34
240	80	60.6	49.3	42.30	30.09	26.6	18.89	15.38	13.30	12.10
300	100	75.0	61.7	52.9	47.62	33.3	23.62	19.20	16.66	15.15
400	134	100	82.3	70.5	63.5	44.4	31.50	25.60	22.22	20.20
500	167	125	102.8	88.1	79.36	55.5	39.37	32.00	27.77	25.20

Table (5) : Short circuit current for Aluminum conductor and PVC insulation cables. (KA)

Area (mm ²)	Time (S)									
	0.1	0.2	0.3	0.4	0.5	1	2	3	4	5
16	3.47	2.45	2.0	1.73	1.55	1.1	0.77	0.63	0.54	0.49
25	5.42	3.83	3.13	2.70	2.42	1.71	1.21	0.99	0.85	0.76
35	7.59	5.37	4.38	3.78	3.40	2.40	1.70	1.40	1.20	1.07
50	10.85	7.67	6.25	5.42	4.85	3.43	2.43	1.98	1.71	1.53
70	15.18	10.74	8.75	7.57	6.80	4.8	3.40	2.77	2.40	2.15
95	20.57	14.57	11.9	10.3	9.20	6.52	4.61	3.76	3.26	2.91
120	26.03	18.41	15.0	13.0	11.64	8.23	5.82	4.75	4.12	3.68
150	32.54	23.00	18.75	16.25	14.55	10.30	7.28	5.94	5.14	4.60
185	40.13	28.38	23.15	20.0	17.95	12.70	8.97	7.33	6.34	5.68
240	52.06	36.80	30.0	26.0	23.38	16.45	11.64	9.5	8.23	7.36
300	65.07	46.00	37.5	32.46	29.00	20.58	14.55	11.88	10.30	9.20
400	90.35	61.25	50.0	43.3	38.75	27.40	19.43	15.84	13.70	12.25
500	108.3	76.56	62.5	54.11	48.45	34.24	24.30	19.80	17.12	15.31



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Table (6) : Short circuit current for Copper conductor and XLPE insulation cables (KA)

Area (mm ²)	Time (S)									
	0.1	0.2	0.3	0.4	0.5	1	2	3	4	5
1.5	0.67	0.48	0.40	0.34	0.30	0.21	0.15	0.12	0.10	0.097
2.5	1.13	0.81	0.66	0.56	0.51	0.35	0.25	0.20	0.17	0.16
4	1.80	1.30	1.05	0.90	0.81	0.57	0.40	0.33	0.28	0.26
6	2.71	1.95	1.58	1.36	1.22	0.85	0.60	0.49	0.42	0.39
10	4.52	3.24	2.64	2.26	2.04	1.42	1.01	0.82	0.71	0.65
16	7.24	5.12	4.18	3.62	3.24	2.28	1.62	1.32	1.14	1.04
25	11.31	7.99	6.53	5.65	5.05	3.58	2.53	2.06	1.78	1.60
35	15.84	11.2	9.14	7.92	7.08	5.0	3.54	2.89	2.5	2.27
50	22.6	16.0	13.1	11.3	10.1	7.2	5.1	4.1	3.6	3.20
70	31.7	22.4	18.3	15.8	14.2	10.0	7.1	5.8	5.0	4.50
95	43.0	30.4	24.8	21.5	19.2	13.6	9.6	7.8	6.8	6.10
120	54.3	38.4	31.3	27.1	24.3	17.2	12.1	9.9	8.6	7.70
150	67.9	48.0	39.2	33.9	30.4	21.5	15.2	12.4	10.7	9.60
185	83.7	59.2	48.3	41.9	37.4	26.5	18.7	15.3	13.2	11.8
240	108.6	76.8	62.7	54.3	48.6	34.3	24.3	19.8	17.2	15.4
300	135.7	96.0	78.4	67.9	60.7	42.9	30.4	24.8	21.5	19.2
400	181.0	130.0	105.8	90.7	81.6	57.1	40.5	33.0	28.5	25.9
500	226.2	162.3	132.2	113.3	102.0	71.4	50.65	41.2	35.7	32.4

Table (7) : Short circuit current for Aluminum conductor and XLPE insulation cables. (KA)

Area (mm ²)	Time (S)									
	0.1	0.2	0.3	0.4	0.5	1	2	3	4	5
16	4.78	3.38	2.76	2.39	2.15	1.51	1.07	0.87	0.75	0.68
25	7.47	5.28	4.31	3.73	3.35	2.36	1.67	1.36	1.18	1.06
35	10.46	7.39	6.03	5.23	4.68	3.31	2.34	1.91	1.65	1.48
50	14.94	10.56	8.63	7.47	6.68	4.72	3.34	2.73	2.36	2.11
70	20.91	14.8	12.08	10.46	9.35	6.61	4.68	3.82	3.31	2.96
95	28.38	20.1	16.4	14.2	12.7	8.98	6.35	5.18	4.49	4.01
120	35.85	25.35	20.7	17.9	16.03	11.34	8.02	6.55	5.67	5.07
150	44.82	31.7	25.9	22.4	20.0	14.17	10.02	8.18	7.09	6.34
185	55.28	39.1	31.9	27.65	24.72	17.48	12.36	10.09	8.74	7.82
240	71.7	50.71	41.5	35.85	32.07	22.68	16.03	13.09	11.34	10.14
300	89.6	63.38	51.75	44.82	40.1	28.35	20.04	16.37	14.17	12.68
400	119.4	85.83	69.9	59.88	53.9	37.73	26.75	21.80	18.86	16.92
500	149.2	107.3	87.4	74.85	67.4	47.16	33.44	27.26	23.60	21.15

