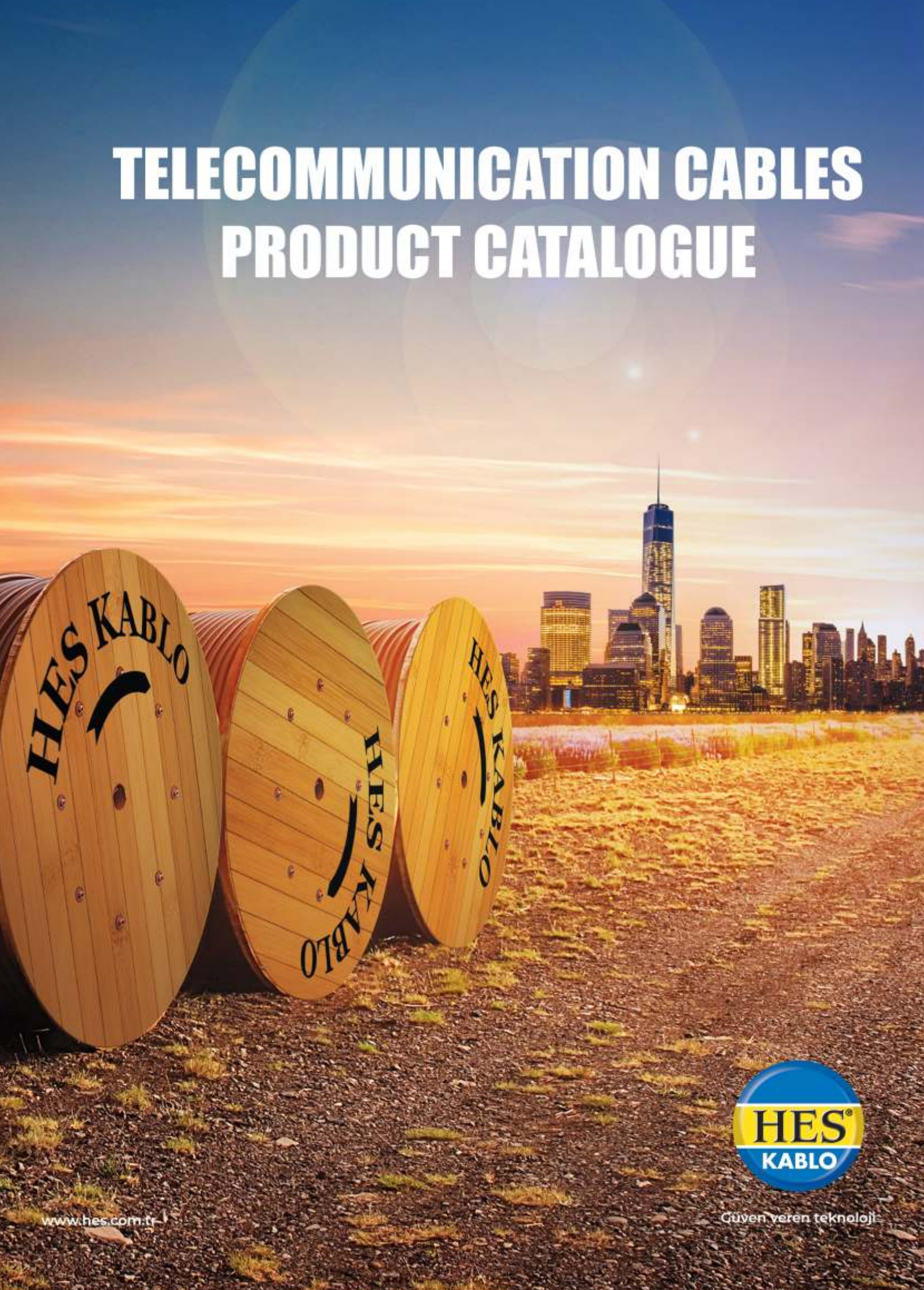
TELECOMMUNICATION CABLES PRODUCT CATALOGUE



HES KABLO

www.hes.com.tr

Güven veren teknoloji

OVER 140 COUNTRIES CARRY
HES KABLO MARK!

HES HACILAR ELEKTRİK SANAYİ VE TİCARET A.Ş.

Established in 1974 to produce energy cables, HES Cable has made a very rapid development and has a wide range of products that appeal to the entire cable and conductor sector by producing copper communication cable, fiber optic cable, energy cable, aluminum conductor, enamel coil wire, solar cable and weak current cables.

Acting with the slogan of "Reliable Technology", HES Cable has become a well-known and respected brand in the international arena with its "know-how" and high quality products with nearly 50 years of experience.

Production in integrated facilities with a total area of 250,000 m², 120,000 m² of which is closed, is carried out in accordance with ISO 9001 standards and considering the requirements of ISO 10002, ISO 14001, OHSAS 18001, ISO 27001 and ISO 50001, by a team of approximately 1000 experts with knowledge and experience in the field, using machines and methods suitable for modern and technological developments. Quality certificates such as ISO, TSE, VDE, BASEC, SII, GOST, ETL, UKRSEPRO and KEMA given as a result of the periodic inspections carried out by national and international surveillance companies are an expression of trust in HES Cable brand and products. HES Cable, which ensures that high quality products are delivered to the customer by using modern test devices and control methods at every stage of production, develops products according to special customer specifications and requests as well as products manufactured according to international and domestic standards.

According to 2020 data, HES, which ranks 101st in the "Turkey's Top 500 Industrial Enterprises" ranking determined by Istanbul Chamber of Industry every year, continues to lead the sector and reaches more than 140 countries.

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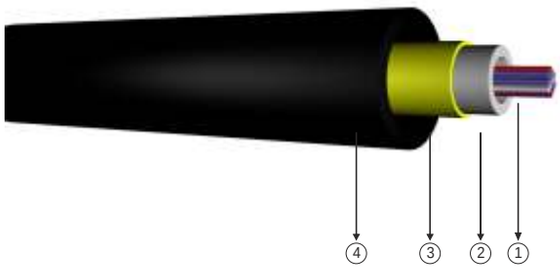
INDOOR CABLES | Single Loose Tube, Single Sheath, Unarmoured



1 Fiber
2 Loose Tube
3 Aramid/Glass Yarn
4 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black HFFR, Thickness nominal 1.5 ± 0.1 mm.

Applications
Used in cable channels or cable trays in communication networks within the building.

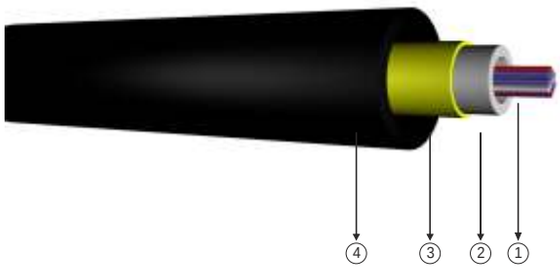
Construction
Painted fibers are placed in the central Loose tube. Then they are covered with HFFR material using adequate aramid / glass yarns. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	7,2	60
6	3,0/2,0	7,2	60
8	3,0/2,0	7,2	60
12	3,0/2,0	7,2	60
16	3,0/2,0	7,2	60
24	3,0/2,0	7,2	60

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1000 N Tensile Strength (Installation) 800 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	5J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-5 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

INDOOR CABLES | Single Loose Tube, Single Sheath, Non-metallic Armoured



1 Fiber
2 Loose Tube
3 Aramid/Glass Yarn
4 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : Dielectric Armour
Outer Sheath : Black HFFR, Thickness nominal 1.5 ± 0.1 mm.

Applications
Used in cable channels or cable trays in communication networks within the building.

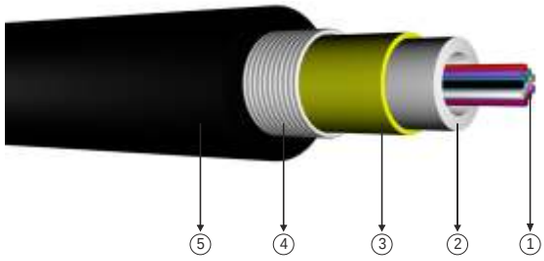
Construction
Painted fibers are placed in the central Loose tube. Then adequate aramid / glass yarns are used as a shield.
They are covered with HFFR material.
It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	9,0	85
6	3,0/2,0	9,0	85
8	3,0/2,0	9,0	85
12	3,0/2,0	9,0	85
16	3,0/2,0	9,0	85
24	3,0/2,0	9,0	85

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1900 N Tensile Strength (Installation) 1000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-5 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

INDOOR CABLES | Single Loose Tube, Single Sheath, Steel Tape Armoured



1 Fiber
2 Loose Tube
3 Aramid/Glass Yarn
4 Corrugated Steel Tape
5 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : Corrugated Steel Tape
Outer Sheath : Black HFFR, Thickness nominal 1.5 ± 0.1 mm.

Applications
Used in cable channels or cable trays in communication networks within the building.

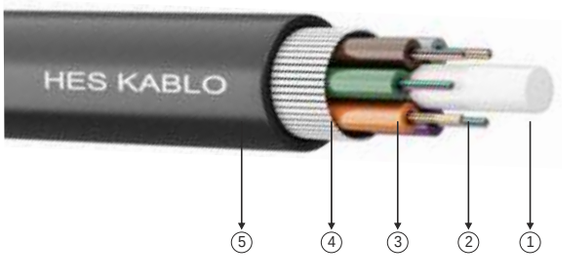
Construction
Painted fibers are placed in the central Loose tube. Then curly steel belt is used as a shield with aramid / glass yarns. They are covered with HFFR material. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	9,0	117
6	3,0/2,0	9,0	117
8	3,0/2,0	9,0	117
12	3,0/2,0	9,0	117
16	3,0/2,0	9,0	117
24	3,0/2,0	9,0	117

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1100 N Tensile Strength (Installation) 900 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-5 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

INDOOR CABLES | Multi Loose Tube, Single Sheath, Unarmoured



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Polyester Tape
5 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black HFFR, Thickness nominal 1.5 ± 0.1 mm.

Applications
Used in cable channels or cable trays in communication networks within the building.

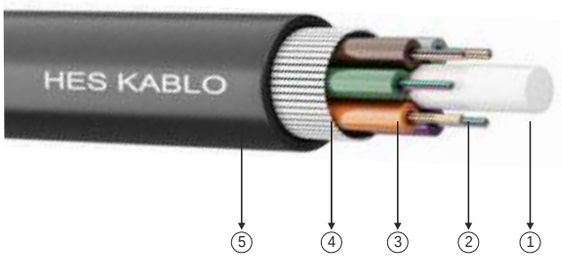
Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then they are covered with HFFR material using adequate aramid / glass yarns. It has a water blocking feature.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Filler	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	LooseTube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
8	2	4	4	2,5	N/A	2,4/1,7	10,8	130
12	3	3	4	2,5	N/A	2,4/1,7	10,8	131
16	4	2	4	2,5	N/A	2,4/1,7	10,8	133
24	6	-	4	2,5	N/A	2,4/1,7	10,8	135
36	6	-	6	2,5	N/A	2,4/1,7	10,8	135
48	6	-	8	2,5	N/A	2,4/1,7	10,8	136
72	6	-	12	2,7	N/A	2,6/1,8	11,4	150
96	8	-	12	2,7	4,5	2,6/1,8	13,2	183
144	12	-	12	2,7	8,0	2,6/1,8	16,7	248
288	24	-	12	2,7	5,4	2,6/1,8	19,3	428
432	18	-	24	3,0	N/A	2,8/1,8	17,7	377

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	2700 N Tensile Strength (Installation) 1700 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-5 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

INDOOR CABLES | Multi Loose Tube, Single Sheath, Non-metallic Armoured



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Aramid/Glass Yarn
5 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : Dielectric Armour
Outer Sheath : Black HFFR, Thickness nominal 1.5 ± 0.1 mm.

Applications
Used in cable channels or cable trays in communication networks within the building.

Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then adequate aramid / glass yarns are used as a shield. They are covered with HFFR material. It has a water blocking feature.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
8	1	5	8	2,2	N/A	2,00/1,40	12,0	140
12	1	5	12	2,2	N/A	2,00/1,40	12,0	140
16	2	4	8	2,2	N/A	2,00/1,40	12,0	141
24	6	-	4	2,2	N/A	2,00/1,40	12,0	143
36	6	-	6	2,2	N/A	2,00/1,40	12,0	144
48	6	-	8	2,2	N/A	2,00/1,40	12,0	144
72	6	-	12	2,2	N/A	2,00/1,40	12,0	145
96	8	-	12	2,2	3,4	2,00/1,40	13,2	169
144	12	-	12	2,2	6,2	2,00/1,40	16,0	233
288	24	-	12	2,2	4,5	2,00/1,40	18,0	294

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	3000 N Tensile Strength (Installation) 1500 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-5 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

INDOOR CABLES | Multi Loose Tube, Single Sheath, Steel Tape Armoured

1 Central Strength Member
2 Fiber
3 Loose Tube
4 Polyester Tape
5 Central Strength Member
6 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : Corrugated Steel Tape
Outer Sheath : Black HFFR, Thickness nominal 1.5 ± 0.1 mm.

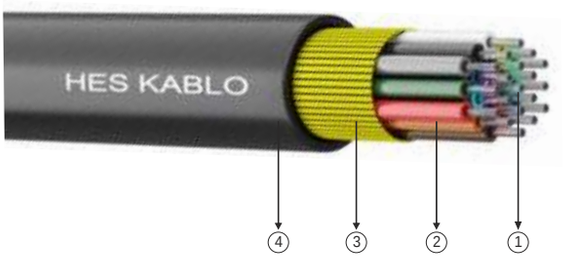
Applications
Used in cable channels or cable trays in communication networks within the building.

Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then adequate aramid / glass yarns are used as a shield. They are covered with HFFR material. It has a water blocking feature.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
8	2	4	4	2,2	N/A	2,0/1,4	11,7	159
12	3	3	4	2,2	N/A	2,0/1,4	11,7	160
16	4	2	4	2,2	N/A	2,0/1,4	11,7	160
24	6	-	4	2,2	N/A	2,0/1,4	11,7	162
36	6	-	6	2,5	N/A	2,4/1,7	12,8	193
48	6	-	8	2,5	N/A	2,4/1,7	12,8	194
72	6	-	12	2,7	N/A	2,6/1,8	13,4	211
96	8	-	12	2,7	N/A	2,6/1,8	15,2	260
144	12	-	12	2,7	8,0	2,6/1,8	18,7	371
288	24	-	12	2,7	5,4	2,6/1,8	21,3	485
432	18	-	24	3,0	N/A	2,8/1,8	19,7	402

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	2000 N Tensile Strength (Installation) 1000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	3000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-5 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Fiber
2 Tight Coating
3 Aramid Yarn
4 Outer Sheath

Tight Coated Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise

Fiber Colors
Natural

Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black HFFR, Thickness nominal 0,9 ± 0,1 mm.

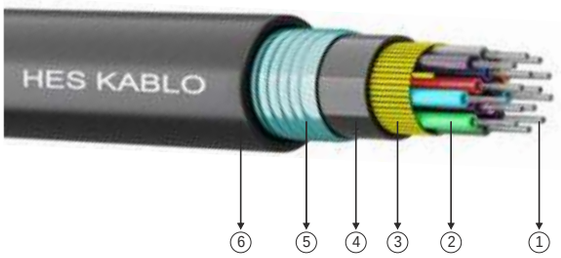
Applications
They are used in cable channels or cable trays in fiber applications (Fiber-to-the-home) in short range communication networks within interconnection applications in campus spine structure to hometop.

Construction
Aramid / glass yarns are strengthened by tightly covering fibers and combining them. They are covered with HFFR material.

TECHNICAL PROPERTIES			
Number Of Fiber	Tight Coated Diameter (µm) *	Cable Diameter *	Cable Weight (Kg/km) *
2	900	5,0	24
4	900	5,2	28
6	900	6,8	37
8	900	7,3	42
12	900	7.5	47

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	750 N Tensile Strength (Installation) 400 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	1000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20 x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10 x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-20 to +60 ° C	IEC 60794-1-22-F1
Installation Temperature	0 to +50 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Fiber
2 Tight Coating
3 Aramid Yarn
4 Intermediate Sheath
5 Corrugated Steel Tape
6 Outer Sheath

Tight Coated Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise

Fiber Colors
Natural

Inner Sheath : Black HFFR, Thickness nominal 0,8 ± 0,1 mm.
Armour : Corrugated Steel Tape.
Outer Sheath : Black HFFR, Thickness nominal 1,4 ± 0,1 mm.

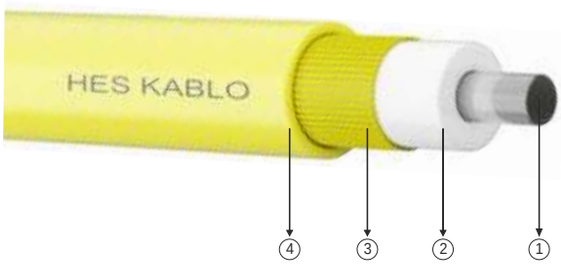
Applications
They are used in cable channels or cable trays in fiber applications (Fiber-to-the-home) in short range communication networks within interconnection applications in campus spine structure to hometop.

Construction
Aramid / glass yarns are strengthened by tightly covering fibers and combining them. They are covered with HFFR material. They are covered with HFFR material by implementing corrugated steel tape. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Tight Coated Diameter (µm) *	Cable Diameter (mm) *	Cable Weight (Kg/km) *
2	900	9,6	126
4	900	9,8	130
6	900	11,4	160
8	900	11,9	172
12	900	12,1	179

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1000 N Tensile Strength (Installation) 600 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-20 to +60 ° C	IEC 60794-1-22-F1
Installation Temperature	0 to +50 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Fiber
2 Tight Coating
3 Aramid Yarn
4 Outer Sheath

Tight Coated Colors
Natural

Fiber Colors
Natural

Inner Sheath : N/A
Armour : N/A
Outer Sheath : According to the fiber type; White, Yellow, Orange or Turquoise HFFR, Thickness nominal 0,3 ± 0,1 mm.

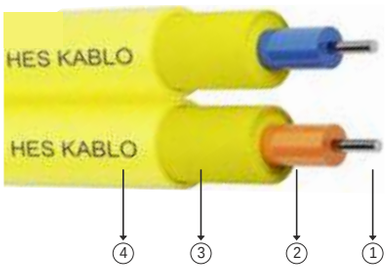
Applications
They are used in internal communication networks in short range conditions, in applications where panel etc. units are connected to each other or where a connection is established to fiber spine, in applications where direct termination in required and in fiber-to-the-home applications, in all general-purpose internal LAN applications

Construction
Then they are covered with HFFR material using adequate aramid / glass yarns after tightly covered with fiber.

TECHNICAL PROPERTIES			
Number Of Fiber	Tight Coated Diameter (µm) *	Cable Diameter (mm) *	Cable Weight (Kg/km) *
1	900	2,0	4,5
1	900	2,4	4,6
1	900	2,6	4,7

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	200 N Tensile Strength (Installation) 100 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	5J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	200 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	25x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-20 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	0 to +50 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60332-3-25 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60332-3-25 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Fiber
2 Tight Coating
3 Aramid Yarn
4 Outer Sheath

Tight Coated Colors
According to the fiber type; White, Yellow, Orange or Turquoise.

Fiber Colors
Natural
Inner Sheath : N/A
Armour : N/A
Outer Sheath : According to the fiber type; White, Yellow, Orange or Turquoise HFFR, Thickness nominal 0,3 ± 0,1 mm.

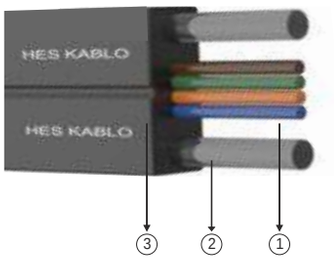
Applications
They are used in internal communication networks in short range conditions, in applications where panel etc. units are connected to each other or where a connection is established to fiber spine, in applications where direct termination in required and in fiber-to-the-home applications, in all general-purpose internal LAN applications.

Construction
Then they are covered with HFFR material using adequate aramid / glass yarns after tightly covered with fiber.

TECHNICAL PROPERTIES			
Number Of Fiber	Tight Coated Diameter (µm) *	Cable Diameter (mm) *	Cable Weight (Kg/km) *
2	900	2,0/4,2	9,4
2	900	2,4/5,0	9,8
2	900	2,6/5,4	10,2

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	200 N Tensile Strength (Installation) 100 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	5J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	200 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	25x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-20 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	0 to +50 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60332-3-25 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60332-3-25 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Fiber
2 FRP/ARP
3 Outer Sheath

Fiber Colors
Blue, Orange, Green, Brown

Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black or White HFFR

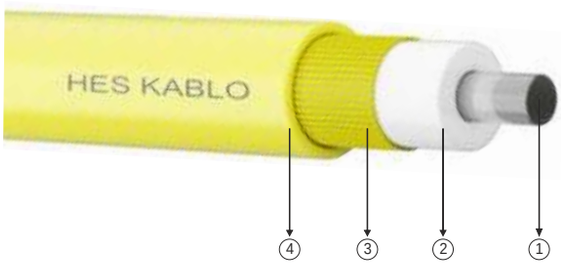
Applications
They are used in internal communication networks in short range conditions, in applications where panel etc. units are connected to each other or where a connection is established to fiber spine, in applications where direct termination in required and in fiber-to-the-home applications, in all general-purpose internal LAN applications.

Construction
They are covered with two FRP/ARP element HFFR material with fibers. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Self-Support Diameter (mm) *	Cable Diameter (mm) *	Cable Weight (Kg/km) *
2	0,5	4,0/2,0 mm	12
4	0,5	4,0/2,0 mm	12

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	200 N Tensile Strength (Installation) 100 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	3J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	200 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-20 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	0 to +50 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60332-3-25 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60332-3-25 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Fiber
2 Tight Coating
3 Aramid Yarn
4 Outer Sheath

Tight Coated Colors
Natural

Fiber Colors
White

Inner Sheath : N/A
Armour : N/A
Outer Sheath : According to the fiber type; Yellow, Orange or Turquoise HFFR, Thickness nominal 0,4 ± 0,1 mm.

Applications
They are used in internal communication networks in short range conditions, in applications where panel etc. units are connected to each other or where a connection is established to fiber spine, in applications where direct termination in required and in fiber-to-the-home applications, in all general-purpose internal LAN applications.

Construction
Then they are covered with HFFR material using adequate aramid / glass yarns after tightly covered with fiber

TECHNICAL PROPERTIES			
Number Of Fiber	Tight Coated Diameter (µm) *	Cable Diameter (mm) *	Cable Weight (Kg/km) *
1	900	2,4	7,2

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	400 N Tensile Strength (Installation) 200 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	5J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	200 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	25x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-20 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	0 to +50 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	IEC 60332-1-2 IEC 60332-3-25 IEC 60754-2 IEC 61034-2	IEC 60332-1-2 IEC 60332-3-25 IEC 60754-2 IEC 61034-2

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

1 Central Strength Member
2 Fiber
3 Loose Tube
4 Polyester Tape
5 Mika Tape
6 Corrugated Steel Tape
7 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise.
Inner Sheath : N/A
Armour : Corrugated Steel Tape
Outer Sheath : Black HFFR, thickness nominal 1.5 ± 0.1 mm.

Applications
Cable channels and cable trays are used in optical telecommunication networks of such structures as Metro (Subway) lines, tunnels etc.

Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then mica tape and curly steel belt shield is implemented for FE 180 feature. They are covered with HFFR material. It has a water blocking feature.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
4	1	5	4	2,2	N/A	2,0/1,4	12,5	190
6	3	3	2	2,2	N/A	2,0/1,4	12,5	190
8	2	4	4	2,2	N/A	2,0/1,4	12,5	190
12	3	3	4	2,2	N/A	2,0/1,4	12,5	191
16	4	2	4	2,2	N/A	2,0/1,4	12,5	192
24	6	0	4	2,2	N/A	2,0/1,4	12,5	193
36	6	0	6	2,5	N/A	2,4/1,7	13,6	224
48	6	0	8	2,5	N/A	2,4/1,7	13,6	225
60	5	1	12	2,7	N/A	2,6/1,8	14,2	242
72	6	0	12	2,7	N/A	2,6/1,8	14,2	244
96	8	0	12	2,7	4,5	2,6/1,8	16,0	296
144	12	0	12	2,7	8	2,6/1,8	19,5	415

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	2000 N Tensile Strength (Installation) 1000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N/ 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 °C	IEC 60794-1-22-F1
Installation Temperature	-5 to +60 °C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	FE-180 IEC 60332-1-2 IEC 60754-2 IEC 61034-2 IEC 60332-3-24	IEC 60331-25 IEC 60332-1-2 IEC 60754-2 IEC 61034-2 IEC 60332-3-24

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Single Loose Tube, Single Covered, Unarmoured

1 Fiber
2 Loose Tube
3 Aramid/Glass Yarn
4 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black MDPE , Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe which is made of HDPE etc. material in long range and local communication networks.

Construction
Painted fibers are placed in the central Loose tube. Then they are covered with MDPE material using adequate aramid / glass yarns. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	7,2	45
6	3,0/2,0	7,2	45
8	3,0/2,0	7,2	45
12	3,0/2,0	7,2	45
16	3,0/2,0	7,2	45
24	3,0/2,0	7,2	45

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1000 N Tensile Strength (Installation) 800 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	5J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Single Loose Tube, Single Sheath, Non-metallic Armoured

1 Fiber
2 Loose Tube
3 Aramid/Glass Yarn
4 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : Dielectric Armour
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe which is made of HDPE etc. material in long range and local communication networks.

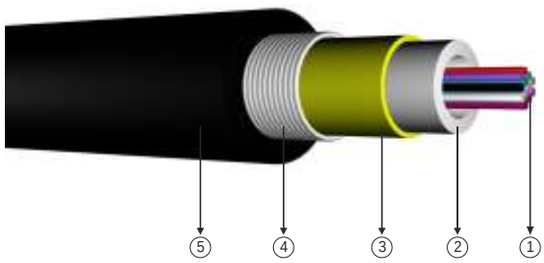
Construction
Colored fibers are placed in the central Loose tube. Then adequate aramid / glass yarns are used as a shield.
They are covered with MDPE material. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	9,0	65
6	3,0/2,0	9,0	65
8	3,0/2,0	9,0	65
12	3,0/2,0	9,0	65
16	3,0/2,0	9,0	65
24	3,0/2,0	9,0	65

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1900 N Tensile Strength (Installation) 1000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Single Loose Tube, Single Sheath, Steel Tape Armoured



1 Fiber
2 Loose Tube
3 Aramid/Glass Yarn
4 Corrugated Steel Tape
5 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : Corrugated Steel Tape
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe which is made of HDPE etc. material in long range and local communication networks.

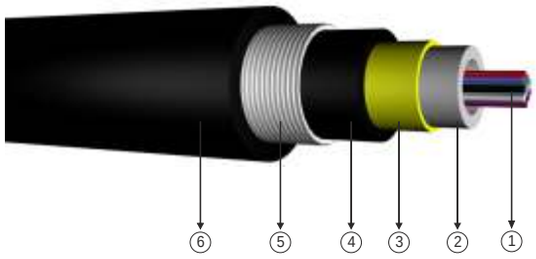
Construction
Colored fibers are placed in the central Loose tube. Then yarns steel belt is used as a shield with aramid / glass yarns. They are covered with MDPE material. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	9,0	96
6	3,0/2,0	9,0	96
8	3,0/2,0	9,0	96
12	3,0/2,0	9,0	96
16	3,0/2,0	9,0	96
24	3,0/2,0	9,0	96

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1100 N Tensile Strength (Installation) 900 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Single Loose Tube, Double Sheath, Steel Tape Armoured



1 Fiber
2 Loose Tube
3 Aramid/Glass Yarn
4 Inner Sheath
5 Corrugated Steel Tape
6 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : Black LDPE, Thickness nominal 1,0 ± 0,1 mm.
Armour : Corrugated Steel Tape
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe made of HDPE etc. materials in long range and local communication networks or directly burying in the ground.

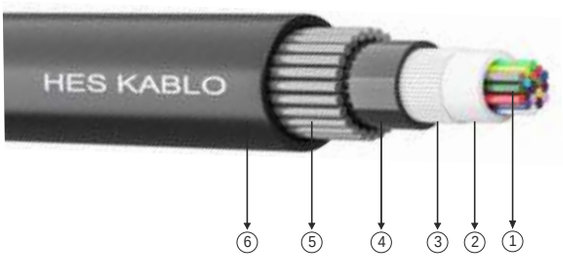
Construction
Colored fibers are placed in the central Loose tube. Then they are covered with intercandinal cover using aramid / glass yarns. Curly steel belt is used as a shield. They are covered with MDPE material. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	11,2	125
6	3,0/2,0	11,2	125
8	3,0/2,0	11,2	125
12	3,0/2,0	11,2	125
16	3,0/2,0	11,2	125
24	3,0/2,0	11,2	125

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1200 N Tensile Strength (Installation) 1000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Single Loose Tube, Steel Wire Armoured (SWA) Cables



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Inner Sheath
5 Steel Wire Armour
6 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : Black LDPE, Thickness nominal 1,0 ± 0,1 mm.
Armour : Steel Wire Armour
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe made of HDPE etc. materials in long range and local communication networks or directly burying in the ground.

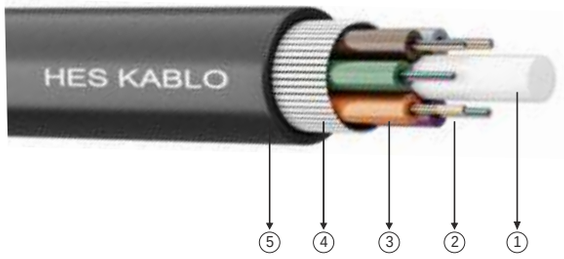
Construction
Colored fibers are placed in the central Loose tube. Then they are covered with intercandinal cover using aramid / glass yarns. Round steel wires is used as a shield. They are covered with MDPE material.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	10,6	182
6	3,0/2,0	10,6	182
8	3,0/2,0	10,6	182
12	3,0/2,0	10,6	182
16	3,0/2,0	10,6	182
24	3,0/2,0	10,6	182

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	600 N Tensile Strength (Installation) 300 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	3000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Multi Loose Tube, Single Sheath, Unarmoured



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Aramid/Glass Yarn
5 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe made of HDPE etc. materials in long range and local communication networks or directly burying in the ground.

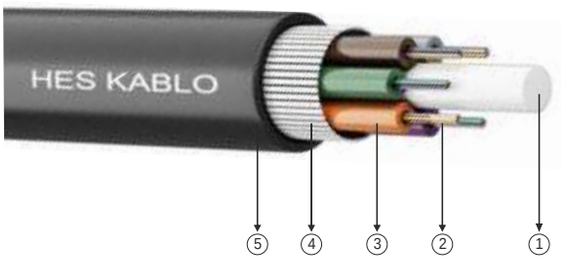
Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any).
Then they are covered with MDPE material using adequate aramid / glass yarns. It has a water blocking feature.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
8	2	4	4	2,5	N/A	2,4/1,7	10,8	103
12	3	3	4	2,5	N/A	2,4/1,7	10,8	104
16	4	2	4	2,5	N/A	2,4/1,7	10,8	106
24	6	-	4	2,5	N/A	2,4/1,7	10,8	108
36	6	-	6	2,5	N/A	2,4/1,7	10,8	108
48	6	-	8	2,5	N/A	2,4/1,7	10,8	109
72	6	-	12	2,7	N/A	2,6/1,8	11,4	121
96	8	-	12	2,7	4,5	2,6/1,8	13,2	149
144	12	-	12	2,7	8,0	2,6/1,8	16,7	203
288	24	-	12	2,7	5,4	2,6/1,8	19,3	376
432	18	-	24	3,0	N/A	2,8/1,8	17,7	329

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	2700 N Tensile Strength (Installation) 1700 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Multi Loose Tube, Single Sheath, Non-metallic Armoured



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Aramid/Glass Yarn
5 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.
Inner Sheath : N/A
Armour : Dielectric Armour
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe made of HDPE etc. materials in long range and local communication networks or directly burying in the ground.

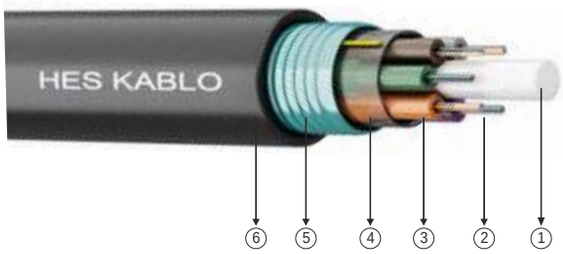
Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then adequate aramid / glass yarns are used as a shield. They are covered with MDPE material. It has a water blocking feature.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
8	1	5	8	2,2	N/A	2,00/1,40	12,0	110
12	1	5	12	2,2	N/A	2,00/1,40	12,0	110
16	2	4	8	2,2	N/A	2,00/1,40	12,0	110
24	6	-	4	2,2	N/A	2,00/1,40	12,0	113
36	6	-	6	2,2	N/A	2,00/1,40	12,0	113
48	6	-	8	2,2	N/A	2,00/1,40	12,0	113
72	6	-	12	2,2	N/A	2,00/1,40	12,0	114
96	8	-	12	2,2	3,4	2,00/1,40	13,2	135
144	12	-	12	2,2	6,2	2,00/1,40	16,0	191
288	24	-	12	2,2	4,5	2,00/1,40	18,0	246

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	3000 N Tensile Strength (Installation) 1500 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Multi Loose Tube, Single Sheath, Steel Tape Armoured



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Polyester Tape
5 Corrugated Steel Tape
6 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.
Inner Sheath : N/A
Armour : Corrugated Steel Tape
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe made of HDPE etc. materials in long range and local communication networks or directly burying in the ground.

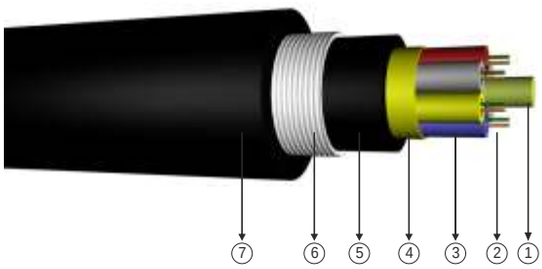
Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then adequate aramid / glass yarns are used as a shield. They are covered with MDPE material. It has a water blocking feature.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
8	2	4	4	2,2	N/A	2,0/1,4	11,7	130
12	3	3	4	2,2	N/A	2,0/1,4	11,7	131
16	4	2	4	2,2	N/A	2,0/1,4	11,7	132
24	6	-	4	2,2	N/A	2,0/1,4	11,7	133
36	6	-	6	2,5	N/A	2,4/1,7	12,8	161
48	6	-	8	2,5	N/A	2,4/1,7	12,8	162
72	6	-	12	2,7	N/A	2,6/1,8	13,4	178
96	8	-	12	2,7	N/A	2,6/1,8	15,2	221
144	12	-	12	2,7	8,0	2,6/1,8	18,7	322
288	24	-	12	2,7	5,4	2,6/1,8	21,3	425
432	18	-	24	3,0	N/A	2,8/1,8	19,7	346

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	2000 N Tensile Strength (Installation) 1000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	3000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Multi Loose Tube, Double Sheathed, Steel Tape Armoured



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Polyester Tape
5 Inner Sheath
6 Corrugated Steel Tape
7 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.
Inner Sheath : Black LDPE, Thickness nominal 1,0 ± 0,1 mm.
Armour : Corrugated Steel Tape
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe made of HDPE etc. materials in long range and local communication networks or directly burying in the ground.

