Telephone Cables
Fire Warning Cables

HELUKABEL®

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As supplier of underground cables, telephone cables for indoor and outdoor lying, as well as fire warning cables (also the halogen-free types, see page G 6 and G 9) HELUKABEL® provides for a short term delivery-readiness. Modern and powerful cutting machines ensure even the demands for fixed lengths within a short term processing.

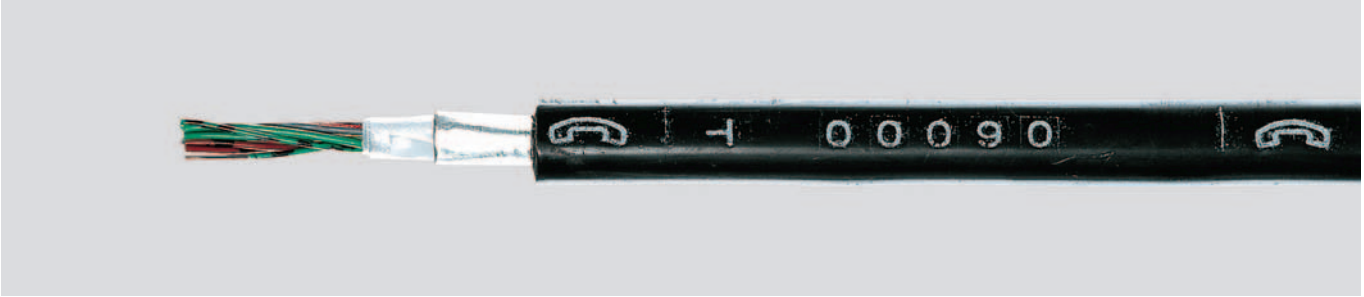
To the nearness of our customers (stock in Hemmingen/Stuttgart, Neuenhagen/Berlin, Pleißa/Chemnitz and Windsbach/Nürnberg) we are also as direct deliverer to the **customers construction site** for short scheduled term on-the-spot".

On request we deliver also vehicles with lifting platform for better loading and unloading.

HELUKABEL®-own empty drums (**no KTG drums**). Please report to our department for empty drum administration (Tel. 0 7150/92 09-52, Fax 0 7150/81786) for collection at free of charge.

Contents and Index

A-2Y(L)2Y Bd Telephone-Outdoor Cable
as per VDE 0816, laminated sheath, unfilled



Technical data

- According to DIN VDE 0816
- **Temperature range**
  flexible −20° C to +50° C
  fixed installation to +70° C

Conductor ∅ mm	0,6	0,8
Loop resistance		
at 20° C max. Ohm/km	130	73,2
Operating voltage		
(peak voltage) max. V	225	225
Test voltage		
core/core U eff.	500[2)]	500[2)]
core/screen U eff.	2000	2000
Insulation resistance		
min. GOhm x km	5	5
Mutual capacitance		
at 800 Hz max. nF/km		
of all values 100%	52	55
of all values 95%	50[1)]	53[1)]
of all values 80%	48	50
Capacitance unbalances		
at 800 Hz max. pF/300 m		
of all values k_1 100%	800[1)]	800[1)]
98%	400	400
of all values $k_{9..12}$ 100%	300[1)]	300[1)]
98%	100	100
Line attenuation of side circuits		
at 800 Hz dB/km	1,04	0,78
Impedance of side circuites		
at 800 Hz Ohm	720	520

- **Minimum bending radius**
  approx. 10 x cable ∅
- **Radiation resistance**
  up to 80 x 10^6 cJ/kg (up to 80 Mrad)

Caloric load values see page T 67

Cable structure

- Bare copper conductor, solid, 0,6 and 0,8 mm ∅
- PE (2Y) core insulation, wall-thickness as per DIN VDE 0816 table 4
- Core identification of quads marked with black rings
- 4 cores twisted to a star quad
- 5 star quads stranded to sub units, each 5 or 10 sub units stranded to main units and the sub or main units stranded to cable core
- Core wrapping with several plastic tapes
- Outer sheath, as laminated sheath (L)2Y, PE-coated aluminium tape spliced with PE (2Y) sheath
- PE-outer sheath colour black
- Sheath marking continuously with telephone-receiver, meter marking in white colour