Table (8) : Short circuit current for Copper Screen. (KA)

Area (mm ²)	Time (S)									
	0.1	0.2	0.3	0.4	0.5	1	2	3	4	5
16	7.52	5.32	4.34	3.76	3.36	2.38	1.68	1.37	1.19	1.06
25	11.75	8.31	6.78	5.87	5.25	3.71	2.63	2.14	1.86	1.66
35	16.44	11.63	9.49	8.22	7.35	5.20	3.68	3.0	2.6	2.33



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Table (9): Insulation Colour for Telecommunication Cables

Pair Number	Conductor A	Conductor B	Pair Number	Conductor A	Conductor B
1	White	Blue	14	Black	Brown
2	White	Orange	15	Black	Grey
3	White	Green	16	Yellow	Blue
4	White	Brown	17	Yellow	Orange
5	White	Grey	18	Yellow	Green
6	Red	Blue	19	Yellow	Brown
7	Red	Orange	20	Yellow	Grey
8	Red	Green	21	Violet	Blue
9	Red	Brown	22	Violet	Orange
10	Red	Grey	23	Violet	Green
11	Black	Blue	24	Violet	Brown
12	Black	Orange	25	Violet	Grey
13	Black	Green			

Table (10): Binder Colour for Telecommunication Cables

Group Number	Colour of Bindings	Pair Numbers	Group Number	Colour of Bindings	Pair Numbers
1	White(W)- Blue(BL)	1 - 25	13	Black(BL)- Green(G)	301 - 325
2	White(W)- Orange(O)	26 - 50	14	Black(BL)- Brown(BR)	326 - 350
3	White(W)- Green(G)	51 - 75	15	Black(BL)- Slate(S)	351 - 375
4	White(W)- Brown(BR)	76 - 100	16	Yellow(Y)- Blue(BL)	376 - 400
5	White(W)- Slate(S)	101 - 125	17	Yellow(Y)- Orange(O)	401 - 425
6	Red(R)- Blue(BL)	126 - 150	18	Yellow(Y)- Green(G)	426 - 450
7	Red(R)- Orange(O)	151 - 175	19	Yellow(Y)- Brown(BR)	451 - 475
8	Red(R)- Green(G)	176 - 200	20	Yellow(Y)- Slate(S)	476 - 500
9	Red(R)- Brown(BR)	201 - 225	21	Violet(V)- Blue(BL)	501 - 525
10	Red(R)- Slate(S)	226 - 250	22	Violet(V)- Orange(O)	526 - 550
11	Black(BL)- Blue(BL)	251 - 275	23	Violet(V)- Green(G)	551 - 575
12	Black(BL)- Orange(O)	276 - 300	24	Violet(V)- Brown(BR)	576 - 600



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Table (11): Voltage Drop

Area mm ²	DC System mV/A/m	Single Core AC System mV/A/m	Multi core AC System mV/A/m	Multi core mV/A/m
	Copper conductor			Aluminum conductor
1.5	24.2	27.9	24.1	----
2.5	14.3	17.1	14.8	----
4	9.0	10.7	9.3	----
6	6.0	7.2	6.2	----
10	3.6	4.3	3.7	----
16	2.3	2.8	2.4	3.63
25	1.5	1.8	1.5	2.32
35	1.1	1.3	1.1	1.69
50	0.8	0.96	0.85	1.28
70	0.6	0.70	0.60	0.91
95	0.4	0.55	0.45	0.68
120	0.3	0.45	0.35	0.55
150	0.25	0.35	0.31	0.47
185	0.20	0.30	0.26	0.39
240	0.15	0.25	0.22	0.32
300	0.12	0.22	0.19	0.27
400	0.10	0.19	0.17	0.23
500	0.08	0.16	0.15	0.20

age drop in a circuit of which the cable forms a part, should not exceed 3 – 5 % of the voltage, e.g. 20.0 volts (5%) for a three phase 400 volts supply. For any cable length ed to multiplied by the length of the cable (in meter) and by the current (in Ampere).

for the calculated voltage drop in $mV/A/m$:

$$= \frac{\text{permissible voltage drop}(e) \times 1000}{\text{current}(A) \times \text{length}(m)}$$




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AWG Conversion table

Table (12): American Wire Gauge

AWG No.	Dia. mm	Area mm ²		AWG No.	Dia. mm	Area mm ²
40	0.079	0.005		8	3.268	8.387
38	0.102	0.008		6	4.115	13.289
36	0.127	0.013		4	5.189	21.149
34	0.160	0.020		2	6.543	33.624
32	0.203	0.032		1	7.348	42.409
30	0.254	0.051		1/0	8.25	53.47
28	0.320	0.080		2/0	9.27	67.40
26	0.404	0.128		3/0	10.40	85.0
24	0.511	0.204		4/0	11.68	107.20
22	0.643	0.324		250 MCM	14.6	127
20	0.813	0.519		300 MCM	16.0	152
18	10.24	0.823		350 MCM	17.3	178
16	1.290	1.303		400 MCM	18.9	203
14	1.628	2.082		500 MCM	20.7	254
12	2.052	3.308		600 MCM	19.7	304
10	2.588	5.262		750 MCM	22.0	380

mil : Unit of measure equal to 1/1000 of an inch.

