HALLEY CABLES

CABLES & WIRES

TELECOMMUNICATION CABLES

2017

CATALOGUE

Dear Partners,

Halley Cables evolution has been founded on the premises that the key to success in business comes from continuous improvement and customer satisfaction.
Professionalism, efficiency, reliability, positive attitude and determination are the key traits for our company, guiding us in our daily work – how we relate to people, various cultures and how we do business worldwide.

We manufacture Results

Experience permits us to deliver high quality cables for domestic and international market sunder any kind of regulation or technical specification.

Marketplaces

Public & Private power utilities /Industrial / Infrastructures / Shipping / Motorways Railways/Government agencies / Ministry of Defence/High-rise Buildings / Residential Hospitals / Stadiums/Hotels / Schools & Colleges / Shopping Centres /Office Buildings Universities / Refineries / Oil Platforms /Off Shore / Chemical Industry / Airports / Ports

We are a whole seller specialized in:

- FIBER OPTIC CABLES
- TELECOMMUNICATION CABLES
- COMMUNICATIONS CABLES
- LAN & DATA CABLES

Since the company was founded, we focused on finding the best solutions, to take fast decision and to have a very competent management skill. Our goal is to ensure consumers that they can have confidence in our products due their superior technical characteristics and their availability. We understand export and offer a full service, including:

- FAST DELIVERY
- FAST RESPONSES TO ENQUIRIES
- EXCELLENT CUSTOMER SERVICE
- CONTAINER LOADING RAMP AND FACILITIES
- EXPORT PACKING AS STANDARD
- REASONABLE MINIMUM PRODUCTION QUANTITY
- SHORT DELIVERY TIMES
- CABLES CUT TO LENGTH
- EUR 1 CERTIFICATES, CERTIFIED BY CHAMBER OF COMMERCE
- CERTIFICATES OF ORIGIN
- PRODUCT CERTIFICATES
- PACKING LIST
- DATA SHEETS
- TEST REPORTS
- UP TO 36 MONTHS WARRANTY
- DISPATCH BY COURIER, AIR, SEA, ROAD, RAIL OR COLLECT FROM OUR WAREHOUSE

We work with the best products whose quality is certified and in agreement with the highest international standards

- QUALITY MANAGEMENT SYSTEM CERTIFICATE ISO EN 9001
- ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE ISO EN 14000
- OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE ISO EN 18001

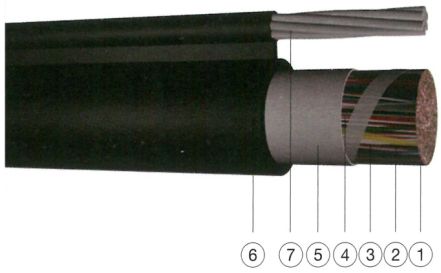
Yours faithfully,
Halley Cables

DAN CIREASA
Business development

Telecommunication Cables

HALLEY CABLES
CABLES & WIRES

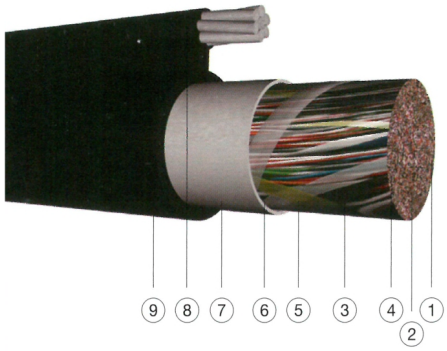
Air Core Aerial Cables



Application
Designed to use on outshirt of the cities and in rural for aerial application. Cables having 0.4 and 0.5 mm. conductor diameter are used for distribution network, cables having 0.6 and 0.9 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Core covering
5. Screen (Shield)
6. Outer jacket
7. Messenger

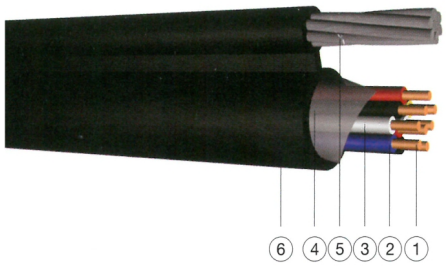
Filled Aerial Cables



Application
Designed to use on outshirt of the cities and in rural for aerial application. Cables having 0.4 and 0.5 mm. conductor diameter are used for distribution network, cables having 0.6 and 0.9 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Filling compound
5. Core covering
6. Flooding compound
7. Screen (Shield)
8. Messenger
9. Outer jacket (Sheath)