Application

These external subscriber telephone cables are installed as telecommunication connection cable for connecting the telephone extension to the telephone exchange or central offices and as well as for industrial plants.
These subscriber connecting cables are suitable for laying in under ground, in cable ducts and cable conduits – and also for indoor-laying.
Both sides of PE-copolymere coated aluminium type (L), which is spliced with the outer PE-sheath ensures a **barrier against water vapour** and diagonally water-proof.
Black coloured PE-sheath is **UV-resistant**.
The Polyethelene material (PE = 2Y) is **halogen-free.**

Note

These are not allowed for the power installation. For fire and hazardous areas, this cable type with PE-sheath, the installation is not permitted without enough protective precaution.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

A-2Y(L)2Y.. x 2 x 0,6 St III Bd

Part No.	No. of pairs x cond. ∅ mm	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km
0,6 mm ∅				
34100	2 x 2 x 0,6	8,0	11	82
34101	4 x 2 x 0,6	10,0	23	127
34102	6 x 2 x 0,6	11,5	34	132
34103	10 x 2 x 0,6	12,5	57	171
34104	20 x 2 x 0,6	15,5	113	268
34105	30 x 2 x 0,6	17,5	170	358
34106	40 x 2 x 0,6	19,5	226	438
34107	50 x 2 x 0,6	21,0	283	531
34108	70 x 2 x 0,6	24,5	396	712
34109	100 x 2 x 0,6	28,0	565	950
34110	150 x 2 x 0,6	33,0	848	1348
34111	200 x 2 x 0,6	37,0	1131	1758
34112	250 x 2 x 0,6	40,5	1414	2137
34113	300 x 2 x 0,6	44,0	1696	2533
34114	350 x 2 x 0,6	47,5	1979	2954
34115	400 x 2 x 0,6	50,0	2262	3342

A-2Y(L)2Y.. x 2 x 0,8 St III Bd

Part No.	No. of pairs x cond. ∅ mm	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km
0,8 mm ∅				
34130	2 x 2 x 0,8	11,0	20	102
34131	4 x 2 x 0,8	12,0	40	158
34132	6 x 2 x 0,8	13,0	60	179
34133	10 x 2 x 0,8	14,5	101	241
34134	20 x 2 x 0,8	18,0	201	393
34135	30 x 2 x 0,8	21,0	302	540
34136	40 x 2 x 0,8	23,0	402	675
34137	50 x 2 x 0,8	25,5	503	842
34138	70 x 2 x 0,8	29,0	704	1105
34139	100 x 2 x 0,8	34,0	1005	1524
34140	150 x 2 x 0,8	40,0	1508	2208
34141	200 x 2 x 0,8	46,5	2011	2915
34142	250 x 2 x 0,8	51,0	2514	3575
34143	300 x 2 x 0,8	53,0	3016	4232
34144	350 x 2 x 0,8	56,5	3519	4940
34145	400 x 2 x 0,8	60,0	4022	5565
34146	500 x 2 x 0,8	68,0	5027	6955
34147	600 x 2 x 0,8	73,0	6032	8240

[1)] But at least for 2 quads.
[2)] Local cables with more than 100 pairs the test conductor/conductor is emitted.
Conductor ∅ 0,4 mm on request.

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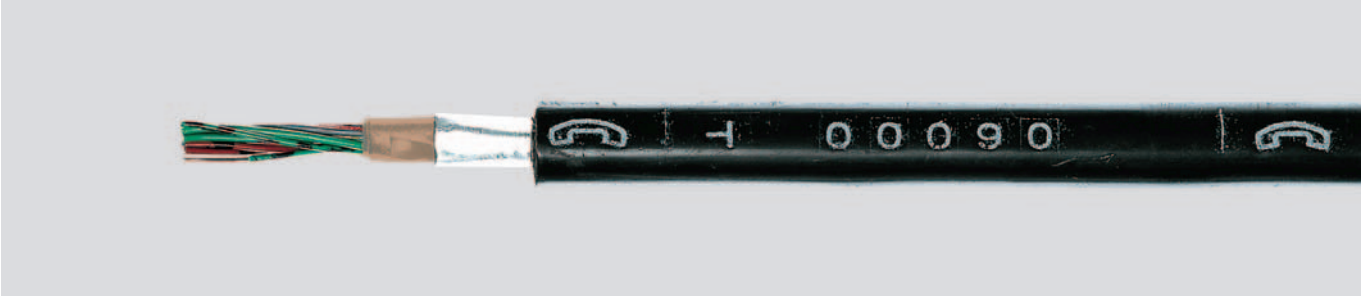
A-2YF(L)2Y Bd Telephone-Outdoor Cable

to VDE 0816, laminated sheath, filled cable core, longitudinally water-proof



Technical data

- According to DIN VDE 0816
- **Temperature range**
  flexible −20° C to +50° C
  fixed installation to +70° C