Circular mil (Cmil) : A unit of area equal to the area of a circle whose diameter is 1 mil (0.001 inch). Used chiefly in specifying cross-sectional areas of round conductors.

Kcmil : Thousand circular Mils (MCM)

1 MCM = 1000 Cmil = 1 Kcmil = 0.5067 mm²

1 mil = 0.001 inch = 0.0254 mm

1 Cmil = (1 mil)²



Technical Information

A.C. Resistance and Reactance Values

Table (13): A.C. Resistance

Nominal Area of Conductor	PVC Insulated Cables							XLPE Insulated Cables							
	A.C Resistance at 70 °C				Reactance at 50 Hz			A.C Resistance at 90 °C				Reactance at 50 Hz			
	Single Core Cables		Multicore Cables		Single Core Cables		Multicore Cables	Single Core Cables		Multicore Cables		Single Core Cables		Multi-Core Cables	
	Copper	Almn	Copper	Almn	Trefoil	Flat		Copper	Almn	Copper	Almn	Trefoil	Flat		
mm ²	Ohm/km		Ohm/km		Ohm/km		Ohm/km	Ohm/km		Ohm/km		Ohm/km		Ohm/km	
1.5	15.19	-	15.19	-	-	-	0.115	15.43	-	15.43	-	-	-	0.115	
2.5	9.30	-	9.30	-	-	-	0.111	9.45	-	9.45	-	-	-	0.100	
4	5.79	-	5.79	-	-	-	0.096	5.88	-	5.88	-	-	-	0.093	
6	3.87	-	3.87	-	-	-	0.092	3.93	-	3.93	-	-	-	0.089	
10	2.30	-	2.30	-	-	-	0.091	2.33	-	2.33	-	-	-	0.084	
16	1.38	2.29	1.38	2.29	0.121	0.210	0.086	1.47	2.42	1.47	2.42	0.114	0.172	0.081	
25	0.870	1.44	0.87	1.44	0.116	0.202	0.085	0.927	1.54	0.927	1.54	0.113	0.172	0.081	
35	0.627	1.04	0.627	1.04	0.115	0.201	0.083	0.668	1.11	0.668	1.11	0.110	0.167	0.079	
50	0.464	0.771	0.464	0.77	0.112	0.195	0.080	0.494	0.822	0.494	0.822	0.106	0.161	0.075	
70	0.321	0.533	0.321	0.533	0.107	0.188	0.077	0.342	0.568	0.342	0.568	0.103	0.160	0.074	
95	0.232	0.385	0.232	0.385	0.103	0.186	0.077	0.247	0.411	0.247	0.411	0.098	0.155	0.073	
120	0.135	0.305	0.184	0.305	0.103	0.185	0.075	0.197	0.325	0.197	0.325	0.097	0.153	0.072	
150	0.150	0.248	0.150	0.248	0.101	0.185	0.075	0.160	0.265	0.160	0.265	0.097	0.153	0.072	
185	0.120	0.198	0.121	0.198	0.099	0.184	0.074	0.128	0.211	0.128	0.211	0.096	0.153	0.072	
240	0.0926	0.152	0.0929	0.152	0.096	0.181	0.074	0.0986	0.162	0.0989	0.162	0.092	0.147	0.071	
300	0.0750	0.122	0.0752	0.122	0.094	0.180	0.073	0.0800	0.130	0.0802	0.130	0.090	0.147	0.070	
400	0.0600	0.096	0.0604	0.096	0.091	0.178	0.073	0.0640	0.102	0.0645	0.102	0.090	0.146	0.070	
500	0.0484	0.0757	0.0491	0.0757	0.089	0.176	0.072	0.0525	0.0810	0.0530	0.081	0.089	0.146	0.070	
630	0.0398	0.0605	-	-	0.086	0.173	-	0.0428	0.0658	-	-	0.086	0.144	-	
800	0.0334	0.0500	-	-	0.086	0.171	-	0.0380	0.0541	-	-	0.084	0.143	-	
1000	0.0290	0.0415	-	-	0.084	0.168	-	0.0334	0.0457	-	-	0.081	0.140	-	