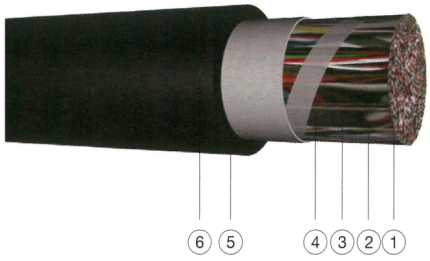
Air Core Aerial Subscriber Cables



Application
Designed to provide aerial service extensions from distribution cables.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Core covering
5. Messenger
6. Outer jacket (Sheath)

Air Core Underground Cables

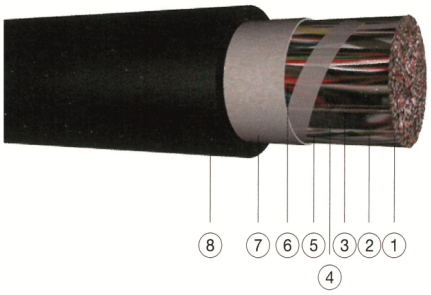


Application
Desingn to use in ducts. Cables having 0.4 and 0.5 mm. conductor diameter are used for distribution network, cables having 0.6 and 0.9 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Core covering
5. Screen (Shield)
6. Outer jacket (Sheath)

Telecommunication Cables

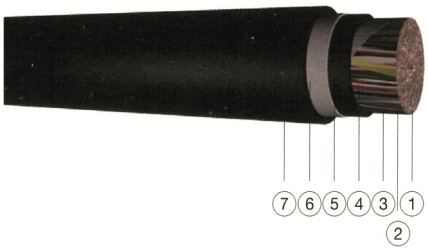
Filled Underground Cables



Application
Designed to use in ducts and also directly burried into ground. Cables having 0.4 and 0.5 mm. conductor diameter are used for distribution network, cables having 0.6 and 0.9 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Filling compound
5. Core covering
6. Flooding compound
7. Screen (Shield)
8. Outer jacket (Sheath)

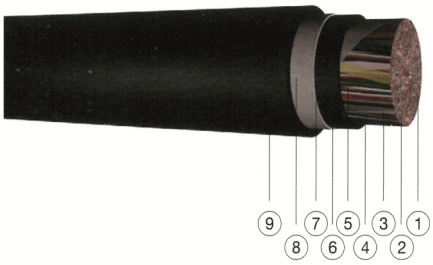
Unfilled Double Sheathed Underground Cables



Application
Designed to use in ducts. Cables having 0.4 and 0.5 mm. conductor diameter are used for distribution network, cables having 0.6 and 0.9 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Core covering
5. Inner jacket (Inner sheath)
6. Screen (Shield)
7. Outer jacket (Sheath)

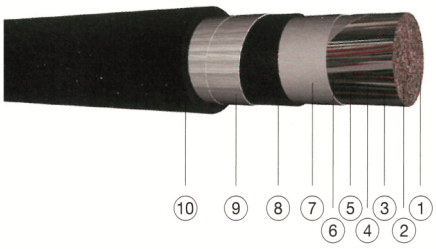
Filled Double Sheathed Underground Cables



Application
Designed to use in ducts and also directly burried into ground. Cables having 0.4 and 0.5 mm. conductor diameter are used for distribution network, cables having 0.6 and 0.8 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Filling compound
5. Core covering
6. Inner jacket (Inner sheath)
7. Flooding compound
8. Screen (Shield)
9. Outer jacket (Sheath)

Filled Galvanized Steel Tape Armoured Underground Cables



Application
Designed to use directly burried into ground. Cables having 0.5 mm. conductor diameter are used for distribution network, cables having 0.63 and 0.9 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Filling compound
5. Core covering
6. Flooding compound
7. Shield (Screen)
8. Inner jacket (Inner sheath)
9. Armour
10. Outer jacket (Sheath)