Conductor ∅ mm	0,6	0,8
Loop resistance		
at 20° C max. Ohm/km	130	73,2
Operating voltage		
(peak voltage) max. V	225	225
Test voltage		
core/core U eff.	500[2)]	500[2)]
core/screen U eff.	2000	2000
Insulation resistance		
min. GOhm x km	1,5	1,5
Mutual capacitance		
at 800 Hz max. nF/km		
of all values 100%	52	55
of all values 95%	50[1)]	53[1)]
of all values 80%	48	50
Capacitance unbalances		
at 800 Hz max. pF/300 m		
of all values k_1 100%	800[1)]	800[1)]
98%	400	400
of all values $k_{9..12}$ 100%	300[1)]	300[1)]
98%	100	100
Line attenuation of side circuits		
at 800 Hz dB/km	1,04	0,78
Impedance of side circuites		
at 800 Hz Ohm	720	520

- **Minimum bending radius**
  approx. 10 x cable ∅
- **Radiation resistance**
  up to 80 x 10^6 cJ/kg (up to 80 Mrad)

Caloric load values see page T 67

Cable structure

- Bare copper conductor, solid, 0,6 and 0,8 mm ∅
- PE (2Y) core insulation, wall-thickness as per DIN VDE 0816 table 4
- Core identification of quads marked with black rings
- 4 cores twisted to a star quad
- 5 star quads stranded to sub units, each 5 or 10 sub units stranded to main units and the sub or main units stranded to cable core
- Core cavities continuously filled with petrol-jelly
- Core wrapping with paper tape
- Outer sheath, as laminated sheath (L)2Y, PE-coated aluminium tape spliced with PE (2Y) sheath
- PE-outer sheath colour black
- Sheath marking continuously with telephone-receiver, meter marking in white colour

Application

These external subscriber telephone cables are installed as telecommunication connection cable for connecting the telephone extension to the telephone exchange for transmitting signals.
These subscriber connecting cables are suitable for laying in under ground, in cable ducts and cable conduits.
According to DIN VDE 0800 part 1, these cables are allowed in all types of installation plants. The cavities of the cable core, filled continuously with viscous compound (F). Both sides of PE-copolymere coated aluminium type (L), which is spliced with the outer PE-sheath, ensures a barrier against water vapour and **cross-wise and longitudinal water tightness.** Black coloured PE-sheath is **UV-resistant.** The Polyethelene material (PE = 2Y) is **halogen-free.**

Note

These cables are not allowed for purposes of high current and power installation. These cables with outer PE-jacket are also not permitted for fire and explosive areas without any protective measure.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

A-2YF(L)2Y.. x 2 x 0,6 St III Bd

Part No.	No. of pairs x cond. ∅ mm	Outer ∅ ca. mm	Cop. weight kg / km	Weight ca. kg / km
0,6 mm ∅				
34007	2 x 2 x 0,6	7,5	11	80
34008	4 x 2 x 0,6	9,0	23	140
34009	6 x 2 x 0,6	12,0	34	150
34010	10 x 2 x 0,6	13,5	57	190
34011	20 x 2 x 0,6	16,0	113	310
34012	30 x 2 x 0,6	19,0	170	430
34013	40 x 2 x 0,6	20,5	226	545
34014	50 x 2 x 0,6	23,0	283	660
34015	70 x 2 x 0,6	26,0	396	895
34016	100 x 2 x 0,6	31,5	565	1230
34017	150 x 2 x 0,6	37,5	848	1780
34018	200 x 2 x 0,6	42,5	1131	2320
34036	250 x 2 x 0,6	47,5	1414	2910
34037	300 x 2 x 0,6	51,5	1696	3490
34038	350 x 2 x 0,6	55,0	1979	3970
34039	400 x 2 x 0,6	60,5	2262	4480
34040	500 x 2 x 0,6	66,0	2827	5460