Abbreviations used for Wire and Cable Standards

ISIRI	Institute of Standards and Industrial Research of IRAN
ANSI	American National standards Institute (USA)
AS	Australian Standard (Australia)
ASTM	American standard of Testing Materials (USA)
BASEC	British Approvals Service for Electric Cables (UK)
BSI	British Standard Institution (UK)
CEBEC	Comite Electrotechnique Belge (Belgium)
CEI	Commission Electrotechnico Italiano (Italy)
CEN	Comite Europeen de Normalisation Electrotechniques (European Committee for Standardization)
CENELEC	European Committee for Electrotechnical Standardization (Comite Europeen de Normalisation ELECTrotechnique)
CSA	Canadian Standards Association (Canada)
DEMKO	Denmark Elektriske Material Kontrol (Denmark)
DIN	Deutsches Institut für Normung (Germany)
DNV	Det Norske Veritas (Scandinavia)
ELOT	Hellenic Organization for Standardization (Greece)
EN	European Standards (Germany)
ERA	Electrical Research Association (UK)
FAR	Federal Air Regulation (USA)
GOST	Russia Standards
HD	Harmonized– Document (International)
ICEA	Insulated Cable Engineers Association (USA)
IEC	International Electrotechnical Commission (International)
IEE	Institute of Electrical Engineer (UK)
IEEE	Institute of Electrical and Electronic Engineers (UK)
ISO	International Standards Organization (International) or (International Organization for Standardization)
KEMA	Keuring Van Elektrotechnische Materialen (Netherlands)
LLOYDS	Lloyds Register of Shipping (UK)
MESC	Material and Equipment Standards and Code (Shell BV)(Netherlands)
MIL	Military Specification (USA)
NEC	National Electrical Code (USA)
NEMA	National Electrical Manufacturers Association (USA)
NEMKO	Norges Elektriske Materiell kontroll (Norway)
NFC	Normes Francaises Class C (France)
NP	IPQ –Instituto Portugues Da Qualidade (Portugal)
NSAI	National Standards Authority of Ireland (Ireland)
OVE	Osterreichischer Verband für Elektrotechnik (Austria)
SEMKO	Svenska Elektriska Materiel Kontrollanstalten (Sweden)
SETI	Sahkotarkastuslatios (Electriska Inspektoratet) (Finland)
SEV	Schweizerischer Elektrotechnischer Verein (Switzerland)
SNV	Schweizerischer Normen Verband (Switzerland)
UL	Underwriter Laboratories (USA)
VDE	Verband Deutscher Elektrotechniker (Germany)



Construction abbreviation

Construction Abbreviation

Cu	Copper
Al	Aluminum
Ti Cu	Tinned Copper
RM	Circular Stranded
SM	Shaped Stranded
RE	Solid Circular
RF	Flexible Circular
CWS	Copper Wire Screen
CTS	Copper Tape Screen
CBS	Copper Braid Screen
CWBS	Copper Wire Braid Screen
ISCR	Individual Screen
OSCR	Overall Screen
TCWB	Tinned Copper Wire Braid
CW	Communication Wire
ATA	Aluminum Tape Armor
GTA	Galvanized Tape Armor
STA	Steel Tape Armor
SWA	Steel Wire Armor
AWA	Aluminum Wire Armor
SWB	Steel Wire Braid
LC	Lead Cover
LSH	Lead Sheath
SC	Semi Conductive (Extrusion)
SCT	Semi Conductive Tape
WBT	Water Blocking Tape
SCWBT	Semi Conductive WBT
MGT	Mica Glass Tape
PET	Polyester Tape
Bd	Bedding
PVC	Poly Vinyl Chloride
PVCH	High Temperature PVC
PVC(OR)	Oil resistant PVC
LDPE	Low Density Polyethylene
HDPE	High Density Polyethylene
FPE	Foam PE
XLPE	Cross - Linked PE
EVA	Ethylene Vinyl Acetate
EPR	Ethylene Propylene Rubber
HEPR	Hard Grade EPR
SIR	Silicon Rubber
LSHF	Low Smoke Halogen Free
HFFR	Halogen Free Fire Retardant
NBR	Nitrile Butadiene Rubber
NBR - PVC	NBR with PVC compound
PCP	Poly Chloroprene (Neoprene) Rubber
CPE	Chlorinated Polyethylene
CSP	Chlorosulfonated polyethylene
PUR	Polyurethane rubber



Designation Code for Power Cables

Designation Code for Power Cables

1- Identifications of designation

N	DIN - VDE standard
(N)	Similar to DIN - VDE standard

2- Conductor materials

A	Aluminum conductor
-	Copper conductor

3 - Insulating materials

Y	PVC
2X	Cross - linked PE (XLPE)
2Y	Polyethylene
2G	Silicon Rubber
3G	EPR

4- Concentric Conductor (Screen)

C	Concentric conductor of copper
CW	Concentric conductor of copper in wave form
CE	Concentric conductor of copper over each Individual core
S	Screen of copper wires
SE	Screen of copper wires over each Individual core
(St)	Static screen (PET + D.W + Al foil)

5- Armoring

B	Steel tape armor
F	Flat steel wire armor
G	counter helix of galvanized steel tape
R	round steel wire armor

6- Metal Sheath material

K	lead sheath
KL	Aluminum sheath

7- Outer sheath material

Y	PVC
2Y	PE
4G	EVA
6G	CSP
8G	NBR
11Y	PUR

8- Protective Conductor

- J	With green - yellow
- 0	Without green - yellow

9- Conductor type

RM	circular Stranded conductor
SM	Sector Stranded conductor
RE	circular Solid conductor
SE	Sector Solid conductor
/V	Compact conductor