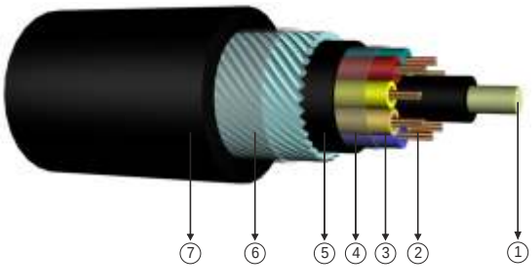
Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then they are covered with intercandinal cover using aramid / glass yarns.
Curly steel belt is used as a shield. They are covered with MDPE material. It has a water blocking feature.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
8	2	4	4	2,5	N/A	2,4/1,7	14,8	207
12	3	3	4	2,5	N/A	2,4/1,7	14,8	208
16	4	2	4	2,5	N/A	2,4/1,7	14,8	209
24	6	-	4	2,5	N/A	2,4/1,7	14,8	211
36	6	-	6	2,5	N/A	2,4/1,7	14,8	211
48	6	-	8	2,5	N/A	2,4/1,7	14,8	212
72	6	-	12	2,7	N/A	2,6/1,8	15,4	230
96	8	-	12	2,7	4.5	2,6/1,8	17,2	274
144	12	-	12	2,7	8,0	2,6/1,8	20,7	352
288	24	-	12	2,7	5,3	2,6/1,8	23,2	484

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	2500 N Tensile Strength (Installation) 1500 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	4000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Multi Loose Tube, Steel Wire Armoured (SWA) Cables



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Polyester Tape
5 Inner Sheath
6 Steel Wire Armour
7 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise.

Inner Sheath : Black LDPE, Thickness nominal 0,8 ± 0,1 mm.
Armour : Steel Wire Armour
Outer Sheath : Black MDPE,Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used in a pipe made of HDPE etc. materials in long range and local communication networks or directly burying in the ground.

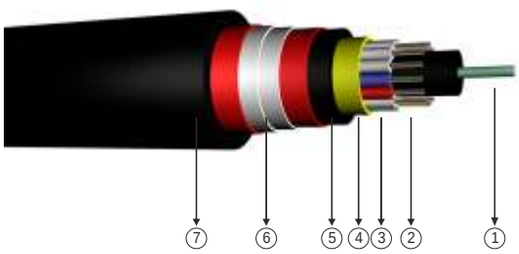
Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then they are covered with intercandinal cover using aramid / glass yarns.
Round steel wires is used as a shield. They are covered with MDPE material.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
4	1	5	4	2,2	N/A	2,0/1,4	13,5	290
6	3	3	2	2,2	N/A	2,0/1,4	13,5	290
8	2	4	4	2,2	N/A	2,0/1,4	13,5	290
12	3	3	4	2,2	N/A	2,0/1,4	13,5	290
16	4	2	4	2,2	N/A	2,0/1,4	13,5	291
24	6	0	4	2,2	N/A	2,0/1,4	13,5	292
36	6	0	6	2,5	N/A	2,4/1,7	14,6	332
48	6	0	8	2,5	N/A	2,4/1,7	14,6	332
60	5	1	12	2,7	N/A	2,6/1,8	15,2	357
72	6	0	12	2,7	N/A	2,6/1,8	15,2	358
96	8	0	12	2,7	4,5	2,6/1,8	17,0	432
144	12	0	12	2,7	8	2,6/1,8	20,5	593

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	15000 N Tensile Strength (Installation) 9000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR CABLES | Multi Tube, Double Sheath, Galvanized Steel Tape Armoured



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Aramid Yarn
5 Inner Sheath
6 Galvanized Steel Tape
7 Outer Sheath

Loose Tube Colors

Blue, Orange, Green, Brown, Gray, White, Red,

Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.

Fiber Colors

Blue, Orange, Green, Brown, Gray, White, Red,

Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : Black LDPE, Thickness nominal 1,0 ± 0,1 mm.
Armour : Galvenized Steel Tape
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications

They are used in a pipe made of HDPE etc. materials in long range and local communication networks or directly burying in the ground.

Construction

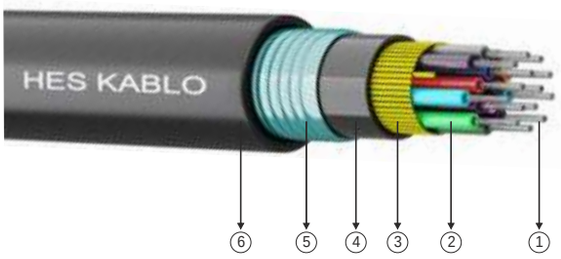
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then they are covered with intercandinal cover using aramid / glass yarns.

. Galvanized steel belt is used as a shield. They are covered with MDPE material.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
4	2	4	2	2,5	N/A	2,4/1,7	14,0	325
6	3	3	2	2,5	N/A	2,4/1,7	14,0	326
8	2	4	4	2,5	N/A	2,4/1,7	14,0	325
12	3	3	4	2,5	N/A	2,4/1,7	14,0	326
16	4	2	4	2,5	N/A	2,4/1,7	14,0	327
24	6	-	4	2,5	N/A	2,4/1,7	14,0	329
36	6	-	6	2,5	N/A	2,4/1,7	14,0	330
48	6	-	8	2,5	N/A	2,4/1,7	14,0	330
60	5	1	12	2,7	N/A	2,6/1,8	14,6	353
72	6	-	12	2,7	N/A	2,6/1,8	14,6	355
96	8	-	12	2,7	4,5	2,6/1,8	16,4	426
144	12	-	12	2,7	8,0	2,6/1,8	19,9	580
288	24	-	12	2,7	5,3	2,6/1,8	22,4	714

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	2500 N Tensile Strength (Installation) 1500 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	440 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Fiber
2 Tight Coating
3 Aramid Yarn
4 Inner Sheath
5 Corrugated Steel Tape
6 Outer Sheath

Tight Coated Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise.

Fiber Colors
Natural

Inner Sheath : Black HFFR, Thickness nominal 0,8 ± 0,1 mm.
Armour : Corrugated Steel Tape.
Outer Sheath : Black MDPE, Thickness nominal 1,4 ± 0,1 mm.

Applications
They are used in internal communication networks in short range conditions, in internal and external communication networks, in external applications in campus spine structure, in a pipe made of HDPE etc. material or directly by burying in the ground.

Construction
Aramid / glass yarns are strengthened by tightly covering fibers and combining them. They are covered with HFFR material.They are covered with MDPE material by implementing curly steel belt shield. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Tight Coated Diameter (µm) *	Cable Diameter *	Cable Weight (Kg/km) *
2	900	9,6	103
4	900	9,8	108
6	900	11,4	133
8	900	11,9	144
12	900	12,1	150

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1000 N Tensile Strength (Installation) 600 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-20 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	0 to +60 ° C	N/A
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR AERIAL CABLES | Single Loose Tube, Steel Wire Rope, UnArmoured

1 Fiber
2 Loose Tube
3 Aramid/Glass Yarn
4 Messenger Wire
5 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.
Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used by hanging from sings between the poles in aerial lines within long range and local communication networks.

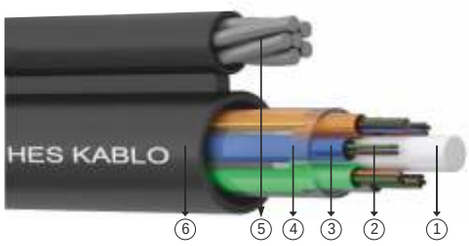
Construction
Colored fibers are placed in the central Loose tube. They are covered with MDPE material using aramid / glass yarns and sling.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	7,0/15,3	108
6	3,0/2,0	7,0/15,3	108
8	3,0/2,0	7,0/15,3	108
12	3,0/2,0	7,0/15,3	108
16	3,0/2,0	7,0/15,3	108
24	3,0/2,0	7,0/15,3	108

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	2000 N Tensile Strength (Installation) 1000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR AERIAL CABLES | Multi Loose Tube, Steel Wire Rope, Unarmoured



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Polyester Tape
5 Messenger Wire
6 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.

Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used by hanging from sings between the poles in aerial lines within long range and local communication networks.

Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). They are covered with MDPE material using aramid / glass yarns and sling.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
8	2	4	4	2,5	N/A	2,4/1,7	11,2/19,5	167
12	3	3	4	2,5	N/A	2,4/1,7	11,2/19,5	167
16	4	2	4	2,5	N/A	2,4/1,7	11,2/19,5	168
24	6	-	4	2,5	N/A	2,4/1,7	11,2/19,5	170
36	6	-	6	2,5	N/A	2,4/1,7	11,2/19,5	170
48	6	-	8	2,5	N/A	2,4/1,7	11,2/19,5	171
72	6	-	12	2,7	N/A	2,6/1,8	11,8/20,1	184
96	8	-	12	2,7	4,5	2,6/1,8	13,6/21,9	220

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	5000 N Tensile Strength (Installation) 2500 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	3000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR AERIAL CABLES | Single Loose Tube, Steel Wire Rope, Steel Tape Armoured

1 Fiber
2 Loose Tube
3 Aramid/Glass Yarn
4 Messenger Wire
5 Corrugated Steel Tape
6 Outer Sheath

Loose Tube Colors
Natural

Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.
Inner Sheath : N/A
Armour : Corrugated Steel Tape.
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

Applications
They are used by hanging from sings between the poles in aerial lines within long range and local communication networks.

Construction
Colored fibers are placed in the central Loose tube. Then curly steel belt is used as a shield with aramid / glass yarns. They are covered with HFFR material using sling.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	17,0/8,7	150
6	3,0/2,0	17,0/8,7	150
8	3,0/2,0	17,0/8,7	150
12	3,0/2,0	17,0/8,7	150
16	3,0/2,0	17,0/8,7	150
24	3,0/2,0	17,0/8,7	150

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	2000 N Tensile Strength (Installation) 1000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

OUTDOOR AERIAL CABLES | Multi LooseTube, Steel Wire Rope, Steel Tape Armoured

1 Central Strength Member
2 Fiber
3 Loose Tube
4 Polyester Tape
5 Messenger Wire
6 Corrugated Steel Tape
7 Outer Sheath

Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black stripes colors.
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise and Black ringed colors.
Inner Sheath : N/A
Armour : Corrugated Steel Tape
Outer Sheath : Black MDPE, Thickness nominal 1,5 ± 0,1 mm.

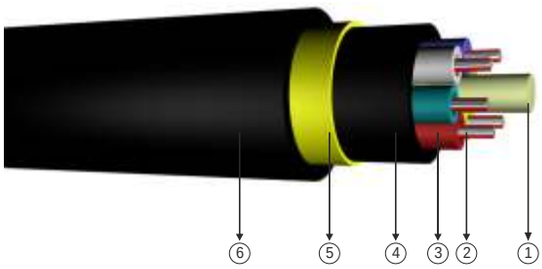
Applications
They are used by hanging from sings between the poles in aerial lines within long range and local communication networks.

Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then curly steel belt is implemented as a shield with aramid / glass yarns.
They are covered with HFFR material using sling.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
8	2	4	4	2,2	N/A	2,0/1,4	11,7/21,2	251
12	3	3	4	2,2	N/A	2,0/1,4	11,7/21,2	252
16	4	2	4	2,2	N/A	2,0/1,4	11,7/21,2	252
24	6	-	4	2,2	N/A	2,0/1,4	11,7/21,2	253
36	6	-	6	2,5	N/A	2,4/1,7	12,8/22,3	280
48	6	-	8	2,5	N/A	2,4/1,7	12,8/22,3	280
72	6	-	12	2,5	N/A	2,4/1,7	12,8/22,3	281
96	8	-	12	2,5	4,5	2,4/1,7	14,4/23,9	319

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	5000 N Tensile Strength (Installation) 2500 N Tensile Strength (Operation)	IEC 60794-1-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-E4
Crush Resistance	3000 N / 10cm	IEC 60794-1-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-F1
Installation Temperature	-30 to +60 ° C	IEC 60794-1-E6
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Inner Sheath
5 Aramid Yarn
6 Outer Sheath

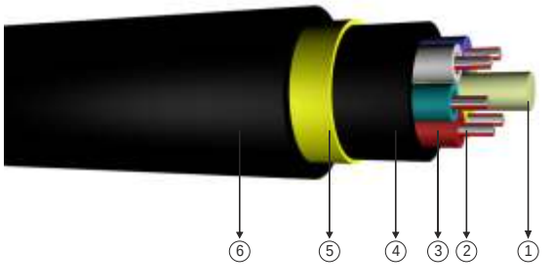
Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise.
Inner Sheath : Black LDPE, Thickness nominal 0,8 ± 0,1 mm.
Armour : N/A
Outer Sheath : Black MDPE,Thickness nominal 1,5 ± 0,1 mm.
Span Lengths : 300m
Diğer Conditions : NESC LIGHT/2,0% sag

Applications
They are used between the poles in aerial lines within long range and local communication networks. They are used by hanging with the own-reinforced structure.
Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then they are covered with intercandinal cover using tumescent belt. The own-reinforced structure is supplied with adequate aramid thread. They are covered with MDPE material. It has a water blocking feature.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
4	1	5	4	2,5	N/A	2,4/1,7	13,5	126
6	3	3	2	2,5	N/A	2,4/1,7	13,5	126
8	2	4	4	2,5	N/A	2,4/1,7	13,5	126
12	3	3	4	2,5	N/A	2,4/1,7	13,5	126
16	4	2	4	2,5	N/A	2,4/1,7	13,5	126
24	6	0	4	2,5	N/A	2,4/1,7	13,5	130
36	6	0	6	2,5	N/A	2,4/1,7	13,9	136
48	6	0	8	2,5	N/A	2,4/1,7	13,9	136
60	5	1	12	2,7	N/A	2,6/1,8	14,5	149
72	6	0	12	2,7	N/A	2,6/1,8	14,5	150
96	8	0	12	2,7	4,5	2,6/1,8	16,7	192
144	12	0	12	2,7	8	2,6/1,8	20,8	284

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	(4-24 fiber) 9000 N Tensile Strength (Installation) (4-24 fiber) 6600 N Tensile Strength (Operation) (36-48 fiber) 10000 N Tensile Strength (Installation) (36-48 fiber) 6800 N Tensile Strength (Operation) (60-72 fiber) 11500 NTensile Strength (Installation) (60-72 fiber) 7300 NTensile Strength (Operation) (96 fiber) 14000 NTensile Strength (Installation) (96 fiber) 8800 NTensile Strength (Operation) (144 fiber) 17000 NTensile Strength (Installation) (144 fiber) 11500 NTensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E4
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-21-E11
Installation Temperature	-30 to +60 ° C	IEC 60794-1-22-F1
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Central Strength Member
2 Fiber
3 Loose Tube
4 Inner Sheath
5 Aramid Yarn
6 Outer Sheath

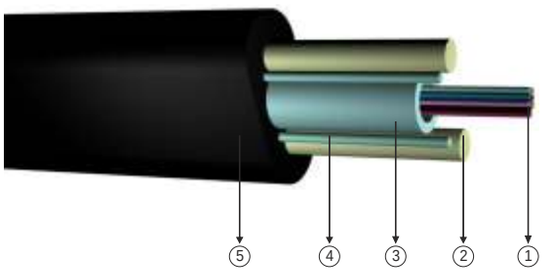
Loose Tube Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red,
Black, Yellow, Violet, Pink, Turquoise.
Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black MDPE,Thickness nominal 1,5 ± 0,1 mm.
Span Lengths : 100m
Diğer Conditions : NESC LIGHT/1,5% sag

Applications
They are used between the poles in aerial lines within long range and local communication networks. They are used by hanging with the own-reinforced structure.
Construction
Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then they are covered with intercandinal cover using tumescent belt. The own-reinforced structure is supplied with adequate aramid thread. They are covered with MDPE material. It has a water blocking feature.

TECHNİCAL PROPERTİES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
4	1	5	4	2,2	N/A	2,0/1,4	10,4	75
6	3	3	2	2,2	N/A	2,0/1,4	10,4	75
8	2	4	4	2,2	N/A	2,0/1,4	10,4	75
12	3	3	4	2,2	N/A	2,0/1,4	10,4	75
16	4	2	4	2,2	N/A	2,0/1,4	10,4	77
24	6	0	4	2,2	N/A	2,0/1,4	10,4	77
36	6	0	6	2,5	N/A	2,4/1,7	11,5	95
48	6	0	8	2,5	N/A	2,4/1,7	11,5	95
60	5	1	12	2,7	N/A	2,6/1,8	12,1	105
72	6	0	12	2,7	N/A	2,6/1,8	12,1	105
96	8	0	12	2,7	4.5	2,6/1,8	13,9	139
144	12	0	12	2,7	8	2,6/1,8	17,4	217

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	(4-24 fiber) 3200 N Tensile Strength (Installation) (4-24 fiber) 2100 N Tensile Strength (Operation) (36-48 fiber) 4200 N Tensile Strength (Installation) (36-48 fiber) 2400 N Tensile Strength (Operation) (60-72 fiber) 4500 NTensile Strength (Installation) (60-72 fiber) 2700 NTensile Strength (Operation) (96 fiber) 5000 NTensile Strength (Installation) (96 fiber) 3300 NTensile Strength (Operation) (144 fiber) 6500 NTensile Strength (Installation) (144 fiber) 4400 NTensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E4
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-21-E11
Installation Temperature	-30 to +60 ° C	IEC 60794-1-22-F1
Water Penetration Test	24 hours 3m length	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.



1 Fiber
2 Central Strength Member
3 Loose Tube
4 Water Swellable Yarn
5 Outer Sheath

Loose Tube Colors
Natural
Fiber Colors
Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise.

Inner Sheath : N/A
Armour : N/A
Outer Sheath : Black MDPE, Thickness nominal 1,1 ± 0,1 mm.
Span Lengths : 120m (NESC Light)
90m (NESC Medium)
40m (NESC Heavy)

Applications
They are used between the poles in aerial lines within long range and local communication networks. They are used by hanging with own-reinforced structure.

Construction
They are covered with two FRP element MDPE material with Loose tube. It has a water blocking feature.

TECHNICAL PROPERTIES			
Number Of Fiber	Loose Tube Outer/Inner Diameter (mm)*	Cable Diameter *	Cable Weight (Kg/km) *
4	3,0/2,0	5,5/8,5	40
6	3,0/2,0	5,5/8,5	40
8	3,0/2,0	5,5/8,5	40
12	3,0/2,0	5,5/8,5	40
16	3,0/2,0	5,5/8,5	40
24	3,0/2,0	5,5/8,5	40

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	1350 N Tensile Strength (Installation) 400 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E4
Bend Radius (During Installation)	30x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	15x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-5 to +60 ° C	IEC 60794-1-E6
Water Penetration Test	24 hours 3m length	IEC 60794-1-2 F5
Fire Test**	N/A	N/A

* : Tolerance ±10%.
** : These test case apply to HFFR sheated cables.

Standard SM FİBER ITU-T G 652 D	
PROPERTIES	PROPERTIES
Attenuation (max)	0.40 dB/km (1310 nm)
	0.25 dB/km (1550 nm)
MFD	9.2±0.4 µm (1310 nm)
	10.4±0.5 µm (1550 nm)
Chromatic Dispersion (max) (maks.)	3.5 ps/(nmxkm)(1310 nm)
	18 ps/(nmxkm)(1550 nm)
Cladding Diameter	125±0.3µm
Core/Clad Concentricity error	≤0.5 µm
Zero dispersion wavelength	1300nm≤≤1324nm
Cladding non-circularity	≤0.7 %
Cladding Diameter	245±10 µm
Cut Off Wavelength	≤1260v
Proof Test	≥1% (100kpsi or 0.7GPa)

NON-ZERO DISPERSION SHIFTED SM FIBER ITU-T G 655	
PROPERTIES	PROPERTIES
Attenuation (max)	0.25 dB/km (1550 nm)
MFD	9.6±0.4 µm 1550 nm)
Chromatic Dispersion at 1530-1565 nm	2.0-6.0 ps/(nmxkm)
Chromatic Dispersion at 1565-1625 nm	4.0-12.0 ps/(nmxkm)
Cladding Diameter	125±0.7µm
Core/Clad Concentricity error (maks)	≤0.6 µm
Cladding non-circularity (max)	% 0.7
Cladding Diameter	245±5 µm
Cut Off Wavelength	≤1450v
Proof Test	≥1% (100kpsi or 0.7GPa)

STANDARD SM FIBER ITU-T G 657 A1	
PROPERTIES	PROPERTIES
Attenuation (max)	0.40 dB/km (1310 nm)
	0.25 dB/km (1550 nm)
MFD	9.0±0.4 µm (1310 nm)
	10.1±0.5 µm (1550 nm)
Cladding Diameter	125±0.7µm
Core/Clad Concentricity error	≤0.5 µm
Zero dispersion wavelength	1300nm≤≤1324nm
Cladding non-circularity (max)	≤0.7 %
Cladding Diameter	242±7 µm
Cut Off Wavelength	≤1260v
Proof Tensile Test	≥1% (100kpsi or 0.7GPa)
Macro bending Attenuation : (10 turn on a 15 mm radius mandrel)	≤0.25 dB @1550 nm

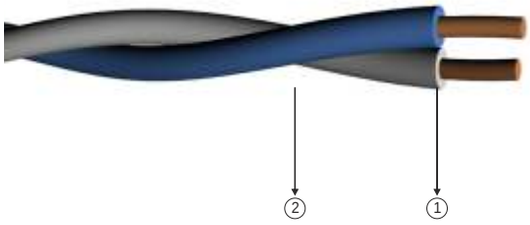
SM FIBER ITU-T G 657 A2 Bend İnsensitive	
PROPERTIES	PROPERTIES
Attenuation (max)	0.35 dB/km (1310 nm)
	0.22 dB/km (1550 nm)
MFD	8.6µ0.4 ?m (1310 nm)
Core/Clad Concentricity error (max)	0.5 µm
Zero dispersion wavelength	1302nm≤≤1322nm
Cladding non-circularity (max)	1%
Coating diameter	240±5 µm
Cut Off Wavelength	≤1260vµ
Proof Tensile Test	≥1% (100kpsi or 0.7GPa)
Macro bending Attenuation : (1 turn on a 7.5 mm radius mandrel)	≤0.5 dB @1550 nm

62.5/125 µm MM OM1 OPTICAL FIBER	
PROPERTIES	PROPERTIES
Attenuation (max)	3.5 dB/km (850 nm)
	1.5 dB/km (1300 nm)
Tapewidth (min)	200 MHz.km(850 nm)
	600 MHz.km(1300 nm)
Numerical Aparature	0.275±0.015
Core Diameter	62.5±0.2µm
Cladding Diameter	125±1µm
Core/Clad Concentricity error	≤1 µm
Cladding non-circularity	≤0.7 %
Cladding Diameter	245±10 µm
Proof Test	≥1% (100kpsi or 0.7GPa)

50/125 µm MM OM2 OPTICAL FIBER	
PROPERTIES	PROPERTIES
Attenuation (max)	3.5 dB/km (850 nm)
	1.5 dB/km (1300 nm)
Tapewidth (min)	500 MHz.km(850 nm)
	600 MHz.km(1300 nm)
Numerical Aparature	0.200±0.015
Core Diameter	50±0.2µm
Cladding Diameter	125±1µm
Core/Clad Concentricity error (maks)	≤1 µµ
Cladding non-circularity	? 0.7 %
Cladding Diameter	242±5 µm
Proof Test	≥1% (100kpsi or 0.7GPa)

50/125 µm MM OM3 OPTICAL FIBER	
PROPERTIES	PROPERTIES
Attenuation (max)	3.5 dB/km
	1.5 dB/km
Tapewidth (Laser EMB)	2000 MHz.km(850 nm)
	500 MHz.km(1300 nm)
Tapewidth (Overfilled)	1500 MHz.km(850 nm)
	500 MHz.km(1300 nm)
Numerical Aparature	0.200±0.015
Core Diameter	50±2 µm
Cladding Diameter	125±1 µm
Core/Clad Concentricity error	1 ≤µµ
Cladding non-circularity	≤0.7 %
Cladding Diameter	242±5 µm
Proof Test	≥1% (100kpsi or 0.7GPa)

50/125 µm MM OM4 OPTICAL FIBER	
PROPERTIES	PROPERTIES
Attenuation (max)	3.0 dB/km
	1.0 dB/km
Tapewidth (Laser EMB)	4700 MHz.km(850 nm)
	500 MHz.km(1300 nm)
Tapewidth (Overfilled)	3500 MHz.km(850 nm)
	500 MHz.km(1300 nm)
Numerical Aparature	0.2±0.015
Core Diameter	50±3 µm
Cladding Diameter	125±3 µm
Core/Clad Concentricity error	1 ≤µµ
Cladding non-circularity	≤0.7 %
Cladding Diameter	242±5 µm
Proof Test	≥1% (100kpsi or 0.7GPa)



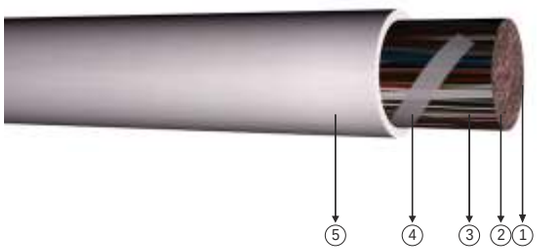
Application
They are used in external lines telephone lines, audio and diaphone lines, repeater and area closets.
They are used in order to provide communication between the switchboard and main transmission circuit in main distribution frame.

Construction
Conductor : Annealed Copper Wire
Insulation : PVC
Outer Sheath : N/A

Construction
1. Conductor
2. Insulation

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Coil Lenght (m)	Tolerance (%)
0,6	1	2	7,5	500	5

Electrical Properties	Conductor Diameter (mm) 0.6
Conductor Resistance (? /km) 20 °C max.	66
Insulation Resistance (Megaohm-km)	200
Dielectric Strength (VAC, 1 Minute)	1000



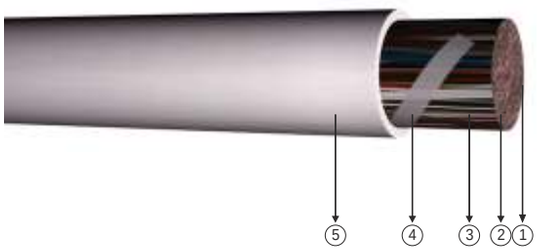
Application
They are generally used in switchboards and subscriber distributions in indoor lines.

Construction
Conductor : Annealed Copper Wire
Insulation : Solid Polyethylene
Outer Sheath : PVC

Construction
1. Conductor
2. Insulation
3. Cable Core
4. Wrapping
5. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Coil Lenght (m)
0,5	2	4,9	30	2000
0,5	3	6,4	40	2000
0,5	4	6,6	48	2000
0,5	6	7,7	61	2000
0,5	10	8,4	88	2000
0,5	20	11,3	148	2000
0,5	30	12,6	200	2000
0,5	50	15,2	310	2000
0,5	100	20,8	576	1000
0,5	200	28,1	1072	1000

Electrical Properties	Conductor Diameter (mm)
	0,5
Conductor Resistance (? /km) 20 °C max.	98
Mutual Capacitance 800 Hz	56
Capacitance Unbalance (pF/km)	500
Insulation Resistance (Megaohm-km)	5000
Dielectric Strength (VDC)	1500



Application
They are generally used in switchboards and subscriber distributions in indoor lines.

Construction
Conductor : Annealed Copper Wire
Insulation : Solid Polyethylene
Outer Sheath : HFFR

Construction
1. Conductor
2. Insulation
3. Cable Core
4. Wrapping
5. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Coil Lenght (m)
0,5	2	4,9	31	2000
0,5	3	6,4	42	2000
0,5	4	6,6	50	2000
0,5	6	7,7	63	2000
0,5	10	8,4	91	2000
0,5	20	11,3	151	2000
0,5	30	12,6	204	2000
0,5	50	15,2	314	2000
0,5	100	20,8	583	1000
0,5	200	28,1	1082	1000

Electrical Properties	Conductor Diameter (mm) 0,5
Conductor Resistance (? /km) 20 °C max.	98
Mutual Capacitance 800 Hz	56
Capacitance Unbalance (pF/km)	500
Insulation Resistance (Megaohm-km)	5000
Dielectric Strength (VDC)	1500

Application

They are generally used to transmit the telephone line on aerial poles to subscribers in rural places and out of town.

Construction

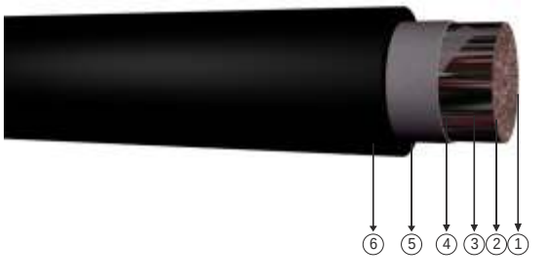
Conductor : Annealed Copper Wire
Insulation : N/A
Outer Sheath : LDPE

Construction

1. Conductor
2. Outer Sheath

Electrical Properties	Conductor Diameter (mm)		
	0,8	0,9	1,0
Conductor Resistance (? /km) 20 °C max.	36,78	28,96	23,39
Insulation Resistance (Megaohm-km)	10000		
Dielectric Strength (VAC 3 Minute)	4000		

OUTDOOR CABLES | Unfilled Underground Cables (KPD-AP / PD-AP)



Application

They are used in HDPE pipes which are furnished underground. The cables with 0.4 mm and 0.5 mm transistor diameter are used in short range distribution networks and the cables with 0.6 mm and 0.9 mm transistor diameter are used in long range network lines.

Construction
Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

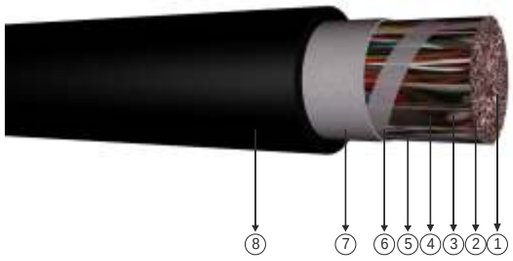
Construction

1. Conductor
2. Insulation
3. Cable Core
4. Wrapping
5. Screen (Shield)
6. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Lenght (m)
0,4	10	8,0	107	2000
0,4	20	10,1	152	2000
0,4	30	11,0	197	2000
0,4	50	12,7	264	1000
0,4	100	16,3	438	1000
0,4	150	19,9	632	500
0,4	200	21,7	786	500
0,4	300	26,4	1130	500
0,4	400	29,4	1448	500
0,4	600	35,9	2113	500
0,4	900	42,9	3054	400
0,4	1200	48,7	3978	400
0,4	1500	54,5	4896	300
0,4	1800	60,0	5854	300
0,4	2200	65,5	7084	250
0,5	10	8,8	127	2000
0,5	20	11,3	195	2000
0,5	30	12,4	256	2000
0,5	50	14,5	354	1000
0,5	100	18,7	609	500
0,5	150	23,2	895	500
0,5	200	25,4	1118	500
0,5	300	30,9	1626	500
0,5	400	34,5	2110	500
0,5	600	42,3	3101	400
0,5	900	50,4	4475	300
0,5	1200	57,7	5909	300

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Lenght (m)
0,6	10	9,8	155	1200
0,6	20	12,9	249	1200
0,6	30	14,2	324	1200
0,6	50	16,7	478	1200
0,6	100	22,1	838	800
0,6	150	27,5	1233	400
0,6	200	30,3	1570	400
0,6	300	36,9	2285	400
0,6	400	41,2	2956	400
0,6	600	50,4	4325	400
0,9	10	12,6	260	1200
0,9	20	17,1	450	1200
0,9	30	19,3	608	800
0,9	50	23,2	935	800
0,9	100	31,3	1716	400
0,9	150	39,2	2537	400
0,9	200	43,3	3275	400
0,9	300	52,8	4789	400
0,9	400	59,4	6267	300

OUTDOOR CABLES | Filled Underground Cables (KPDF-AP / PDF-AP)



Application

They are used in HDPE pipes which are conductor underground. The cables with 0.4 mm and 0.5 mm transistor diameter are used in short range distribution networks and the cables with 0.6 mm and 0.9 mm transistor diameter are used in long range network lines.

Construction
Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

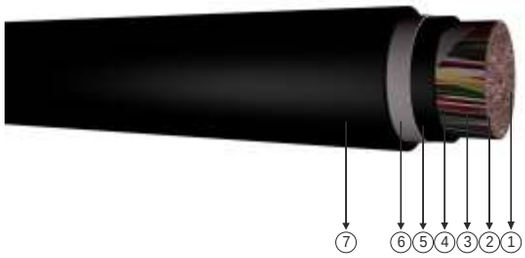
Construction

1. Conductor
2. Insulation
3. Cable Core
4. Flooding Compound
5. Core Covering
6. Flooding Compound
7. Screen (Shield)
8. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,4	10	8,8	84	2000
0,4	20	11,1	138	2000
0,4	30	12,0	177	2000
0,4	50	13,9	254	1000
0,4	100	17,7	452	1000
0,4	150	21,5	668	500
0,4	200	23,6	838	500
0,4	300	28,3	1226	500
0,4	400	31,5	1576	500
0,4	600	38,3	2331	500
0,4	900	46,0	3420	400
0,4	1200	52,1	4474	400
0,4	1500	58,4	5591	300
0,4	1800	63,8	6689	300
0,5	10	10,3	120	2000
0,5	20	12,8	194	2000
0,5	30	14,1	250	2000
0,5	50	16,4	368	1000
0,5	100	21,4	673	500
0,5	150	26,4	1014	500
0,5	200	28,8	1266	500
0,5	300	35,0	1869	500
0,5	400	39,2	2422	500
0,5	600	47,8	3594	500
0,5	900	56,9	5237	400
0,5	1200	65,2	6925	300

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,6	10	11,2	145	1200
0,6	20	14,6	260	1200
0,6	30	16,2	340	1200
0,6	50	19,0	504	1200
0,6	100	25,3	944	800
0,6	150	31,4	1428	400
0,6	200	34,5	1803	400
0,6	300	42,0	2668	400
0,6	400	47,1	3452	400
0,6	600	57,3	5127	400
0,9	10	14,8	274	1200
0,9	20	20,4	518	1200
0,9	30	22,8	695	800
0,9	50	27,6	1071	800
0,9	100	37,3	2044	400
0,9	150	46,7	3126	400
0,9	200	51,2	3936	400
0,9	300	62,8	5883	400

OUTDOOR CABLES | Unfilled Double Sheathed Underground Cables (KPD-PAP / PD-PAP)



Application

YThey are used in HDPE pipes which are conductor underground. The cables with 0.4 mm and 0.5 mm transistor diameter are used in short range distribution networks and the cables with 0.6 mm and 0.9 mm transistor diameter are used in long range network lines.

