



## LIHH



### Kullanım Alanları

HFFR izole ve kılıflı kablolar, elektrik ve elektronik cihazlar arasında bilgi alışverişini sağlamak için kullanılan düşük duman yoğunluklu ve halogen gazı içermeyen yalıtım ve kılıflı kablolardır. Otellerde, fabrikalarda, alışveriş merkezlerinden apartmanlara kadar her alanda kullanılmaktadır.

Talep edildiği takdirde numara kodlu olarak aşağıda belirtilen tipler üretilebilir.

LIHH-OZ: Damarlar Siyah/Beyaz numara kodlu

LIHH-JZ: Toprak koruma damarlı (Sarı/Yeşil), damarlar Siyah/Beyaz numara kodlu

### Kablo Yapısı

#### İç İletken

Elektrolitik Bükülü Bakır Tel  
Sınıf 5 IEC 60228, DIN VDE EN 0295

#### İzolasyon

HFFR, DIN 47100 İzole renk uygulamasına uygun  
EN 50290-2-26

#### Büküm

Grup halinde bükülü damarlar

#### Dış Kılıf

HFFR\*, RAL 7001 Gri  
EN 50290-2-27

### Teknik Özellikler

#### Çalışma Sıcaklığı

-30°C ... + 70°C

#### Min. Bük. Yarı Çapı

15 x Kablo Çapı

#### İzolasyon Direnci

200 MΩ km

#### Çalışma Gerilimi

0.22 mm<sup>2</sup> - 0.34 mm<sup>2</sup>

250 V

≥ 0.50 mm<sup>2</sup>

300/500 V

#### Test Gerilimi

0.22 mm<sup>2</sup> - 0.34 mm<sup>2</sup>

1200 V

≥ 0.50 mm<sup>2</sup>

2000 V

#### Ambalaj

500 / 1000 m

### Standartlar

TS EN 13755, DIN VDE 0812

#### CPR Sınıfı

C<sub>ca</sub>, s1a, d1, a1

#### Alev Geciktiricilik

EN 60332-1-2

#### Korozif Gaz Testi

TS EN 60754-2

#### Duman Yoğunluğu

EN 61034-2

### Application

These cables are used for connections in the electronic control technology, signal and data transmission cables for voice frequency transmissions. Thanks to the HFFR material that is used in these cables, they are flame retardant, moreover they do not extract poisonous gases and black smoke when they are in fire. These cables are used in the hotels, factories, shopping centers, and apartments.

If there is a request from this cables as number coded, it can be able to produce the following types.

LIHH-OZ: Cores number coded and Black/White color

LIHH-JZ: Green/Yellow earthing core, cores number coded and Black/White color

### Cable Construction

#### Inner Conductor

Stranded Electrolytic Bare Copper  
Class 5 IEC 60228, DIN VDE 0295

#### Insulation

HFFR, DIN 47100 Suitable for isolated color  
EN 50290-2-26

#### Stranding

Twisted in group

#### Outer Sheath

HFFR\*, RAL 7001 Grey  
EN 50290-2-27

### Technical Properties

#### Operating Temperature

-30°C ... + 70°C

#### Min. Bending Radius

15 x Cable Diameter

#### Insulation Resistance

200 MΩ km

#### Operating Voltage

0.22 mm<sup>2</sup> - 0.34 mm<sup>2</sup>

250 V

≥ 0.50 mm<sup>2</sup>

300/500 V

#### Test Voltage

0.22 mm<sup>2</sup> - 0.34 mm<sup>2</sup>

1200 V

≥ 0.50 mm<sup>2</sup>

2000 V

#### Packing

500 / 1000 m

### Standards

TS EN 13755, DIN VDE 0812

#### Euro Class

C<sub>ca</sub>, s1a, d1, a1

#### Flame Retardancy

EN 60332-1-2

#### Corrosive Gases Test

TS EN 60754-2

#### Smoke Density

EN 61034-2

İletken Çapı Cross Section (mm <sup>2</sup> )	İletken Direnci Conductor Resistance (Ohm/km @ 20 °C)
0.22	96.00
0.34	56.00
0.50	39.00
0.75	26.00
1.00	19.50
1.50	13.30
2.50	7.98