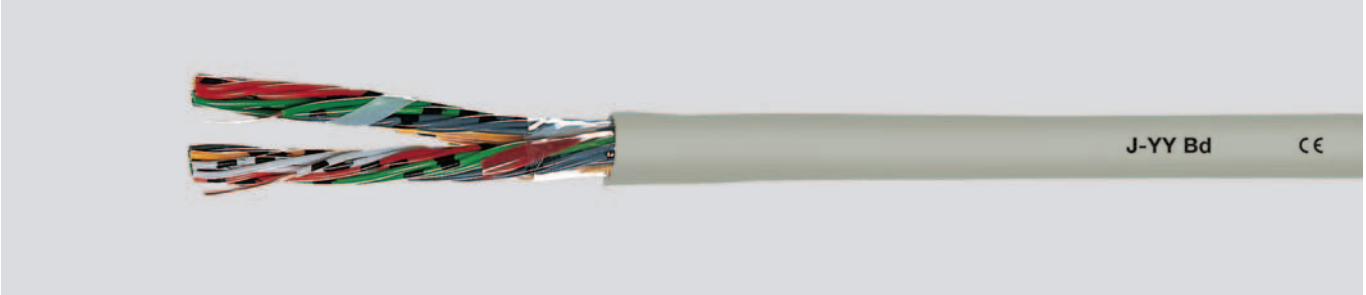
A-2YF(L)2Y.. x 2 x 0,8 St III Bd

Part No.	No. of pairs x cond. ∅ mm	Outer ∅ ca. mm	Cop. weight kg / km	Weight ca. kg / km
0,8 mm ∅				
34029	2 x 2 x 0,8	8,5	20	100
34030	4 x 2 x 0,8	10,0	40	180
34019	6 x 2 x 0,8	12,5	60	190
34020	10 x 2 x 0,8	15,0	101	280
34021	20 x 2 x 0,8	19,0	201	480
34022	30 x 2 x 0,8	23,0	302	670
34023	40 x 2 x 0,8	26,0	402	860
34024	50 x 2 x 0,8	29,0	503	1060
34025	70 x 2 x 0,8	33,0	704	1420
34026	100 x 2 x 0,8	39,0	1005	1980
34027	150 x 2 x 0,8	47,0	1508	2940
34028	200 x 2 x 0,8	51,0	2011	3780
34031	250 x 2 x 0,8	58,0	2514	4660
34032	300 x 2 x 0,8	62,5	3016	5570
34033	350 x 2 x 0,8	68,0	3519	6750
34034	400 x 2 x 0,8	73,0	4022	7630
34035	500 x 2 x 0,8	81,5	5027	9540

[1)] But at least for 2 quads.
[2)] Local cables with more than 100 pairs the test conductor/conductor is emitted.
Conductor ∅ 0,4 mm on request.

HELUKABEL®

J-YY Bd Telephone-Installation Cable according to VDE 0815



Technical data

- Installation cable according toDIN VDE 0815
- **Temperature range**
  during operation −5° C to +50° C
  before and after installation
  −30° C to +70° C

Conductor ∅	mm	0,6

- **Loop resistance**
  at 20° C max. Ohm/km 130
- **Nominal voltage**
  (peak voltage) V 300
- **Test voltage**
  core/core U eff. V (50 Hz) 800
- **Insulation resistance**
  min. MOhm x km 100
- **Mutual capacitance**
  at 800 Hz max. nF/km 100[1)]
- **Capacitance unbalances**
  at 800 Hz k_1 max. pF/100 m 300[2)]
  $k_{9..12}$ pF/100 m 100[3)]
- **Line attenuation**
  at 800 Hz dB/km 1,48

- **Minimum bending radius**
  to DIN VDE 0891 part 5
  during delivery 7,5 x cable ∅
  single bending without tension 2,5 x cable ∅
  repeated bending under tension 7,5 x cable ∅
- **Radiation resistance**
  up to 80 x 10^6 cJ/kg (up to 80 Mrad)

Caloric load values see page T 68

Cable structure

- Bare copper conductor, solid, 0,6 mm ∅
- PVC core insulation, compound type YI1 to DIN VDE 0207, insulation wall-thickness 0,2 mm to table 7
- Core and star quad identification to DIN VDE 0815
- The cores to a quad and each 5 quads to a unit and several units are stranded in layer
- Core wrapping with plastic tape
- PVC outer jacket grey, flame retardant, compound type YM1 to DIN VDE 0207 part 5, jacket wall-thickness to DIN VDE 0815 table 19
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

J-YY installation cables are preferably used as telephone cables in telephone stations and sub-extensions, suitable for installation in dry and damp environments in, on and under plaster as well as in the open air for fixed installation on outer walls of buildings.
Telephone-Installation cables are not allowed for purposes of high current and power installation.