Construction
Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

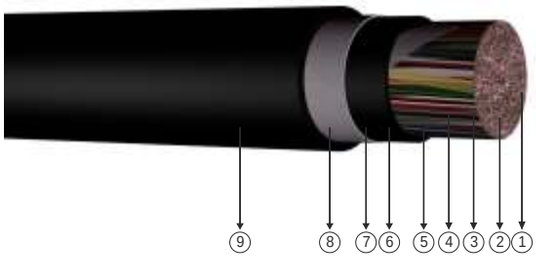
Construction

1. Conductor
2. Insulation
3. Cable Core
4. Core Covering
5. Ara Kılıf (Inner Sheath)
6. Screen (Shield)
7. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,4	10	9,5	93	2000
0,4	20	11,6	139	2000
0,4	30	12,5	175	2000
0,4	50	14,2	240	1000
0,4	100	17,8	410	1000
0,4	150	21,6	597	500
0,4	200	23,4	746	500
0,4	300	28,3	1081	500
0,4	400	31,3	1391	500
0,4	600	38,0	2031	500
0,4	900	45,2	3958	400
0,4	1200	51,4	3887	400
0,4	1500	57,6	4825	300
0,4	1800	63,3	5761	300
0,4	2200	69,0	6983	300
0,5	10	10,3	114	2000
0,5	20	12,8	175	2000
0,5	30	13,9	227	2000
0,5	50	16,0	326	1000
0,5	100	20,2	576	500
0,5	150	24,9	851	500
0,5	200	27,1	1073	500
0,5	300	32,8	1567	500
0,5	400	36,6	2042	500
0,5	600	44,6	3003	400
0,5	900	53,1	4387	300
0,5	1200	61,0	5832	300

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,6	10	11,3	139	1200
0,6	20	14,4	225	1200
0,6	30	15,7	296	1200
0,6	50	18,2	440	1200
0,6	100	23,8	801	800
0,6	150	29,4	1185	400
0,6	200	32,2	1508	400
0,6	300	39,0	2206	400
0,6	400	43,5	2877	400
0,6	600	53,1	4240	400
0,9	10	14,1	236	1200
0,9	20	18,6	411	1200
0,9	30	21,0	568	800
0,9	50	24,9	875	800
0,9	100	33,2	1654	400
0,9	150	41,5	2471	400
0,9	200	45,6	3179	400
0,9	300	55,9	4722	400
0,9	400	62,7	6191	400

OUTDOOR CABLES | Filled Double Sheathed Underground Cables (KPDF-PAP / PDF-PAP)



Application

They are used in HDPE pipes which are conductor underground. The cables with 0.4 mm and 0.5 mm transistor diameter are used in short range distribution networks and the cables with 0.6 mm and 0.9 mm transistor diameter are used in long range network lines.

Construction
Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

Construction

1. Conductor
2. Insulation
3. Cable Core
4. Flooding Compound
5. Core Covering
6. Inner Sheath
7. Flooding Compound
8. Screen (Shield)
9. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,4	10	9,7	112	2000
0,4	20	12,0	178	2000
0,4	30	12,9	217	2000
0,4	50	14,8	303	1000
0,4	100	18,6	508	1000
0,4	150	22,6	740	500
0,4	200	24,7	922	500
0,4	300	29,6	1332	500
0,4	400	32,8	1689	500
0,4	600	39,8	2480	500
0,4	900	48,1	3630	400
0,4	1200	54,6	4736	400
0,4	1500	61,1	5904	300
0,4	1800	66,5	7016	300
0,4	2200	72,5	8439	300
0,5	10	10,9	145	2000
0,5	20	13,7	238	2000
0,5	30	15,0	301	2000
0,5	50	17,3	424	1000
0,5	100	22,5	746	500
0,5	150	27,7	1110	500
0,5	200	30,1	1372	500
0,5	300	36,5	2008	500
0,5	400	40,9	2579	500
0,5	600	49,9	3815	400
0,5	900	59,4	5523	300
0,5	1200	68,1	7283	300

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,6	10	12,1	184	1200
0,6	20	15,5	310	1200
0,6	30	17,1	396	1200
0,6	50	19,9	571	1200
0,6	100	26,4	1032	500
0,6	150	32,7	1540	400
0,6	200	36,0	1938	400
0,6	300	43,7	2840	400
0,6	400	49,2	3672	400
0,9	600	59,8	5410	400
0,9	10	15,7	323	1200
0,9	20	21,5	597	1200
0,9	30	23,9	780	800
0,9	50	28,9	1181	800
0,9	100	38,8	2187	400
0,9	150	48,8	3333	400
0,9	200	53,3	4171	400
0,9	300	65,5	6218	300
0,9	400	74,0	8077	300

OUTDOOR AERIAL CABLES | Unfilled Suspended Rope Cables (KPD-AP-A / PD-AP-A)

Application
They are generally used to transmit the telephone line on aerial poles to subscribers in rural places and out of town. The cables with 0.4 mm and 0.5 mm conductor diameter are used in short range distribution networks and the cables with 0.6 mm and 0.9 mm transistor diameter are used in long range network lines.

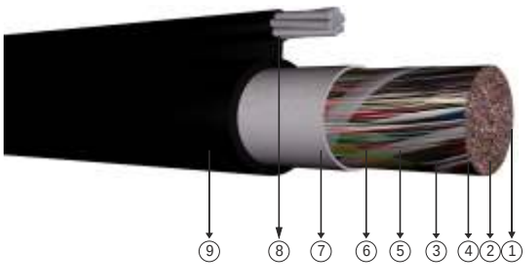
Construction
Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

Construction

1. Conductor
2. Insulation
3. Cable Core
4. Core Covering
5. Screen (Shield)
6. Outer Sheath
7. Messenger

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Diameter Over Messenger (mm)	Net Weight (kg/km)	Drum Length (m)
0,4	10	8,0	19,5	136	2000
0,4	20	10,1	21,6	176	2000
0,4	30	11,0	22,5	209	2000
0,4	50	12,7	24,7	297	1000
0,4	100	16,3	29,3	481	1000
0,4	150	19,9	33,4	671	500
0,4	200	21,7	38,7	884	500
0,5	10	8,8	20,8	178	2000
0,5	20	11,3	23,3	235	2000
0,5	30	12,4	24,4	283	2000
0,5	50	14,5	27,0	404	1000
0,5	100	18,7	31,7	667	500
0,5	150	23,2	40,2	980	500
0,5	200	25,4	42,9	1197	500
0,6	10	9,8	21,8	204	2000
0,6	20	12,9	24,9	282	1200
0,6	30	14,2	26,7	375	1200
0,6	50	16,7	30,2	540	1200
0,6	100	22,1	39,1	943	1200
0,6	150	27,5	45,0	1294	800
0,6	200	30,3	49,3	1692	400
0,9	10	12,6	24,6	294	1200
0,9	20	17,1	29,6	481	1200
0,9	30	19,3	32,8	660	800
0,9	50	23,2	40,2	1021	800
0,9	100	31,3	50,3	1832	400
0,9	150	39,2	59,7	2573	400
0,9	200	43,3	65,3	3274	400

OUTDOOR AERIAL CABLES | Filled Suspended Cables (KPDF-AP-A / PDF-AP-A)



Application

They are generally used to transmit the telephone line on aerial poles to subscribers in rural places and out of town. The cables with 0.4 mm and 0.5 mm conductor diameter are used in short range distribution networks and the cables with 0.6 mm and 0.9 mm transistor diameter are used in long range network lines.

Construction

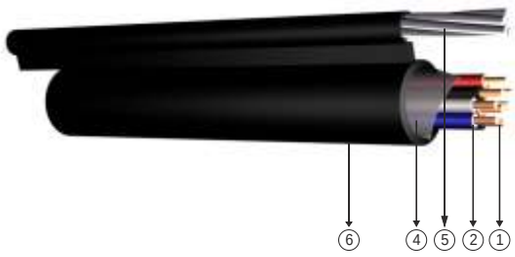
Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

Construction

1. Conductor
2. Insulation
3. Cable Core
4. Flooding Compound
5. Core Covering
6. Flooding Compound
7. Screen (Shield)
8. Messenger
9. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Diameter Over Messenger (mm)	Net Weight (kg/km)	Drum Length (m)
0,4	10	8,2	10,2	151	2000
0,4	20	10,5	12,5	208	2000
0,4	30	11,4	23,4	246	2000
0,4	50	13,3	25,8	344	1000
0,4	100	17,1	30,6	564	1000
0,4	150	20,9	34,9	805	500
0,4	200	23,0	40,5	1043	500
0,5	10	9,4	21,9	203	2000
0,5	20	12,2	24,7	284	2000
0,5	30	13,5	26,0	342	2000
0,5	50	15,8	28,8	484	1000
0,5	100	20,8	34,3	811	500
0,5	150	25,8	43,3	1221	500
0,5	200	28,2	46,3	147	500
0,6	10	10,6	23,1	235	2000
0,6	20	14,0	26,5	350	1200
0,6	30	15,6	28,6	455	1200
0,6	50	18,4	32,4	649	1200
0,6	100	24,7	42,2	1148	1200
0,6	150	30,8	48,8	1631	800
0,6	200	33,9	53,4	2082	400
0,9	10	14,2	24,6	363	1200
0,9	20	19,8	29,6	634	1200
0,9	30	22,2	32,8	839	800
0,9	50	27,0	40,2	1289	800
0,9	100	36,7	50,3	2322	400
0,9	150	46,1	59,7	3384	400
0,9	200	50,6	65,3	4194	400

OUTDOOR AERIAL CABLES | Unfilled Suspended Rope Subscriber Cables (KPD-P-A / PD-P-A)

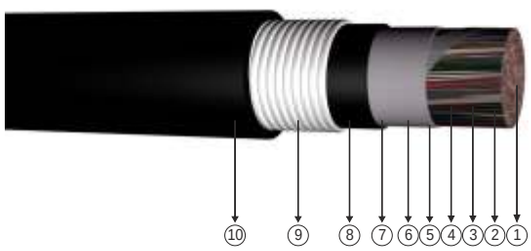


Application
They are generally used to transmit the telephone line on aerial poles to subscribers in rural places and out of town.

Construction
Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

Construction
1. Conductor
2. Insulation
3. Cable Core
4. Core Covering
5. Messenger
6. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Diameter Over Messenger (mm)	Net Weight (kg/km)	Drum Length (m)
0,5	2	5,2	12,1	47	500
0,5	4	7,1	15,1	85	1000
0,5	6	8,0	16,0	96	1000
0,5	10	8,2	16,5	121	1000



Application

They are designed to be directly buried in the ground and used underground. The cables with 0.4 mm conductor diameter are used in short range distribution networks and the cables with 0.6 mm and 0.9 mm transistor diameter are used in long range networks.

Construction

Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

Construction

1. Conductor
2. Insulation
3. Cable Core
4. Flooding Compound
5. Core Covering
6. Flooding Compound
7. Screen (Shield)
8. Messenger
9. Armor
10. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,4	10	15	270	1010
0,4	20	17,5	345	1010
0,4	30	18,5	410	1010
0,4	40	21	510	1010
0,4	50	22,5	575	1010
0,4	70	24,5	685	1010
0,4	100	28,5	875	1010
0,4	150	30,5	1195	1010
0,4	200	34	1485	1010
0,4	300	40	2085	760
0,4	400	44,5	2610	505
0,4	500	50	3205	505
0,4	600	53,5	3695	255
0,6	10	18,5	385	1010
0,6	20	22,5	570	1010
0,6	30	25,5	730	1010
0,6	40	27,5	850	1010
0,6	50	29,5	980	1010
0,6	70	33	1225	1010
0,6	100	38	1590	1010
0,6	150	42,5	2290	760
0,6	200	48	2955	505
0,6	300	57	4200	505
0,6	400	63,5	5345	255
0,6	500	70,5	6515	255
0,6	600	75,5	7605	255

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,9	10	23,5	615	1010
0,9	20	28	890	1010
0,9	30	32,5	1210	1010
0,9	40	36	1455	1010
0,9	50	39	1730	1010
0,9	70	44	2210	760
0,9	100	52	3005	505
0,9	150	58,5	4560	505
0,9	200	65,5	5830	505
0,9	300	79,5	8480	255
0,9	400	89	11010	255

OUTDOOR CABLES | Filled Galvanized Steel Tape Armored Underground Cables

Application

They are designed to be directly buried in the ground and used underground. The cables with 0.4 mm conductor diameter are used in short range distribution networks and the cables with 0.6 mm and 0.9 mm transistor diameter are used in long range networks.

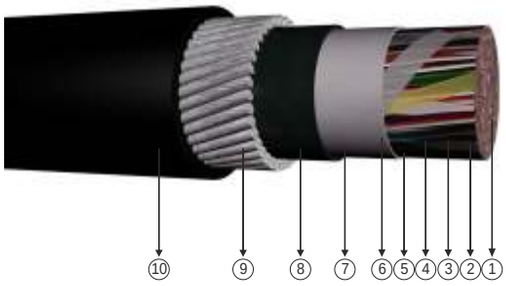
Construction

Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

Construction

1. Conductor
2. Insulation
3. Cable Core
4. Flooding Compound
5. Core Covering
6. Flooding Compound
7. Screen (Shield)
8. Inner Sheath
9. Armor
10. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,4	10	14,8	358	1000
0,4	20	17,1	456	1000
0,4	30	18,1	519	1000
0,4	40	19,0	575	1000
0,4	50	20,0	632	1000
0,4	70	21,1	725	1000
0,4	100	24,1	903	1000
0,4	150	28,9	1196	1000
0,4	200	30,9	1405	1000
0,6	10	17,1	466	1000
0,6	20	20,6	639	1000
0,6	30	22,1	751	1000
0,6	40	23,5	850	1000
0,6	50	25,0	959	1000
0,6	70	26,5	1136	1000
0,6	100	32,4	1860	500
0,6	150	39,3	2481	500
0,6	200	42,2	2929	500
0,6	300	48,7	3850	500
0,6	400	54,6	5173	500
0,6	600	65,4	7028	500
0,8	10	19,4	592	1000
0,8	20	23,9	842	1000
0,8	30	25,9	1014	1000
0,8	40	27,7	1176	1000
0,8	50	30,4	1372	1000
0,8	70	33,1	2036	500
0,8	100	39,7	2669	500
0,8	150	47,7	3583	500
0,8	200	52,8	4763	500



Application

They are designed to be directly buried in the ground and used underground. The cables with 0.4 mm conductor diameter are used in short range distribution networks and the cables with 0.6 mm and 0.9 mm transistor diameter are used in long range networks.

Construction

Conductor : Annealed Copper Wire
Insulation : Foamed Polyethylene / Solid Polyethylene
Outer Sheath : LDPE

Construction

1. Conductor
2. Insulation
3. Cable Core
4. Flooding Compound
5. Core Covering
6. Flooding Compound
7. Screen (Shield)
8. Inner Sheath
9. Armor
10. Outer Sheath

Conductor Diameter (mm)	Number of Pairs (mm)	Cable Diameter (mm)	Net Weight (kg/km)	Drum Length (m)
0,5	9,9	0,5	180	1000
0,5	11,7	0,5	244	1000
0,5	12,5	0,5	292	1000
0,5	15,2	0,5	429	1000
0,5	17,1	0,5	596	1000
0,5	18,2	0,5	683	1000
0,5	20,0	0,5	876	1000
0,5	25,0	0,5	1333	1000
0,63	10,5	0,63	205	1000
0,63	12,7	0,63	296	1000
0,63	13,8	0,63	357	1000
0,63	17,9	0,63	642	1000
0,63	20,3	0,63	883	1000
0,63	21,6	0,63	1008	1000
0,63	23,0	0,63	1152	1000
0,63	29,2	0,63	1801	1000
0,9	11,5	0,9	249	1000
0,9	14,7	0,9	395	1000
0,9	16,9	0,9	596	1000
0,9	22,1	0,9	1049	1000
0,9	24,3	0,9	1280	1000
0,9	26,0	0,9	1492	1000
0,9	28,0	0,9	1835	1000

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Hes Quality!

Produced according to the latest technology
Hes Weak Current Cables,
Worth life for over 40 years
continues to add.

HES KABLO

Reliable technology

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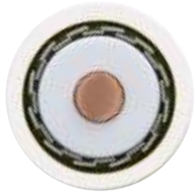
RG 59 / U-4 Cu / Al / Y Coaxial Cables



Code: RG 59 / U-4 Cu / Al / Y Standard: TS EN 50117-9-2

RG : Radio Frequency
59 : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor / Aluminum Foil, Aluminum Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 0,81±0,02 mm
Insulation Diameter : 3,7±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Overall Diameter : 5,8±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 34 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : Aluminum Foil With Copolyedmer (% 100 Coverage)
4- Secand Screen : Tinned Aluminum Wire Braid
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

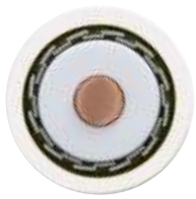
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,85	12,3	17,2	24,3	28,1	40,1	45,0	48,2

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

RG 59 / U-4 Cu / Al / H Coaxial Cables



Code: RG 59 / U-4 Cu / Al / H Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
59 : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor / Aluminum Foil, Aluminum Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 0,81±0,02 mm
Insulation Diameter : 3,7±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Overall Diameter : 5,8±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 36 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Aluminum Wire Braid
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

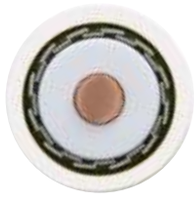
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,85	12,3	17,2	24,3	28,1	40,1	45,0	48,2

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

RG 59 / U-4 Cu / Cu Sn / Y Coaxial Cables



Code: RG 59 / U-4 Cu / Cu Sn / Y Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
59 : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor / Aluminum Foil, Tinned Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter	: 0,81±0,02 mm
Insulation Diameter	: 3,7±0,2 mm
First Screen	: AL-PET Foil (% 100 Coverage)
Secand Screen	: Tinned Copper Wire Braid
Overall Diameter	: 5,8±0,2 mm
Sheath Colour	: White
Sheath Material	: PVC
Net Weight	: 37 kg/km ±%3
Package	: 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance	: 75±3 Ohm
Nominal Capacitance	: 54±2 pF/m (Conductor/Screen)
Velocity of Prop.	: %82±2
Insulation Resistance	: 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz)	: 2500 V / 1 Minutes
Operating Temperature	: -40°C, +70°C
Min. Bending Radius	: 10 x D (mm) (D:Overall Diameter)
Class of Screen	: Class B
CPR Fire Class	: Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

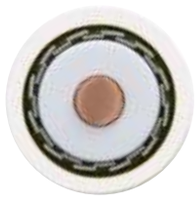
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,85	12,3	17,2	24,3	28,1	40,1	45,0	48,2

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

RG 59 / U-4 Cu / Cu Sn / H Coaxial Cables



Code: RG 59 / U-4 Cu / Cu Sn / H Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
59 : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor / Aluminum Foil, Tinned Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 0,81±0,02 mm
Insulation Diameter : 3,7±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Tinned Copper Wire Braid
Overall Diameter : 5,8±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 39 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Copper Wire Braid
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

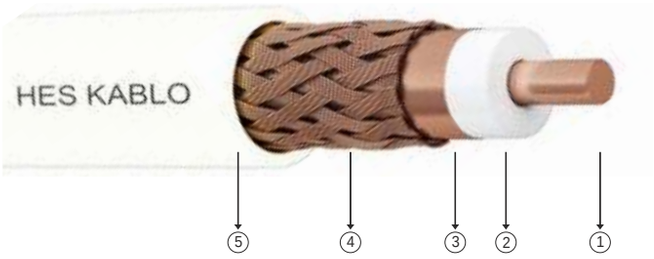
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,85	12,3	17,2	24,3	28,1	40,1	45,0	48,2

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

RG 59 / U-6 Cu / Cu / Y Coaxial Cables



Code: RG 59 / U-6 Cu / Cu / Y Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
59 : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Copper Foil, Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 0,81±0,02 mm
Insulation Diameter : 3,7±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Overall Diameter : 5,8±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 39 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Copper Wire
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

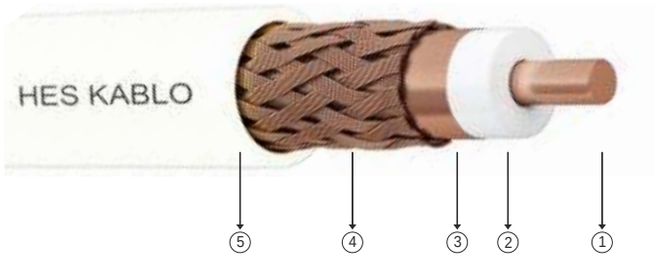
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,85	12,3	17,2	24,3	28,1	40,1	45,0	48,2

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

RG 59 / U-6 Cu / Cu / H Coaxial Cables



Code: RG 59 / U-6 Cu / Cu / H Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
59 : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Copper Foil, Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 0,81±0,02 mm
Insulation Diameter : 3,7±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Overall Diameter : 5,8±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 41 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Copper Wire
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

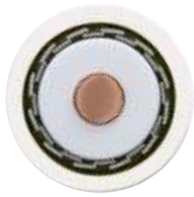
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,85	12,3	17,2	24,3	28,1	40,1	45,0	48,2

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

RG 6 / U-4 Cu / Al / Y Coaxial Cables



Code: RG 6 / U-4 Cu / Al / Y Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor / Aluminum Foil, Aluminum Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 42 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Aluminum Wire
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems..

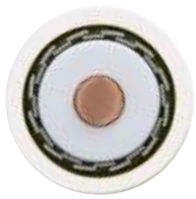
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-4 Cu / Al / H Coaxial Cables



Code: RG 6 / U-4 Cu / Al / H Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor / Aluminum Foil, Aluminum Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 44 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Aluminum Wire
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

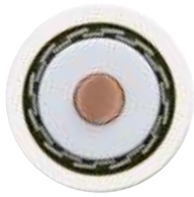
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-4 Cu / Cu Sn / Y Coaxial Cables



Code: RG 6 / U-4 Cu / Cu Sn / Y Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor / Aluminum Foil, Tinned Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Tinned Copper Wire Braid
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 46 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

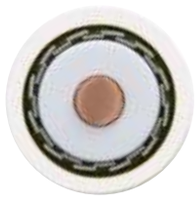
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-4 Cu / Cu Sn / H Coaxial Cables



Code: RG 6 / U-4 Cu / Cu Sn / H Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor / Aluminum Foil, Tinned Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Tinned Copper Wire Braid
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 48 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

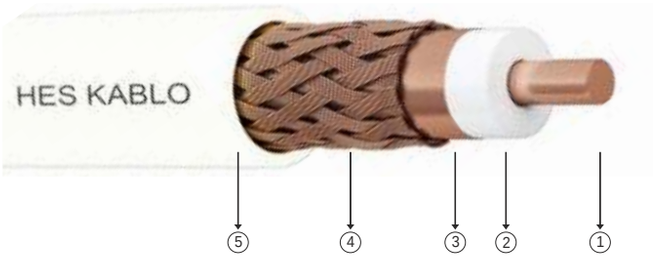
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-6 Cu / Cu / Y Coaxial Cables



Code: RG 6 / U-6 Cu / Cu / Y Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Copper Foil, Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 50 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Copper Wire
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

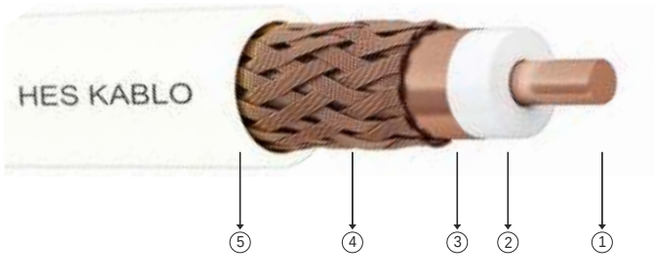
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-6 Cu / Cu / H Coaxial Cables



Code: RG 6 / U-6 CU/CU/H Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Copper Foil, Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 50 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Copper Wire
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

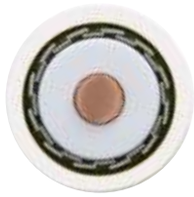
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 11 / U-4 Cu / Al / Y Coaxial Cables



Code: RG 11 / U-4 Cu / Al / Y Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
11 : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor / Aluminum Foil, Aluminum Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 1,63±0,02 mm
Insulation Diameter : 7,2±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Overall Diameter : 10,0±0,3 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 98 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class C
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Aluminum Wire
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

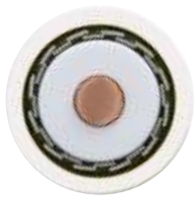
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
1,8	6,7	9,5	13,5	15,3	23,0	25,6	29,9

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 11 / U-4 Cu / Al / H Coaxial Cables



Code: RG 11 / U-4 Cu / Al / H Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
11 : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor / Aluminum Foil, Aluminum Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 1,63±0,02 mm
Insulation Diameter : 7,2±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Overall Diameter : 10,0±0,3 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 100 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class C
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Aluminum Wire
5- Outer Sheath : Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

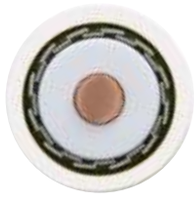
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
1,8	6,7	9,5	13,5	15,3	23,0	25,6	29,9

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 11 / U-4 Cu / Cu Sn / Y Coaxial Cables



Code: RG 11 / U-4 Cu / Cu Sn / Y Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
11 : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor /Aluminum Foil, Tinned Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 1,63±0,02 mm
Insulation Diameter : 7,2±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Tinned Copper Wire Braid
Overall Diameter : 10,0±0,3 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 104 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class C
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

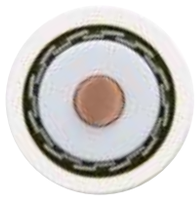
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
1,8	6,7	9,5	13,5	15,3	23,0	25,6	29,9

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 11 / U-4 Cu / Cu Sn / H Coaxial Cables



Code: RG 11 / U-4 Cu / Cu Sn / H Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
11 : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor / Aluminum Foil, Tinned Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 1,63±0,02 mm
Insulation Diameter : 7,2±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Tinned Copper Wire Braid
Overall Diameter : 10,0±0,3 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 106 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class C
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

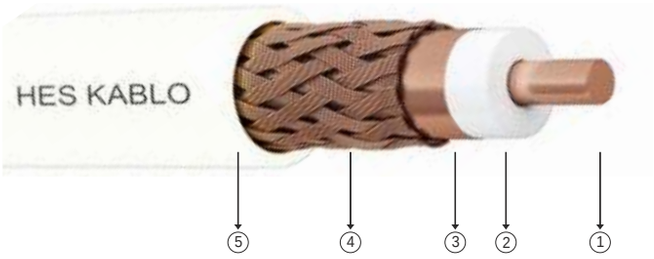
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
1,8	6,7	9,5	13,5	15,3	23,0	25,6	29,9

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 11 / U-6 Cu / Cu / Y Coaxial Cables



Code: RG 11 / U-6 Cu / Cu / Y Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
11 : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Copper Foil, Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 1,63±0,02 mm
Insulation Diameter : 7,2±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Overall Diameter : 10,0±0,3 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 106 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class C
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Copper Wire
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

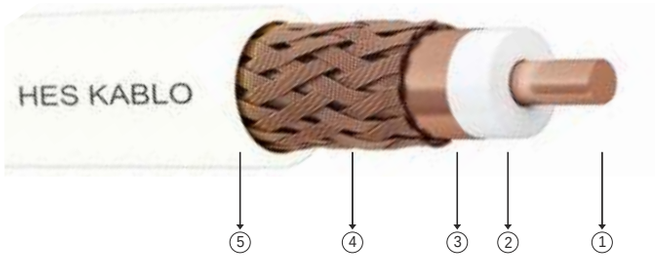
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
1,8	6,7	9,5	13,5	15,3	23,0	25,6	29,9

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 11 / U-6 Cu / Cu / H Coaxial Cables



Code: RG 11 / U-6 Cu / Cu / H Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
11 : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Copper Foil, Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 1,63±0,02 mm
Insulation Diameter : 7,2±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Overall Diameter : 10,0±0,3 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 108 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class C
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin Copper Wire
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

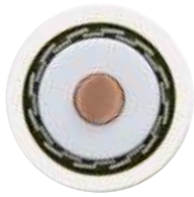
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
1,8	6,7	9,5	13,5	15,3	23,0	25,6	29,9

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

Mini Coaxial / U-4 Cu / Al / Y Coaxial Cables



Code: Mini Koaksiyel / U-4 Cu / Al / Y Standard: TSE / TS EN 50117-9-2

Mini : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor /Aluminum Foil, Aluminum Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 0,65±0,02 mm
Insulation Diameter : 2,9±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Overall Diameter : 4,4±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 26 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Aluminum Wire
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

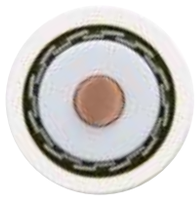
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,88	14,0	19,3	29,0	31,46	48,10	52,0	57,65

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

Mini Coaxial / U-4 Cu / Al / H Coaxial Cables



Code: Mini Koaksiyel / U-4 Cu / Al / H Standard: TSE / TS EN 50117-9-2

Mini : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor / Aluminum Foil, Aluminum Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 0,65±0,02 mm
Insulation Diameter : 2,9±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Overall Diameter : 4,4±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 26 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Aluminum Wire
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

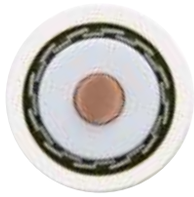
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,88	14,0	19,3	29,0	31,46	48,10	52,0	57,65

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

Mini Coaxial / U-4 Cu / Cu Sn / Y Coaxial Cables



Code: Mini Koaksiyel / U-4 Cu / Cu Sn/ Y Standard: TSE / TS EN 50117-9-2

Mini : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor / Aluminum Foil, Tinned Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter	: 0,65±0,02 mm
Insulation Diameter	: 2,9±0,2 mm
First Screen	: AL-PET Foil (% 100 Coverage)
Secand Screen	: Tinned Copper Wire Braid
Overall Diameter	: 4,4±0,2 mm
Sheath Colour	: White
Sheath Material	: PVC
Net Weight	: 29 kg/km ±%3
Package	: 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance	: 75±3 Ohm
Nominal Capacitance	: 54±2 pF/m (Conductor/Screen)
Velocity of Prop.	: %82±2
Insulation Resistance	: 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz)	: 2500 V / 1 Minutes
Operating Temperature	: -40°C, +70°C
Min. Bending Radius	: 10 x D (mm) (D:Overall Diameter)
Class of Screen	: Class B
CPR Fire Class	: Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

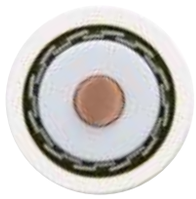
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,88	14,0	19,3	29,0	31,46	48,10	52,0	57,65

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

Mini Coaxial / U-4 Cu / Cu Sn / H Coaxial Cables



Code: Mini Koaksiyel / U-4 Cu / Cu Sn / H Standard: TSE / TS EN 50117-9-2

Mini : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor / Aluminum Foil, Tinned Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 0,65±0,02 mm
Insulation Diameter : 2,9±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Tinned Copper Wire Braid
Overall Diameter : 4,4±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 29 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

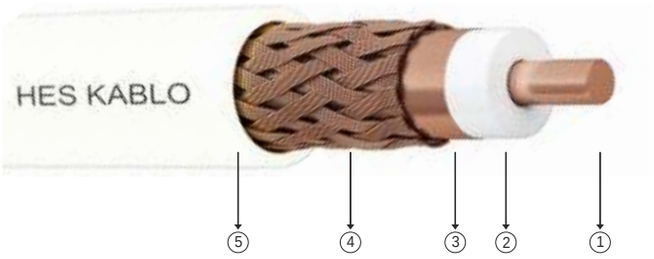
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,88	14,0	19,3	29,0	31,46	48,10	52,0	57,65

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

Mini Coaxial / U-6 Cu / Cu / Y Coaxial Cables



Code: Mini Koaksiyel / U-6 Cu / Cu / Y Standard: TSE / TS EN 50117-9-2

Mini : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Copper Foil, Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 0,65±0,02 mm
Insulation Diameter : 2,9±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Overall Diameter : 4,4±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 30 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire
5- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

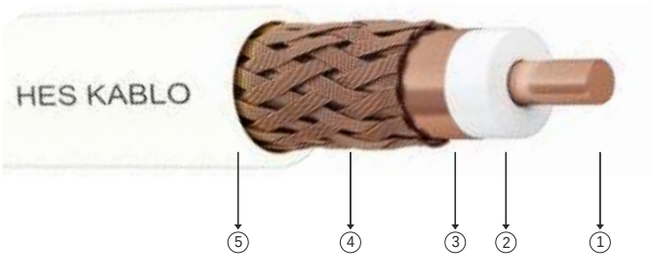
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,88	14,0	19,3	29,0	31,46	48,10	52,0	57,65

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

Mini Coaxial / U-6 Cu / Cu / H Coaxial Cables



Code: Mini Koaksiyel / U-6 Cu / Cu / H Standard: TSE / TS EN 50117-9-2

Mini : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Copper Foil, Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 0,65±0,02 mm
Insulation Diameter : 2,9±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Overall Diameter : 4,4±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 31 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 2500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire
5- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

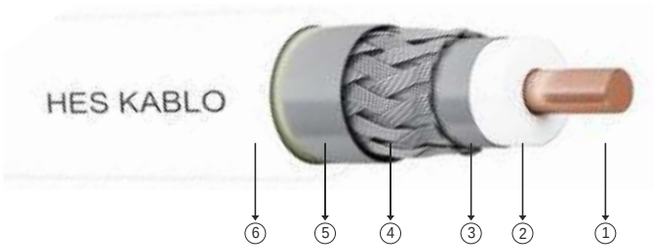
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,88	14,0	19,3	29,0	31,46	48,10	52,0	57,65

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>20	>18	>16	>15

RG 6 / U-4 Cu / Al / Y TRISHIELD Coaxial Cables



Code: RG 6 / U-4 Cu / Al / Y TRISHIELD Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor / Double Layer Aluminum Foil, Aluminum Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Third Screen : AL-PET Foil (% 100 Coverage)
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 43 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Aluminum Wire
5- Third Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
6- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

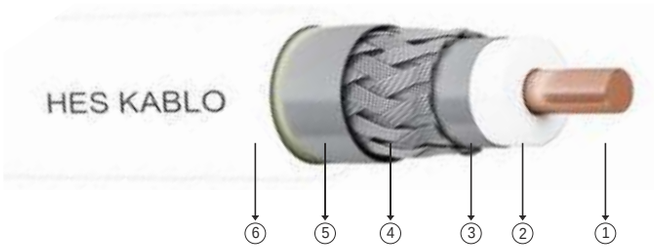
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-4 Cu / Al / H TRISHIELD Coaxial Cables



Code: RG 6 / U-4 Cu / Al / H TRISHIELD Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-4 : Screening
Cu/Al : Copper Conductor / Double Layer Aluminum Foil, Aluminum Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Aluminum Wire Braid
Third Screen : AL-PET Foil (% 100 Coverage)
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 45 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Aluminum Wire
5- Third Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
6- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

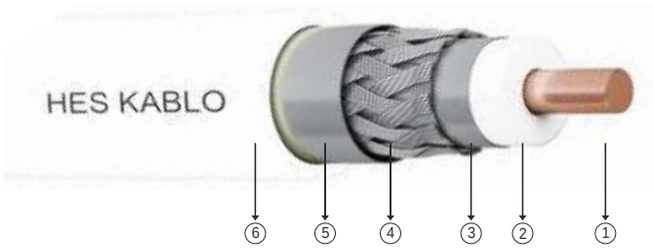
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-4 Cu / Cu Sn / Y TRISHIELD Coaxial Cables



Code: RG 6 / U-4 Cu / Cu Sn / Y TRISHIELD Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor / Double Layer Aluminum Foil, Tinned Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Tinned Copper Wire Braid
Third Screen : AL-PET Foil (% 100 Coverage)
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 47 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Third Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
6- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

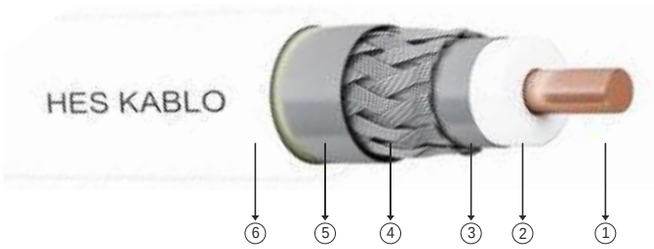
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-4 Cu / Cu Sn / H TRISHIELD Coaxial Cables



Code: RG 6 / U-4 Cu / Cu Sn / H TRISHIELD Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-4 : Screening
Cu/CuSn: Copper Conductor / Double Layer Aluminum Foil, Tinned Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : AL-PET Foil (% 100 Coverage)
Secand Screen : Tinned Copper Wire Braid
Third Screen : AL-PET Foil (% 100 Coverage)
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 49 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Third Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
6- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

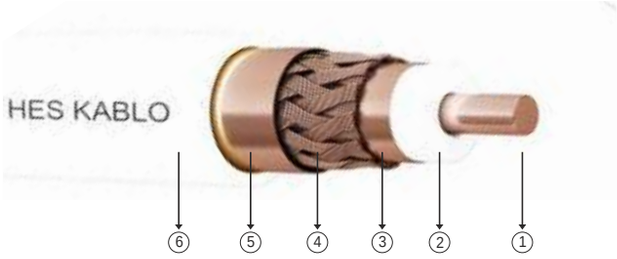
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-6 Cu / Cu / Y TRISHIELD Coaxial Cables



Code: RG 6 / U-6 Cu / Cu / Y TRISHIELD Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Double Layer Copper Foil, Tinned Copper Wire Braid
Y : PVC Sheath

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Third Screen : CU-PET Foil (% 100 Coverage)
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : PVC
Net Weight : 52 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire
5- Third Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
6- Outer Sheath : PVC Sheath With White Colour (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

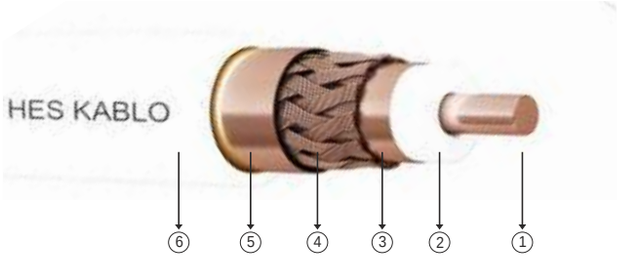
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

RG 6 / U-6 Cu / Cu / H TRISHIELD Coaxial Cables



Code: RG 6 / U-6 Cu / Cu / H TRISHIELD Standard: TSE / TS EN 50117-9-2

RG : Radio Frequency
6 : Wire Diameter
U-6 : Screening
Cu/Cu : Copper Conductor / Double Layer Copper Foil, Tinned Copper Wire Braid
H : HFFR / LSZH Sheath (Low moke density, halogen-free)

Technical Properties

Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : CU-PET Foil (% 100 Coverage)
Secand Screen : Copper Wire Braid
Third Screen : CU-PET Foil (% 100 Coverage)
Overall Diameter : 6,8±0,2 mm
Sheath Colour : White
Sheath Material : HFFR / LSZH Sheath
Net Weight : 55 kg/km ±%3
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 3000 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
Class of Screen : Class B
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Solid Annealed Copper (TS EN 60228 Class 1)
2- Insulation : Foam Skin Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire
5- Third Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
6- Outer Sheath : HFFR / LSZH Sheath With White Colour (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems.