Telecommunication Cables

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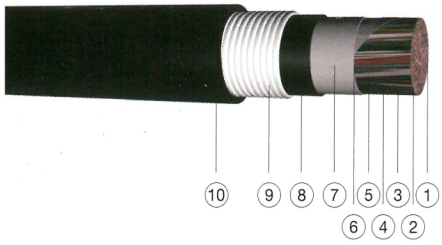
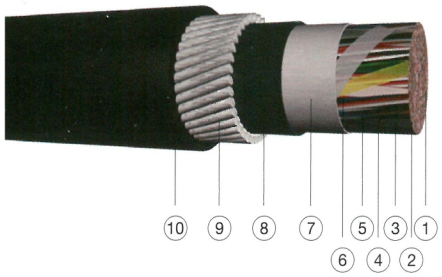
Filled Corrugated Steel Tape Armoured Underground Cables s



Application
Designed to use directly burried into ground. Cables having 0.4 mm. conductor diameter are used for distribution network, cables having 0.6 and 0.9 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Filling compound
5. Core covering
6. Flooding compound
7. Screen (Shield)
8. Inner jacket (Inner sheath)
9. Armour
10. Outer jacket (Sheath)

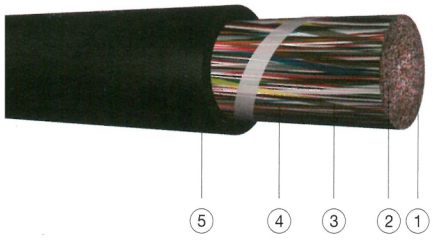
Filled Steel Wire Armoured Cables



Application
Designed to use directly burried into ground. Cables having 0.5 mm. conductor diameter are used for distribution network, cables having 0.63 and 0.9 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Filling compound
5. Core covering
6. Flooding compound
7. Screen (Shield)
8. Inner jacket (Inner sheath)
9. Armour
10. Outer jacket (Sheath)

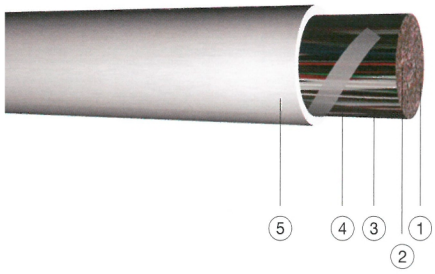
Air Core Subscriber Cables



Application
Designed to use ducts. Cables having 0.5 mm. conductor diameter are used for distribution network, cables having 0.9 mm. conductor diameter are used for long distance network.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Core covering
5. Outer jacket (Sheath)

Air Core PVC Jacketed Cables

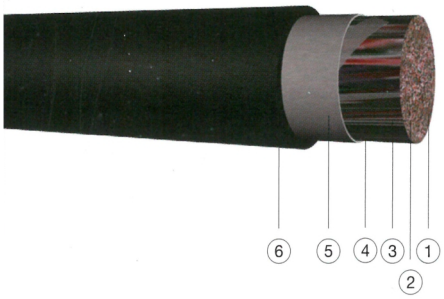


Application
Designed to provide service extensions from distribution cables.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Core covering
5. Outer jacket (Sheath)

Telecommunication Cables

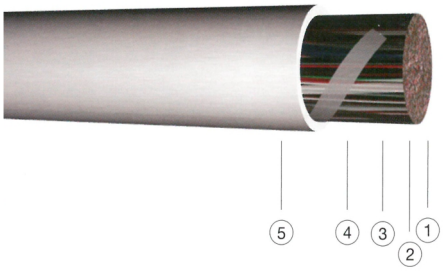
Air Core PE Jacketed Cables



Application
Generally used for indoor application, underground application or at the places having a possibility of fire.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Core covering
5. Screen (Shield)
6. Outer jacket (Sheath)

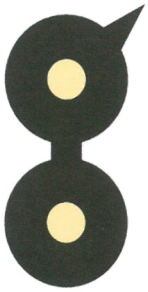
Multi Pair Indoor Cables



Application
Generally used for indoor application, underground application or at the places having a possibility of fire.

Costruction
1. Conductor
2. Insulation
3. Cable assembly
4. Core covering
5. Outer jacket (Sheath)

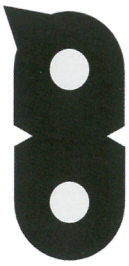
Drop Wire



Application
Designed for extension to the subscribers.

Costruction
1. Conductor
2. Insulation

Aerial Drop Wire (CCSR)



Application
PVC insulated copper covered steel reinforced drop wire cables are designed for extending and open wire line or distribution cable pair from a pole and/or cable terminal to a building.