Damar Sayısı x Kesit No. Of Cores x Cross Section (mm <sup>2</sup> )	Kablo Çapı Overall Diameter (mm)	Bakır Ağırlığı Copper Weight (kg/km)	Kablo Ağırlığı Cable Weight (kg/km)
2 x 0.22	3.6	4.0	19
3 x 0.22	3.8	6.2	20
4 x 0.22	4.1	8.2	23
5 x 0.22	4.2	10.2	30
6 x 0.22	5.1	12.2	35
7 x 0.22	5.1	14.2	36
8 x 0.22	5.3	16.4	43
9 x 0.22	5.7	18.8	47
10 x 0.22	5.7	21.0	50
12 x 0.22	6.0	24.8	62
14 x 0.22	6.4	29.0	71
16 x 0.22	6.8	33.1	76
18 x 0.22	8.2	37.0	85
20 x 0.22	8.2	41.8	92
25 x 0.22	9.0	52.4	117
2 x 0.34	4.4	6.4	23
3 x 0.34	4.7	9.7	29
4 x 0.34	5.1	12.9	32
5 x 0.34	5.5	16.1	38
6 x 0.34	6.0	19.3	45
7 x 0.34	6.0	22.6	52
8 x 0.34	6.4	24.8	60
9 x 0.34	7.6	28.4	70
10 x 0.34	7.6	32.2	72
12 x 0.34	7.9	38.7	84
14 x 0.34	8.3	45.1	95
16 x 0.34	8.7	51.6	108
18 x 0.34	9.3	58.0	120
20 x 0.34	9.3	63.0	135
25 x 0.34	11.0	80.6	167
2 x 0.50	4.7	9.6	27
3 x 0.50	5.0	14.4	35
4 x 0.50	5.3	19.2	40
5 x 0.50	5.8	24.0	48
6 x 0.50	6.3	28.8	57
7 x 0.50	6.3	33.6	65
8 x 0.50	7.2	38.4	77
9 x 0.50	8.0	43.2	88
10 x 0.50	8.0	48.0	93
12 x 0.50	8.3	57.6	105
14 x 0.50	8.7	67.2	122
16 x 0.50	9.2	76.8	137
18 x 0.50	10.0	86.4	156
20 x 0.50	10.0	96.0	180
25 x 0.50	11.6	120.0	214

Damar Sayısı x Kesit No. Of Cores x Cross Section (mm <sup>2</sup> )	Kablo Çapı Overall Diameter (mm)	Bakır Ağırlığı Copper Weight (kg/km)	Kablo Ağırlığı Cable Weight (kg/km)
2 x 0.75	5.0	14.4	34
3 x 0.75	5.5	21.6	44
4 x 0.75	6.0	28.8	53
5 x 0.75	6.6	36.0	65
6 x 0.75	7.2	43.2	78
7 x 0.75	7.2	50.4	88
8 x 0.75	8.3	57.6	114
9 x 0.75	9.2	64.8	120
10 x 0.75	9.2	72.0	123
12 x 0.75	9.7	86.4	150
14 x 0.75	10.2	100.8	172
16 x 0.75	10.8	115.2	194
18 x 0.75	11.8	129.6	216
20 x 0.75	11.8	144.0	262
25 x 0.75	13.6	180.0	302
2 x 1.00	5.3	19.2	41
3 x 1.00	5.7	28.8	54
4 x 1.00	6.3	38.4	65
5 x 1.00	6.9	48.0	80
6 x 1.00	7.5	57.6	94
7 x 1.00	7.5	67.2	105
8 x 1.00	8.9	76.8	127
9 x 1.00	9.8	86.4	150
10 x 1.00	9.8	96.0	154
12 x 1.00	10.1	115.2	181
14 x 1.00	10.7	134.4	210
16 x 1.00	11.3	153.6	237
18 x 1.00	12.4	172.8	264
20 x 1.00	12.4	192.0	335
25 x 1.00	14.2	240.0	370
2 x 1.50	6.3	28.8	54
3 x 1.50	6.8	43.2	80
4 x 1.50	7.5	57.6	93
5 x 1.50	8.2	72.0	114
6 x 1.50	9.0	86.4	135
7 x 1.50	9.0	100.8	155
8 x 1.50	10.3	115.2	172
9 x 1.50	10.8	129.6	200
10 x 1.50	11.8	144.0	224
12 x 1.50	12.2	172.8	264
14 x 1.50	13.1	201.6	312
16 x 1.50	13.8	230.4	352
18 x 1.50	14.8	259.2	393
20 x 1.50	14.8	288.0	437
25 x 1.50	17.4	360.0	544

Damar Sayısı x Kesit No. Of Cores x Cross Section (mm <sup>2</sup> )	Kablo Çapı Overall Diameter (mm)	Bakır Ağırlığı Copper Weight (kg/km)	Kablo Ağırlığı Cable Weight (kg/km)
2 x 2.50	7.4	48.0	88
3 x 2.50	8.5	72.0	122
4 x 2.50	8.7	96.0	140
5 x 2.50	9.8	120.0	175
6 x 2.50	10.7	144.0	208
7 x 2.50	10.7	168.0	237
8 x 2.50	11.8	192.0	284
9 x 2.50	13.0	216.0	310
10 x 2.50	14.0	240.0	344
12 x 2.50	14.5	288.0	405
14 x 2.50	15.5	336.0	474
16 x 2.50	16.4	384.0	538
18 x 2.50	17.6	432.0	600
20 x 2.50	17.6	480.0	641
25 x 2.50	20.4	600.0	821