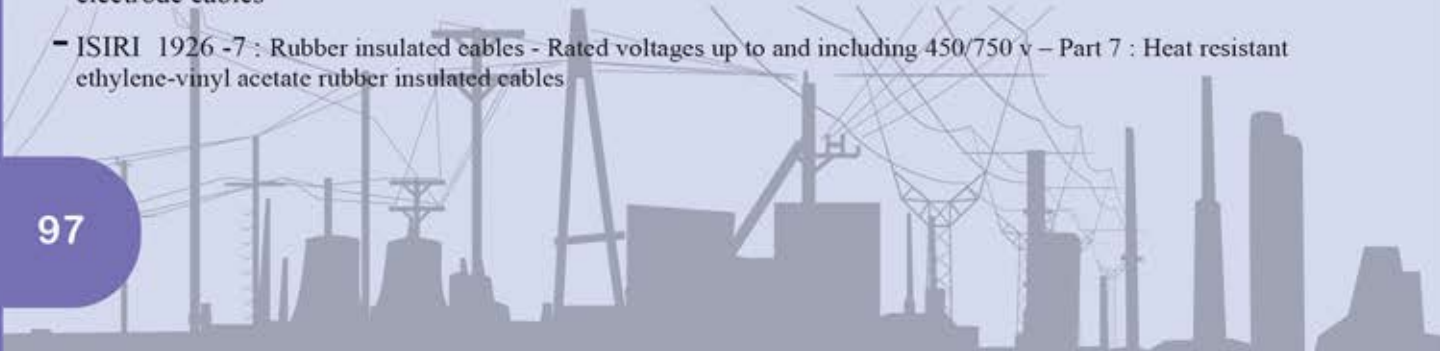


The List of Cable Standards

- **ISIRI**
- **IEC**
- **BSI**
- **BS EN**
- **VDE**
- **ASTM**

1) ISIRI Standards

- ISIRI (607) -1 : Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 1: General requirements
- ISIRI (607) – 2 : Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 2: Test methods
- ISIRI (607) – 3 : Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 3: Non-sheathed cables for fixed wiring
- ISIRI (607) – 4 : Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 4: sheathed cables for fixed wiring
- ISIRI (607) – 5 : Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 5: Flexible cables (cords)
- ISIRI (607) – 6 : Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 6: lift cables and cables for flexible connections
- ISIRI (607) – 7 : Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 7: Flexible cables screened and unscreened with two or more conductors
- ISIRI 1926 -1: Rubber insulated cables - Rated voltages up to and including 450/750 v – Part 1 : General requirements
- ISIRI 1926 -2 : Rubber insulated cables - Rated voltages up to and including 450/750 v – Part 2 : Test methods
- ISIRI 1926 -3 : Rubber insulated cables - Rated voltages up to and including 450/750 v – Part 3 : Heat resistance silicone insulated cables
- ISIRI 1926 -4 : Rubber insulated cables - Rated voltages up to and including 450/750 v – Part 4 : Cords and flexible cables
- ISIRI 1926 -5 : Rubber insulated cables - Rated voltages up to and including 450/750 v – Part 5 : Lifts cable
- ISIRI 1926 -6 : Rubber insulated cables - Rated voltages up to and including 450/750 v – Part 6 : Arc welding electrode cables
- ISIRI 1926 -7 : Rubber insulated cables - Rated voltages up to and including 450/750 v – Part 7 : Heat resistant ethylene-vinyl acetate rubber insulated cables