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

J-YY.. x 2 x 0,6 Bd

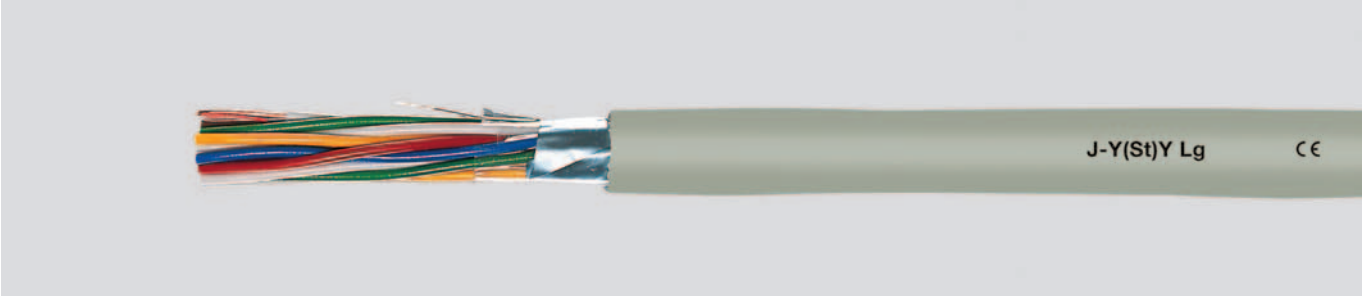
Part No.	No. of pairs x cond. ∅ mm	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km
33100	2 x 2 x 0,6	4,5	11	34
33101	4 x 2 x 0,6	6,5	23	59
33102	6 x 2 x 0,6	7,0	34	74
33103	10 x 2 x 0,6	8,5	57	111
33104	16 x 2 x 0,6	10,0	90	160
33105	20 x 2 x 0,6	11,0	113	200
33106	24 x 2 x 0,6	11,5	136	224

Part No.	No. of pairs x cond. ∅ mm	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km
33107	30 x 2 x 0,6	13,0	170	284
33108	40 x 2 x 0,6	15,0	226	364
33109	50 x 2 x 0,6	16,5	283	451
33110	60 x 2 x 0,6	17,5	339	529
33111	80 x 2 x 0,6	20,3	452	700
33112	100 x 2 x 0,6	22,3	565	850

PVC cables will be changed to lead free PVC successively.

[1)] This value may be extended by 20% with a make-up up to 4 pairs.
[2)] 20% of the values, but one value up to 500 pF is allowed.
[3)] 10% of the values, but four values (relationship) up to 300 pF are allowed.

J-Y(St)Y Lg Telephone-Installation Cable according to DIN VDE 0815



Technical data

- Installation cable according to DIN VDE 0815
- **Temperature range**
  during operation −5° C to +50° C
  before and after installation
  −30° C to +70° C

Conductor ∅ mm	0,6	0,8
– Loop resistance		
at 20° C max. Ohm/km	130	73,2
– Nominal voltage		
(peak voltage) V	300	300[3]
– Test voltage		
core/core U eff. V (50 Hz)	800	800
core/screen	800	800
– Insulation resistance		
min. MOhm x km	100	100
– Mutual capacitance		
at 800 Hz max. nF/km	100[1]	100[1]
– Capacitance unbalances		
at 800 Hz		
k– max. pF/100 m	300[2]	300[2]
– Line attenuation		
at 800 Hz dB/km	1,7	1,1

- **Minimum bending radius**
  to DIN VDE 0891 part 5
  during delivery 7,5 x cable ∅
  single bending without tension 2,5 x cable ∅
  repeated bending under tension 7,5 x cable ∅
- **Radiation resistance**
  up to 80 x 10^6 cJ/kg (up to 80 Mrad)