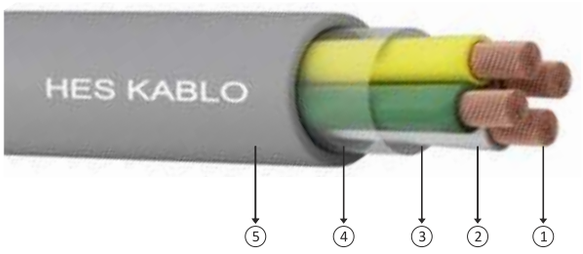
Attenuahier (Max)

Mhz							
5	200	400	800	1000	2150	2400	3000
dB/100 m							
2,8	9,3	13,7	19,1	22,0	32,5	35,1	39,3

Return Loss (Min)

Mhz			
5-470	470-1000	1000-2000	2000-3000
dB			
>23	>20	>18	>16

LIYY



Code: LIYY Standard: TS 13755, VDE 0812, TSE K 353

LI : Bundle wire
Y : PVC
LIYY-OB : Cables without number, with different colored cores
LIYY-JB : Cables without number, with different colored cores and cables with ground core (Yellow / Green)
LIYY-OZ : White numbered core cables on insulated black
LIYY-JZ : White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature :-5 °C / + 70 °C
Storage Temperature :-30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50290-2-21)
3- Single twist in layers
4- Separator tape
5- PVC Sheath (EN 50290-2-22)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

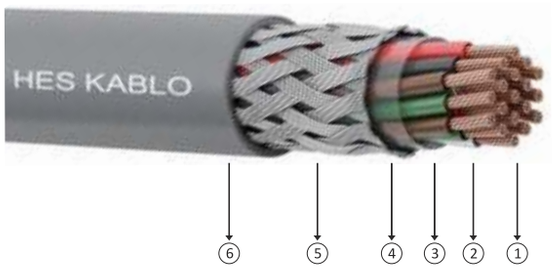
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,50	4,6	9,0	25	38,9	500	100 / 500 / 1000
3x0,50	4,9	13,5	33	38,9	500	100 / 500 / 1000
4x0,50	5,4	18,0	41	38,9	500	100 / 500 / 1000
5x0,50	5,8	22,5	51	38,9	500	100 / 500 / 1000
6x0,50	6,4	27,0	60	38,9	500	100 / 500 / 1000
7x0,50	6,4	31,5	65	38,9	500	100 / 500 / 1000
8x0,50	7,1	36,0	80	38,9	500	100 / 500 / 1000
10x0,50	8,1	45,0	96	38,9	500	100 / 500 / 1000
12x0,50	8,4	53,9	106	38,9	500	100 / 500 / 1000
2x0,75	5,0	13,5	31	26,0	500	100 / 500 / 1000
3x0,75	5,3	20,2	42	26,0	500	100 / 500 / 1000
4x0,75	5,7	27,0	52	26,0	500	100 / 500 / 1000
5x0,75	6,3	33,7	65	26,0	500	100 / 500 / 1000
6x0,75	6,8	40,5	77	26,0	500	100 / 500 / 1000
7x0,75	6,8	47,2	84	26,0	500	100 / 500 / 1000
8x0,75	7,7	53,9	103	26,0	500	100 / 500 / 1000
10x0,75	8,7	67,4	124	26,0	500	100 / 500 / 1000
12x0,75	9,0	80,9	138	26,0	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	5,4	18,0	38	19,5	500	100 / 500 / 1000
3x1,0	5,7	27,0	51	19,5	500	100 / 500 / 1000
4x1,0	6,3	36,0	65	19,5	500	100 / 500 / 1000
5x1,0	6,9	45,0	80	19,5	500	100 / 500 / 1000
6x1,0	7,5	53,9	96	19,5	500	100 / 500 / 1000
7x1,0	7,5	62,9	105	19,5	500	100 / 500 / 1000
8x1,0	8,4	71,9	129	19,5	500	100 / 500 / 1000
10x1,0	9,6	89,9	155	19,5	500	100 / 500 / 1000
12x1,0	9,9	107,9	173	19,5	900	100 / 500 / 1000
2x1,5	6,4	26,3	52	13,3	900	100 / 500 / 1000
3x1,5	6,8	39,5	72	13,3	900	100 / 500 / 1000
4x1,5	7,5	52,7	92	13,3	900	100 / 500 / 1000
5x1,5	8,2	65,9	114	13,3	900	100 / 500 / 1000
6x1,5	9,0	79,0	137	13,3	900	100 / 500 / 1000
7x1,5	9,0	92,2	150	13,3	900	100 / 500 / 1000
8x1,5	10,1	105,4	186	13,3	900	100 / 500 / 1000
10x1,5	11,8	131,7	229	13,3	900	100 / 500 / 1000
12x1,5	12,2	158,0	255	13,3	900	100 / 500 / 1000
2x2,5	7,1	40,4	70	7,98	900	100 / 500 / 1000
3x2,5	7,6	60,6	97	7,98	900	100 / 500 / 1000
4x2,5	8,3	80,8	125	7,98	900	100 / 500 / 1000
5x2,5	9,2	101,0	157	7,98	900	100 / 500 / 1000
6x2,5	10,1	121,2	189	7,98	900	100 / 500 / 1000
7x2,5	10,1	141,4	208	7,98	900	100 / 500 / 1000
8x2,5	11,6	161,6	262	7,98	900	100 / 500 / 1000
10x2,5	13,2	201,9	316	7,98	900	100 / 500 / 1000
12x2,5	13,7	242,3	355	7,98	900	100 / 500 / 1000

LIYCY



Code: LIYCY Standard: TS 13755, VDE 0812, TSE K 353

LI	: Bundle wire
Y	: PVC
C	: Braided Screen
LIYCY-OB	: Cables without number, with different colored cores
LIYCY-JB	: Cables without number, with different colored cores and cables with ground core (Yellow / Green)
LIYCY-OZ	: White numbered core cables on insulated black
LIYCY-JZ	: White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2,
DIN EN 60332-1-2 (VDE 0482-332-1-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50290-2-21)
3- Single twist in layers
4- Separator tape
5- Tinned Copper Wire Braid Screen
6- PVC Sheath (EN 50290-2-22)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

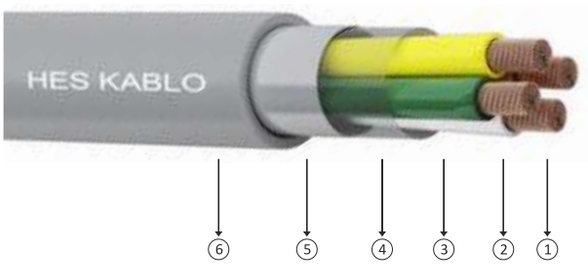
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromagnetics interference.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,50	5,0	14,4	32	38,9	350	100 / 500 / 1000
3x0,50	5,3	19,0	39	38,9	350	100 / 500 / 1000
4x0,50	5,8	24,0	48	38,9	350	100 / 500 / 1000
5x0,50	6,2	29,3	58	38,9	350	100 / 500 / 1000
6x0,50	6,8	34,5	69	38,9	350	100 / 500 / 1000
7x0,50	6,8	39,0	74	38,9	350	100 / 500 / 1000
8x0,50	7,5	44,3	90	38,9	350	100 / 500 / 1000
10x0,50	8,5	54,8	107	38,9	350	100 / 500 / 1000
12x0,50	8,8	64,7	117	38,9	350	100 / 500 / 1000
2x0,75	5,4	19,2	38	26,0	500	100 / 500 / 1000
3x0,75	5,7	26,3	49	26,0	500	100 / 500 / 1000
4x0,75	6,1	33,3	60	26,0	500	100 / 500 / 1000
5x0,75	6,7	41,1	73	26,0	500	100 / 500 / 1000
6x0,75	7,2	48,8	87	26,0	500	100 / 500 / 1000
7x0,75	7,2	55,6	94	26,0	500	100 / 500 / 1000
8x0,75	8,1	63,6	114	26,0	500	100 / 500 / 1000
10x0,75	9,1	78,5	136	26,0	500	100 / 500 / 1000
12x0,75	9,4	92,2	150	26,0	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	5,8	24,3	45	19,5	500	100 / 500 / 1000
3x1,0	6,1	33,7	59	19,5	500	100 / 500 / 1000
4x1,0	6,7	43,5	73	19,5	500	100 / 500 / 1000
5x1,0	7,3	53,3	89	19,5	500	100 / 500 / 1000
6x1,0	7,9	62,9	106	19,5	500	100 / 500 / 1000
7x1,0	7,9	71,9	115	19,5	500	100 / 500 / 1000
8x1,0	8,8	81,6	139	19,5	500	100 / 500 / 1000
10x1,0	10,0	101,6	168	19,5	500	100 / 500 / 1000
12x1,0	10,3	119,5	185	19,5	500	100 / 500 / 1000
2x1,5	6,8	33,9	61	13,3	900	100 / 500 / 1000
3x1,5	7,2	47,7	81	13,3	900	100 / 500 / 1000
4x1,5	7,9	61,1	101	13,3	900	100 / 500 / 1000
5x1,5	8,6	75,8	125	13,3	900	100 / 500 / 1000
6x1,5	9,4	90,1	149	13,3	900	100 / 500 / 1000
7x1,5	9,4	103,3	162	13,3	900	100 / 500 / 1000
8x1,5	10,5	118,5	200	13,3	900	100 / 500 / 1000
10x1,5	12,2	147,2	246	13,3	900	100 / 500 / 1000
12x1,5	12,6	173,7	272	13,3	900	100 / 500 / 1000
2x2,5	7,5	49,2	80	7,98	900	100 / 500 / 1000
3x2,5	8,0	70,2	108	7,98	900	100 / 500 / 1000
4x2,5	8,7	90,7	136	7,98	900	100 / 500 / 1000
5x2,5	9,6	112,3	169	7,98	900	100 / 500 / 1000
6x2,5	10,5	134,3	203	7,98	900	100 / 500 / 1000
7x2,5	10,5	154,5	223	7,98	900	100 / 500 / 1000
8x2,5	12,0	176,4	278	7,98	900	100 / 500 / 1000
10x2,5	13,6	219,0	335	7,98	900	100 / 500 / 1000
12x2,5	14,1	259,4	373	7,98	900	100 / 500 / 1000

LIY(St)Y



Code: LIY(St)Y Standard: TTS 13755, VDE 0812, TSE K 353

LI	: Bundle wire
Y	: PVC
(St)	: Aluminum foil
LIY(St)Y-OB	: Cables without number, with different colored cores
LIY(St)Y-JB	: Cables without number, with different colored cores and cables with ground core (Yellow / Green)
LIY(St)Y-OZ	: White numbered core cables on insulated black
LIY(St)Y-JZ	: White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2,
DIN EN 60332-1-2 (VDE 0482-332-1-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50290-2-21)
3- Single twist in layers
4- Separator tape
5- AL-PET Tape
6- PVC Sheath (EN 50290-2-22)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

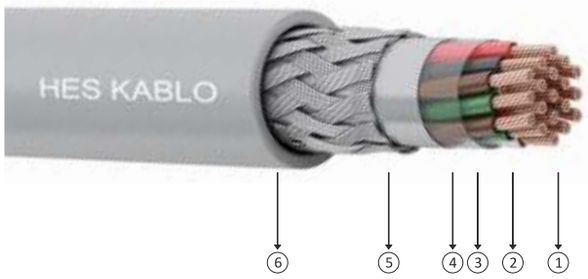
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromagnetics interference.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,50	4,6	10,8	27	38,9	350	100 / 500 / 1000
3x0,50	4,9	15,3	34	38,9	350	100 / 500 / 1000
4x0,50	5,4	19,8	43	38,9	350	100 / 500 / 1000
5x0,50	5,8	24,3	52	38,9	350	100 / 500 / 1000
6x0,50	6,4	28,8	61	38,9	350	100 / 500 / 1000
7x0,50	6,4	33,3	66	38,9	350	100 / 500 / 1000
8x0,50	7,1	37,8	82	38,9	350	100 / 500 / 1000
10x0,50	8,1	46,8	97	38,9	350	100 / 500 / 1000
12x0,50	8,4	55,7	107	38,9	350	100 / 500 / 1000
2x0,75	5,0	15,3	33	26,0	500	100 / 500 / 1000
3x0,75	5,3	22,0	43	26,0	500	100 / 500 / 1000
4x0,75	5,7	28,8	54	26,0	500	100 / 500 / 1000
5x0,75	6,3	35,5	66	26,0	500	100 / 500 / 1000
6x0,75	6,8	42,3	78	26,0	500	100 / 500 / 1000
7x0,75	6,8	49,0	85	26,0	500	100 / 500 / 1000
8x0,75	7,7	55,7	105	26,0	500	100 / 500 / 1000
10x0,75	8,7	69,2	125	26,0	500	100 / 500 / 1000
12x0,75	9,0	82,7	139	26,0	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	5,4	19,8	39	19,5	500	100 / 500 / 1000
3x1,0	5,7	28,8	52	19,5	500	100 / 500 / 1000
4x1,0	6,3	37,8	66	19,5	500	100 / 500 / 1000
5x1,0	6,9	46,8	81	19,5	500	100 / 500 / 1000
6x1,0	7,5	55,7	97	19,5	500	100 / 500 / 1000
7x1,0	7,5	64,7	106	19,5	500	100 / 500 / 1000
8x1,0	8,4	73,7	130	19,5	500	100 / 500 / 1000
10x1,0	9,6	91,7	156	19,5	500	100 / 500 / 1000
12x1,0	9,9	109,7	173	19,5	500	100 / 500 / 1000
2x1,5	6,4	28,1	53	13,3	900	100 / 500 / 1000
3x1,5	6,8	41,3	73	13,3	900	100 / 500 / 1000
4x1,5	7,5	54,5	93	13,3	900	100 / 500 / 1000
5x1,5	8,2	67,6	115	13,3	900	100 / 500 / 1000
6x1,5	9,0	80,8	138	13,3	900	100 / 500 / 1000
7x1,5	9,0	94,0	151	13,3	900	100 / 500 / 1000
8x1,5	10,1	107,2	186	13,3	900	100 / 500 / 1000
10x1,5	11,8	133,5	230	13,3	900	100 / 500 / 1000
12x1,5	12,2	159,8	256	13,3	900	100 / 500 / 1000
2x2,5	7,1	42,2	71	7,98	900	100 / 500 / 1000
3x2,5	7,6	62,4	98	7,98	900	100 / 500 / 1000
4x2,5	8,3	82,6	126	7,98	900	100 / 500 / 1000
5x2,5	9,2	102,8	158	7,98	900	100 / 500 / 1000
6x2,5	10,1	123,0	190	7,98	900	100 / 500 / 1000
7x2,5	10,1	143,2	209	7,98	900	100 / 500 / 1000
8x2,5	11,6	163,4	263	7,98	900	100 / 500 / 1000
10x2,5	13,2	203,7	317	7,98	900	100 / 500 / 1000
12x2,5	13,7	244,1	355	7,98	900	100 / 500 / 1000

LIY(St)CY



Code: LIY(St)CY Standard: TS 13755, VDE 0812, TSE K 353

LI	: Bundle wire
Y	: PVC
(St)	: Aluminum foil
C	: Braided Screen
LIY(St)CY-OB	: Cables without number, with different colored cores
LIY(St)CY-JB	: Cables without number, with different colored cores and cables with ground core (Yellow / Green)
LIY(St)CY-OZ	: White numbered core cables on insulated black
LIY(St)CY-JZ	: White numbered core cables on insulated black and cables with ground core (Yellow / Green)
LIYCY-JZ	: White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2,
DIN EN 60332-1-2 (VDE 0482-332-1-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50290-2-21)
3- Single twist in layers
4- Separator tape
5- AL-PET Tape ve Tinned Copper Wire Braid Screen
6- PVC Sheath (EN 50290-2-22)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

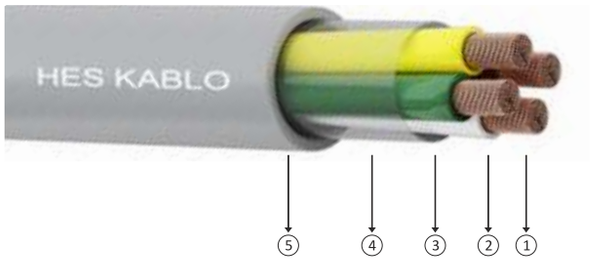
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromagnetics interference.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,50	5,1	14,4	32	38,9	350	100 / 500 / 1000
3x0,50	5,4	19,1	40	38,9	350	100 / 500 / 1000
4x0,50	5,9	24,3	49	38,9	350	100 / 500 / 1000
5x0,50	6,3	29,3	59	38,9	350	100 / 500 / 1000
6x0,50	6,9	34,5	70	38,9	350	100 / 500 / 1000
7x0,50	6,9	39,0	74	38,9	350	100 / 500 / 1000
8x0,50	7,6	44,3	91	38,9	350	100 / 500 / 1000
10x0,50	8,6	54,8	108	38,9	350	100 / 500 / 1000
12x0,50	8,9	64,6	119	38,9	350	100 / 500 / 1000
2x0,75	5,5	19,1	39	26,0	500	100 / 500 / 1000
3x0,75	5,8	26,2	49	26,0	500	100 / 500 / 1000
4x0,75	6,2	33,8	61	26,0	500	100 / 500 / 1000
5x0,75	6,8	41,2	74	26,0	500	100 / 500 / 1000
6x0,75	7,3	48,8	88	26,0	500	100 / 500 / 1000
7x0,75	7,3	55,5	95	26,0	500	100 / 500 / 1000
8x0,75	8,2	63,5	115	26,0	500	100 / 500 / 1000
10x0,75	9,2	78,5	138	26,0	500	100 / 500 / 1000
12x0,75	9,5	92,2	152	26,0	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	5,9	24,3	46	19,5	500	100 / 500 / 1000
3x1,0	6,2	33,7	59	19,5	500	100 / 500 / 1000
4x1,0	6,8	43,5	74	19,5	500	100 / 500 / 1000
5x1,0	7,4	53,3	90	19,5	500	100 / 500 / 1000
6x1,0	8,0	63,6	108	19,5	500	100 / 500 / 1000
7x1,0	8,0	72,6	116	19,5	500	100 / 500 / 1000
8x1,0	8,9	82,6	142	19,5	500	100 / 500 / 1000
10x1,0	10,1	101,6	169	19,5	500	100 / 500 / 1000
12x1,0	10,4	120,6	188	19,5	500	100 / 500 / 1000
2x1,5	6,9	33,9	62	13,3	900	100 / 500 / 1000
3x1,5	7,3	47,8	82	13,3	900	100 / 500 / 1000
4x1,5	8,0	61,7	103	13,3	900	100 / 500 / 1000
5x1,5	8,7	75,8	126	13,3	900	100 / 500 / 1000
6x1,5	9,5	90,3	151	13,3	900	100 / 500 / 1000
7x1,5	9,5	103,5	164	13,3	900	100 / 500 / 1000
8x1,5	10,6	118,3	201	13,3	900	100 / 500 / 1000
10x1,5	12,3	147,0	248	13,3	900	100 / 500 / 1000
12x1,5	12,7	173,7	274	13,3	900	100 / 500 / 1000
2x2,5	7,6	48,8	80	7,98	900	100 / 500 / 1000
3x2,5	8,1	70,2	109	7,98	900	100 / 500 / 1000
4x2,5	8,8	90,4	137	7,98	900	100 / 500 / 1000
5x2,5	9,7	112,3	171	7,98	900	100 / 500 / 1000
6x2,5	10,5	134,1	204	7,98	900	100 / 500 / 1000
7x2,5	10,5	154,3	224	7,98	900	100 / 500 / 1000
8x2,5	12,1	177,0	280	7,98	900	100 / 500 / 1000
10x2,5	13,7	219,0	337	7,98	900	100 / 500 / 1000
12x2,5	14,2	259,5	375	7,98	900	100 / 500 / 1000

LIHH



Code: LIHH Standard: TS 13755, VDE 0812, TSE K 353

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
LIHH-OB : Cables without number, with different colored cores
LIHH-JB : Cables without number, with different colored cores and cables with ground core (Yellow / Green)
LIHH-OZ : White numbered core cables on insulated black
LIHH-JZ : White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- HFFR insulation (EN 50290-2-26)
3- Single twist in layers
4- Separator tape
5- HFFR Sheath (EN 50290-2-27)

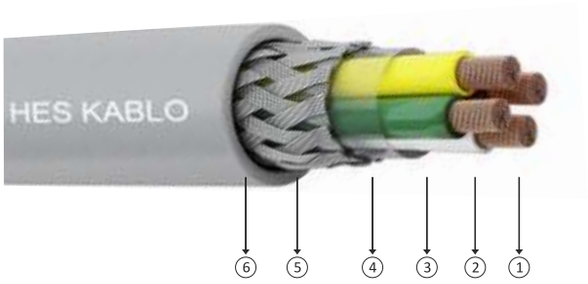
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cable can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,50	4,6	9,0	26	38,9	500	100 / 500 / 1000
3x0,50	4,9	13,5	33	38,9	500	100 / 500 / 1000
4x0,50	5,4	18,0	42	38,9	500	100 / 500 / 1000
5x0,50	5,8	22,5	51	38,9	500	100 / 500 / 1000
6x0,50	6,4	27,0	61	38,9	500	100 / 500 / 1000
7x0,50	6,4	31,5	66	38,9	500	100 / 500 / 1000
8x0,50	7,1	36,0	82	38,9	500	100 / 500 / 1000
10x0,50	8,1	45,0	97	38,9	500	100 / 500 / 1000
12x0,50	8,4	53,9	107	38,9	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	5,0	13,5	32	26,0	500	100 / 500 / 1000
3x0,75	5,3	20,2	42	26,0	500	100 / 500 / 1000
4x0,75	5,7	27,0	53	26,0	500	100 / 500 / 1000
5x0,75	6,3	33,7	66	26,0	500	100 / 500 / 1000
6x0,75	6,8	40,5	78	26,0	500	100 / 500 / 1000
7x0,75	6,8	47,2	85	26,0	500	100 / 500 / 1000
8x0,75	7,7	53,9	105	26,0	500	100 / 500 / 1000
10x0,75	8,7	67,4	126	26,0	500	100 / 500 / 1000
12x0,75	9,0	80,9	140	26,0	500	100 / 500 / 1000
2x1,0	5,4	18,0	38	19,5	500	100 / 500 / 1000
3x1,0	5,7	27,0	52	19,5	500	100 / 500 / 1000
4x1,0	6,3	36,0	65	19,5	500	100 / 500 / 1000
5x1,0	6,9	45,0	81	19,5	500	100 / 500 / 1000
6x1,0	7,5	53,9	97	19,5	500	100 / 500 / 1000
7x1,0	7,5	62,9	106	19,5	500	100 / 500 / 1000
8x1,0	8,4	71,9	130	19,5	500	100 / 500 / 1000
10x1,0	9,6	89,9	157	19,5	500	100 / 500 / 1000
12x1,0	9,9	107,9	175	19,5	500	100 / 500 / 1000
2x1,5	6,4	26,3	53	13,3	900	100 / 500 / 1000
3x1,5	6,8	39,5	72	13,3	900	100 / 500 / 1000
4x1,5	7,5	52,7	93	13,3	900	100 / 500 / 1000
5x1,5	8,2	65,9	116	13,3	900	100 / 500 / 1000
6x1,5	9,0	79,0	139	13,3	900	100 / 500 / 1000
7x1,5	9,0	92,2	152	13,3	900	100 / 500 / 1000
8x1,5	10,1	105,4	188	13,3	900	100 / 500 / 1000
10x1,5	11,8	131,7	232	13,3	900	100 / 500 / 1000
12x1,5	12,2	158,0	259	13,3	900	100 / 500 / 1000
2x2,5	7,1	40,4	71	7,98	900	100 / 500 / 1000
3x2,5	7,6	60,6	98	7,98	900	100 / 500 / 1000
4x2,5	8,3	80,8	127	7,98	900	100 / 500 / 1000
5x2,5	9,2	101,0	159	7,98	900	100 / 500 / 1000
6x2,5	10,1	121,2	191	7,98	900	100 / 500 / 1000
7x2,5	10,1	141,4	211	7,98	900	100 / 500 / 1000
8x2,5	11,6	161,6	265	7,98	900	100 / 500 / 1000
10x2,5	13,2	201,9	320	7,98	900	100 / 500 / 1000
12x2,5	13,7	242,3	359	7,98	900	100 / 500 / 1000

LIHCH



Code: LIHCH Standard: TS 13755, VDE 0812, TSE K 353

LI	: Bundle wire
H	: HFFR (Halogen free flame retardant)
C	: Braided Screen
LIHCH-OB	: Cables without number, with different colored cores
LIHCH-JB	: Cables without number, with different colored cores and cables with ground core (Yellow / Green)
LIHCH-OZ	: White numbered core cables on insulated black
LIHCH-JZ	: White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- HFFR insulation (EN 50290-2-26)
3- Single twist in layers
4- Separator tape
5- Tinned Copper Wire Braid Screen
6- HFFR Sheath (EN 50290-2-27)

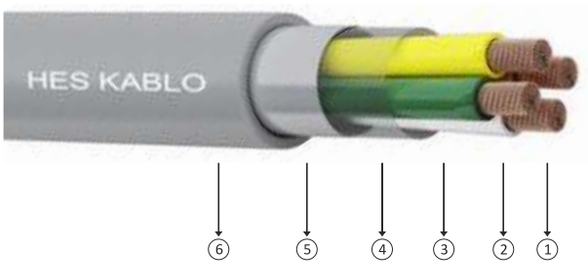
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromangetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,50	5,0	14,4	32	38,9	500	100 / 500 / 1000
3x0,50	5,3	19,0	40	38,9	500	100 / 500 / 1000
4x0,50	5,8	24,0	49	38,9	500	100 / 500 / 1000
5x0,50	6,2	29,3	59	38,9	500	100 / 500 / 1000
6x0,50	6,8	34,5	70	38,9	500	100 / 500 / 1000
7x0,50	6,8	39,0	75	38,9	500	100 / 500 / 1000
8x0,50	7,5	44,3	91	38,9	500	100 / 500 / 1000
10x0,50	8,5	54,8	108	38,9	500	100 / 500 / 1000
12x0,50	8,8	64,7	119	38,9	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	5,4	19,2	38	26,0	500	100 / 500 / 1000
3x0,75	5,7	26,3	49	26,0	500	100 / 500 / 1000
4x0,75	6,1	33,3	61	26,0	500	100 / 500 / 1000
5x0,75	6,7	41,1	74	26,0	500	100 / 500 / 1000
6x0,75	7,2	48,8	88	26,0	500	100 / 500 / 1000
7x0,75	7,2	55,6	95	26,0	500	100 / 500 / 1000
8x0,75	8,1	63,6	116	26,0	500	100 / 500 / 1000
10x0,75	9,1	78,5	138	26,0	500	100 / 500 / 1000
12x0,75	9,4	92,2	152	26,0	500	100 / 500 / 1000
2x1,0	5,8	24,3	45	19,5	500	100 / 500 / 1000
3x1,0	6,1	33,7	59	19,5	500	100 / 500 / 1000
4x1,0	6,7	43,5	74	19,5	500	100 / 500 / 1000
5x1,0	7,3	53,3	90	19,5	500	100 / 500 / 1000
6x1,0	7,9	62,9	107	19,5	500	100 / 500 / 1000
7x1,0	7,9	71,9	116	19,5	500	100 / 500 / 1000
8x1,0	8,8	81,6	141	19,5	500	100 / 500 / 1000
10x1,0	10,0	101,6	169	19,5	500	100 / 500 / 1000
12x1,0	10,3	119,5	188	19,5	500	100 / 500 / 1000
2x1,5	6,8	33,9	61	13,3	900	100 / 500 / 1000
3x1,5	7,2	47,7	82	13,3	900	100 / 500 / 1000
4x1,5	7,9	61,1	102	13,3	900	100 / 500 / 1000
5x1,5	8,6	75,8	127	13,3	900	100 / 500 / 1000
6x1,5	9,4	90,1	151	13,3	900	100 / 500 / 1000
7x1,5	9,4	103,3	164	13,3	900	100 / 500 / 1000
8x1,5	10,5	118,5	202	13,3	900	100 / 500 / 1000
10x1,5	12,2	147,2	249	13,3	900	100 / 500 / 1000
12x1,5	12,6	173,7	276	13,3	900	100 / 500 / 1000
2x2,5	7,5	49,2	81	7,98	900	100 / 500 / 1000
3x2,5	8,0	70,2	109	7,98	900	100 / 500 / 1000
4x2,5	8,7	90,7	138	7,98	900	100 / 500 / 1000
5x2,5	9,6	112,3	171	7,98	900	100 / 500 / 1000
6x2,5	10,5	134,3	205	7,98	900	100 / 500 / 1000
7x2,5	10,5	154,5	225	7,98	900	100 / 500 / 1000
8x2,5	12,0	176,4	281	7,98	900	100 / 500 / 1000
10x2,5	13,6	219,0	338	7,98	900	100 / 500 / 1000
12x2,5	14,1	259,4	377	7,98	900	100 / 500 / 1000

LIH(St)H



Code: LIH(St)H Standard: TS 13755, VDE 0812, TSE K 353

LI	: Bundle wire
H	: HFFR (Halogen free flame retardant)
(St)	: Aluminum foil
LIH(St)H-OB	: Cables without number, with different colored cores
LIH(St)H-JB	: Cables without number, with different colored cores and cables with ground core (Yellow / Green)
LIH(St)H-OZ	: White numbered core cables on insulated black
LIH(St)H-JZ	: White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature	:-5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- HFFR insulation (EN 50290-2-26)
3- Single twist in layers
4- Separator tape
5- AL-PET Tape
6- HFFR Sheath (EN 50290-2-27)

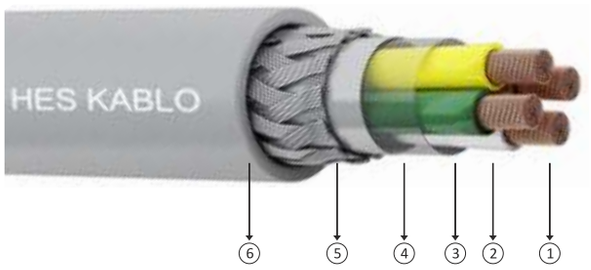
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromangetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Damar Sayısı ve Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,50	4,6	10,8	27	38,9	500	100 / 500 / 1000
3x0,50	4,9	15,3	35	38,9	500	100 / 500 / 1000
4x0,50	5,4	19,8	43	38,9	500	100 / 500 / 1000
5x0,50	5,8	24,3	53	38,9	500	100 / 500 / 1000
6x0,50	6,4	28,8	62	38,9	500	100 / 500 / 1000
7x0,50	6,4	33,3	67	38,9	500	100 / 500 / 1000
8x0,50	7,1	37,8	83	38,9	500	100 / 500 / 1000
10x0,50	8,1	46,8	98	38,9	500	100 / 500 / 1000
12x0,50	8,4	55,7	108	38,9	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	5,0	15,3	33	26,0	500	100 / 500 / 1000
3x0,75	5,3	22,0	43	26,0	500	100 / 500 / 1000
4x0,75	5,7	28,8	54	26,0	500	100 / 500 / 1000
5x0,75	6,3	35,5	67	26,0	500	100 / 500 / 1000
6x0,75	6,8	42,3	80	26,0	500	100 / 500 / 1000
7x0,75	6,8	49,0	87	26,0	500	100 / 500 / 1000
8x0,75	7,7	55,7	106	26,0	500	100 / 500 / 1000
10x0,75	8,7	69,2	127	26,0	500	100 / 500 / 1000
12x0,75	9,0	82,7	141	26,0	500	100 / 500 / 1000
2x1,0	5,4	19,8	39	19,5	500	100 / 500 / 1000
3x1,0	5,7	28,8	53	19,5	500	100 / 500 / 1000
4x1,0	6,3	37,8	67	19,5	500	100 / 500 / 1000
5x1,0	6,9	46,8	82	19,5	500	100 / 500 / 1000
6x1,0	7,5	55,7	98	19,5	500	100 / 500 / 1000
7x1,0	7,5	64,7	107	19,5	500	100 / 500 / 1000
8x1,0	8,4	73,7	131	19,5	500	100 / 500 / 1000
10x1,0	9,6	91,7	158	19,5	500	100 / 500 / 1000
12x1,0	9,9	109,7	176	19,5	500	100 / 500 / 1000
2x1,5	6,4	28,1	54	13,3	900	100 / 500 / 1000
3x1,5	6,8	41,3	74	13,3	900	100 / 500 / 1000
4x1,5	7,5	54,5	94	13,3	900	100 / 500 / 1000
5x1,5	8,2	67,6	117	13,3	900	100 / 500 / 1000
6x1,5	9,0	80,8	140	13,3	900	100 / 500 / 1000
7x1,5	9,0	94,0	153	13,3	900	100 / 500 / 1000
8x1,5	10,1	107,2	189	13,3	900	100 / 500 / 1000
10x1,5	11,8	133,5	233	13,3	900	100 / 500 / 1000
12x1,5	12,2	159,8	259	13,3	900	100 / 500 / 1000
2x2,5	7,1	42,2	72	7,98	900	100 / 500 / 1000
3x2,5	7,6	62,4	100	7,98	900	100 / 500 / 1000
4x2,5	8,3	82,6	128	7,98	900	100 / 500 / 1000
5x2,5	9,2	102,8	160	7,98	900	100 / 500 / 1000
6x2,5	10,1	123,0	192	7,98	900	100 / 500 / 1000
7x2,5	10,1	143,2	212	7,98	900	100 / 500 / 1000
8x2,5	11,6	163,4	266	7,98	900	100 / 500 / 1000
10x2,5	13,2	203,7	320	7,98	900	100 / 500 / 1000
12x2,5	13,7	244,1	359	7,98	900	100 / 500 / 1000