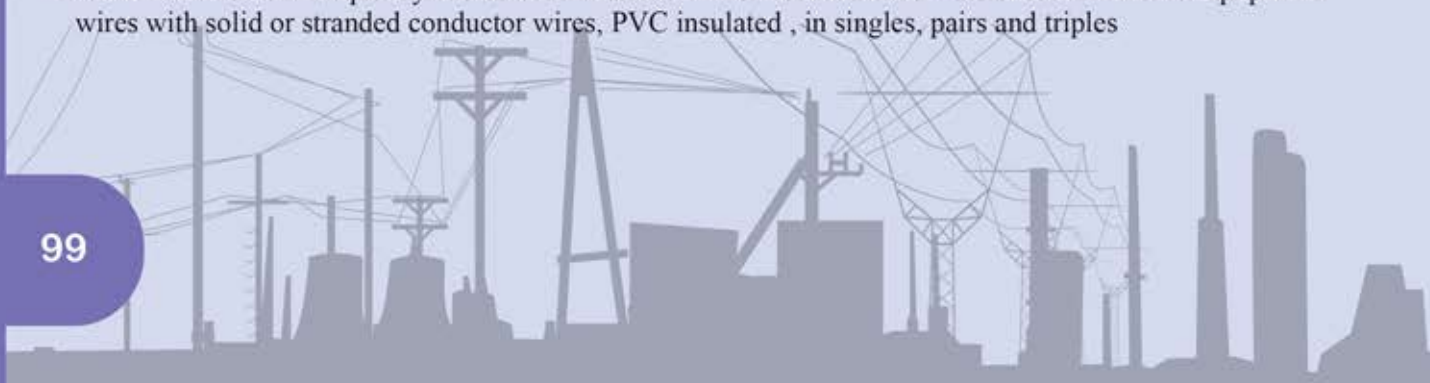
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- ISIRI 1926 -8 : Rubber insulated cables - Rated voltages up to and including 450/750 v – Part 8 : Cords for applications requiring high flexibility
- ISIRI 3081 -1-1 : Tests on electric and optical fiber cables under fire conditions -
Part 1-1: Test for vertical flame propagation for a single insulated wire or cable – Apparatus
- ISIRI 3081 -1-2 : Tests on electric and optical fiber cables under fire conditions -
Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame
- ISIRI 3081 -1-3 : Tests on electric and optical fiber cables under fire conditions -
Part 1-3: Test for vertical flame propagation for a single insulated wire or cable – Procedure for determination of flaming droplets / particles
- ISIRI 3081 -2-1 : Tests on electric and optical fiber cables under fire conditions -
Part 2-1 : Test for vertical flame propagation for a single insulated wire or cable – Apparatus
- ISIRI 3081 -2-2 : Tests on electric and optical fiber cables under fire conditions -
Part 2-2 : Test for vertical flame propagation for a single insulated wire or cable – Procedure for diffusion flame
- ISIRI 3081 -3-22 : Tests on electric and optical fiber cables under fire conditions -
Part 3-22 :
- ISIRI 3081 -3-24 : Tests on electric and optical fiber cables under fire conditions -
Part 3-24 : Test for vertical flame spread of vertically-mounted bunched wires or cables-Category C
- ISIRI 3081 -3- 25 : Tests on electric and optical fiber cables under fire conditions -
Part 3-25 : Test for vertical flame spread of vertically-mounted bunched wires or cables-Category D
- ISIRI 3084 : Conductors of insulated cables
- ISIRI 3569-1: Power cables with extruded insulation and their accessories for rated voltages from 1 kV ($U_m = 1,2$ kV) up to 30 kV ($U_m = 36$ kV) Part 1 : Cables for rated voltages from 1 kV ($U_m = 1,2$ kV) and 3 kV ($U_m = 3,6$ kV)
- ISIRI 3569-2 : Power cables with extruded insulation and their accessories for rated voltages from 1 kV ($U_m = 1,2$ kV) up to 30 kV ($U_m = 36$ kV) Part 2 : Cables for rated voltages from 6 kV ($U_m = 7,2$ kV) up to 30 kV ($U_m = 36$ kV)
- ISIRI 5525-1-1 : Common test methods for insulating and sheathing materials of electric cables and optical cables –
Part 1-1: Methods for general application – Measurement of thickness and overall dimensions – Tests for determining the mechanical properties
- ISIRI 5525-1-2 : Common test methods for insulating and sheathing materials of electric cables and optical cables –
Part 1-2: Methods for general application – Thermal ageing methods
- ISIRI 5525-1-3 : Common test methods for insulating and sheathing materials of electric cables and optical cables –
Part 1-3 : Methods for general application – Methods for determining the density – Water absorption tests – Shrinkage test
- ISIRI 5525-1-4 : Common test methods for insulating and sheathing materials of electric cables and optical cables –
Part 1-4 : Methods for general application – Test at low temperature
- ISIRI 5525-2-1 : Common test methods for insulating and sheathing materials of electric cables and optical cables –
Part 2-1 : Methods specific to elastomeric compounds – Ozone resistance , hot set and mineral oil immersion tests
- ISIRI 5525-3-1 : Common test methods for insulating and sheathing materials of electric cables and optical cables –
Part 3-1: Methods specific to PVC compounds – Pressure test at high temperature - Tests for resistance to cracking



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- ISIRI 5525-3-2 : Common test methods for insulating and sheathing materials of electric cables and optical cables – Part 3-2: Methods specific to PVC compounds – Loss of mass tests – Thermal stability test
- ISIRI 5525-4-1 : Common test methods for insulating and sheathing materials of electric cables and optical cables – Part 4-1 : Methods specific to polyethylene and polypropylene compounds – Resistance to environmental stress cracking – Measurement of the melt flow index – Carbon black and / or mineral filler content measurement in polyethylene by direct combustion - Measurement of carbon black content by thermogravimetric analysis (TGA) – Assessment of carbon black dispersion in polyethylene using a microscope
- ISIRI 5525-4-2 : Common test methods for insulating and sheathing materials of electric cables and optical cables – Part 4-2 : Methods specific to polyethylene and polypropylene compounds – Tensile strength and elongation at break after conditioning at elevated temperature – Wrapping test after conditioning at elevated temperature - Wrapping test after thermal ageing in air - Measurement of mass increase – Long – term stability test – Test method for copper – catalyzed oxidative degradation
- ISIRI 5525-5-1 : Common test methods for insulating and sheathing materials of electric cables and optical cables – Part 5-1 : Methods specific to filling compounds – Drop point – Separation of oil – Lower temperature brittleness – Total acid number – Absence of corrosive components – Permittivity at 23°C – DC resistivity at 23°C and 100°C
- ISIRI 5525-6 : Common test methods for insulating and sheathing materials of electric cables. Pressure test at high temperature, tests for resistance to cracking
- ISIRI 5525-7 : Common test methods for insulating and sheathing materials Of electric Cables- Loss of mass test- Thermal stability test
- ISIRI 5526-1 : Electrical test methods for electric cables – Part 1 : Electrical test methods for cables, cords and wires for voltages up to and including 450/750 V.
- ISIRI 5526-2 : Electrical test methods for electric cables – Part 2 : Partial discharge test.
- ISIRI 5526-3 : Electrical test methods for electric cables – Part 3 : Test methods for partial discharge measurements on lengths extruded power cable.
- ISIRI 60331 (All parts) : Tests for Electric Cables Under Fire Conditions – Circuit Integrity
- ISIRI 60649 (All parts) : Calculation of Maximum External Diameter of Cables for Indoor Installations
- ISIRI 60853 (All parts) : Calculation of the Cyclic and Emergency Current Rating of Cables
- ISIRI 463-1 : Low-frequency cables and wires with PVC insulation and PVC sheath – Part 1 : General test and measuring methods
- ISIRI 463-2 : Low-frequency cables and wires with PVC insulation and PVC sheath – Part 2 : Cables in pairs, triples, quads and quintuples for inside installation
- ISIRI 463-3 : Low-frequency cables and wires with PVC insulation and PVC sheath – Part 3 : Equipment wires with solid or stranded conductor wires, PVC insulated , in singles, pairs and triples