Caloric load values see page T 68

Cable structure

J-Y(St)Y Lg (pairs)*

- As per J-YY, but laid up in pairs and with electrostatic screen (St)
- Bare copper conductor, solid, 0,6 and 0,8 mm ∅
- PVC core insulation, compound type YI1, to DIN VDE 0207, insulation wall-thickness 0,2 mm and 0,4 mm to table 7
- Core and pair identification to DIN VDE 0815
- Cores twisted to pairs and the pairs are stranded in layers
- Core wrapping with plastic tape
- Electrostatic screen (St) of plastic coated aluminium foil and drain wire
- PVC outer jacket grey, flame retardant, compound type YM1 to DIN VDE 0207 part 5, jacket wall-thickness to DIN VDE 0815 table 19
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

This cable type with electrostatic screening (St) protects the transmission circuits against extern electrical interferences. Installation cables laid up in pairs are preferably used for indoor telecommunication installation in dry and damp places, in, on and under plaster but also in the open air for fixed installation on outer walls of buildings.
These cables are suitable for telephone stations and sub-extensions, for signal and data transmission. Telephone-Installation cables are not allowed for purposes of high current and power installation.

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

J-Y(St)Y. .x2x0,6 Lg

Part No.	No. of pairs x cond. ∅ mm	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km
33001	2x2x0,6	5,0	13	40
33002	3x2x0,6	6,3	18	50
33003	4x2x0,6	6,5	24	60
33004	5x2x0,6	7,2	30	70
33005	6x2x0,6	7,5	35	80
33006	8x2x0,6	8,0	46	90
33007	10x2x0,6	10,0	58	110
33008	12x2x0,6	10,2	71	130
33009	16x2x0,6	11,0	93	160
33010	20x2x0,6	12,0	116	190
33011	24x2x0,6	13,0	139	220
33012	30x2x0,6	14,0	172	280
33013	40x2x0,6	15,0	220	350
33014	50x2x0,6	17,0	286	430
33015	60x2x0,6	19,0	342	500
33016	80x2x0,6	21,0	455	640
33017	100x2x0,6	24,0	568	850

J-Y(St)Y. .x2x0,8 Lg

Part No.	No. of pairs x cond. ∅ mm	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km
33018	2x2x0,8	7,0	21	60
33019	3x2x0,8	8,5	31	80
33020	4x2x0,8	9,0	41	100
33021	5x2x0,8	9,5	52	120
33022	6x2x0,8	11,0	62	140
33023	8x2x0,8	11,5	82	170
33024	10x2x0,8	13,2	102	220
33025	12x2x0,8	14,2	123	250
33026	16x2x0,8	16,0	164	320
33027	20x2x0,8	17,0	204	380
33028	24x2x0,8	19,0	244	460
33029	30x2x0,8	20,8	304	560
33030	40x2x0,8	23,0	405	710
33031	50x2x0,8	26,0	505	900
33032	60x2x0,8	28,0	606	1050
33033	80x2x0,8	31,5	807	1400
33034	100x2x0,8	33,0	1008	1750

PVC cables will be changed to lead free PVC successively.

[1] This value may be extended by 20% with a make-up up to 4 pairs.
[2] 20% of the values, but one value up to 500 pF is allowed.
[3] Short time operation (6 s/min) up to 600 V permitted.

* Compare also Data transmission cable J-2Y(St)Y and JE-Y(St)Y, page C 29 and C 30.
In halogen-free version see page G 6–G 7.

HELUKABEL®

J-Y(St)Y Lg Fire Warning Installation Cable according to DIN VDE 0815

Technical data

- Installation cable according to DIN VDE 0815
- **Temperature range**
  during operation
  −5° C to +50° C
  before and after installation
  −30° C to +70° C

Conductor ∅	mm	0,8

- **Loop resistance**
  at 20° C max. Ohm/km 73,2
- **Nominal voltage**
  (peak voltage) V 300[3)]
- **Test voltage.**
  core/core U eff. V (50 Hz) 800
  core/screen 800
- **Insulation resistance**
  min. MOhm x km 100
- **Mutual capacitance**
  at 800 Hz max. nF/km 100[1)]
- **Capacitance unbalances**
  at 800 Hz k– max. pF/100 m 300[2)]
- **Line attenuation**
  at 800 Hz dB/km 1,1

- **Minimum bending radius**
  to DIN VDE 0891 part 5
  during delivery 7,5 x cable ∅
  single bending without tension 2,5 x cable ∅
  repeated bending under tension 7,5 x cable ∅
- **Radiation resistance**
  up to 80 x 10^6 cJ/kg (up to 80 Mrad)