Costruction
1. Conductor
2. Insulation

Summary

A-02YSF(L)2Y ...x2x0.4 (0.5; 0.6; 0.8) ST III BD (H42; H50; H52; H55)
A-2YF(L)2Y ...x2x0.6 (0.8)ST III BD (H52, H55)
A-02Y(L)2Y ...x2x0.5 ST III BD (H42)
A-2Y(L)2Y ...x2x0.6 (0.8) ST III BD (H52, H55)
J-Y(ST)Y ...x2x0.6 (0.8) LG (ST III BD)
J-H(ST)H ...x2x0.6 (0.8) ST III BD FRNC
A-HH, A-H(L)H ...x2x... P LG FRNC (...x2x... PIMF LG FRNC)
A-HHBH, AJ-HHAH ...x2x... P LG (R...VZK) FRNC (...x2x... PIMF LG (R...VZK) FRNC)
...x2x... P LG (...AL) FRNC (...x2x... PIMF LG (...AL) FRNC)
A-2Y2YV ... x1x0.9 (1.4; 1.8) S LG (H95, H115, H145)
A-2Y(L)2YV ... x4x0.9 S LG (H45)
A-2Y2YB2Y ... x1x0.9 (1.4; 1.8) S LG...B 0 (H95, H115 resp. H145)
A-2Y(L)2YB2Y ...x4x0.9 S LG (...B 0...) (H45)
AJ-2Y2YDB2Y ...x1x0.9 (1.4; 1.8) S LG (...Cu/2B 0....) (H95, H115, H145)
AJ-2Y(L)2YDB2Y x4x0.9 S (H45) LG (...Cu/2B 0....)
U72 | U72-H ...x4x0.5 (0.8)
TK 59 GM ...x4x0.4 (0.6; 0.8)
TK 53 UM (aerial) ...x4 (0.6; 0.8)
HRQhQzKAhQ (Qv – jelly filled) ...x4x0.4 (0.6; 0.8)
HRQhQzKAhQ – AkVQ (Qvr – armoured) ...x4x0.4 (0.6; 0.8)
FRQKAhM (Qf – indoor) ...x4x0.4 (0.6)
LRQhqkAhQ (Ql – aerial) ...x4x0.6 (0.8)
UTP CAT 5, CAT5e 4x2xAWG 24 PVC (FRNC)
UTP CAT 3 – 100 Ω x2xAWG 24 PVC (x2xAWG 24 FRNC)
S-Y(ST)Y, S-Y(ST)CY ...x2x0,4 (0,5; 0,6) BD
FLES 8.5 (20)
KD – Therm CJPSN Heating Cable
KD – Therm CJTSN Heating Cable
KD – Therm CJTBLN 5 W Heating Cable
KD – Therm CJTBLN 10 W Heating Cable
KD – Therm CJTBLN 20 W Heating Cable
CW1128, CW1128/1179 ...x2x0.4 (0.5; 0.6; 0.63; 0.9)
CW 1171/CW 1179 ...x2x0.4 (0.5; 0.63; 0.9)
CW 1224/CW 1179 ...x2x0.4 (0.5; 0.63; 0.9)
CW 1236, CW 1236/CW 1179 ...x2x0.4 (0.5; 0.63; 0.9)
CW 1326, CW 1326/CW 1179 ...x2x0.5
CW1308 ...x2x0.5
CW1600 ...x2x0.5
TCEPKPFLE, TCEPKPFLEY ...x4x0.4 (0.6; 0.8)
TCEPKPFLEZE, TCEPKPFLEZY ...x4x0.4 (0.6; 0.8)
TCEKFLE, TCEKFLEY ...x4x0.4 (0.6; 0.8)
TCEKFLEZE, TCEKFLEZY ...x4x0.4 (0.6; 0.8)
TCEKFLES ...x4x0.4 (0.6; 0.8)
TCEKFLH ...x4x0.4 (0.6; 0.8)
TCEKFLHZH ...x4x0.4 (0.6; 0.8)

A-02YSF(L)2Y

...x2x0.4 (0.5; 0.6; 0.8) ST III BD (H42; H50; H52; H55)

Specification

VDE 0816 nebo technické dojednání
VDE 0816 or Technical agreement

Cable codes

A – outdoor cable
02YS – foam-skin PE conductor isolation
F – cable core filled
(L)2Y – laminated sheath (PE + Al tape)
ST III – star quad in cable
BD – unit stranding
H(n) – operating capacity of the pair