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2) IEC Standard

- IEC 60060-1 : High – voltage test techniques . part1:general definition and test requirements
- IEC 60092 (All parts) : Electrical Installations in ships
- IEC 60189 : Low-frequency cables and wires with PVC insulation and PVC sheath
- IEC 60227 (All parts) : Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V
- IEC 60228 : Conductors of insulated cables
- IEC 60229 : Electric Cables – tests on extruded over sheaths with a special protective function
- IEC 60230 : Impulse tests on cables and their accessories
- IEC 60245 : Rubber insulated cables – Rated voltages up to and including 450/750 v
- IEC 60287 : Electric cables. Calculation of the current rating. Part 3: sections on operating conditions. Section 2: Economic optimization of power cable size
- IEC 60331 (All parts) : Tests for electric cables under fire conditions. Circuit integrity.
- IEC 60332 (All parts) : Tests on electric cables under fire conditions
- IEC/TR 60334 : Calculation of d.c. resistance of plain and coated copper conductors of low-frequency cables and wires. Application guide
- IEC 60344 : Calculation of the resistance of plan and coated copper conductors of low frequency cables and wires- Application guide.
- IEC 60502 -1: Power cables with extruded insulation and their accessories for rated voltages from 1kV ($U_m=1.2kV$) up to 30kV ($U_m=36kV$)- Part 1: Cables for rated voltages of 1kV ($U_m=1.2kV$) and 3kV ($U_m=3.6kV$)
- IEC 60502-2 : Power cables with extruded insulation and their accessories for rated voltages from 1kV ($U_m=1.2kV$) up to 30kV ($U_m=36kV$). Part 2. Cables for rated voltages from 6kV ($U_m=7.2kV$) up to 30kV ($U_m=36kV$)
- IEC 60502-4 : Power cables with extruded insulation and their accessories for rated voltages from 1kV ($U_m=1.2kV$) up to 30kV ($U_m=36kV$). Part 4: Test requirements on accessories for cables with rated voltages from 6kV ($U_m=7.2kV$) up to 30kV ($U_m=36kV$)
- IEC 60598-1 : Single core , PVC insulated only ,450/750 stranded conductor
- IEC 60649 : Calculation of maximum external diameter of cables for indoor installations
- IEC 60754 (All parts)
- IEC 60811 (All parts) : Common test methods for insulating and sheathing materials of electric cables
- IEC 60840 (All parts) : Power cables with extruded insulation and their accessories for rated voltages above 30kV ($U_m=36kV$) up to 150kV ($U_m=170kV$). Test methods and requirements.
- IEC 60853 : Calculation of the cyclic and emergency current rating of cables
- IEC 60885 : Electrical test methods for electric cables
- IEC 60918 : PVC insulated ribbon cable with a pitch of 1.27 mm suitable for insulation displacement termination



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- IEC 60979 : Wires for wire wrapping applications
- IEC 60986 : Short-circuit temperature limits of electric cables with rated voltages from 6kV ($U_m=7.2\text{kV}$) up to 30kV ($U_m=36\text{kV}$)
- IEC 61034 (All parts): Measurement of smoke density of cables burning under defined conditions
- IEC 61084 : Cable trunking and ducting systems for electrical installations
- IEC 61089 : Round wire concentric lay overhead electrical stranded conductors
- IEC 61138 : Cables for portable earthing and short-circuiting equipment
- IEC 61156 (All parts)
- IEC 61232 : Aluminium - clad steel wires for electrical purposes
- IEC 61316 : Industrial cable reels
- IEC 61442 : Test methods for accessories for power cables with rated voltages from 6kV ($U_m=7.2\text{kV}$) up to 30kV ($U_m=36\text{kV}$)
- IEC 62230 (All parts): Electric cables- Spark test method