LIH(St)CH



Code: LIH(St)CH Standard: TS 13755, VDE 0812, TSE K 353

LI	: Bundle wire
H	: HFFR (Halogen free flame retardant)
(St)	: Aluminum foil
C	: Braided Screen
LIH(St)CH-OB	: Cables without number, with different colored cores
LIH(St)CH-JB	: Cables without number, with different colored cores and cables with ground core (Yellow / Green)
LIH(St)CH-OZ	: White numbered core cables on insulated black
LIH(St)CH-JZ	: White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- HFFR insulation (EN 50290-2-26)
3- Single twist in layers
4- Separator tape
5- AL-PET Tape ve Tinned Copper Wire Braid Screen
6- HFFR Sheath (EN 50290-2-27)

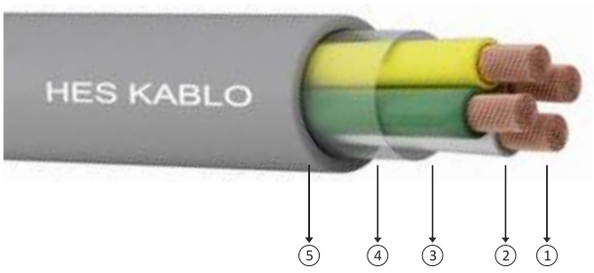
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromangetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,50	5,1	14,4	33	38,9	500	100 / 500 / 1000
3x0,50	5,4	19,1	41	38,9	500	100 / 500 / 1000
4x0,50	5,9	24,3	50	38,9	500	100 / 500 / 1000
5x0,50	6,3	29,3	60	38,9	500	100 / 500 / 1000
6x0,50	6,9	34,5	71	38,9	500	100 / 500 / 1000
7x0,50	6,9	39,0	76	38,9	500	100 / 500 / 1000
8x0,50	7,6	44,3	92	38,9	500	100 / 500 / 1000
10x0,50	8,6	54,8	109	38,9	500	100 / 500 / 1000
12x0,50	8,9	64,6	120	38,9	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,50	5,1	14,4	33	38,9	500	100 / 500 / 1000
3x0,50	5,4	19,1	41	38,9	500	100 / 500 / 1000
4x0,50	5,9	24,3	50	38,9	500	100 / 500 / 1000
5x0,50	6,3	29,3	60	38,9	500	100 / 500 / 1000
6x0,50	6,9	34,5	71	38,9	500	100 / 500 / 1000
7x0,50	6,9	39,0	76	38,9	500	100 / 500 / 1000
8x0,50	7,6	44,3	92	38,9	500	100 / 500 / 1000
10x0,50	8,6	54,8	109	38,9	500	100 / 500 / 1000
12x0,50	8,9	64,6	120	38,9	500	100 / 500 / 1000
2x0,75	5,5	19,1	39	26,0	500	100 / 500 / 1000
3x0,75	5,8	26,2	50	26,0	500	100 / 500 / 1000
4x0,75	6,2	33,8	62	26,0	500	100 / 500 / 1000
5x0,75	6,8	41,2	75	26,0	500	100 / 500 / 1000
6x0,75	7,3	48,8	89	26,0	500	100 / 500 / 1000
7x0,75	7,3	55,5	96	26,0	500	100 / 500 / 1000
8x0,75	8,2	63,5	117	26,0	500	100 / 500 / 1000
10x0,75	9,2	78,5	139	26,0	500	100 / 500 / 1000
12x0,75	9,5	92,2	154	26,0	500	100 / 500 / 1000
2x1,0	5,9	24,3	46	19,5	500	100 / 500 / 1000
3x1,0	6,2	33,7	60	19,5	500	100 / 500 / 1000
4x1,0	6,8	43,5	75	19,5	500	100 / 500 / 1000
5x1,0	7,4	53,3	91	19,5	500	100 / 500 / 1000
6x1,0	8,0	63,6	109	19,5	500	100 / 500 / 1000
7x1,0	8,0	72,6	118	19,5	500	100 / 500 / 1000
8x1,0	8,9	82,6	143	19,5	500	100 / 500 / 1000
10x1,0	10,1	101,6	171	19,5	500	100 / 500 / 1000
12x1,0	10,4	120,6	190	19,5	500	100 / 500 / 1000
2x1,5	6,9	33,9	62	13,3	900	100 / 500 / 1000
3x1,5	7,3	47,8	83	13,3	900	100 / 500 / 1000
4x1,5	8,0	61,7	104	13,3	900	100 / 500 / 1000
5x1,5	8,7	75,8	128	13,3	900	100 / 500 / 1000
6x1,5	9,5	90,3	153	13,3	900	100 / 500 / 1000
7x1,5	9,5	103,5	166	13,3	900	100 / 500 / 1000
8x1,5	10,6	118,3	203	13,3	900	100 / 500 / 1000
10x1,5	12,3	147,0	251	13,3	900	100 / 500 / 1000
12x1,5	12,7	173,7	278	13,3	900	100 / 500 / 1000
2x2,5	7,6	48,8	81	7,98	900	100 / 500 / 1000
3x2,5	8,1	70,2	110	7,98	900	100 / 500 / 1000
4x2,5	8,8	90,4	139	7,98	900	100 / 500 / 1000
5x2,5	9,7	112,3	172	7,98	900	100 / 500 / 1000
6x2,5	10,5	134,1	206	7,98	900	100 / 500 / 1000
7x2,5	10,5	154,3	226	7,98	900	100 / 500 / 1000
8x2,5	12,1	177,0	283	7,98	900	100 / 500 / 1000
10x2,5	13,7	219,0	340	7,98	900	100 / 500 / 1000
12x2,5	14,2	259,5	379	7,98	900	100 / 500 / 1000

LIYY -TP



Code: LIYY Standard: TS 13755, VDE 0812, TSE K 353

LI : Bundle wire
Y : PVC

Technical Properties

Operating Temperature	:-5 °C / + 70 °C
Storage Temperature	:-30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2,
DIN EN 60332-1-2 (VDE 0482-332-1-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50290-2-21)
3- Double twist in layers
4- Separator tape
5- PVC Sheath (EN 50290-2-22)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

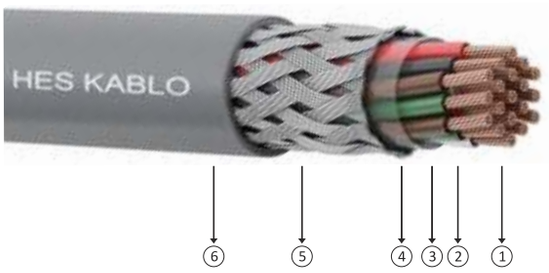
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x2x0,5	8	17	46	39	500	100 / 500 / 1000
2x2x0,75	8,6	25,5	57	26	500	100 / 500 / 1000
2x2x1	9,5	34	70	19,5	500	100 / 500 / 1000
2x2x1,5	11,6	49,5	103	13,3	900	100 / 500 / 1000
2x2x2,5	13,1	81,6	143	7,98	900	100 / 500 / 1000
3x2x0,5	8,5	25,5	61	39	500	100 / 500 / 1000
3x2x0,75	9,2	38,2	78	26	500	100 / 500 / 1000
3x2x1	10,1	51	95	19,5	500	100 / 500 / 1000
3x2x1,5	12,5	74,2	141	13,3	900	100 / 500 / 1000
3x2x2,5	14	122,5	199	8	900	100 / 500 / 1000
4x2x0,5	9,4	33,9	77	39	500	100 / 500 / 1000
4x2x0,75	10,2	51	99	26	500	100 / 500 / 1000
4x2x1	11,4	68	127	19,5	500	100 / 500 / 1000
4x2x1,5	13,8	98,9	180	13,3	900	100 / 500 / 1000
4x2x2,5	15,6	163,3	257	8	900	100 / 500 / 1000
5x2x0,5	10,4	42,4	98	39	500	100 / 500 / 1000
5x2x0,75	11,4	63,7	131	26	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
5x2x1	12,6	85	161	19,5	500	100 / 500 / 1000
5x2x1,5	15,3	123,6	230	13,3	900	100 / 500 / 1000
5x2x2,5	17,4	204,1	336	7,98	900	100 / 500 / 1000
6x2x0,5	11,6	50,9	124	39	500	100 / 500 / 1000
6x2x0,75	12,6	76,4	158	26	500	100 / 500 / 1000
6x2x1	13,9	102	196	19,5	500	100 / 500 / 1000
6x2x1,5	17	148,4	288	13,3	900	100 / 500 / 1000
6x2x2,5	19,2	244,9	409	7,98	900	100 / 500 / 1000
7x2x0,5	11,6	59,4	129	39	500	100 / 500 / 1000
7x2x0,75	12,6	89,2	167	26	500	100 / 500 / 1000
7x2x1	13,9	118,9	207	19,5	500	100 / 500 / 1000
7x2x1,5	17	173,1	303	13,3	900	100 / 500 / 1000
7x2x2,5	19,2	285,8	436	7,98	900	100 / 500 / 1000
8x2x0,5	13,9	67,9	175	39	500	100 / 500 / 1000
8x2x0,75	15	101,9	222	26	500	100 / 500 / 1000
8x2x1	16,8	135,9	283	19,5	500	100 / 500 / 1000
8x2x1,5	20,4	197,8	407	13,3	900	100 / 500 / 1000
8x2x2,5	23,3	326,6	586	7,98	900	100 / 500 / 1000
9x2x0,5	14,3	76,4	196	39	500	100 / 500 / 1000
9x2x0,75	15,6	114,7	250	26	500	100 / 500 / 1000
9x2x1	17,4	152,9	318	19,5	500	100 / 500 / 1000
9x2x1,5	21,2	222,5	459	13,3	900	100 / 500 / 1000
9x2x2,5	24,1	367,4	661	7,98	900	100 / 500 / 1000
10x2x0,5	15	84,9	202	39	500	100 / 500 / 1000
10x2x0,75	16,5	127,4	266	26	500	100 / 500 / 1000
10x2x1	18,3	169,9	330	19,5	500	100 / 500 / 1000
10x2x1,5	22,4	247,3	484	13,3	900	100 / 500 / 1000
10x2x2,5	25,3	408,2	689	7,98	900	100 / 500 / 1000
12x2x0,5	15,6	101,8	211	39	500	100 / 500 / 1000
12x2x0,75	17,1	152,9	281	26	500	100 / 500 / 1000
12x2x1	18,9	203,9	350	19,5	500	100 / 500 / 1000
12x2x1,5	23,2	296,7	512	13,3	900	100 / 500 / 1000
12x2x2,5	26,2	489,9	739	8	900	100 / 500 / 1000

LIYCY -TP



Code: LIYCY Standard: TS 13755, VDE 0812, TSE K 353

LI : Bundle wire
Y : PVC
C : Braided Screen

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2,
DIN EN 60332-1-2 (VDE 0482-332-1-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50290-2-21)
3- Double twist in layers
4- Separator tape
5- Tinned Copper Wire Braid Screen
6- PVC Sheath (EN 50290-2-22)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

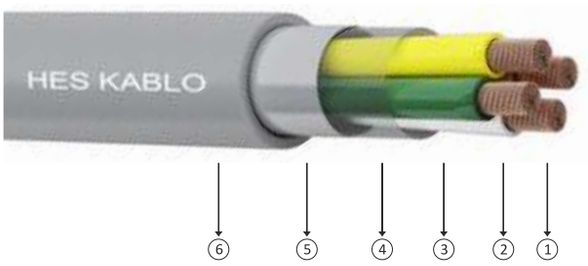
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromagnetics interference.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x2x0,5	8,4	17	56	39	500	100 / 500 / 1000
2x2x0,75	9	25,5	68	26	500	100 / 500 / 1000
2x2x1	9,9	34	82	19,5	500	100 / 500 / 1000
2x2x1,5	12	49,5	117	13,3	900	100 / 500 / 1000
2x2x2,5	13,5	81,6	160	8	900	100 / 500 / 1000
3x2x0,5	8,9	25,5	72	39	500	100 / 500 / 1000
3x2x0,75	9,6	38,2	90	26	500	100 / 500 / 1000
3x2x1	10,5	51	109	19,5	500	100 / 500 / 1000
3x2x1,5	12,9	74,2	157	13,3	900	100 / 500 / 1000
3x2x2,5	14,4	122,5	217	8	900	100 / 500 / 1000
4x2x0,5	9,8	33,9	90	39	500	100 / 500 / 1000
4x2x0,75	10,6	51	112	26	500	100 / 500 / 1000
4x2x1	11,8	68	142	19,5	500	100 / 500 / 1000
4x2x1,5	14,2	98,9	198	13,3	900	100 / 500 / 1000
4x2x2,5	16	163,3	278	8	900	100 / 500 / 1000
5x2x0,5	10,8	42,4	112	39	500	100 / 500 / 1000
5x2x0,75	11,8	63,7	145	26	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
5x2x1	13	85	177	19,5	500	100 / 500 / 1000
5x2x1,5	15,7	123,6	251	13,3	900	100 / 500 / 1000
5x2x2,5	17,8	204,1	359	7,98	900	100 / 500 / 1000
6x2x0,5	12	50,9	139	39	500	100 / 500 / 1000
6x2x0,75	13	76,4	174	26	500	100 / 500 / 1000
6x2x1	14,3	102	214	19,5	500	100 / 500 / 1000
6x2x1,5	17,4	148,4	311	13,3	900	100 / 500 / 1000
6x2x2,5	19,6	244,9	435	7,98	900	100 / 500 / 1000
7x2x0,5	12	59,4	144	39	500	100 / 500 / 1000
7x2x0,75	13	89,2	182	26	500	100 / 500 / 1000
7x2x1	14,3	118,9	225	19,5	500	100 / 500 / 1000
7x2x1,5	17,4	173,1	326	13,3	900	100 / 500 / 1000
7x2x2,5	19,6	285,8	463	7,98	900	100 / 500 / 1000
8x2x0,5	14,3	67,9	193	39	500	100 / 500 / 1000
8x2x0,75	15,4	101,9	243	26	500	100 / 500 / 1000
8x2x1	17,2	135,9	305	19,5	500	100 / 500 / 1000
8x2x1,5	20,8	197,8	433	13,3	900	100 / 500 / 1000
8x2x2,5	23,7	326,6	618	7,98	900	100 / 500 / 1000
9x2x0,5	14,7	76,4	214	39	500	100 / 500 / 1000
9x2x0,75	16	114,7	271	26	500	100 / 500 / 1000
9x2x1	17,8	152,9	341	19,5	500	100 / 500 / 1000
9x2x1,5	21,8	222,5	495	13,3	900	100 / 500 / 1000
9x2x2,5	24,5	367,4	693	7,98	900	100 / 500 / 1000
10x2x0,5	15,4	84,9	223	39	500	100 / 500 / 1000
10x2x0,75	16,9	127,4	288	26	500	100 / 500 / 1000
10x2x1	18,7	169,9	353	19,5	500	100 / 500 / 1000
10x2x1,5	22,8	247,3	515	13,3	900	100 / 500 / 1000
10x2x2,5	25,9	408,2	738	7,98	900	100 / 500 / 1000
12x2x0,5	16	101,8	232	39	500	100 / 500 / 1000
12x2x0,75	17,5	152,9	304	26	500	100 / 500 / 1000
12x2x1	19,3	203,9	376	19,5	500	100 / 500 / 1000
12x2x1,5	23,6	296,7	544	13,3	900	100 / 500 / 1000
12x2x2,5	27	489,9	801	8	900	100 / 500 / 1000

LIY(St)Y -TP



Code: LIY(St)Y Standard: TTS 13755, VDE 0812, TSE K 353

LI : Bundle wire
Y : PVC
(St) : Aluminum foil

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2,
DIN EN 60332-1-2 (VDE 0482-332-1-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50290-2-21)
3- Double twist in layers
4- Separator tape
5- AL-PET Tape
6- PVC Sheath (EN 50290-2-22)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

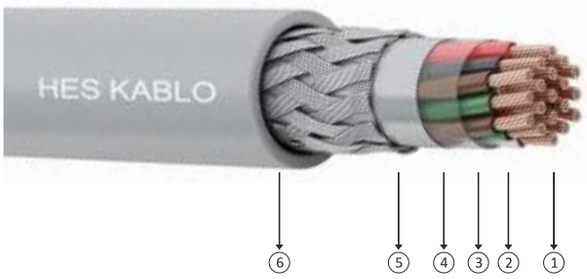
Applications

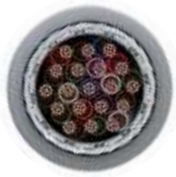
Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromagnetics interference.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x2x0,5	8	17	47	39	500	100 / 500 / 1000
2x2x0,75	8,6	25,5	59	26	500	100 / 500 / 1000
2x2x1	9,5	34	71	19,5	500	100 / 500 / 1000
2x2x1,5	11,7	49,5	104	13,3	900	100 / 500 / 1000
2x2x2,5	13,1	81,6	144	8	900	100 / 500 / 1000
3x2x0,5	8,5	25,5	63	39	500	100 / 500 / 1000
3x2x0,75	9,2	38,2	79	26	500	100 / 500 / 1000
3x2x1	10,2	51	97	19,5	500	100 / 500 / 1000
3x2x1,5	12,5	74,2	142	13,3	900	100 / 500 / 1000
3x2x2,5	14	122,5	201	8	900	100 / 500 / 1000
4x2x0,5	9,4	33,9	79	39	500	100 / 500 / 1000
4x2x0,75	10,2	51	100	26	500	100 / 500 / 1000
4x2x1	11,5	68	129	19,5	500	100 / 500 / 1000
4x2x1,5	13,8	98,9	182	13,3	900	100 / 500 / 1000
4x2x2,5	15,6	163,3	259	8	900	100 / 500 / 1000
5x2x0,5	10,4	42,4	100	39	500	100 / 500 / 1000
5x2x0,75	11,4	63,7	132	26	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
5x2x1	12,6	85	163	19,5	500	100 / 500 / 1000
5x2x1,5	15,3	123,6	232	13,3	900	100 / 500 / 1000
5x2x2,5	17,4	204,1	338	7,98	900	100 / 500 / 1000
6x2x0,5	11,6	50,9	126	39	500	100 / 500 / 1000
6x2x0,75	12,6	76,4	160	26	500	100 / 500 / 1000
6x2x1	13,9	102	197	19,5	500	100 / 500 / 1000
6x2x1,5	17	148,4	290	13,3	900	100 / 500 / 1000
6x2x2,5	19,2	244,9	411	7,98	900	100 / 500 / 1000
7x2x0,5	11,6	59,4	131	39	500	100 / 500 / 1000
7x2x0,75	12,6	89,2	168	26	500	100 / 500 / 1000
7x2x1	13,9	118,9	208	19,5	500	100 / 500 / 1000
7x2x1,5	17	173,1	305	13,3	900	100 / 500 / 1000
7x2x2,5	19,2	285,8	438	7,98	900	100 / 500 / 1000
8x2x0,5	13,9	67,9	176	39	500	100 / 500 / 1000
8x2x0,75	15,1	101,9	224	26	500	100 / 500 / 1000
8x2x1	16,9	135,9	284	19,5	500	100 / 500 / 1000
8x2x1,5	20,5	197,8	408	13,3	900	100 / 500 / 1000
8x2x2,5	23,3	326,6	588	7,98	900	100 / 500 / 1000
9x2x0,5	14,4	76,4	198	39	500	100 / 500 / 1000
9x2x0,75	15,6	114,7	251	26	500	100 / 500 / 1000
9x2x1	17,5	152,9	320	19,5	500	100 / 500 / 1000
9x2x1,5	21,2	222,5	460	13,3	900	100 / 500 / 1000
9x2x2,5	24,1	367,4	662	7,98	900	100 / 500 / 1000
10x2x0,5	15,1	84,9	203	39	500	100 / 500 / 1000
10x2x0,75	16,5	127,4	267	26	500	100 / 500 / 1000
10x2x1	18,3	169,9	331	19,5	500	100 / 500 / 1000
10x2x1,5	22,4	247,3	486	13,3	900	100 / 500 / 1000
10x2x2,5	25,3	408,2	690	7,98	900	100 / 500 / 1000
12x2x0,5	15,6	101,8	212	39	500	100 / 500 / 1000
12x2x0,75	17,1	152,9	283	26	500	100 / 500 / 1000
12x2x1	19	203,9	351	19,5	500	100 / 500 / 1000
12x2x1,5	23,2	296,7	513	13,3	900	100 / 500 / 1000
12x2x2,5	26,2	489,9	740	8	900	100 / 500 / 1000

LIY(St)CY -TP





Code: LIY(St)CY Standard: TS 13755, VDE 0812, TSE K 353

LI : Bundle wire
Y : PVC
(St) : Aluminum foil
C : Braided Screen

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2,
DIN EN 60332-1-2 (VDE 0482-332-1-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50290-2-21)
3- Double twist in layers
4- Separator tape
5- AL-PET Tape ve Tinned Copper Wire Braid Screen
6- PVC Sheath (EN 50290-2-22)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

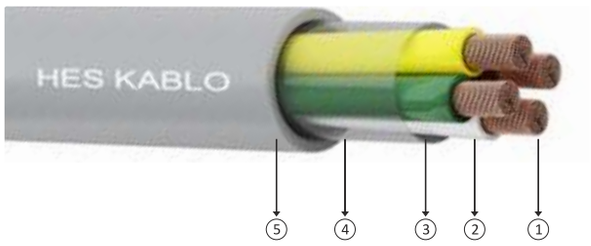
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromagnetics interference.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x2x0,5	8,4	17	56	39	500	100 / 500 / 1000
2x2x0,75	9	25,5	68	26	500	100 / 500 / 1000
2x2x1	9,9	34	82	19,5	500	100 / 500 / 1000
2x2x1,5	12,1	49,5	117	13,3	900	100 / 500 / 1000
2x2x2,5	13,5	81,6	160	8	900	100 / 500 / 1000
3x2x0,5	8,9	25,5	72	39	500	100 / 500 / 1000
3x2x0,75	9,6	38,2	90	26	500	100 / 500 / 1000
3x2x1	10,6	51	109	19,5	500	100 / 500 / 1000
3x2x1,5	12,9	74,2	156	13,3	900	100 / 500 / 1000
3x2x2,5	14,4	122,5	217	8	900	100 / 500 / 1000
4x2x0,5	9,8	33,9	89	39	500	100 / 500 / 1000
4x2x0,75	10,6	51	112	26	500	100 / 500 / 1000
4x2x1	11,9	68	141	19,5	500	100 / 500 / 1000
4x2x1,5	14,2	98,9	198	13,3	900	100 / 500 / 1000
4x2x2,5	16	163,3	278	8	900	100 / 500 / 1000
5x2x0,5	10,8	42,4	112	39	500	100 / 500 / 1000
5x2x0,75	11,8	63,7	145	26	500	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
5x2x1	13	85	177	19,5	500	100 / 500 / 1000
5x2x1,5	15,7	123,6	251	13,3	900	100 / 500 / 1000
5x2x2,5	17,8	204,1	359	7,98	900	100 / 500 / 1000
6x2x0,5	12	50,9	139	39	500	100 / 500 / 1000
6x2x0,75	13	76,4	174	26	500	100 / 500 / 1000
6x2x1	14,3	102	214	19,5	500	100 / 500 / 1000
6x2x1,5	17,4	148,4	311	13,3	900	100 / 500 / 1000
6x2x2,5	19,6	244,9	435	7,98	900	100 / 500 / 1000
7x2x0,5	12	59,4	144	39	500	100 / 500 / 1000
7x2x0,75	13	89,2	182	26	500	100 / 500 / 1000
7x2x1	14,3	118,9	224	19,5	500	100 / 500 / 1000
7x2x1,5	17,4	173,1	326	13,3	900	100 / 500 / 1000
7x2x2,5	19,6	285,8	462	7,98	900	100 / 500 / 1000
8x2x0,5	14,3	67,9	193	39	500	100 / 500 / 1000
8x2x0,75	15,5	101,9	243	26	500	100 / 500 / 1000
8x2x1	17,3	135,9	305	19,5	500	100 / 500 / 1000
8x2x1,5	20,9	197,8	433	13,3	900	100 / 500 / 1000
8x2x2,5	23,7	326,6	617	7,98	900	100 / 500 / 1000
9x2x0,5	14,8	76,4	214	39	500	100 / 500 / 1000
9x2x0,75	16	114,7	271	26	500	100 / 500 / 1000
9x2x1	17,9	152,9	341	19,5	500	100 / 500 / 1000
9x2x1,5	21,8	222,5	495	13,3	900	100 / 500 / 1000
9x2x2,5	24,5	367,4	693	7,98	900	100 / 500 / 1000
10x2x0,5	15,5	84,9	222	39	500	100 / 500 / 1000
10x2x0,75	16,9	127,4	288	26	500	100 / 500 / 1000
10x2x1	18,7	169,9	353	19,5	500	100 / 500 / 1000
10x2x1,5	22,8	247,3	515	13,3	900	100 / 500 / 1000
10x2x2,5	25,9	408,2	737	7,98	900	100 / 500 / 1000
12x2x0,5	16	101,8	232	39	500	100 / 500 / 1000
12x2x0,75	17,5	152,9	304	26	500	100 / 500 / 1000
12x2x1	19,4	203,9	375	19,5	500	100 / 500 / 1000
12x2x1,5	23,6	296,7	543	13,3	900	100 / 500 / 1000
12x2x2,5	27	489,9	800	8	900	100 / 500 / 1000

LIHH -TP



Code: LIHH Standard: TS 13755, VDE 0812, TSE K 353

LI : Bundle wire
H : HFFR (Halogen free flame retardant)

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- HFFR insulation (EN 50290-2-26)
3- Double twist in layers
4- Separator tape
5- HFFR Sheath (EN 50290-2-27)

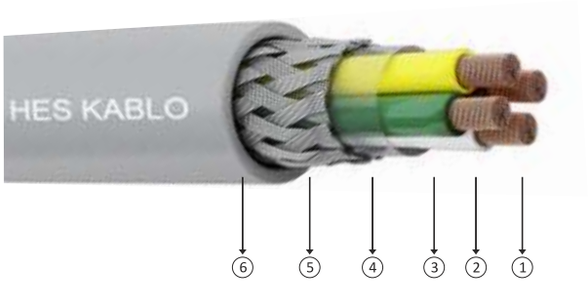
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cable can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x2x0,5	8	17	48	39	500	100 / 500 / 1000
2x2x0,75	8,6	25,5	59	26	500	100 / 500 / 1000
2x2x1	9,5	34	72	19,5	500	100 / 500 / 1000
2x2x1,5	11,6	49,5	106	13,3	900	100 / 500 / 1000
2x2x2,5	13,1	81,6	147	8	900	100 / 500 / 1000
3x2x0,5	8,5	25,5	63	39	500	100 / 500 / 1000
3x2x0,75	9,2	38,2	80	26	500	100 / 500 / 1000
3x2x1	10,1	51	98	19,5	500	100 / 500 / 1000
3x2x1,5	12,5	74,2	145	13,3	900	100 / 500 / 1000
3x2x2,5	14	122,5	203	8	900	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
4x2x0,5	9,4	33,9	80	39	500	100 / 500 / 1000
4x2x0,75	10,2	51	101	26	500	100 / 500 / 1000
4x2x1	11,4	68	131	19,5	500	100 / 500 / 1000
4x2x1,5	13,8	98,9	184	13,3	900	100 / 500 / 1000
4x2x2,5	15,6	163,3	262	8	900	100 / 500 / 1000
5x2x0,5	10,4	42,4	101	39	500	100 / 500 / 1000
5x2x0,75	11,4	63,7	134	26	500	100 / 500 / 1000
5x2x1	12,6	85	165	19,5	500	100 / 500 / 1000
5x2x1,5	15,3	123,6	235	13,3	900	100 / 500 / 1000
5x2x2,5	17,4	204,1	342	7,98	900	100 / 500 / 1000
6x2x0,5	11,6	50,9	128	39	500	100 / 500 / 1000
6x2x0,75	12,6	76,4	162	26	500	100 / 500 / 1000
6x2x1	13,9	102	200	19,5	500	100 / 500 / 1000
6x2x1,5	17	148,4	294	13,3	900	100 / 500 / 1000
6x2x2,5	19,2	244,9	416	7,98	900	100 / 500 / 1000
7x2x0,5	11,6	59,4	133	39	500	100 / 500 / 1000
7x2x0,75	12,6	89,2	170	26	500	100 / 500 / 1000
7x2x1	13,9	118,9	211	19,5	500	100 / 500 / 1000
7x2x1,5	17	173,1	309	13,3	900	100 / 500 / 1000
7x2x2,5	19,2	285,8	443	7,98	900	100 / 500 / 1000
8x2x0,5	13,9	67,9	179	39	500	100 / 500 / 1000
8x2x0,75	15	101,9	227	26	500	100 / 500 / 1000
8x2x1	16,8	135,9	289	19,5	500	100 / 500 / 1000
8x2x1,5	20,4	197,8	414	13,3	900	100 / 500 / 1000
8x2x2,5	23,3	326,6	596	7,98	900	100 / 500 / 1000
9x2x0,5	14,3	76,4	200	39	500	100 / 500 / 1000
9x2x0,75	15,6	114,7	255	26	500	100 / 500 / 1000
9x2x1	17,4	152,9	324	19,5	500	100 / 500 / 1000
9x2x1,5	21,2	222,5	466	13,3	900	100 / 500 / 1000
9x2x2,5	24,1	367,4	671	7,98	900	100 / 500 / 1000
10x2x0,5	15	84,9	206	39	500	100 / 500 / 1000
10x2x0,75	16,5	127,4	272	26	500	100 / 500 / 1000
10x2x1	18,3	169,9	336	19,5	500	100 / 500 / 1000
10x2x1,5	22,4	247,3	493	13,3	900	100 / 500 / 1000
10x2x2,5	25,3	408,2	699	7,98	900	100 / 500 / 1000
12x2x0,5	15,6	101,8	215	39	500	100 / 500 / 1000
12x2x0,75	17,1	152,9	287	26	500	100 / 500 / 1000
12x2x1	18,9	203,9	356	19,5	500	100 / 500 / 1000
12x2x1,5	23,2	296,7	521	13,3	900	100 / 500 / 1000
12x2x2,5	26,2	489,9	749	8	900	100 / 500 / 1000

LIHCH -TP



Code: LIHCH Standard: TS 13755, VDE 0812, TSE K 353

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
C : Braided Screen

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- HFFR insulation (EN 50290-2-26)
3- Double twist in layers
4- Separator tape
5- Tinned Copper Wire Braid Screen
6- HFFR Sheath (EN 50290-2-27)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

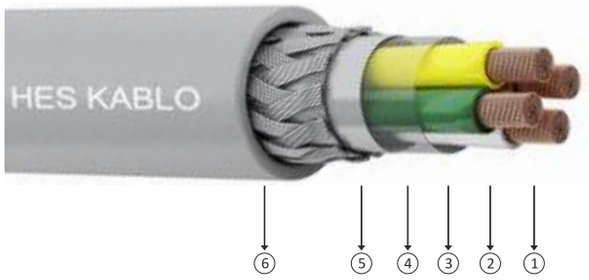
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromangetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x2x0,5	8,4	17	58	39	500	100 / 500 / 1000
2x2x0,75	9	25,5	71	26	500	100 / 500 / 1000
2x2x1	9,9	34	85	19,5	500	100 / 500 / 1000
2x2x1,5	12	49,5	121	13,3	900	100 / 500 / 1000
2x2x2,5	13,5	81,6	165	8	900	100 / 500 / 1000
3x2x0,5	8,9	25,5	75	39	500	100 / 500 / 1000
3x2x0,75	9,6	38,2	92	26	500	100 / 500 / 1000
3x2x1	10,5	51	112	19,5	500	100 / 500 / 1000
3x2x1,5	12,9	74,2	161	13,3	900	100 / 500 / 1000
3x2x2,5	14,4	122,5	222	8	900	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
4x2x0,5	9,8	33,9	92	39	500	100 / 500 / 1000
4x2x0,75	10,6	51	115	26	500	100 / 500 / 1000
4x2x1	11,8	68	145	19,5	500	100 / 500 / 1000
4x2x1,5	14,2	98,9	203	13,3	900	100 / 500 / 1000
4x2x2,5	16	163,3	283	8	900	100 / 500 / 1000
5x2x0,5	10,8	42,4	115	39	500	100 / 500 / 1000
5x2x0,75	11,8	63,7	149	26	500	100 / 500 / 1000
5x2x1	13	85	181	19,5	500	100 / 500 / 1000
5x2x1,5	15,7	123,6	256	13,3	900	100 / 500 / 1000
5x2x2,5	17,8	204,1	366	7,98	900	100 / 500 / 1000
6x2x0,5	12	50,9	143	39	500	100 / 500 / 1000
6x2x0,75	13	76,4	178	26	500	100 / 500 / 1000
6x2x1	14,3	102	218	19,5	500	100 / 500 / 1000
6x2x1,5	17,4	148,4	317	13,3	900	100 / 500 / 1000
6x2x2,5	19,6	244,9	442	7,98	900	100 / 500 / 1000
7x2x0,5	12	59,4	148	39	500	100 / 500 / 1000
7x2x0,75	13	89,2	186	26	500	100 / 500 / 1000
7x2x1	14,3	118,9	229	19,5	500	100 / 500 / 1000
7x2x1,5	17,4	173,1	332	13,3	900	100 / 500 / 1000
7x2x2,5	19,6	285,8	469	7,98	900	100 / 500 / 1000
8x2x0,5	14,3	67,9	197	39	500	100 / 500 / 1000
8x2x0,75	15,4	101,9	248	26	500	100 / 500 / 1000
8x2x1	17,2	135,9	311	19,5	500	100 / 500 / 1000
8x2x1,5	20,8	197,8	441	13,3	900	100 / 500 / 1000
8x2x2,5	23,7	326,6	628	7,98	900	100 / 500 / 1000
9x2x0,5	14,7	76,4	219	39	500	100 / 500 / 1000
9x2x0,75	16	114,7	276	26	500	100 / 500 / 1000
9x2x1	17,8	152,9	348	19,5	500	100 / 500 / 1000
9x2x1,5	21,8	222,5	504	13,3	900	100 / 500 / 1000
9x2x2,5	24,5	367,4	703	7,98	900	100 / 500 / 1000
10x2x0,5	15,4	84,9	227	39	500	100 / 500 / 1000
10x2x0,75	16,9	127,4	294	26	500	100 / 500 / 1000
10x2x1	18,7	169,9	360	19,5	500	100 / 500 / 1000
10x2x1,5	22,8	247,3	524	13,3	900	100 / 500 / 1000
10x2x2,5	25,9	408,2	748	7,98	900	100 / 500 / 1000
12x2x0,5	16	101,8	237	39	500	100 / 500 / 1000
12x2x0,75	17,5	152,9	310	26	500	100 / 500 / 1000
12x2x1	19,3	203,9	382	19,5	500	100 / 500 / 1000
12x2x1,5	23,6	296,7	553	13,3	900	100 / 500 / 1000
12x2x2,5	27	489,9	813	8	900	100 / 500 / 1000