Cable structure

- Solid plain copper wire 0,8 mm ∅
- PVC core insulation YI1, to DIN VDE 0207 part 4
- Cores twisted in pairs
- Pairs stranded in layer
- Plastic coated aluminium foil static screening (St)
- Tinned copper drain wire
- PVC outer sheath YM1, to DIN VDE 0207 part 5
- Red PVC outer jacket with imprint "Brandmeldekabel"
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

This cable type with electrostatic screening (St) protects the transmission circuits against extern electrical interferences. Installation cables laid up in pairs are preferably used for indoor telecommunication installation in dry and damp places, in, on and under plaster but also in the open air for fixed installation on outer walls of buildings.
These cables are suitable for telephone stations and sub-extensions, for signal and data transmission. Telephone-Installation cables are not allowed for purposes of high current and power installation.

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

J-Y(St)Y.. x 2 x 0,8 Lg

Part No.	No. of pairs x cond. ∅ mm	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km
33035	1 x 2 x 0,8	4,5	11,0	38
33036	2 x 2 x 0,8	7,0	21,0	60
33037	3 x 2 x 0,8	8,5	31,0	80
33038	4 x 2 x 0,8	9,0	41,0	100
33039	5 x 2 x 0,8	9,5	52,0	120
33040	6 x 2 x 0,8	11,0	62,0	140
33041	8 x 2 x 0,8	11,5	82,0	170
33042	10 x 2 x 0,8	13,2	102,0	220
33043	12 x 2 x 0,8	14,2	123,0	250
33044	14 x 2 x 0,8	14,6	145,0	280
33045	16 x 2 x 0,8	16,0	164,0	320
33046	20 x 2 x 0,8	17,0	204,0	380
33047	24 x 2 x 0,8	19,0	244,0	460
33048	30 x 2 x 0,8	20,8	304,0	560
33049	40 x 2 x 0,8	23,0	405,0	710
33050	50 x 2 x 0,8	26,0	505,0	900
33051	60 x 2 x 0,8	28,0	606,0	1050
33052	80 x 2 x 0,8	31,5	807,0	1400
33053	100 x 2 x 0,8	33,0	1008,0	1750

PVC cables will be changed to lead free PVC successively.

[1)] This value may be extended by 20% with a make-up up to 4 pairs.
[2)] 20% of the values, but one value up to 500 pF is allowed.
[3)] Short time operation (6 s/min) up to 600 V permitted.
Halogen-free Fire Warning Cables see pages G 6–G 7.

S-YY Lg Switchboard Cable according to VDE 0813

Technical data

- PVC-insulation according to DIN VDE 0813
- **Temperature range**
  during operation
  −5° C to +50° C
  before and after installation
  −30° C to +70° C
- **Electrical characteristics**
  according to VDE 0813 at 20° C

Conductor ∅ mm	0,5	0,6	1,0
Conductor resistance			
max. Ohm/km	96	65	23,4
Nominal voltage			
max. V	375	375	400
Test voltage			
core/core V	2000	2500	2500
Insulation resistance			
min. MOhm x km	100	100	100

- Min. permissible **bending radius** according to DIN VDE 0891 part 3 during operation max. 7,5 x cable ∅

Cable structure

- Bare copper conductor, solid
- PVC core insulation, YI1 to DIN VDE 0207 part 4
- Core identification to DIN VDE 0813
- Cores stranded in layers
- Core wrapping with plastic tape
- PVC outer jacket, YM1 to DIN VDE 0207 part 5
- Jacket colour grey (RAL 7032)
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

In DIN VDE 0800 the operational areas are defined, where the application of switchboard cables permit.
These are preferred for the transmission of data signals of telecommunication and control processings i. e. in interlocking installations, to connect the outdoor cables with relay groups as well as for fixed installation to interconnect the racks and distributor frames.
This type is not allowed for the installation of heavy current operation.