3) BSI Standard

- BSI 215 : Aluminium conductors and aluminium conductors, steel-reinforced for overhead power transmission
- BSI 443 : Testing zinc coatings on steel wire and for quality requirements
- BSI 3242 : Aluminium alloy stranded conductors for overhead power transmission
- BSI 4545 : Methods for mechanical testing of steel wire
- BSI 4565 : Galvanized steel wire for aluminium conductors, steel-reinforced
- BSI 5099 : Spark testing of electric cables
- BSI 5308 : Control and instrumentation cables
- BSI 5467 : 600/1000 V and 1900/3300 V armoured electric cables having thermosetting insulation
- BSI 6004 : Electric cables – PVC insulated, non-armoured cables for voltages up to and including 450/750 V, for electric power, lighting and internal wiring
- BSI 6007 : Electric cables – Single core unsheathed heat resisting cables for voltages up to and including 450/750 V, for internal wiring
- BSI 6346 : 600/1000 V and 1900/3300 V armoured electric cables having PVC insulation
- BSI 6360 : Conductors in insulated cables and cords
- BSI 6387 :





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- BSI 6500 : Electric cables – flexible cords rated up to 300/500 V, for use with appliances and equipment intended for domestic, office and similar environments
- BSI 6746 : PVC insulation and sheath of electric cables
- BSI 7655 : Insulating and sheathing materials for cables
- BSI 7870 : LV and MV polymeric insulated cables for use by distribution and generation utilities
- BSI 7884 : Copper and copper-cadmium stranded conductors for overhead electric traction and power transmission systems
- BSI 7888 : Test requirements on accessories for use on power cables of rated voltage from 3,6/6(7,2) kV up to 20,8/36(42) kV

4) BS – EN Standards

- BS EN 10002 : Tensile testing of metallic materials
- BS EN 10244 : Steel wire and wire products –Non-ferrous metallic coatings on steel wire
- BS EN 10257 : Zinc or zinc alloy coated non-alloy steel wire for armouring either power cables or telecommunication cables
- BS EN 12548 : Lead and alloys – lead alloy ingots for electric cable sheathing and for sleeves
- BS EN 50183 : conductors for overhead lines – aluminium-magnesium-silicon alloy wires
- BS EN 50189 : Conductors for overhead lines – zinc coated steel wires
- BS EN 50214 : Flat polyvinyl chloride sheathed flexible cables
- BS EN 50265 : Common test methods for cables under fire conditions – test for resistance to vertical flame propagation for a single insulated conductor or cable
- BS EN 50266 : Common test methods for cables under fire conditions – test for vertical flame spread of vertically-mounted bunched wires or cables
- BS EN 50267 : Common test methods for cables under fire conditions – tests on gases evolved during combustion of materials from cables
- BS EN 50268 : Common test methods for cables under fire conditions – measurement of smoke density of cables burning under defined conditions
- BS EN 50289 : Communication cables – specifications for test methods
- BS EN 50290 : Communication cables
- BS EN 50363 : Insulating, sheathing and covering materials for low voltage energy cables
- BS EN 50395 : Electrical test methods for low voltage energy cables
- BS EN 50397 : Covered conductors for overhead lines and the related accessories for rated voltages above 1 kV a.c. and not exceeding 36 kV a.c.



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- BS EN 50441 : Cables for indoor residential telecommunication installations
- BS EN 50483 : Test requirements for low voltage aerial bundled cable accessories
- BS EN 60228 : Conductors of insulated cables
- BS EN 60811 : Insulating and sheathing materials of electric and optical cables — Common test methods
- BS EN 60889 : Hard drawn aluminium wire for overhead line conductors
- BS EN 61034 : Measurement of smoke density of cables burning under defined conditions
- BS EN 62230 : Electric cables — Spark-test method

5) VDE Standard

- VDE 0100 : Erection of power installations with nominal voltages up to 1000 V
- VDE 0102 : Short-circuit currents in three-phase a. c. systems
- VDE 0207 : Insulating and sheathing compounds for cables and flexible cords
- VDE 0250 : Cables, wires and flexible cords for power installation
- VDE 0253 : Heating cables
- VDE 0260 : Railway applications – Railway rolling stock cables having special fire performance – Thin wall
- VDE 0262 : XLPE insulated and PVC sheathed installation-cables with nominal voltage 0,6/1 kV
- VDE 0265 : Cables with plastic-insulation and lead-sheath for power installation
- VDE 0266 : Power cables with improved characteristics in the case of fire –Nominal voltages U_0/U 0,6/1 kV
- VDE 0271 : PVC-insulated and sheathed power cables for rated voltages up to and including U_0/U (U_m) 3,6/6 (7,2) kV
- VDE 0274 : Specifications for Insulated Conductor Bundles of overhead lines
- VDE 0276 : Power cables D Part 604: Power cables of nominal voltages U_0/U 0,6/1 kV with special fire performance for use in power stations
- VDE 0279 : Accessories for underground mining cables
- VDE 0281 : Cables of rated voltages up to and including 450/750 V and having thermoplastic insulation
- VDE 0282 : Cables of rated voltages up to and including 450/750 V and having cross-linked insulation
- VDE 0287 : Technical procedures for determining the conformity of harmonized cables and cords
- VDE 0289 : Definitions for cables, wires and flexible cords for power installations
- VDE 0292 : System for cable designation
- VDE 0293 : Identification of cores in cables and flexible cords by colours
- VDE 0295 : Conductors of insulated cables
- VDE 0298 : Application of cables and cords in power installations