LIH(St)H -TP



Code: LIH(St)H Standard: TS 13755, VDE 0812, TSE K 353

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
(St) : Aluminum foil

Technical Properties

Operating Temperature :-5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- HFFR insulation (EN 50290-2-26)
3- Double twist in layers
4- Separator tape
5- AL-PET Tape
6- HFFR Sheath (EN 50290-2-27)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

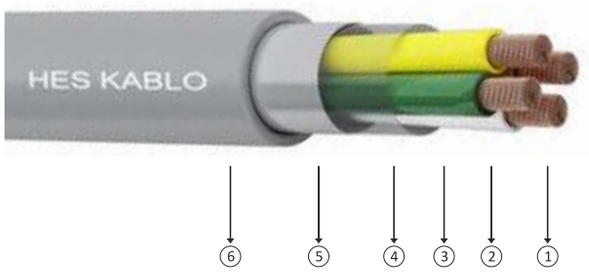
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromangetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x2x0,5	8,0	17,0	50	39,0	500	100 / 500 / 1000
2x2x0,75	8,6	25,5	61	26,0	500	100 / 500 / 1000
2x2x1	9,5	34,0	74	19,5	500	100 / 500 / 1000
2x2x1,5	11,7	49,5	108	13,3	900	100 / 500 / 1000
2x2x2,5	13,1	81,6	148	8,0	900	100 / 500 / 1000
3x2x0,5	8,5	25,5	65	39,0	500	100 / 500 / 1000
3x2x0,75	9,2	38,2	82	26,0	500	100 / 500 / 1000
3x2x1	10,2	51,0	100	19,5	500	100 / 500 / 1000
3x2x1,5	12,5	74,2	146	13,3	900	100 / 500 / 1000
3x2x2,5	14,0	122,5	205	8,0	900	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
4x2x0,5	9,4	33,9	81	39,0	500	100 / 500 / 1000
4x2x0,75	10,2	51,0	103	26,0	500	100 / 500 / 1000
4x2x1	11,5	68,0	132	19,5	500	100 / 500 / 1000
4x2x1,5	13,8	98,9	186	13,3	900	100 / 500 / 1000
4x2x2,5	15,6	163,3	263	8,0	900	100 / 500 / 1000
5x2x0,5	10,4	42,4	102	39,0	500	100 / 500 / 1000
5x2x0,75	11,4	63,7	136	26,0	500	100 / 500 / 1000
5x2x1	12,6	85,0	167	19,5	500	100 / 500 / 1000
5x2x1,5	15,3	123,6	236	13,3	900	100 / 500 / 1000
5x2x2,5	17,4	204,1	344	7,98	900	100 / 500 / 1000
6x2x0,5	11,6	50,9	129	39	500	100 / 500 / 1000
6x2x0,75	12,6	76,4	164	26	500	100 / 500 / 1000
6x2x1	13,9	102,0	202	19,5	500	100 / 500 / 1000
6x2x1,5	17,0	148,4	296	13,3	900	100 / 500 / 1000
6x2x2,5	19,2	244,9	417	7,98	900	100 / 500 / 1000
7x2x0,5	11,6	59,4	134	39	500	100 / 500 / 1000
7x2x0,75	12,6	89,2	172	26	500	100 / 500 / 1000
7x2x1	13,9	118,9	212	19,5	500	100 / 500 / 1000
7x2x1,5	17,0	173,1	311	13,3	900	100 / 500 / 1000
7x2x2,5	19,2	285,8	444	7,98	900	100 / 500 / 1000
8x2x0,5	13,9	67,9	180	39	500	100 / 500 / 1000
8x2x0,75	15,1	101,9	228	26	500	100 / 500 / 1000
8x2x1	16,9	135,9	291	19,5	500	100 / 500 / 1000
8x2x1,5	20,5	197,8	415	13,3	900	100 / 500 / 1000
8x2x2,5	23,3	326,6	597	7,98	900	100 / 500 / 1000
9x2x0,5	14,4	76,4	202	39	500	100 / 500 / 1000
9x2x0,75	15,6	114,7	256	26	500	100 / 500 / 1000
9x2x1	17,5	152,9	326	19,5	500	100 / 500 / 1000
9x2x1,5	21,2	222,5	467	13,3	900	100 / 500 / 1000
9x2x2,5	24,1	367,4	672	7,98	900	100 / 500 / 1000
10x2x0,5	15,1	84,9	208	39	500	100 / 500 / 1000
10x2x0,75	16,5	127,4	273	26	500	100 / 500 / 1000
10x2x1	18,3	169,9	338	19,5	500	100 / 500 / 1000
10x2x1,5	22,4	247,3	494	13,3	900	100 / 500 / 1000
10x2x2,5	25,3	408,2	700	7,98	900	100 / 500 / 1000
12x2x0,5	15,6	101,8	217	39,0	500	100 / 500 / 1000
12x2x0,75	17,1	152,9	289	26,0	500	100 / 500 / 1000
12x2x1	19,0	203,9	357	19,5	500	100 / 500 / 1000
12x2x1,5	23,2	296,7	522	13,3	900	100 / 500 / 1000
12x2x2,5	26,2	489,9	751	8,0	900	100 / 500 / 1000

LIH(St)CH -TP



Code: LIH(St)CH Standard: TS 13755, VDE 0812, TSE K 353

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
(St) : Aluminum foil
C : Braided Screen

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- HFFR insulation (EN 50290-2-26)
3- Double twist in layers
4- Separator tape
5- AL-PET Tape ve Tinned Copper Wire Braid Screen
6- HFFR Sheath (EN 50290-2-27)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	6
0,75	13
1	16
1,5	20
2,5	25

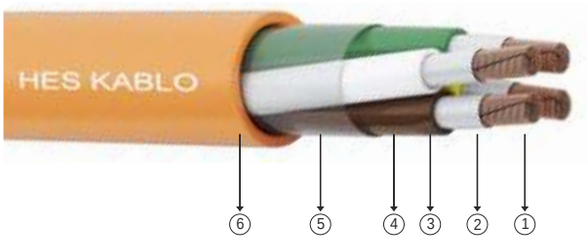
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems in places with electromangetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x2x0,5	8,4	17	58	39	500	100 / 500 / 1000
2x2x0,75	9	25,5	71	26	500	100 / 500 / 1000
2x2x1	9,9	34	84	19,5	500	100 / 500 / 1000
2x2x1,5	12,1	49,5	121	13,3	900	100 / 500 / 1000
2x2x2,5	13,5	81,6	165	8	900	100 / 500 / 1000
3x2x0,5	8,9	25,5	75	39	500	100 / 500 / 1000
3x2x0,75	9,6	38,2	92	26	500	100 / 500 / 1000
3x2x1	10,6	51	111	19,5	500	100 / 500 / 1000
3x2x1,5	12,9	74,2	160	13,3	900	100 / 500 / 1000
3x2x2,5	14,4	122,5	221	8	900	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
4x2x0,5	9,8	33,9	92	39	500	100 / 500 / 1000
4x2x0,75	10,6	51	115	26	500	100 / 500 / 1000
4x2x1	11,9	68	145	19,5	500	100 / 500 / 1000
4x2x1,5	14,2	98,9	202	13,3	900	100 / 500 / 1000
4x2x2,5	16	163,3	283	8	900	100 / 500 / 1000
5x2x0,5	10,8	42,4	114	39	500	100 / 500 / 1000
5x2x0,75	11,8	63,7	149	26	500	100 / 500 / 1000
5x2x1	13	85	181	19,5	500	100 / 500 / 1000
5x2x1,5	15,7	123,6	255	13,3	900	100 / 500 / 1000
5x2x2,5	17,8	204,1	365	7,98	900	100 / 500 / 1000
6x2x0,5	12	50,9	142	39	500	100 / 500 / 1000
6x2x0,75	13	76,4	178	26	500	100 / 500 / 1000
6x2x1	14,3	102	218	19,5	500	100 / 500 / 1000
6x2x1,5	17,4	148,4	317	13,3	900	100 / 500 / 1000
6x2x2,5	19,6	244,9	442	7,98	900	100 / 500 / 1000
7x2x0,5	12	59,4	147	39	500	100 / 500 / 1000
7x2x0,75	13	89,2	186	26	500	100 / 500 / 1000
7x2x1	14,3	118,9	229	19,5	500	100 / 500 / 1000
7x2x1,5	17,4	173,1	332	13,3	900	100 / 500 / 1000
7x2x2,5	19,6	285,8	469	7,98	900	100 / 500 / 1000
8x2x0,5	14,3	67,9	197	39	500	100 / 500 / 1000
8x2x0,75	15,5	101,9	247	26	500	100 / 500 / 1000
8x2x1	17,3	135,9	311	19,5	500	100 / 500 / 1000
8x2x1,5	20,9	197,8	440	13,3	900	100 / 500 / 1000
8x2x2,5	23,7	326,6	627	7,98	900	100 / 500 / 1000
9x2x0,5	14,8	76,4	219	39	500	100 / 500 / 1000
9x2x0,75	16	114,7	275	26	500	100 / 500 / 1000
9x2x1	17,9	152,9	347	19,5	500	100 / 500 / 1000
9x2x1,5	21,8	222,5	504	13,3	900	100 / 500 / 1000
9x2x2,5	24,5	367,4	703	7,98	900	100 / 500 / 1000
10x2x0,5	15,5	84,9	227	39	500	100 / 500 / 1000
10x2x0,75	16,9	127,4	294	26	500	100 / 500 / 1000
10x2x1	18,7	169,9	359	19,5	500	100 / 500 / 1000
10x2x1,5	22,8	247,3	524	13,3	900	100 / 500 / 1000
10x2x2,5	25,9	408,2	748	7,98	900	100 / 500 / 1000
12x2x0,5	16	101,8	237	39	500	100 / 500 / 1000
12x2x0,75	17,5	152,9	310	26	500	100 / 500 / 1000
12x2x1	19,4	203,9	382	19,5	500	100 / 500 / 1000
12x2x1,5	23,6	296,7	552	13,3	900	100 / 500 / 1000
12x2x2,5	27	489,9	812	8	900	100 / 500 / 1000

LIHH FE-180



Code: LIHH FE-180 Standard: TS 13734, VDE 0812, TSE K 178

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
FE-... : Cable whose insulation continuity is determined according to the declared period. (FE-180 = 180 Minutes etc)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,75	13
1	16
1,5	20
2,5	25

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Circuit Integrity / IEC 60331-21, DIN IEC 60331-21 (VDE 0482-331-21)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- Mica Tape
3- HFFR insulation (EN 50290-2-26)
4- Single twist in layers
5- Separator tape
6- HFFR Sheath (EN 50290-2-27)

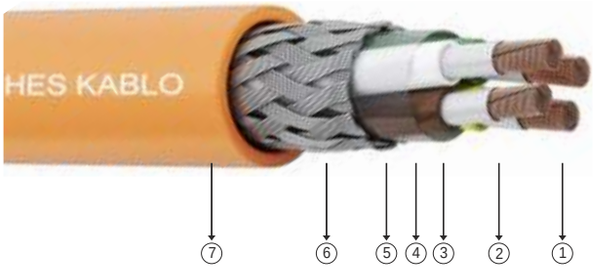
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cable can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	6,9	13,5	47	26,0	500	500 / 1000
3x0,75	7,3	18,0	54	26,0	500	500 / 1000
4x0,75	8,3	26,3	71	26,0	500	500 / 1000
5x0,75	9,2	40,4	94	26,0	500	500 / 1000
6x0,75	7,3	20,2	60	26,0	500	500 / 1000
7x0,75	7,7	27,0	70	26,0	500	500 / 1000
8x0,75	8,8	39,5	94	26,0	500	500 / 1000
10x0,75	9,8	60,6	126	26,0	500	500 / 1000
12x0,75	7,9	27,0	74	26,0	500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	8,4	36,0	88	19,5	500	500 / 1000
3x1,0	9,8	52,7	123	19,5	500	500 / 1000
4x1,0	10,7	80,8	160	19,5	500	500 / 1000
5x1,0	8,6	33,7	91	19,5	500	500 / 1000
6x1,0	9,3	45,0	112	19,5	500	500 / 1000
7x1,0	10,7	65,9	152	19,5	500	500 / 1000
8x1,0	11,9	101,0	206	19,5	500	500 / 1000
10x1,0	9,5	40,5	112	19,5	500	500 / 1000
12x1,0	10,1	53,9	133	19,5	500	500 / 1000
2x1,5	11,9	79,0	188	13,3	900	500 / 1000
3x1,5	12,9	121,2	245	13,3	900	500 / 1000
4x1,5	9,5	47,2	120	13,3	900	500 / 1000
5x1,5	10,1	62,9	143	13,3	900	500 / 1000
6x1,5	11,9	92,2	203	13,3	900	500 / 1000
7x1,5	12,9	141,4	266	13,3	900	500 / 1000
8x1,5	10,5	53,9	149	13,3	900	500 / 1000
10x1,5	11,3	71,9	177	13,3	900	500 / 1000
12x1,5	13,2	105,4	251	13,3	900	500 / 1000
2x2,5	14,5	161,6	328	7,98	900	500 / 1000
3x2,5	12,1	67,4	184	7,98	900	500 / 1000
4x2,5	13,0	89,9	219	7,98	900	500 / 1000
5x2,5	15,0	131,7	299	7,98	900	500 / 1000
6x2,5	16,6	201,9	401	7,98	900	500 / 1000
7x2,5	12,5	80,9	200	7,98	900	500 / 1000
8x2,5	13,4	107,9	239	7,98	900	500 / 1000
10x2,5	15,5	158,0	328	7,98	900	500 / 1000
12x2,5	17,2	242,3	443	7,98	900	500 / 1000

LIHCH FE-180



Code: LIHCH FE-180 Standard: TS 13734, VDE 0812, TSE K 178

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
C : Braid Screen
FE-... : Cable whose insulation continuity is determined according to the declared period. (FE-180 = 180 Minutes etc)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,75	13
1	16
1,5	20
2,5	25

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Circuit Integrity / IEC 60331-21, DIN IEC 60331-21 (VDE 0482-331-21) Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- Mica Tape
3- HFFR insulation (EN 50290-2-26)
4- Single twist in layers
5- Separator tape
6- Tinned Copper Wire Braid Screen
7- HFFR Sheath (EN 50290-2-27)

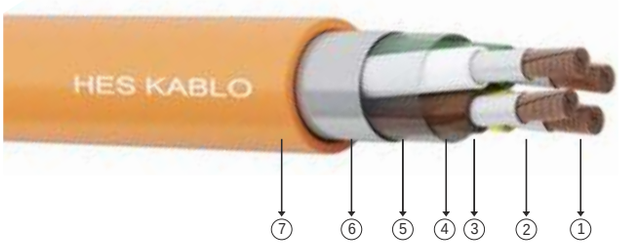
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems in places with electromagnetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	7,3	21,0	55	26,0	500	500 / 1000
3x0,75	7,7	28,5	70	26,0	500	500 / 1000
4x0,75	8,3	35,9	85	26,0	500	500 / 1000
5x0,75	9,0	43,6	102	26,0	500	500 / 1000
6x0,75	9,9	51,5	125	26,0	500	500 / 1000
7x0,75	9,9	58,3	133	26,0	500	500 / 1000
8x0,75	10,9	66,7	163	26,0	500	500 / 1000
10x0,75	12,5	82,3	201	26,0	500	500 / 1000
12x0,75	12,9	96,2	217	26,0	500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	7,7	26,3	64	19,5	500	500 / 1000
3x1,0	8,1	35,3	80	19,5	500	500 / 1000
4x1,0	8,8	45,6	99	19,5	500	500 / 1000
5x1,0	9,7	56,0	125	19,5	500	500 / 1000
6x1,0	10,5	65,2	146	19,5	500	500 / 1000
7x1,0	10,5	74,2	156	19,5	500	500 / 1000
8x1,0	11,7	84,9	192	19,5	500	500 / 1000
10x1,0	13,4	105,6	237	19,5	500	500 / 1000
12x1,0	13,8	124,4	257	19,5	500	500 / 1000
2x1,5	8,7	35,9	82	13,3	900	500 / 1000
3x1,5	9,2	49,2	105	13,3	900	500 / 1000
4x1,5	10,2	64,0	136	13,3	900	500 / 1000
5x1,5	11,1	79,0	166	13,3	900	500 / 1000
6x1,5	12,3	93,9	205	13,3	900	500 / 1000
7x1,5	12,3	107,1	219	13,3	900	500 / 1000
8x1,5	13,6	121,8	269	13,3	900	500 / 1000
10x1,5	15,4	150,0	319	13,3	900	500 / 1000
12x1,5	15,9	176,8	348	13,3	900	500 / 1000
2x2,5	9,6	51,1	106	7,98	900	500 / 1000
3x2,5	10,2	71,9	139	7,98	900	500 / 1000
4x2,5	11,1	93,9	174	7,98	900	500 / 1000
5x2,5	12,3	115,8	222	7,98	900	500 / 1000
6x2,5	13,3	136,9	263	7,98	900	500 / 1000
7x2,5	13,3	157,1	283	7,98	900	500 / 1000
8x2,5	14,9	178,9	347	7,98	900	500 / 1000
10x2,5	17,0	223,7	425	7,98	900	500 / 1000
12x2,5	17,6	264,7	467	7,98	900	500 / 1000

LIH(St)H FE-180



Code: LIH(St)H FE-180 Standard: TS 13734, VDE 0812, TSE K 178

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
(St) : Aluminum foil
FE-... : Cable whose insulation continuity is determined according to the declared period. (FE-180 = 180 Minutes etc)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,75	13
1	16
1,5	20
2,5	25

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Circuit Integrity / IEC 60331-21, DIN IEC 60331-21 (VDE 0482-331-21)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- Mica Tape
3- HFFR insulation (EN 50290-2-26)
4- Single twist in layers
5- Separator tape
6- AL-PET Tape
7- HFFR Sheath (EN 50290-2-27)

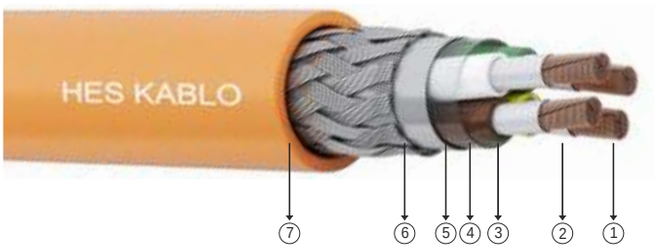
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems in places with electromagnetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	7,0	15,3	49	26,0	500	500 / 1000
3x0,75	7,4	22,0	63	26,0	500	500 / 1000
4x0,75	8,0	28,8	77	26,0	500	500 / 1000
5x0,75	8,7	35,5	94	26,0	500	500 / 1000
6x0,75	9,6	42,3	115	26,0	500	500 / 1000
7x0,75	9,6	49,0	123	26,0	500	500 / 1000
8x0,75	10,6	55,7	152	26,0	500	500 / 1000
10x0,75	12,2	69,2	188	26,0	500	500 / 1000
12x0,75	12,6	82,7	204	26,0	500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	7,4	19,8	57	19,5	500	500 / 1000
3x1,0	7,8	28,8	73	19,5	500	500 / 1000
4x1,0	8,5	37,8	91	19,5	500	500 / 1000
5x1,0	9,4	46,8	116	19,5	500	500 / 1000
6x1,0	10,2	55,7	137	19,5	500	500 / 1000
7x1,0	10,2	64,7	146	19,5	500	500 / 1000
8x1,0	11,4	73,7	181	19,5	500	500 / 1000
10x1,0	13,1	91,7	223	19,5	500	500 / 1000
12x1,0	13,5	109,7	243	19,5	500	500 / 1000
2x1,5	8,4	28,1	74	13,3	900	500 / 1000
3x1,5	9,1	41,3	101	13,3	900	500 / 1000
4x1,5	9,9	54,5	126	13,3	900	500 / 1000
5x1,5	10,8	67,7	155	13,3	900	500 / 1000
6x1,5	11,9	80,8	192	13,3	900	500 / 1000
7x1,5	11,9	94,0	206	13,3	900	500 / 1000
8x1,5	13,3	107,2	255	13,3	900	500 / 1000
10x1,5	15,1	133,5	303	13,3	900	500 / 1000
12x1,5	15,6	159,8	332	13,3	900	500 / 1000
2x2,5	9,3	42,2	97	7,98	900	500 / 1000
3x2,5	9,9	62,4	129	7,98	900	500 / 1000
4x2,5	10,8	82,6	163	7,98	900	500 / 1000
5x2,5	12,0	102,8	209	7,98	900	500 / 1000
6x2,5	13,0	123,0	249	7,98	900	500 / 1000
7x2,5	13,0	143,2	269	7,98	900	500 / 1000
8x2,5	14,6	163,4	332	7,98	900	500 / 1000
10x2,5	16,7	203,7	405	7,98	900	500 / 1000
12x2,5	17,3	244,1	447	7,98	900	500 / 1000

LIH(St)CH FE-180



Code: LIH(St)CH FE-180 Standard: TS 13734, VDE 0812, TSE K 178

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
(St) : Aluminum foil
FE-... : Cable whose insulation continuity is determined according to the declared period. (FE-180 = 180 Minutes etc)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,75	13
1	16
1,5	20
2,5	25

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Circuit Integrity / IEC 60331-21, DIN IEC 60331-21 (VDE 0482-331-21)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- Mica Tape
3- HFFR insulation (EN 50290-2-26)
4- Single twist in layers
5- Separator tape
6- AL-PET Tape ve Tinned Copper Wire Braid Screen
7- HFFR Sheath (EN 50290-2-27)

Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems in places with electromagnetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	7,4	21,2	57	26,0	500	500 / 1000
3x0,75	7,8	28,5	71	26,0	500	500 / 1000
4x0,75	8,4	36,6	87	26,0	500	500 / 1000
5x0,75	9,1	43,6	104	26,0	500	500 / 1000
6x0,75	10,0	51,6	126	26,0	500	500 / 1000
7x0,75	10,0	58,3	134	26,0	500	500 / 1000
8x0,75	11,0	67,1	165	26,0	500	500 / 1000
10x0,75	12,6	82,9	203	26,0	500	500 / 1000
12x0,75	13,0	96,2	219	26,0	500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	7,8	26,3	65	19,5	500	500 / 1000
3x1,0	8,2	35,9	82	19,5	500	500 / 1000
4x1,0	8,9	45,8	100	19,5	500	500 / 1000
5x1,0	9,8	56,0	126	19,5	500	500 / 1000
6x1,0	10,6	65,6	148	19,5	500	500 / 1000
7x1,0	10,6	74,6	158	19,5	500	500 / 1000
8x1,0	11,8	84,9	193	19,5	500	500 / 1000
10x1,0	13,5	105,6	239	19,5	500	500 / 1000
12x1,0	13,9	124,4	259	19,5	500	500 / 1000
2x1,5	8,8	35,9	83	13,3	900	500 / 1000
3x1,5	9,5	50,2	112	13,3	900	500 / 1000
4x1,5	10,3	64,0	137	13,3	900	500 / 1000
5x1,5	11,2	78,8	168	13,3	900	500 / 1000
6x1,5	12,3	93,9	207	13,3	900	500 / 1000
7x1,5	12,3	107,1	221	13,3	900	500 / 1000
8x1,5	13,7	121,8	271	13,3	900	500 / 1000
10x1,5	15,5	150,0	321	13,3	900	500 / 1000
12x1,5	16,0	176,8	350	13,3	900	500 / 1000
2x2,5	9,7	51,4	108	7,98	900	500 / 1000
3x2,5	10,3	71,9	140	7,98	900	500 / 1000
4x2,5	11,2	93,7	176	7,98	900	500 / 1000
5x2,5	12,4	115,8	224	7,98	900	500 / 1000
6x2,5	13,4	136,9	265	7,98	900	500 / 1000
7x2,5	13,4	157,1	285	7,98	900	500 / 1000
8x2,5	15,0	178,9	350	7,98	900	500 / 1000
10x2,5	17,1	223,7	427	7,98	900	500 / 1000
12x2,5	17,7	264,7	470	7,98	900	500 / 1000

LIHH FE-180 / PH-120

Code: LIHH FE-180 / PH-120 Standard: TS 13734, VDE 0812, TSE K 178

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
FE-... : Insulation continuity of cable is of code determined according to the declared period. (FE-180 = 180 Minutes etc)
PH-... : Functional shock resistant cable

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,75	13
1	16
1,5	20
2,5	25

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Circuit Integrity / IEC 60331-21, DIN IEC 60331-21 (VDE 0482-331-21)
Pulse Generator Circuit Integrity EN 50200 / , DIN EN 50200 (VDE 0482-200)
Pulse Generator Circuit Integrity EN 50362 / , DIN EN 50362 (VDE 0482-362)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- Mica Tape
3- HFFR insulation (EN 50290-2-26)
4- Single twist in layers
5- Separator tape
6- Glass Fiber Tape
7- HFFR Sheath (EN 50290-2-27)

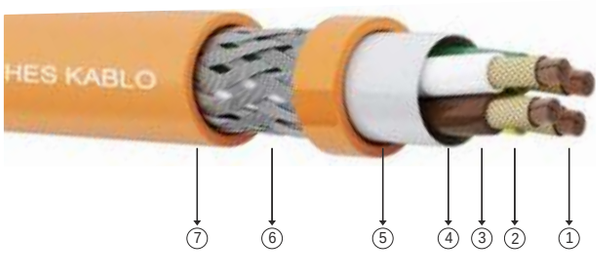
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems in places with electromagnetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	6,9	13,5	50	26,0	500	500 / 1000
3x0,75	7,3	18,0	58	26,0	500	500 / 1000
4x0,75	8,3	26,3	75	26,0	500	500 / 1000
5x0,75	9,2	40,4	99	26,0	500	500 / 1000
6x0,75	7,3	20,2	64	26,0	500	500 / 1000
7x0,75	7,7	27,0	75	26,0	500	500 / 1000
8x0,75	8,8	39,5	99	26,0	500	500 / 1000
10x0,75	9,8	60,6	132	26,0	500	500 / 1000
12x0,75	7,9	27,0	79	26,0	500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	8,4	36,0	93	19,5	500	500 / 1000
3x1,0	9,8	52,7	128	19,5	500	500 / 1000
4x1,0	10,7	80,8	166	19,5	500	500 / 1000
5x1,0	8,6	33,7	96	19,5	500	500 / 1000
6x1,0	9,3	45,0	118	19,5	500	500 / 1000
7x1,0	10,7	65,9	158	19,5	500	500 / 1000
8x1,0	11,9	101,0	212	19,5	500	500 / 1000
10x1,0	9,5	40,5	118	19,5	500	500 / 1000
12x1,0	10,1	53,9	139	19,5	500	500 / 1000
2x1,5	11,9	79,0	195	13,3	900	500 / 1000
3x1,5	12,9	121,2	253	13,3	900	500 / 1000
4x1,5	9,5	47,2	125	13,3	900	500 / 1000
5x1,5	10,1	62,9	149	13,3	900	500 / 1000
6x1,5	11,9	92,2	209	13,3	900	500 / 1000
7x1,5	12,9	141,4	273	13,3	900	500 / 1000
8x1,5	10,5	53,9	155	13,3	900	500 / 1000
10x1,5	11,3	71,9	184	13,3	900	500 / 1000
12x1,5	13,2	105,4	259	13,3	900	500 / 1000
2x2,5	14,5	161,6	337	7,98	900	500 / 1000
3x2,5	12,1	67,4	191	7,98	900	500 / 1000
4x2,5	13,0	89,9	227	7,98	900	500 / 1000
5x2,5	15,0	131,7	308	7,98	900	500 / 1000
6x2,5	16,6	201,9	411	7,98	900	500 / 1000
7x2,5	12,5	80,9	207	7,98	900	500 / 1000
8x2,5	13,4	107,9	247	7,98	900	500 / 1000
10x2,5	15,5	158,0	337	7,98	900	500 / 1000
12x2,5	17,2	242,3	453	7,98	900	500 / 1000

LIHCH FE-180 / PH-120



Code: LIHCH FE-180 / PH-120 Standard: TS 13734, VDE 0812, TSE K 178

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
C : Braided Screen
FE-... : Insulation continuity of cable is determined according to the declared period. (FE-180 = 180 Minutes etc)
PH-... : Functional shock resistant cable

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,75	13
1	16
1,5	20
2,5	25

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Circuit Integrity / IEC 60331-21, DIN IEC 60331-21 (VDE 0482-331-21)
Pulse Generator Circuit Integrity EN 50200 / , DIN EN 50200 (VDE 0482-200)
Pulse Generator Circuit Integrity EN 50362 / , DIN EN 50362 (VDE 0482-362)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- Mica Tape
3- HFFR insulation (EN 50290-2-26)
4- Single twist in layers
5- Separator tape
6- Glass Fiber Tape
7- Tinned Copper Wire Braid Screen
8- HFFR Sheath (EN 50290-2-27)

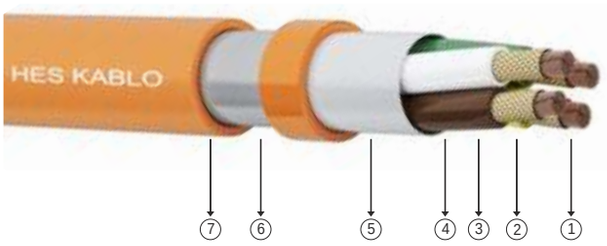
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems in places with electromagnetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	6,9	21,0	59	26,0	500	500 / 1000
3x0,75	7,3	28,5	74	26,0	500	500 / 1000
4x0,75	8,3	35,9	89	26,0	500	500 / 1000
5x0,75	9,2	43,6	107	26,0	500	500 / 1000
6x0,75	7,3	51,5	130	26,0	500	500 / 1000
7x0,75	7,7	58,3	138	26,0	500	500 / 1000
8x0,75	8,8	66,7	169	26,0	500	500 / 1000
10x0,75	9,8	82,3	208	26,0	500	500 / 1000
12x0,75	7,9	96,2	224	26,0	500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	7,7	26,3	68	19,5	500	500 / 1000
3x1,0	8,1	35,3	84	19,5	500	500 / 1000
4x1,0	8,8	45,6	104	19,5	500	500 / 1000
5x1,0	9,7	56,0	130	19,5	500	500 / 1000
6x1,0	10,5	65,2	152	19,5	500	500 / 1000
7x1,0	10,5	74,2	162	19,5	500	500 / 1000
8x1,0	11,7	84,9	198	19,5	500	500 / 1000
10x1,0	13,4	105,6	244	19,5	500	500 / 1000
12x1,0	13,8	124,4	265	19,5	500	500 / 1000
2x1,5	8,7	35,9	86	13,3	900	500 / 1000
3x1,5	9,2	49,2	110	13,3	900	500 / 1000
4x1,5	10,2	64,0	141	13,3	900	500 / 1000
5x1,5	11,1	79,0	173	13,3	900	500 / 1000
6x1,5	12,3	93,9	212	13,3	900	500 / 1000
7x1,5	12,3	107,1	226	13,3	900	500 / 1000
8x1,5	13,6	121,8	277	13,3	900	500 / 1000
10x1,5	15,4	150,0	328	13,3	900	500 / 1000
12x1,5	15,9	176,8	357	13,3	900	500 / 1000
2x2,5	9,6	51,1	111	7,98	900	500 / 1000
3x2,5	10,2	71,9	144	7,98	900	500 / 1000
4x2,5	11,1	93,9	181	7,98	900	500 / 1000
5x2,5	12,3	115,8	229	7,98	900	500 / 1000
6x2,5	13,3	136,9	270	7,98	900	500 / 1000
7x2,5	13,3	157,1	291	7,98	900	500 / 1000
8x2,5	14,9	178,9	356	7,98	900	500 / 1000
10x2,5	17,0	223,7	435	7,98	900	500 / 1000
12x2,5	17,6	264,7	477	7,98	900	500 / 1000

LIH(St)H FE-180 / PH-120



Code: LIH(St)H FE-180 / PH-120 Standard: TS 13734, VDE 0812, TSE K 178

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
(St) : Aluminum foil
FE-... : Insulation continuity of cable is determined according to the declared period. (FE-180 = 180 Minutes etc)
PH-... : Functional shock resistant cable

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,75	13
1	16
1,5	20
2,5	25

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Circuit Integrity / IEC 60331-21, DIN IEC 60331-21 (VDE 0482-331-21)
Pulse Generator Circuit Integrity EN 50200 / , DIN EN 50200 (VDE 0482-200)
Pulse Generator Circuit Integrity EN 50362 / , DIN EN 50362 (VDE 0482-362)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- Mica Tape
3- HFFR insulation (EN 50290-2-26)
4- Single twist in layers
5- Separator tape
6- Glass Fiber Tape
7- AL-PET Tape
8- HFFR Sheath (EN 50290-2-27)

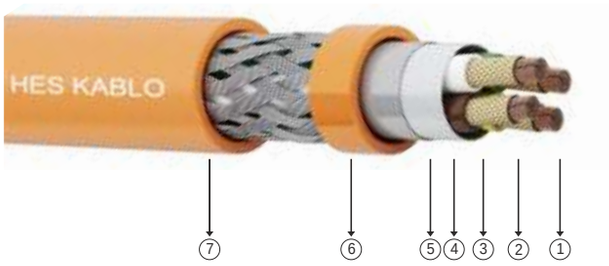
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems in places with electromagnetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	7,0	15,3	53	26,0	500	500 / 1000
3x0,75	7,4	22,0	67	26,0	500	500 / 1000
4x0,75	8,0	28,8	82	26,0	500	500 / 1000
5x0,75	8,7	35,5	99	26,0	500	500 / 1000
6x0,75	9,6	42,3	121	26,0	500	500 / 1000
7x0,75	9,6	49,0	128	26,0	500	500 / 1000
8x0,75	10,6	55,7	158	26,0	500	500 / 1000
10x0,75	12,2	69,2	195	26,0	500	500 / 1000
12x0,75	12,6	82,7	211	26,0	500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	7,4	19,8	61	19,5	500	500 / 1000
3x1,0	7,8	28,8	78	19,5	500	500 / 1000
4x1,0	8,5	37,8	96	19,5	500	500 / 1000
5x1,0	9,4	46,8	121	19,5	500	500 / 1000
6x1,0	10,2	55,7	142	19,5	500	500 / 1000
7x1,0	10,2	64,7	152	19,5	500	500 / 1000
8x1,0	11,4	73,7	187	19,5	500	500 / 1000
10x1,0	13,1	91,7	230	19,5	500	500 / 1000
12x1,0	13,5	109,7	251	19,5	500	500 / 1000
2x1,5	8,4	28,1	78	13,3	900	500 / 1000
3x1,5	9,1	41,3	106	13,3	900	500 / 1000
4x1,5	9,9	54,5	132	13,3	900	500 / 1000
5x1,5	10,8	67,7	161	13,3	900	500 / 1000
6x1,5	11,9	80,8	199	13,3	900	500 / 1000
7x1,5	11,9	94,0	213	13,3	900	500 / 1000
8x1,5	13,3	107,2	263	13,3	900	500 / 1000
10x1,5	15,1	133,5	312	13,3	900	500 / 1000
12x1,5	15,6	159,8	341	13,3	900	500 / 1000
2x2,5	9,3	42,2	102	7,98	900	500 / 1000
3x2,5	9,9	62,4	135	7,98	900	500 / 1000
4x2,5	10,8	82,6	169	7,98	900	500 / 1000
5x2,5	12,0	102,8	216	7,98	900	500 / 1000
6x2,5	13,0	123,0	256	7,98	900	500 / 1000
7x2,5	13,0	143,2	277	7,98	900	500 / 1000
8x2,5	14,6	163,4	341	7,98	900	500 / 1000
10x2,5	16,7	203,7	415	7,98	900	500 / 1000
12x2,5	17,3	244,1	457	7,98	900	500 / 1000