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. of cores x cond. ∅ mm	Insulation wall-thickness mm	Outer jacket wall-thickness mm	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km
34300	30 x 1 x 0,5	0,3	0,8	9,6	59	128
34301	60 x 1 x 0,5	0,3	0,8	11,9	118	233
34302	10 x 1 x 0,6	0,4	0,8	7,9	28	98
34303	20 x 1 x 0,6	0,4	0,8	9,6	57	132
34304	30 x 1 x 0,6	0,4	0,8	11,1	85	183
34305	60 x 1 x 0,6	0,4	1,0	15,4	170	344
34306	80 x 1 x 0,6	0,4	1,0	18,3	226	445
34307	20 x 1 x 1	0,5	1,0	14,5	157	292
34308	24 x 1 x 1	0,5	1,0	15,2	188	328
34309	32 x 1 x 1	0,5	1,0	16,3	251	430
34310	40 x 1 x 1	0,5	1,0	17,8	314	515
34311	60 x 1 x 1	0,5	1,0	22,2	471	710

PVC cables will be changed to lead free PVC successively.

HELUKABEL®

S-Y(St)Y Bd Switchboard Cable according to VDE 0813

Technical data

- PVC-insulation according to DIN VDE 0813
- **Temperature range** during operation −5° C to +50° C before and after installation −30° C to +70° C
- **Electrical characteristics** according to DIN VDE 0813 at 20° C
- **Conductor resistance (loop)** max. 130 Ohm/km
- **Nominal voltage** max. U eff. 300 V
- **Test voltage** core/core U eff. 800 V core/screen U eff. 800 V
- **Insulation resistance** min. 100 MOhm x km
- **Mutual capacitance** max. 120 nF/km
- **Capacitance unbalances** (k) max. 50 pF/100 m (e) max. 150[1] pF/100 m
- Min. permissible **bending radius** according to DIN VDE 0891 part 3 during operation max. 7,5 x cable ∅

Cable structure

- According to DIN VDE 0813
- Bare copper conductor, solid, 0,6 mm ∅
- PVC core insulation, YI1 to DIN VDE 0207 part 4
- Core identification to DIN VDE 0813
- Cores twisted in elements*
- 5 twisted elements are stranded to a sub-unit
- The sub-units are stranded to cable core, the remaining elements laid in interstices
- Core wrapping with plastic tape
- Copper drain-wire, bare ∅ 0,4 mm up to max. 20 cores, ∅ 0,6 mm for cables > 20 cores
- Electrostatic screen with plastic coated aluminium foil
- PVC outer jacket, YM1 to DIN VDE 0207 part 5
- Jacket colour grey (RAL 7032)
- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

Switchboard cables with electrostatic screen are used for interconnecting the racks and distributor frames for the transmission of telephone and data signals at low frequence range.

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. of pairs/triples x cond. ∅ mm	Insulation wall-thickness mm	Outer jacket wall-thickness mm	Outer ∅ ca. mm	Cop. weight kg/km	Weight ca. kg/km
34320	3 x 2 x 0,6	0,2	0,8	5,8	18	42
34321	5 x 2 x 0,6	0,2	0,8	7,0	30	62
34322	6 x 2 x 0,6	0,2	0,8	7,5	35	75
34323	10 x 2 x 0,6	0,2	0,8	8,8	58	105
34324	12 x 2 x 0,6	0,2	0,8	9,0	71	125
34325	16 x 2 x 0,6	0,2	0,8	10,0	93	160
34326	20 x 2 x 0,6	0,2	0,8	11,0	116	190
34327	25 x 2 x 0,6	0,2	0,8	12,5	144	240
34328	30 x 2 x 0,6	0,2	1,0	13,5	172	280
34329	40 x 2 x 0,6	0,2	1,0	15,0	229	360
34330	50 x 2 x 0,6	0,2	1,0	16,5	286	430
34331	56 x 2 x 0,6	0,2	1,0	17,5	319	460
34332	5 x 3 x 0,6	0,2	0,8	7,5	44	85
34333	10 x 3 x 0,6	0,2	0,8	9,5	88	145
34334	20 x 3 x 0,6	0,2	1,0	13,0	172	270
34335	25 x 3 x 0,6	0,2	1,0	14,5	215	330
34336	28 x 3 x 0,6	0,2	1,0	15,0	240	370
34337	50 x 3 x 0,6	0,2	1,0	19,0	427	630
34338	56 x 3 x 0,6	0,2	1,0	20,0	478	690

PVC cables will be changed to lead free PVC successively.

[1] This value may be extended by 10% with a make-up up to 4 pairs, but one value up to 300 pF is allowed.

* Twisting elements are pairs, triple or five-cores.