LIH(St)CH FE-180 / PH-120



Code: LIH(St)CH FE-180 / PH-120 Standard: TS 13734, VDE 0812, TSE K 178

LI : Bundle wire
H : HFFR (Halogen free flame retardant)
(St) : Aluminum foil
FE-... : Insulation continuity of cable is determined according to the declared period. (FE-180 = 180 Minutes etc)
PH-... : Functional shock resistant cable

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,75	13
1	16
1,5	20
2,5	25

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)
Vertical Flame Spread - Category C / EN 60332-3-24, IEC 60332-3-24, DIN EN 60332-3-24 (VDE 0482-332-3-24)
Circuit Integrity / IEC 60331-21, DIN IEC 60331-21 (VDE 0482-331-21)
Pulse Generator Circuit Integrity EN 50200 / , DIN EN 50200 (VDE 0482-200)
Pulse Generator Circuit Integrity EN 50362 / , DIN EN 50362 (VDE 0482-362)
Determination of Halogen Acid Gas Amount / EN 60754-1, IEC 60754-1, DIN EN 60754-1 (VDE 0482-754-1)
Acidity Determination and Conductivity / EN 60754-2, IEC 60754-2, DIN EN 60754-2 (VDE 0482-754-2)
Smoke Density / EN 61034-2, IEC 61034-2, DIN EN 61034-2 (VDE 0482-1034-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- Mica Tape
3- HFFR insulation (EN 50290-2-26)
4- Single twist in layers
5- Separator tape
6- Glass Fiber Tape
7- AL-PET Tape ve Tinned Copper Wire Braid Screen
8- HFFR Sheath (EN 50290-2-27)

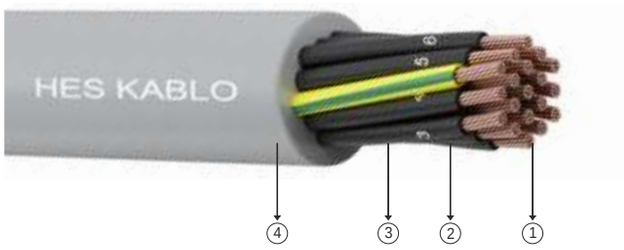
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in instrument and control engineering, industrial electronics, computer and office engineering, indoor communication, audio and security systems and fire notification systems in places with electromagnetics interference. It should be preferred in closed crowd places for its features such as keeping poisonous gas when burning, not transmitting flame and low smoke intensity.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x0,75	7,4	21,2	60	26,0	500	500 / 1000
3x0,75	7,8	28,5	75	26,0	500	500 / 1000
4x0,75	8,4	36,6	91	26,0	500	500 / 1000
5x0,75	9,1	43,6	108	26,0	500	500 / 1000
6x0,75	10,0	51,6	132	26,0	500	500 / 1000
7x0,75	10,0	58,3	139	26,0	500	500 / 1000
8x0,75	11,0	67,1	171	26,0	500	500 / 1000
10x0,75	12,6	82,9	210	26,0	500	500 / 1000
12x0,75	13,0	96,2	226	26,0	500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
2x1,0	7,8	26,3	69	19,5	500	500 / 1000
3x1,0	8,2	35,9	86	19,5	500	500 / 1000
4x1,0	8,9	45,8	105	19,5	500	500 / 1000
5x1,0	9,8	56,0	132	19,5	500	500 / 1000
6x1,0	10,6	65,6	154	19,5	500	500 / 1000
7x1,0	10,6	74,6	163	19,5	500	500 / 1000
8x1,0	11,8	84,9	200	19,5	500	500 / 1000
10x1,0	13,5	105,6	246	19,5	500	500 / 1000
12x1,0	13,9	124,4	267	19,5	500	500 / 1000
2x1,5	8,8	35,9	88	13,3	900	500 / 1000
3x1,5	9,5	50,2	117	13,3	900	500 / 1000
4x1,5	10,3	64,0	143	13,3	900	500 / 1000
5x1,5	11,2	78,8	174	13,3	900	500 / 1000
6x1,5	12,3	93,9	214	13,3	900	500 / 1000
7x1,5	12,3	107,1	228	13,3	900	500 / 1000
8x1,5	13,7	121,8	279	13,3	900	500 / 1000
10x1,5	15,5	150,0	330	13,3	900	500 / 1000
12x1,5	16,0	176,8	360	13,3	900	500 / 1000
2x2,5	9,7	51,4	113	7,98	900	500 / 1000
3x2,5	10,3	71,9	146	7,98	900	500 / 1000
4x2,5	11,2	93,7	182	7,98	900	500 / 1000
5x2,5	12,4	115,8	231	7,98	900	500 / 1000
6x2,5	13,4	136,9	272	7,98	900	500 / 1000
7x2,5	13,4	157,1	293	7,98	900	500 / 1000
8x2,5	15,0	178,9	358	7,98	900	500 / 1000
10x2,5	17,1	223,7	437	7,98	900	500 / 1000
12x2,5	17,7	264,7	480	7,98	900	500 / 1000

YSLY



Code: YSLY Standard: TSE K 373

Y : PVC
SL : Control cable
YSLY-OB : Cables without number, with different colored cores
YSLY-JB : Cables without number, with different colored cores and cables with ground core (Yellow / Green)
YSLY-OZ : White numbered core cables on insulated black
YSLY-JZ : White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	39,0
0,75	26,0
1	19,5
1,5	13,3
2,5	7,98

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50363-3, DIN EN 50363-3, VDE 0207-363-3)
3- Single twist in layers
4- Separator tape
5- PVC Sheath (EN 50363-4-1, DIN EN 50363-4-1, VDE 0207-363-4-1)

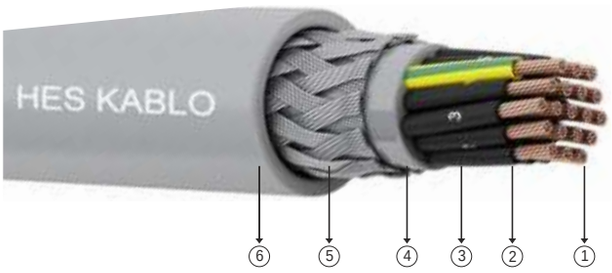
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in internal places, instrument and control engineering, industrial electronics, manufacture and mounting lines, measure-purpose and control-purpose machine manufacture, dry or humid places and in places with no mechanical stress. It must be avoided to get dirty with hydrocarbons, acids and alkalis and cables must be protected against mechanical damage.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,5	5,1	8,3	32	39,0	300/500	500 / 1000
3x0,5	5,4	12,5	40	39,0	300/500	500 / 1000
4x0,5	6,1	16,6	52	39,0	300/500	500 / 1000
5x0,5	6,5	20,8	62	39,0	300/500	500 / 1000
6x0,5	7,3	25,0	76	39,0	300/500	500 / 1000
7x0,5	7,3	29,1	81	39,0	300/500	500 / 1000
12x0,5	9,5	49,9	130	39,0	300/500	500 / 1000
18x0,5	11,1	74,9	188	39,0	300/500	500 / 1000
27x0,5	13,5	112,3	273	39,0	300/500	500 / 1000
36x0,5	15,1	149,7	355	39,0	300/500	500 / 1000
48x0,5	17,5	199,7	471	39,0	300/500	500 / 1000
60x0,5	19,2	249,6	576	39,0	300/500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,75	5,5	12,5	39	26,0	300/500	500 / 1000
3x0,75	6,0	18,7	52	26,0	300/500	500 / 1000
4x0,75	6,5	25,0	64	26,0	300/500	500 / 1000
5x0,75	7,3	31,2	81	26,0	300/500	500 / 1000
6x0,75	7,9	37,5	95	26,0	300/500	500 / 1000
7x0,75	7,9	43,7	101	26,0	300/500	500 / 1000
12x0,75	10,5	74,9	170	26,0	300/500	500 / 1000
18x0,75	12,3	112,4	246	26,0	300/500	500 / 1000
27x0,75	14,9	168,6	357	26,0	300/500	500 / 1000
36x0,75	16,7	224,8	465	26,0	300/500	500 / 1000
48x0,75	19,3	299,7	615	26,0	300/500	500 / 1000
60x0,75	21,4	374,7	764	26,0	300/500	500 / 1000
2x1	6,1	16,7	48	19,5	300/500	500 / 1000
3x1	6,4	25,0	62	19,5	300/500	500 / 1000
4x1	7,0	33,3	76	19,5	300/500	500 / 1000
5x1	7,8	41,6	96	19,5	300/500	500 / 1000
6x1	8,6	50,0	117	19,5	300/500	500 / 1000
7x1	8,6	58,3	126	19,5	300/500	500 / 1000
12x1	11,2	100,0	204	19,5	300/500	500 / 1000
18x1	13,4	149,9	303	19,5	300/500	500 / 1000
27x1	16,2	224,9	440	19,5	300/500	500 / 1000
36x1	18,4	299,9	583	19,5	300/500	500 / 1000
48x1	21,2	399,8	768	19,5	300/500	500 / 1000
60x1	23,2	499,8	940	19,5	300/500	500 / 1000
2x1,5	6,7	24,4	60	13,3	300/500	500 / 1000
3x1,5	7,1	36,6	78	13,3	300/500	500 / 1000
4x1,5	7,9	48,9	101	13,3	300/500	500 / 1000
5x1,5	8,6	61,1	123	13,3	300/500	500 / 1000
6x1,5	9,5	73,3	150	13,3	300/500	500 / 1000
7x1,5	9,5	85,5	162	13,3	300/500	500 / 1000
12x1,5	12,6	146,6	272	13,3	300/500	500 / 1000
18x1,5	15,0	219,8	403	13,3	300/500	500 / 1000
27x1,5	18,2	329,8	585	13,3	300/500	500 / 1000
36x1,5	20,6	439,7	774	13,3	300/500	500 / 1000
48x1,5	23,8	586,2	1020	13,3	300/500	500 / 1000
60x1,5	26,2	732,8	1264	13,3	300/500	500 / 1000
2x2,5	8,2	40,7	91	7,98	300/500	500 / 1000
3x2,5	8,7	61,0	121	7,98	300/500	500 / 1000
4x2,5	9,7	81,4	157	7,98	300/500	500 / 1000
5x2,5	10,7	101,7	197	7,98	300/500	500 / 1000
6x2,5	11,9	122,1	240	7,98	300/500	500 / 1000
7x2,5	11,9	142,4	259	7,98	300/500	500 / 1000
12x2,5	15,8	244,2	434	7,98	300/500	500 / 1000
18x2,5	18,8	366,3	641	7,98	300/500	500 / 1000
27x2,5	22,9	549,4	941	7,98	300/500	500 / 1000
36x2,5	25,9	732,6	1243	7,98	300/500	500 / 1000
48x2,5	29,8	976,7	1635	7,98	300/500	500 / 1000
60x2,5	32,4	1220,9	1990	7,98	300/500	500 / 1000

YSLYCY



Code: YSLYCY Standard: TSE K 373

Y	: PVC
SL	: Control cable
C	: Braid Screen
YSLYCY-OB	: Cables without number, with different colored cores
YSLYCY-JB	: Cables without number, with different colored cores and cables with ground core (Yellow / Green)
YSLYCY-OZ	: White numbered core cables on insulated black
YSLYCY-JZ	: White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	39,0
0,75	26,0
1	19,5
1,5	13,3
2,5	7,98

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50363-3, DIN EN 50363-3, VDE 0207-363-3)
3- Single twist in layers
4- PVC Inner Sheath (EN 50363-4-1, DIN EN 50363-4-1, VDE 0207-363-4-1)
5- Tinned Copper Wire Braid Screen
6- PVC Sheath (EN 50363-4-1, DIN EN 50363-4-1, VDE 0207-363-4-1)

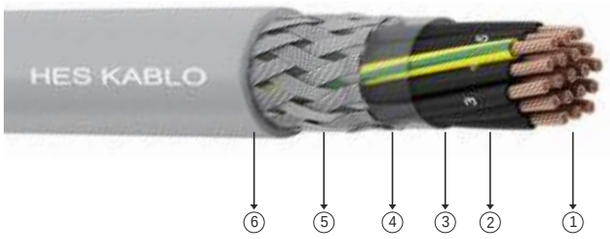
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in places with electromagnetics interference, in internal places, instrument and control engineering, industrial electronics, manufacture and mounting lines, measure-purpose and control-purpose machine manufacture, dry or humid places and in places with no mechanical stress.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,5	6,9	22,6	68	39,0	300/500	500 / 1000
3x0,5	7,2	27,9	78	39,0	300/500	500 / 1000
4x0,5	7,9	32,9	94	39,0	300/500	500 / 1000
5x0,5	8,3	38,7	107	39,0	300/500	500 / 1000
6x0,5	9,1	44,0	125	39,0	300/500	500 / 1000
7x0,5	9,1	48,2	130	39,0	300/500	500 / 1000
12x0,5	11,3	74,9	193	39,0	300/500	500 / 1000
18x0,5	13,1	105,4	268	39,0	300/500	500 / 1000
27x0,5	15,5	148,2	369	39,0	300/500	500 / 1000
36x0,5	17,1	188,5	461	39,0	300/500	500 / 1000
48x0,5	19,9	271,4	631	39,0	300/500	500 / 1000
60x0,5	21,6	325,1	747	39,0	300/500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,75	7,3	28,1	78	26,0	300/500	500 / 1000
3x0,75	7,8	34,9	94	26,0	300/500	500 / 1000
4x0,75	8,3	42,9	109	26,0	300/500	500 / 1000
5x0,75	9,1	50,3	130	26,0	300/500	500 / 1000
6x0,75	9,7	58,6	148	26,0	300/500	500 / 1000
7x0,75	9,7	64,8	155	26,0	300/500	500 / 1000
12x0,75	12,5	103,0	246	26,0	300/500	500 / 1000
18x0,75	14,3	144,5	333	26,0	300/500	500 / 1000
27x0,75	16,9	206,9	461	26,0	300/500	500 / 1000
36x0,75	19,1	295,1	620	26,0	300/500	500 / 1000
48x0,75	21,7	375,8	788	26,0	300/500	500 / 1000
60x0,75	23,8	462,9	959	26,0	300/500	500 / 1000
2x1	7,9	33,6	91	19,5	300/500	500 / 1000
3x1	8,2	42,7	106	19,5	300/500	500 / 1000
4x1	8,8	52,3	124	19,5	300/500	500 / 1000
5x1	9,6	62,6	149	19,5	300/500	500 / 1000
6x1	10,4	73,3	175	19,5	300/500	500 / 1000
7x1	10,6	82,0	189	19,5	300/500	500 / 1000
12x1	13,2	130,7	286	19,5	300/500	500 / 1000
18x1	15,4	185,7	399	19,5	300/500	500 / 1000
27x1	18,6	288,7	586	19,5	300/500	500 / 1000
36x1	20,8	373,4	749	19,5	300/500	500 / 1000
48x1	23,6	487,5	962	19,5	300/500	500 / 1000
60x1	25,8	592,1	1160	19,5	300/500	500 / 1000
2x1,5	8,5	42,6	106	13,3	300/500	500 / 1000
3x1,5	8,9	55,7	126	13,3	300/500	500 / 1000
4x1,5	9,7	70,0	154	13,3	300/500	500 / 1000
5x1,5	10,4	84,7	181	13,3	300/500	500 / 1000
6x1,5	11,3	98,3	213	13,3	300/500	500 / 1000
7x1,5	11,3	110,5	225	13,3	300/500	500 / 1000
12x1,5	14,6	181,2	363	13,3	300/500	500 / 1000
18x1,5	17,0	258,4	508	13,3	300/500	500 / 1000
27x1,5	20,6	403,2	749	13,3	300/500	500 / 1000
36x1,5	23,0	518,5	956	13,3	300/500	500 / 1000
48x1,5	26,4	679,9	1245	13,3	300/500	500 / 1000
60x1,5	28,8	837,5	1512	13,3	300/500	500 / 1000
2x2,5	10,0	62,3	146	7,98	300/500	500 / 1000
3x2,5	10,5	84,9	180	7,98	300/500	500 / 1000
4x2,5	11,5	106,8	221	7,98	300/500	500 / 1000
5x2,5	12,7	130,2	275	7,98	300/500	500 / 1000
6x2,5	13,9	153,5	324	7,98	300/500	500 / 1000
7x2,5	13,9	173,8	344	7,98	300/500	500 / 1000
12x2,5	18,0	307,1	568	7,98	300/500	500 / 1000
18x2,5	21,2	441,2	810	7,98	300/500	500 / 1000
27x2,5	25,5	641,4	1159	7,98	300/500	500 / 1000
36x2,5	28,5	836,8	1488	7,98	300/500	500 / 1000
48x2,5	32,6	1091,8	1928	7,98	300/500	500 / 1000
60x2,5	35,2	1348,2	2309	7,98	300/500	500 / 1000

YSLCY



Code: YSLCY Standard:

Y : PVC
SL : Control cable
C : Braid Screen
YSLCY-OB: Cables without number, with different colored cores
YSLCY-JB : Cables without number, with different colored cores and cables with ground core (Yellow / Green)
YSLCY-OZ: White numbered core cables on insulated black
YSLCY-JZ : White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)

Electrical Properties

Cross-Section (mm²)	Current Carrying Capacity (A)
0,5	39,0
0,75	26,0
1	19,5
1,5	13,3
2,5	7,98

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50363-3, DIN EN 50363-3, VDE 0207-363-3)
3- Single twist in layers
4- Separator tape
5- Tinned Copper Wire Braid Screen
6- PVC Sheath (EN 50363-4-1, DIN EN 50363-4-1, VDE 0207-363-4-1)

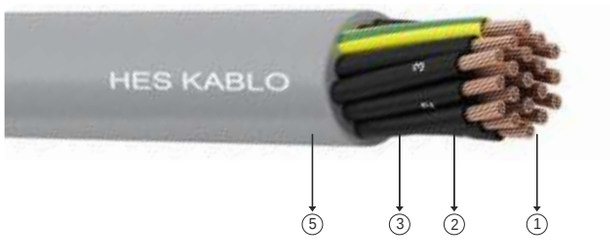
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in places with electromagnetics interference, in internal places, instrument and control engineering, industrial electronics, manufacture and mounting lines, measure-purpose and control-purpose machine manufacture, dry or humid places and in places with no mechanical stress.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,5	5,5	22,6	32	39,0	300/500	500 / 1000
3x0,5	5,8	27,9	39	39,0	300/500	500 / 1000
4x0,5	6,5	32,9	47	39,0	300/500	500 / 1000
5x0,5	6,9	38,7	54	39,0	300/500	500 / 1000
6x0,5	7,7	44,0	63	39,0	300/500	500 / 1000
7x0,5	7,7	48,2	67	39,0	300/500	500 / 1000
12x0,5	9,9	74,9	92	39,0	300/500	500 / 1000
18x0,5	11,5	105,4	126	39,0	300/500	500 / 1000
27x0,5	13,9	148,2	169	39,0	300/500	500 / 1000
36x0,5	15,5	188,5	212	39,0	300/500	500 / 1000
48x0,5	18,1	271,4	298	39,0	300/500	500 / 1000
60x0,5	19,8	325,1	352	39,0	300/500	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,75	5,9	28,1	36	26,0	300/500	500 / 1000
3x0,75	6,4	34,9	48	26,0	300/500	500 / 1000
4x0,75	6,9	42,9	56	26,0	300/500	500 / 1000
5x0,75	7,7	50,3	67	26,0	300/500	500 / 1000
6x0,75	8,3	58,6	75	26,0	300/500	500 / 1000
7x0,75	8,3	64,8	81	26,0	300/500	500 / 1000
12x0,75	10,9	103,0	119	26,0	300/500	500 / 1000
18x0,75	12,7	144,5	162	26,0	300/500	500 / 1000
27x0,75	15,3	206,9	220	26,0	300/500	500 / 1000
36x0,75	17,3	295,1	310	26,0	300/500	500 / 1000
48x0,75	19,9	375,8	386	26,0	300/500	500 / 1000
60x0,75	22,0	462,9	480	26,0	300/500	500 / 1000
2x1	6,5	33,6	44	19,5	300/500	500 / 1000
3x1	6,8	42,7	54	19,5	300/500	500 / 1000
4x1	7,4	52,3	63	19,5	300/500	500 / 1000
5x1	8,2	62,6	77	19,5	300/500	500 / 1000
6x1	9,0	73,3	91	19,5	300/500	500 / 1000
7x1	9,0	82,0	100	19,5	300/500	500 / 1000
12x1	11,6	130,7	140	19,5	300/500	500 / 1000
18x1	13,8	185,7	201	19,5	300/500	500 / 1000
27x1	16,8	288,7	296	19,5	300/500	500 / 1000
36x1	19,0	373,4	387	19,5	300/500	500 / 1000
48x1	21,8	487,5	490	19,5	300/500	500 / 1000
60x1	23,8	592,1	586	19,5	300/500	500 / 1000
2x1,5	7,1	42,6	50	13,3	300/500	500 / 1000
3x1,5	7,5	55,7	64	13,3	300/500	500 / 1000
4x1,5	8,3	70,0	81	13,3	300/500	500 / 1000
5x1,5	9,0	84,7	95	13,3	300/500	500 / 1000
6x1,5	9,9	98,3	111	13,3	300/500	500 / 1000
7x1,5	9,9	110,5	123	13,3	300/500	500 / 1000
12x1,5	13,0	181,2	183	13,3	300/500	500 / 1000
18x1,5	15,4	258,4	262	13,3	300/500	500 / 1000
27x1,5	18,8	403,2	389	13,3	300/500	500 / 1000
36x1,5	21,2	518,5	504	13,3	300/500	500 / 1000
48x1,5	24,4	679,9	640	13,3	300/500	500 / 1000
60x1,5	26,8	837,5	791	13,3	300/500	500 / 1000
2x2,5	8,6	62,3	67	7,98	300/500	500 / 1000
3x2,5	9,1	84,9	91	7,98	300/500	500 / 1000
4x2,5	10,1	106,8	114	7,98	300/500	500 / 1000
5x2,5	11,1	130,2	141	7,98	300/500	500 / 1000
6x2,5	12,3	153,5	166	7,98	300/500	500 / 1000
7x2,5	12,3	173,8	186	7,98	300/500	500 / 1000
12x2,5	16,4	307,1	296	7,98	300/500	500 / 1000
18x2,5	19,4	441,2	425	7,98	300/500	500 / 1000
27x2,5	23,5	641,4	592	7,98	300/500	500 / 1000
36x2,5	26,5	836,8	776	7,98	300/500	500 / 1000
48x2,5	30,4	1091,8	975	7,98	300/500	500 / 1000
60x2,5	33,0	1348,2	1172	7,98	300/500	500 / 1000

NLSY



Code: NLSY Standard: TSE K 374, VDE 0245-201

Y : PVC
NLSY-OB : Cables without number, with different colored cores
NLSY-JB : Cables without number, with different colored cores and cables with ground core (Yellow / Green)
NLSY-OZ : White numbered core cables on insulated black
NLSY-JZ : White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature : -5 °C / + 70 °C
Storage Temperature : -30 °C / + 70 °C
Min. bending radius (fixed) : 7,5 x D
Min. bending radius (moved) : 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50363-3, DIN EN 50363-3, VDE 0207-363-3)
3- Single twist in layers
4- Separator tape
5- PVC Sheath (EN 50363-4-1, DIN EN 50363-4-1, VDE 0207-363-4-1)

Electrical Properties

Cross-Section (mm²)	Conductor Resistance (Ω/km)	Max. Transfer Impedance at 30 Mhz (Ω/km)
39,0	0,5	250
26,0	0,75	250
19,5	1	250
13,3	1,5	250

Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in internal places, instrument and control engineering, industrial electronics, manufacture and mounting lines, measure-purpose and control-purpose machine manufacture, dry or humid places and in places with no mechanical stress.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,5	4,7	8,3	27	39,0	300/300	500 / 1000
3x0,5	5,0	12,5	35	39,0	300/300	500 / 1000
4x0,5	5,5	16,6	43	39,0	300/300	500 / 1000
5x0,5	5,9	20,8	53	39,0	300/300	500 / 1000
7x0,5	6,5	29,1	67	39,0	300/300	500 / 1000
12x0,5	8,7	49,9	112	39,0	300/300	500 / 1000
18x0,5	10,1	74,9	161	39,0	300/300	500 / 1000
25x0,5	11,8	104,0	214	39,0	300/300	500 / 1000
34x0,5	13,5	141,4	289	39,0	300/300	500 / 1000
50x0,5	16,4	208,0	422	39,0	300/300	500 / 1000
60x0,5	17,4	249,6	493	39,0	300/300	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,75	5,1	12,5	33	26,0	300/300	500 / 1000
3x0,75	5,4	18,7	44	26,0	300/300	500 / 1000
4x0,75	5,9	25,0	55	26,0	300/300	500 / 1000
5x0,75	6,5	31,2	67	26,0	300/300	500 / 1000
7x0,75	7,3	43,7	90	26,0	300/300	500 / 1000
12x0,75	9,5	74,9	145	26,0	300/300	500 / 1000
18x0,75	11,1	112,4	210	26,0	300/300	500 / 1000
25x0,75	13,0	156,1	280	26,0	300/300	500 / 1000
34x0,75	15,3	212,3	396	26,0	300/300	500 / 1000
50x0,75	18,0	312,2	556	26,0	300/300	500 / 1000
60x0,75	19,2	374,7	652	26,0	300/300	500 / 1000
2x1,0	5,5	16,7	39	19,5	300/300	500 / 1000
3x1,0	5,8	25,0	52	19,5	300/300	500 / 1000
4x1,0	6,4	33,3	66	19,5	300/300	500 / 1000
5x1,0	7,0	41,6	81	19,5	300/300	500 / 1000
7x1,0	7,8	58,3	109	19,5	300/300	500 / 1000
12x1,0	10,2	100,0	178	19,5	300/300	500 / 1000
18x1,0	12,0	149,9	259	19,5	300/300	500 / 1000
25x1,0	14,5	208,2	360	19,5	300/300	500 / 1000
34x1,0	16,6	283,2	487	19,5	300/300	500 / 1000
50x1,0	19,6	416,5	687	19,5	300/300	500 / 1000
60x1,0	21,2	499,8	829	19,5	300/300	500 / 1000
2x1,5	6,5	24,4	54	13,3	300/300	500 / 1000
3x1,5	6,9	36,6	73	13,3	300/300	500 / 1000
4x1,5	7,6	48,9	93	13,3	300/300	500 / 1000
5x1,5	8,5	61,1	119	13,3	300/300	500 / 1000
7x1,5	9,3	85,5	155	13,3	300/300	500 / 1000
12x1,5	12,3	146,6	254	13,3	300/300	500 / 1000
18x1,5	14,8	219,8	388	13,3	300/300	500 / 1000
25x1,5	17,4	305,3	518	13,3	300/300	500 / 1000
34x1,5	20,0	415,3	704	13,3	300/300	500 / 1000
50x1,5	24,1	610,7	1022	13,3	300/300	500 / 1000
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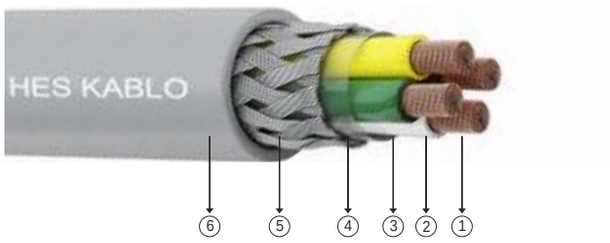
NLSCY



Code: NLSCY Standard: TSE K 374, VDE 0245-201

Y	: PVC
C	: Braid Screen
NLSCY-OB	: Cables without number, with different colored cores
NLSCY-JB	: Cables without number, with different colored cores and cables with ground core (Yellow / Green)
NLSCY-OZ	: White numbered core cables on insulated black
NLSCY-JZ	: White numbered core cables on insulated black and cables with ground core (Yellow / Green)

Technical Properties

Operating Temperature	: -5 °C / + 70 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / EN 60332-1-2, IEC 60332-1-2, DIN EN 60332-1-2 (VDE 0482-332-1-2)

Electrical Properties

Cross-Section (mm²)	Conductor Resistance (Ω/km)
0,5	39,0
0,75	26,0
1	19,5
1,5	13,3

Construction

1- Flexible copper conductor / Class 5 (EN 60228, IEC 60228, DIN VDE 0295)
2- PVC insulation (EN 50363-3, DIN EN 50363-3, VDE 0207-363-3)
3- Single twist in layers
4- Separator tape
5- Tinned Copper Wire Braid Screen
6- PVC Sheath (EN 50363-4-1, DIN EN 50363-4-1, VDE 0207-363-4-1)

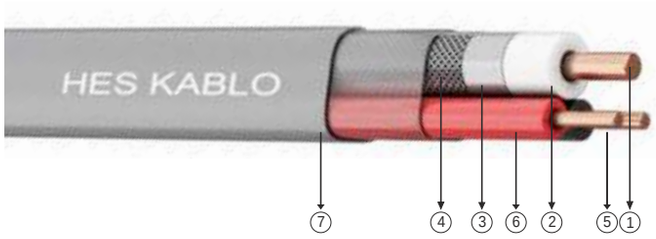
Applications

Appropriate for use in narrow space implementations thanks to its flexible structure, these cables can be used in places with electromagnetics interference, in internal places, instrument and control engineering, industrial electronics, manufacture and mounting lines, measure-purpose and control-purpose machine manufacture, dry or humid places and in places with no mechanical stress.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,5	5,1	18,9	39	39,0	300/300	500 / 1000
3x0,5	5,4	23,8	47	39,0	300/300	500 / 1000
4x0,5	5,9	29,2	57	39,0	300/300	500 / 1000
5x0,5	6,3	34,8	68	39,0	300/300	500 / 1000
7x0,5	7,1	44,6	87	39,0	300/300	500 / 1000
12x0,5	9,1	71,0	135	39,0	300/300	500 / 1000
18x0,5	10,5	99,9	188	39,0	300/300	500 / 1000
25x0,5	12,2	134,7	246	39,0	300/300	500 / 1000
34x0,5	13,9	177,1	326	39,0	300/300	500 / 1000
50x0,5	17,0	271,3	488	39,0	300/300	500 / 1000
60x0,5	18,0	320,5	567	39,0	300/300	500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(U0/U) V	m
2x0,75	5,5	24,1	46	26,0	300/300	500 / 1000
3x0,75	5,8	31,3	57	26,0	300/300	500 / 1000
4x0,75	6,3	39,0	70	26,0	300/300	500 / 1000
5x0,75	6,9	46,7	84	26,0	300/300	500 / 1000
7x0,75	7,7	61,0	109	26,0	300/300	500 / 1000
12x0,75	9,9	98,8	171	26,0	300/300	500 / 1000
18x0,75	11,5	140,5	240	26,0	300/300	500 / 1000
25x0,75	13,4	190,8	316	26,0	300/300	500 / 1000
34x0,75	15,7	250,7	436	26,0	300/300	500 / 1000
50x0,75	18,6	384,8	631	26,0	300/300	500 / 1000
60x0,75	19,8	450,2	731	26,0	300/300	500 / 1000
2x1,0	5,9	29,3	53	19,5	300/300	500 / 1000
3x1,0	6,2	38,7	67	19,5	300/300	500 / 1000
4x1,0	6,8	48,6	82	19,5	300/300	500 / 1000
5x1,0	7,6	58,8	103	19,5	300/300	500 / 1000
7x1,0	8,2	77,1	129	19,5	300/300	500 / 1000
12x1,0	10,6	125,3	204	19,5	300/300	500 / 1000
18x1,0	12,4	180,9	291	19,5	300/300	500 / 1000
25x1,0	14,9	244,9	399	19,5	300/300	500 / 1000
34x1,0	17,2	347,0	553	19,5	300/300	500 / 1000
50x1,0	20,2	493,1	766	19,5	300/300	500 / 1000
60x1,0	21,8	587,4	920	19,5	300/300	500 / 1000
2x1,5	6,9	39,9	71	13,3	300/300	500 / 1000
3x1,5	7,5	53,6	95	13,3	300/300	500 / 1000
4x1,5	8,2	67,2	116	13,3	300/300	500 / 1000
5x1,5	8,9	81,9	142	13,3	300/300	500 / 1000
7x1,5	9,7	108,9	180	13,3	300/300	500 / 1000
12x1,5	12,7	178,0	287	13,3	300/300	500 / 1000
18x1,5	15,2	257,2	427	13,3	300/300	500 / 1000
25x1,5	18,0	376,4	592	13,3	300/300	500 / 1000
34x1,5	20,6	493,0	785	13,3	300/300	500 / 1000
50x1,5	24,7	705,1	1120	13,3	300/300	500 / 1000
60x1,5	26,2	836,9	1309	13,3	300/300	500 / 1000

CCTV RG 59 PVC Camera Cables



Code: CCTV RG 59 PVC Standard: TSE / TS 13778

CCTV : Closed Circuit TV System
RG : Radio Frequency
59 : Conductor Wire Diameter
PVC : PVC Sheath

Technical Properties

Inner Conductor Diameter : 0,81±0,02 mm
Insulation Diameter : 3,7±0,2 mm
First Screen : Al-PET Foil (Coverage %100)
Secand Screen : Tinned Copper Wire Braid
Outer Conductor : Stranded Electrolytic Copper
Sheath Colour : White
Sheath Material : PVC
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 1500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Annealed copper wire (TS EN 60228 Class 1)
2- Insulation : Physical Foamed Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Conductor : Stranded Electrolytic Copper (TS EN 60228)
6- Sheath Material : PVC (TS EN 50290-2-21) (White, Brown, Green, Yellow, Grey, Pink, Blue, Red, Black, Violet, Turquoise, Orange)
7- Outer Sheath : PVC Outer sheath with white coloured (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems. It provides transmission of display, power, audio and control signals at the same time.

Attenuahier (Max)

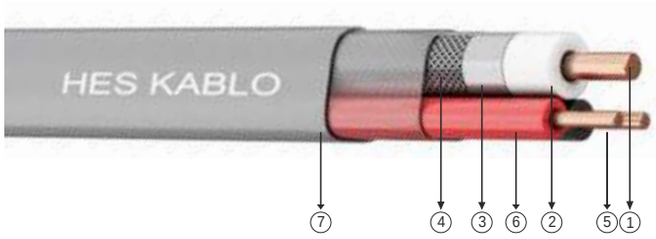
Mhz				
5	200	400	800	1000
dB/100 m				
2,85	12,3	18,5	26,6	30,0

Return Loss (Min)

Mhz	
5-470	470-1000
dB	
>20	>18

Number of Cores and Cross-Section	Outer Diameter (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	Ω/km	(V)	m
2x0,22	8,4	69,8	96,0	250	100 / 300 / 500 / 1000
2x0,25	8,4	70,4	78,0	250	100 / 300 / 500 / 1000
2x0,50	8,8	78,2	39,0	250	100 / 300 / 500 / 1000
2x0,75	9,1	86,3	26,0	250	100 / 300 / 500 / 1000
4x0,22	8,4	76,6	96,0	250	100 / 300 / 500 / 1000
4x0,25	8,4	77,6	78,0	250	100 / 300 / 500 / 1000
4x0,50	8,8	91,7	39,0	250	100 / 300 / 500 / 1000
2x0,50 + 2x0,22	8,8	84,9	39,0 / 96,0	250	100 / 300 / 500 / 1000

CCTV RG 59 LSZH Camera Cables



Code: CCTV RG 59 LSZH Standard: TSE / TS 13778

CCTV : Closed Circuit TV System
RG : Radio Frequency
59 : Conductor Wire Diameter
LSZH : HFFR / LSZH Sheath

Technical Properties

Inner Conductor Diameter : 0,81±0,02 mm
Insulation Diameter : 3,7±0,2 mm
First Screen : Al-PET Foil (Coverage %100)
Secand Screen : Tinned Copper Wire Braid
Outer Conductor : Stranded Electrolytic Copper
Sheath Colour : White
Sheath Material : LSZH
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 1500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Annealed copper wire (TS EN 60228 Class 1)
2- Insulation : Physical Foamed Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin From Tinned Copper Wire Braid
5- Outer Conductor : Stranded Electrolytic Copper (TS EN 60228)
6- Sheath Material : LSZH (TS EN 50290-2-26) (White, Brown, Green, Yellow, Grey, Pink, Blue, Red, Black, Violet, Turquoise, Orange)
7- OuterSheath : LSZH Outer sheath with white coloured (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems. It provides transmission of display, power, audio and control signals at the same time.

Attenuahier (Max)

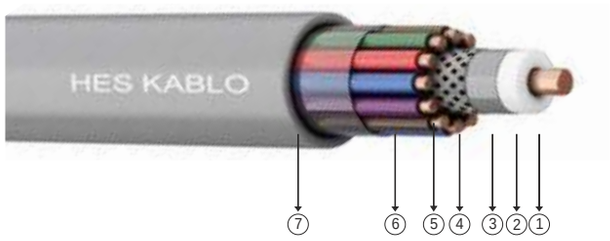
Mhz				
5	200	400	800	1000
dB/100 m				
2,85	12,3	18,5	26,6	30,0

Return Loss (Min)

Mhz	
5-470	470-1000
dB	
>20	>18

Number of Cores and Cross-Section	Outer Diameter (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	Ω/km	(V)	m
2x0,22	8,4	75,3	96,0	250	100 / 300 / 500 / 1000
2x0,25	8,4	75,9	78,0	250	100 / 300 / 500 / 1000
2x0,50	8,8	83,9	39,0	250	100 / 300 / 500 / 1000
2x0,75	9,1	92,1	26,0	250	100 / 300 / 500 / 1000
4x0,22	8,4	82,0	96,0	250	100 / 300 / 500 / 1000
4x0,25	8,4	83,1	78,0	250	100 / 300 / 500 / 1000
4x0,50	8,8	97,3	39,0	250	100 / 300 / 500 / 1000
2x0,50 + 2x0,22	8,8	90,6	39,0 / 96,0	250	100 / 300 / 500 / 1000

CCTV RG 6 PVC Camera Cables



Code: CCTV RG 6 PVC Standard: TSE / TS 13778

CCTV : Closed Circuit TV System
RG : Radio Frequency
6 : Conductor Wire Diameter
PVC : PVC Sheath

Technical Properties

Inner Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : Al-PET Foil (Coverage %100)
Secand Screen : Tinned Copper Wire Braid
Outer Conductors: Stranded Electrolytic Copper
Sheath Colour : White
Sheath Material : PVC
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 1500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Annealed copper wire (TS EN 60228 Class 1)
2- Insulation : Physical Foamed Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Thin From Tinned Copper Wire Braid
5- Outer Conductor : Stranded Electrolytic Copper (TS EN 60228)
6- Sheath Material : PVC (TS EN 50290-2-21) (White, Brown, Green, Yellow, Grey, Pink, Blue, Red, Black, Violet, Turquoise, Orange)
7- OuterSheath : PVC Outer sheath with white coloured (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems. It provides transmission of display, power, audio and control signals at the same time.

Attenuahier (Max)

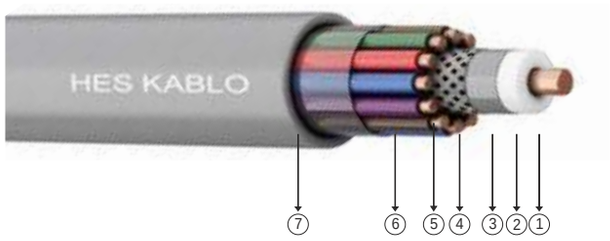
Mhz				
5	200	400	800	1000
dB/100 m				
2,80	10,5	14,8	21,5	24,6

Return Loss (Min)

Mhz	
5-470	470-1000
dB	
>20	>18

Number of Cores and Cross-Section	Outer Diameter (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	Ω/km	(V)	m
2x0,22	9,1	80,7	96,0	250	100 / 300 / 500 / 1000
2x0,25	9,1	81,3	78,0	250	100 / 300 / 500 / 1000
2x0,50	9,5	89,0	39,0	250	100 / 300 / 500 / 1000
2x0,75	9,8	96,9	26,0	250	100 / 300 / 500 / 1000
4x0,22	9,1	87,5	96,0	250	100 / 300 / 500 / 1000
4x0,25	9,1	88,5	78,0	250	100 / 300 / 500 / 1000
4x0,50	9,5	102,5	39,0	250	100 / 300 / 500 / 1000
2x0,50 + 2x0,22	9,5	95,7	39,0 / 96,0	250	100 / 300 / 500 / 1000

CCTV RG 6 LZSH Camera Cables



Code: CCTV RG 6 LSZH Standard: TSE / TS 13778

CCTV : Closed Circuit TV System
RG : Radio Frequency
6 : Conductor Wire Diameter
LSZH : HFFR / LSZH Sheath

Technical Properties

Inner Conductor Diameter : 1,02±0,02 mm
Insulation Diameter : 4,6±0,2 mm
First Screen : Al-PET Foil (Coverage %100)
Secand Screen : Tinned Copper Wire Braid
Outer Conductors: Stranded Electrolytic Copper
Sheath Colour : White
Sheath Material : LSZH
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 1500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Annealed copper wire (TS EN 60228 Class 1)
2- Insulation : Physical Foamed Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Conductor : Stranded Electrolytic Copper (TS EN 60228)
6- Sheath Material : LSZH (TS EN 50290-2-26) (White, Brown, Green, Yellow, Grey, Pink, Blue, Red, Black, Violet, Turquoise, Orange)
7- OuterSheath : LSZH Outer sheath with white coloured (TS EN 50290-2-27)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems. It provides transmission of display, power, audio and control signals at the same time.

Attenuahier (Max)

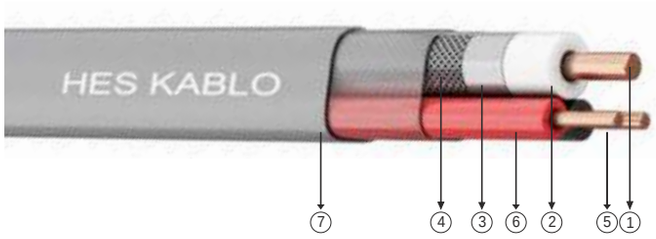
Mhz				
5	200	400	800	1000
dB/100 m				
2,80	10,5	14,8	21,5	24,6

Return Loss (Min)

Mhz	
5-470	470-1000
dB	
>20	>18

Number of Cores and Cross-Section	Outer Diameter (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	Ω/km	(V)	m
2x0,22	9,1	86,5	96,0	250	100 / 300 / 500 / 1000
2x0,25	9,1	87,0	78,0	250	100 / 300 / 500 / 1000
2x0,50	9,5	94,9	39,0	250	100 / 300 / 500 / 1000
2x0,75	9,8	102,9	26,0	250	100 / 300 / 500 / 1000
4x0,22	9,1	93,2	96,0	250	100 / 300 / 500 / 1000
4x0,25	9,1	94,3	78,0	250	100 / 300 / 500 / 1000
4x0,50	9,5	108,3	39,0	250	100 / 300 / 500 / 1000
2x0,50 + 2x0,22	9,5	101,6	39,0 / 96,0	250	100 / 300 / 500 / 1000

CCTV MINI PVC Camera Cables



Code: CCTV MİNİ PVC Standard: TSE / TS 13778

CCTV : Closed Circuit TV System
MİNİ : Conductor Wire Diameter
PVC : PVC Sheath

Technical Properties

Inner Conductor Diameter : 0,65±0,02 mm
Insulation Diameter : 2,9±0,2 mm
First Screen : Al-PET Foil (Coverage %100)
Secand Screen : Tinned Copper Wire Braid
Outer Conductors: Stranded Electrolytic Copper
Sheath Colour : White
Sheath Material : PVC
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 1500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Annealed copper wire (TS EN 60228 Class 1)
2- Insulation : Physical Foamed Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Conductor : Stranded Electrolytic Copper (TS EN 60228)
6- Sheath Material : PVC (TS EN 50290-2-21) (White, Brown, Green, Yellow, Grey, Pink, Blue, Red, Black, Violet, Turquoise, Orange)
7- OuterSheath : PVC Outer sheath with white coloured (TS EN 50290-2-22)

Applications

Used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems. It provides transmission of display, power, audio and control signals at the same time.

Attenuahier (Max)

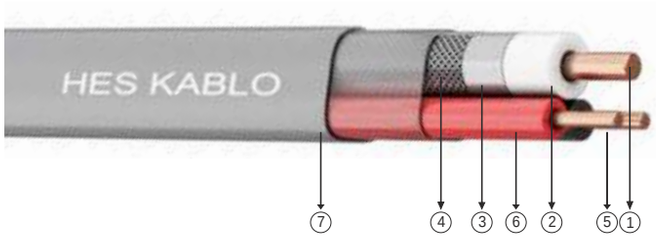
Mhz				
5	200	400	800	1000
dB/100 m				
3,40	16,3	23,8	34,2	38,4

Return Loss (Min)

Mhz	
5-470	470-1000
dB	
>20	>18

Number of Cores and Cross-Section	Outer Diameter (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	Ω/km	(V)	m
2x0,22	6,3	35,3	96,0	250	100 / 300 / 500 / 1000
2x0,25	6,3	35,6	78,0	250	100 / 300 / 500 / 1000
2x0,50	6,7	43,3	39,0	250	100 / 300 / 500 / 1000
2x0,50 + 1x0,25	6,7	46,9	39,0 / 78,0	250	100 / 300 / 500 / 1000
2x0,50 + 2x0,22	6,7	50,2	39,0 / 96,0	250	100 / 300 / 500 / 1000
2x0,50 + 2x0,25	6,7	50,6	39,0 / 78,0	250	100 / 300 / 500 / 1000
2x0,50 + 3x0,25	6,7	54,2	39,0 / 78,0	250	100 / 300 / 500 / 1000
2x0,50 + 4x0,25	6,7	57,8	39,0 / 78,0	250	100 / 300 / 500 / 1000
12x0,25	7,5	76,3	78,0	250	100 / 300 / 500 / 1000

CCTV MINI LSZH Camera Cables



Code: CCTV MİNİ LSZH Standard: TSE / TS 13778

CCTV : Closed Circuit TV System
MİNİ : Conductor Wire Diameter
LSZH : HFFR / LSZH Sheath

Technical Properties

Inner Conductor Diameter : 0,65±0,02 mm
Insulation Diameter : 2,9±0,2 mm
First Screen : Al-PET Foil (Coverage %100)
Secand Screen : Tinned Copper Wire Braid
Outer Conductors: Stranded Electrolytic Copper
Sheath Colour : White
Sheath Material : LSZH
Package : 100 - 300 m Coil / 500 - 1000 m Drum

Electrical Properties

Impedance : 75±3 Ohm
Nominal Capacitance : 54±2 pF/m (Conductor/Screen)
Velocity of Prop. : %82±2
Insulation Resistance : 2000 Mohm x km (Min.)
Test Voltage (AC 50 Hz) : 1500 V / 1 Minutes
Operating Temperature : -40°C, +70°C
Min. Bending Radius : 10 x D (mm) (D:Overall Diameter)
CPR Fire Class : Euro - Class E

Construction

1- Conductor : Annealed copper wire (TS EN 60228 Class 1)
2- Insulation : Physical Foamed Polyethylene (TS EN 50290-2-37)
3- First Screen : One Side Copolyedmer Coated Aluminum Foil (%100 Coverage)
4- Secand Screen : Tinned Copper Wire Braid
5- Outer Conductor : Stranded Electrolytic Copper (TS EN 60228)
6- Sheath Material : LSZH (TS EN 50290-2-26) (White, Brown, Green, Yellow, Grey, Pink, Blue, Red, Black, Violet, Turquoise, Orange)
7- Outer Sheath : LSZH Outer sheath with white coloured (TS EN 50290-2-27)

Applications

They are used in indoor CATV (Cable TV) systems, individual - central antenna and satellite distribution systems, CCTV camera security systems. It provides transmission of display, power, audio and control signals at the same time.

Attenuahier (Max)

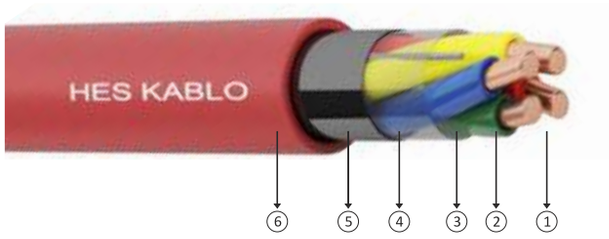
Mhz				
5	200	400	800	1000
dB/100 m				
3,40	16,3	23,8	34,2	38,4

Return Loss (Min)

Mhz	
5-470	470-1000
dB	
>20	>18

Number of Cores and Cross-Section	Outer Diameter (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	Ω/km	(V)	m
2x0,22	6,3	37,8	96,0	250	100 / 300 / 500 / 1000
2x0,25	6,3	38,2	78,0	250	100 / 300 / 500 / 1000
2x0,50	6,7	46,0	39,0	250	100 / 300 / 500 / 1000
2x0,50 + 1x0,25	6,7	49,6	39,0 / 78,0	250	100 / 300 / 500 / 1000
2x0,50 + 2x0,22	6,7	52,9	39,0 / 96,0	250	100 / 300 / 500 / 1000
2x0,50 + 2x0,25	6,7	53,2	39,0 / 78,0	250	100 / 300 / 500 / 1000
2x0,50 + 3x0,25	6,7	56,8	39,0 / 78,0	250	100 / 300 / 500 / 1000
2x0,50 + 4x0,25	6,7	60,5	39,0 / 78,0	250	100 / 300 / 500 / 1000
12x0,25	7,5	79,2	78,0	250	100 / 300 / 500 / 1000

J-Y(St)Y..Lg



Code: J-Y(St)Y..Lg Standard: TSE / TS 13767

J : Duct Cables
Y : PVC Insulation and Sheath
(St) : AL-PET Foil
Lg : Double Twisted Pair Structure

Technical Properties

Operating Temperature	: -5 °C / + 50 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / IEC 60332-1-2

Electrical Properties

Nominal Capacitance	: max.100± nF/km
Capacitance Unbalance	: max.300± pF/100m
Insulation Resistance	: 100 Mohm x km (Min.)
Test Voltage (AC 50 Hz) (Conductor-Conductor)	: 800 V / 1 Minutes
Test Voltage (AC 50 Hz) (Conductor-Screen)	: 800 V / 1 Minutes

Construction

1- Conductor : Annealed copper wire (TS EN 60228)
2- Insulation : PVC insulation (EN 50290-2-21) (Red, White, Black, Brown, Blue, Yellow, Gray, Green)
3- Core : Single twist in layers
4- Wrapping : Polyester Tape
5- Screen : Tinned Copper Wire and AL-PET Foil
6- Outer Sheath : Gray or Red PVC Sheath (EN 50290-2-22)

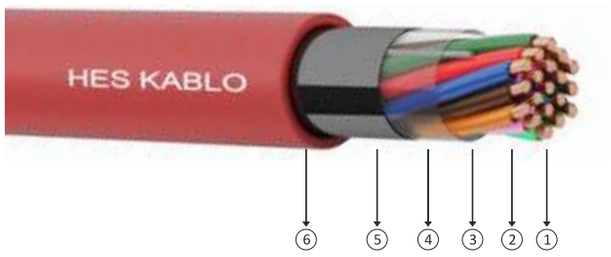
Applications

Used in fire notification systems, control panels and detectors, buttons and area control modules. Furthermore, they can be used in signal, control and data transmissions.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm	mm	kg/km	kg/km	Ω/km	(V)	m
1x2x0,6	4,8	5	28	130	300	100 / 500 / 1000
2x2x0,6	5,7	10	39	130	300	100 / 500 / 1000
3x2x0,6	7,4	15	55	130	300	100 / 500 / 1000
4x2x0,6	7,4	20	62	130	300	100 / 500 / 1000
5x2x0,6	7,8	25	71	130	300	100 / 500 / 1000
6x2x0,6	8,6	30	83	130	300	100 / 500 / 1000
8x2x0,6	8,7	40	96	130	300	100 / 500 / 1000
10x2x0,6	8,8	51	110	130	300	100 / 500 / 1000
16x2x0,6	11,3	81	165	130	300	100 / 500 / 1000
20x2x0,6	12,6	101	209	130	300	100 / 500 / 1000
24x2x0,6	12,6	121	235	130	300	100 / 500 / 1000
30x2x0,6	14,0	152	283	130	300	100 / 500 / 1000
40x2x0,6	15,3	202	359	130	300	100 / 500 / 1000
50x2x0,6	16,6	253	432	130	300	100 / 500 / 1000
60x2x0,6	16,6	303	501	130	300	100 / 500 / 1000
80x2x0,6	20,8	405	678	130	300	100 / 500 / 1000
100x2x0,6	23,4	506	850	130	300	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
1x2x0,8	6,0	9	41	73,2	300	100 / 500 / 1000
2x2x0,8	7,5	18	63	73,2	300	100 / 500 / 1000
3x2x0,8	10,2	27	92	73,2	300	100 / 500 / 1000
4x2x0,8	10,2	36	105	73,2	300	100 / 500 / 1000
5x2x0,8	10,8	45	123	73,2	300	100 / 500 / 1000
6x2x0,8	12,5	54	157	73,2	300	100 / 500 / 1000
8x2x0,8	12,7	72	184	73,2	300	100 / 500 / 1000
10x2x0,8	12,9	90	212	73,2	300	100 / 500 / 1000
16x2x0,8	16,6	144	321	73,2	300	100 / 500 / 1000
20x2x0,8	18,6	180	403	73,2	300	100 / 500 / 1000
24x2x0,8	18,6	216	458	73,2	300	100 / 500 / 1000
30x2x0,8	20,8	270	555	73,2	300	100 / 500 / 1000
40x2x0,8	22,8	360	709	73,2	300	100 / 500 / 1000
50x2x0,8	25,4	450	883	73,2	300	100 / 500 / 1000
60x2x0,8	25,4	539	1024	73,2	300	100 / 500 / 1000
80x2x0,8	31,9	719	1380	73,2	300	100 / 500 / 1000
100x2x0,8	35,6	899	1720	73,2	300	100 / 500 / 1000

J-Y(St)Y..Bd



Code: J-Y(St)Y..Bd Standard: TSE / TS 13767

J : Duct Cables
Y : PVC Insulation and Sheath
(St) : AL-PET Foil
Bd : Quad Twisted Pair Structure

Technical Properties

Operating Temperature	: -5 °C / + 50 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / IEC 60332-1-2

Electrical Properties

Nominal Capacitance	: max.100± nF/km
Capacitance Unbalance	: max.300± pF/100m
Insulation Resistance	: 100 Mohm x km (Min.)
Test Voltage (AC 50 Hz) (Conductor-Conductor)	: 800 V / 1 Minutes
Test Voltage (AC 50 Hz) (Conductor-Screen)	: 800 V / 1 Minutes

Construction

1- Conductor : Annealed copper wire (TS EN 60228)
2- Insulation : PVC insulation (EN 50290-2-21) (Red, White, Black, Brown, Blue, Yellow, Gray, Green)
3- Core : Single twist in layers
4- Wrapping : Polyester Tape
5- Screen : Tinned Copper Wire and AL-PET Foil
6- Outer Sheath : Gray or Red PVC Sheath (EN 50290-2-22)

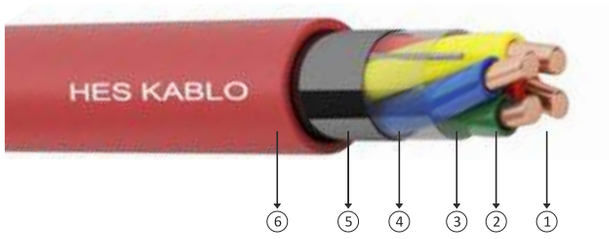
Applications

Used in fire notification systems, control panels and detectors, buttons and area control modules. Furthermore, they can be used in signal, control and data transmissions.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
1x2x0,6	5,0	5	30	130	300	100 / 500 / 1000
2x2x0,6	5,9	10	42	130	300	100 / 500 / 1000
3x2x0,6	7,6	15	58	130	300	100 / 500 / 1000
4x2x0,6	7,6	20	64	130	300	100 / 500 / 1000
5x2x0,6	8,0	25	73	130	300	100 / 500 / 1000
6x2x0,6	8,8	30	85	130	300	100 / 500 / 1000
8x2x0,6	8,9	40	98	130	300	100 / 500 / 1000
10x2x0,6	9,0	51	112	130	300	100 / 500 / 1000
16x2x0,6	11,3	81	165	130	300	100 / 500 / 1000
20x2x0,6	12,6	101	208	130	300	100 / 500 / 1000
24x2x0,6	12,6	121	235	130	300	100 / 500 / 1000
30x2x0,6	14,0	152	283	130	300	100 / 500 / 1000
40x2x0,6	15,3	202	359	130	300	100 / 500 / 1000
50x2x0,6	16,6	253	432	130	300	100 / 500 / 1000
60x2x0,6	16,6	303	498	130	300	100 / 500 / 1000
80x2x0,6	20,8	405	678	130	300	100 / 500 / 1000
100x2x0,6	23,4	506	845	130	300	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm²	mm	kg/km	kg/km	Ω/km	(V)	m
1x2x0,8	6,4	9	47	73,2	300	100 / 500 / 1000
2x2x0,8	7,9	18	69	73,2	300	100 / 500 / 1000
3x2x0,8	10,6	27	97	73,2	300	100 / 500 / 1000
4x2x0,8	10,6	36	111	73,2	300	100 / 500 / 1000
5x2x0,8	11,2	45	128	73,2	300	100 / 500 / 1000
6x2x0,8	12,9	54	163	73,2	300	100 / 500 / 1000
8x2x0,8	13,1	72	190	73,2	300	100 / 500 / 1000
10x2x0,8	13,3	90	218	73,2	300	100 / 500 / 1000
16x2x0,8	16,8	144	324	73,2	300	100 / 500 / 1000
20x2x0,8	18,8	180	405	73,2	300	100 / 500 / 1000
24x2x0,8	18,8	216	461	73,2	300	100 / 500 / 1000
30x2x0,8	21,0	270	559	73,2	300	100 / 500 / 1000
40x2x0,8	23,4	360	735	73,2	300	100 / 500 / 1000
50x2x0,8	25,6	450	887	73,2	300	100 / 500 / 1000
60x2x0,8	25,6	539	1023	73,2	300	100 / 500 / 1000
80x2x0,8	32,1	719	1383	73,2	300	100 / 500 / 1000
100x2x0,8	35,8	899	1717	73,2	300	100 / 500 / 1000

J-H(St)H..Lg



Code: J-H(St)H..Lg Standard: TSE / TS 13767

J : Duct Cables
H : LSZH / HFFR Insulation and Sheath
(St) : AL-PET Foil
Lg : Double Twisted Pair Structure

Technical Properties

Operating Temperature	: -5 °C / + 50 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / IEC 60332-1-2

Electrical Properties

Nominal Capacitance	: max.100± nF/km
Capacitance Unbalance	: max.300± pF/100m
Insulation Resistance	: 100 Mohm x km (Min.)
Test Voltage (AC 50 Hz) (Conductor-Conductor)	: 800 V / 1 Minutes
Test Voltage (AC 50 Hz) (Conductor-Screen)	: 800 V / 1 Minutes

Construction

1- Conductor	: Annealed copper wire (TS EN 60228)
2- Insulation	: LSZH insulation (EN 50290-2-26) (Red, White, Black, Brown, Blue, Yellow, Gray, Green)
3- Core	: Single twist in layers
4- Wrapping	: Polyester Tape
5- Screen	: Tinned Copper Wire and AL-PET Foil
6- Outer Sheath	: Gray or Red LSZH Sheath (EN 50290-2-27)

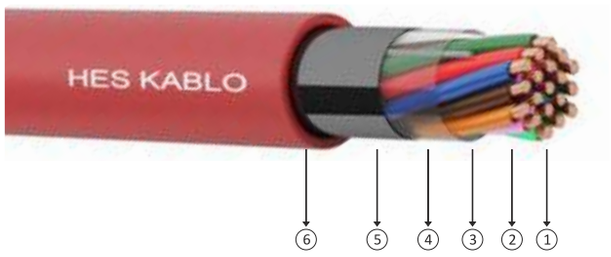
Applications

Used in fire notification systems, control panels and detectors, buttons and area control modules. Furthermore, they can be used in signal, control and data transmissions.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm	mm	kg/km	kg/km	Ω/km	(V)	m
1x2x0,6	4,8	5	29	130	300	100 / 500 / 1000
2x2x0,6	5,7	10	41	130	300	100 / 500 / 1000
3x2x0,6	7,4	15	57	130	300	100 / 500 / 1000
4x2x0,6	7,4	20	64	130	300	100 / 500 / 1000
5x2x0,6	7,8	25	73	130	300	100 / 500 / 1000
6x2x0,6	8,6	30	85	130	300	100 / 500 / 1000
8x2x0,6	8,7	40	98	130	300	100 / 500 / 1000
10x2x0,6	8,8	51	112	130	300	100 / 500 / 1000
16x2x0,6	11,3	81	168	130	300	100 / 500 / 1000
20x2x0,6	12,6	101	212	130	300	100 / 500 / 1000
24x2x0,6	12,6	121	239	130	300	100 / 500 / 1000
30x2x0,6	14,0	152	289	130	300	100 / 500 / 1000
40x2x0,6	15,3	202	364	130	300	100 / 500 / 1000
50x2x0,6	16,6	253	440	130	300	100 / 500 / 1000
60x2x0,6	16,6	303	506	130	300	100 / 500 / 1000
80x2x0,6	20,8	405	687	130	300	100 / 500 / 1000
100x2x0,6	23,4	506	860	130	300	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm	mm	kg/km	kg/km	Ω/km	(V)	m
1x2x0,8	6,0	9	43	73,2	300	100 / 500 / 1000
2x2x0,8	7,5	18	65	73,2	300	100 / 500 / 1000
3x2x0,8	10,2	27	95	73,2	300	100 / 500 / 1000
4x2x0,8	10,2	36	108	73,2	300	100 / 500 / 1000
5x2x0,8	10,8	45	126	73,2	300	100 / 500 / 1000
6x2x0,8	12,5	54	162	73,2	300	100 / 500 / 1000
8x2x0,8	12,7	72	189	73,2	300	100 / 500 / 1000
10x2x0,8	12,9	90	218	73,2	300	100 / 500 / 1000
16x2x0,8	16,6	144	327	73,2	300	100 / 500 / 1000
20x2x0,8	18,6	180	412	73,2	300	100 / 500 / 1000
24x2x0,8	18,6	216	467	73,2	300	100 / 500 / 1000
30x2x0,8	20,8	270	568	73,2	300	100 / 500 / 1000
40x2x0,8	22,8	360	721	73,2	300	100 / 500 / 1000
50x2x0,8	25,4	450	902	73,2	300	100 / 500 / 1000
60x2x0,8	25,4	539	1041	73,2	300	100 / 500 / 1000
80x2x0,8	31,9	719	1403	73,2	300	100 / 500 / 1000
100x2x0,8	35,6	899	1749	73,2	300	100 / 500 / 1000

J-H(St)H..Bd



Code: J-H(St)H..Bd Standard: TSE / TS 13767

J : Duct Cables
H : LSZH / HFFR Insulation and Sheath
(St) : AL-PET Foil
Bd : Quad Twisted Pair Structure

Technical Properties

Operating Temperature	: -5 °C / + 50 °C
Storage Temperature	: -30 °C / + 70 °C
Min. bending radius (fixed)	: 7,5 x D
Min. bending radius (moved)	: 15 x D

Fire Performance Tests

Vertical Flame Spread / IEC 60332-1-2

Electrical Properties

Nominal Capacitance	: max.100± nF/km
Capacitance Unbalance	: max.300± pF/100m
Insulation Resistance	: 100 Mohm x km (Min.)
Test Voltage (AC 50 Hz) (Conductor-Conductor)	: 800 V / 1 Minutes
Test Voltage (AC 50 Hz) (Conductor-Screen)	: 800 V / 1 Minutes

Construction

1- Conductor	: Annealed copper wire (TS EN 60228)
2- Insulation	: LSZH insulation (EN 50290-2-26) (Red, White, Black, Brown, Blue, Yellow, Gray, Green)
3- Core	: Single twist in layers
4- Wrapping	: Polyester Tape
5- Screen	: Tinned Copper Wire and AL-PET Foil
6- Outer Sheath	: Gray or Red LSZH Sheath (EN 50290-2-27)

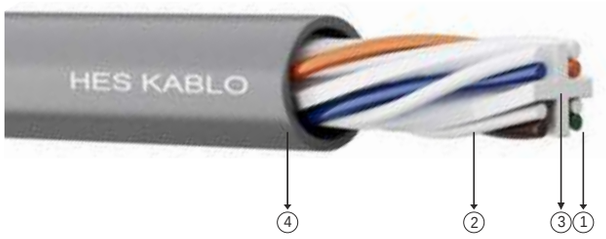
Applications

Used in fire notification systems, control panels and detectors, buttons and area control modules. Furthermore, they can be used in signal, control and data transmissions.

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm	mm	kg/km	kg/km	Ω/km	(V)	m
1x2x0,6	5,0	5	35	130	300	100 / 500 / 1000
2x2x0,6	5,9	10	49	130	300	100 / 500 / 1000
3x2x0,6	7,6	15	68	130	300	100 / 500 / 1000
4x2x0,6	7,6	20	76	130	300	100 / 500 / 1000
5x2x0,6	8,0	25	87	130	300	100 / 500 / 1000
6x2x0,6	8,8	30	100	130	300	100 / 500 / 1000
8x2x0,6	8,9	40	116	130	300	100 / 500 / 1000
10x2x0,6	9,0	51	133	130	300	100 / 500 / 1000
16x2x0,6	11,3	81	208	130	300	100 / 500 / 1000
20x2x0,6	12,6	101	247	130	300	100 / 500 / 1000
24x2x0,6	12,6	121	278	130	300	100 / 500 / 1000
30x2x0,6	14,0	152	336	130	300	100 / 500 / 1000
40x2x0,6	15,3	202	442	130	300	100 / 500 / 1000
50x2x0,6	16,6	253	533	130	300	100 / 500 / 1000
60x2x0,6	16,6	303	611	130	300	100 / 500 / 1000
80x2x0,6	20,8	405	827	130	300	100 / 500 / 1000
100x2x0,6	23,4	506	1005	130	300	100 / 500 / 1000

Number of Cores and Cross-Section	Outer Diameter (Approx)	Copper Weight (Approx)	Cable Weight (Approx)	Conductor Resistance (max.)	Operating Voltage	Delivery Lenght
mm	mm	kg/km	kg/km	Ω/km	(V)	m
1x2x0,8	6,4	9	49	73,2	300	100 / 500 / 1000
2x2x0,8	7,9	18	71	73,2	300	100 / 500 / 1000
3x2x0,8	10,6	27	100	73,2	300	100 / 500 / 1000
4x2x0,8	10,6	36	114	73,2	300	100 / 500 / 1000
5x2x0,8	11,2	45	132	73,2	300	100 / 500 / 1000
6x2x0,8	12,9	54	166	73,2	300	100 / 500 / 1000
8x2x0,8	13,1	72	195	73,2	300	100 / 500 / 1000
10x2x0,8	13,3	90	224	73,2	300	100 / 500 / 1000
16x2x0,8	16,8	144	331	73,2	300	100 / 500 / 1000
20x2x0,8	18,8	180	415	73,2	300	100 / 500 / 1000
24x2x0,8	18,8	216	471	73,2	300	100 / 500 / 1000
30x2x0,8	21,0	270	571	73,2	300	100 / 500 / 1000
40x2x0,8	23,4	360	748	73,2	300	100 / 500 / 1000
50x2x0,8	25,6	450	906	73,2	300	100 / 500 / 1000
60x2x0,8	25,6	539	1044	73,2	300	100 / 500 / 1000
80x2x0,8	32,1	719	1407	73,2	300	100 / 500 / 1000
100x2x0,8	35,8	899	1753	73,2	300	100 / 500 / 1000

CAT 6 U/UTP LSOH



Code: CAT 6 U/UTP LSOH Standard: TSE / TS IEC 61156-5+A1

CAT 6 : Category 6
U/UTP : Construction of Screen (Unscreened)
LSOH : LSZH/HFFR Sheath

Technical Properties

Conductor Diameter	: 23AWG
Insulation	: Solid Polyethylene
Insulation Colors	: Blue- Blue/White Orange - Orange/White Green - Green/White Brown - Brown/White
Overall Diameter	: nom. 6.0mm
Sheath Colour	: Gray
Sheath Material	: LSZH / HFFR
Net Weight	: 40 kg/km ±%3
Package	: 500 - 1000 m Drum
Operating Temperature	: -20°C, +60°C
Storage Temperature	: -40°C, +60°C
Installation Temperature	: 0°C, +50°C
Min. Bending Radius (fixed)	: 4 x D
Min. Bending Radius (moved)	: 8 x D

Construction

1- Conductor	: Annealed copper wire (TS EN 60228)
2- Insulation	: Solid Polyethylene (TS EN 50290-2-23)
3- Seperator	: Polyethylene
4- Outer Sheath	: Gray LSZH/HFFR (TS EN 50290-2-27)

Electrical Properties

DC Resistance	: max. 80 ? /km
Resistance Unbalance	: max. %2
Capacitance	: nom. 50 pF/m (@1kHz)
Capacitance Unbalance	: max. 1500 pF/m (@1kHz)
Operating Voltage	: max. 75 Vac
Insulation Resistance	: 500 Mohm x km (Min.)
Test Voltage (AC 50 Hz)	: 1700 V / 2 sn.
Velocity of Prop.	: nom. %67 (@100 Mhz)
Empedance	: 100±15 Ω 1-100 (Mhz) 100±20 Ω 100-160 (Mhz) 100±22 Ω 160-250 (Mhz)

Fire Performance Tests

Vertical Flame Spread	:IEC 60332-1-2
Acidity Determination and Conductivity	:IEC 60754-2
Smoke Density	:IEC 61034-2

Applications

They can be used in information frame systems, Gigabit Ethernet-supported audio, video and data applications and computer networks.

Frequency (Mhz)	Attenuahier (dB/100m)	NEXT (dB)	PS NEXT (dB)	ACR-F (dB/100m)	PS ACR-F (dB/100m)	Return Loss (RL) (dB)
	max.	min.	min.	min.	min.	min.
1,0	2,0	74,3	72,3	67,8	64,8	20,0
10,0	6,0	59,3	57,3	47,8	44,8	25,0
25,0	9,5	53,3	51,3	39,8	36,8	24,3
31,25	10,7	51,9	49,9	37,9	34,9	23,6
62,50	15,4	47,4	45,4	31,9	28,9	21,5
100	19,8	44,3	42,3	27,8	24,8	20,1
200	29,0	39,8	37,8	21,8	18,8	18,0
250	32,8	38,3	36,3	19,8	16,8	17,3