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.5; 0.6 or 0.8 mm

Core insulation – foam-skin PE

Transmission element – each 4 wires are twisted to one star quad, the quads stranded to units, the units are stranded to the cable core

Cable core – filled

Shield – made of laminated aluminum foil

Sheath – PE, black

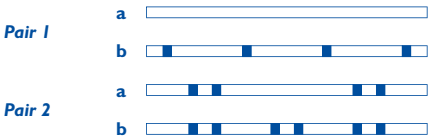
Packing on drums

Application

» connection cables in Local Area Networks

» to be placed in cable ducts, under ground laying and areas without higher danger of mechanical cable damage

Rings identify the individual conductors



Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–20 °C ÷ +50 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.4 (H50)	0.5 (H42)	0.6 (H42)	0.6 (H52)	0.8 (H42)	0.8 (H55)
Max. loop resistance	Ω/km	300.0	196.0	130.0	130.0	73.2	73.2
Insulation resistance min.	GΩ.km	1.5	1.5	1.5	1.5	1.5	1.5
Mutual capacitance	nF/km	50	42	42	52	42	55
Capacity unbalance k_1	dB/km	800	800	800	800	800	800
Test voltage wire/wire at 50 Hz	V	500	500	500	500	500	500
Test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000	2 000	2 000	2 000
Operating voltage max.	Vss	150	150	225	225	225	225

A-02YSF(L)2Y

	Core/wire diameter H42 0.5/1.05 mm			Core/wire diameter H42 0.6/1.30 mm			Core/wire diameter H42 0.8/1.70 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
TCEPKPFLE									
2	7.8	70	2 000	8.5	80	2 000	9.4	100	2 000
4	9.4	100	2 000	10.5	120	2 000	12.1	160	2 000
6	10.2	115	2 000	11.3	145	2 000	13.3	200	2 000
10	11.6	155	2 000	13.2	195	2 000	15.7	290	2 000
20	14.0	230	2 000	16.4	315	2 000	20.5	500	2 000
30	15.9	310	2 000	18.9	425	2 000	23.3	670	2 000
40	17.6	385	2 000	21.1	535	2 000	26.5	870	2 000
50	19.2	460	2 000	22.9	640	2 000	28.9	1 045	2 000
70	21.5	595	2 000	26.2	865	2 000	33.7	1 440	2 000
100	25.0	815	2 000	30.7	1 190	2 000	39.1	1 965	1 000
150	30.0	1 190	2 000	37.0	1 740	2 000	47.8	2 950	1 000
200	34.7	1 580	2 000	41.7	2 245	1 000	54.0	3 815	1 000
250	38.0	1 925	2 000	46.7	2 815	1 000	60.2	4 755	500
300	41.0	2 265	1 000	50.4	3 315	1 000	65.3	5 640	500
350	43.8	2 600	1 000	53,7	3 795	1 000			
400	47.1	2 995	1 000	57.9	4 370	500			
500	51.8	3 660	1 000	65.0	5 480	500			
600	57.7	4 500	500						
700	60.7	5 085	500						
	H50 0.4/0.73 mm			**H52 0.6/1.05 mm**			**H55 0.8/1.38 mm**		
2	7.1	60	2 000	7.8	75	2 000	8.6	90	2 000
4	8.3	75	2 000	9.4	105	2 000	11.0	145	2 000
6	8.7	90	2 000	10.2	125	2 000	12.1	180	2 000
10	9.5	105	2 000	11.6	170	2 000	13.6	245	2 000
20	11.3	160	2 000	14.0	265	2 000	17.1	410	2 000
30	12.7	205	2 000	15.9	355	2 000	19.8	565	2 000
40	13.8	250	2 000	17.6	445	2 000	24.2	725	2 000
50	14.9	295	2 000	19.2	535	2 000	24.6	890	2 000
70	16.6	380	2 000	21.5	705	2 000	28.0	1 205	2 000
100	18.7	500	2 000	25.0	970	2 000	32.1	1 640	2 000
150	22.2	720	2 000	30.0	1 430	2 000	38.6	2 415	2 000
200	25.2	935	2 000	34.7	1 895	2 000	45.4	3 265	1 000
250	27.5	1 140	2 000	38.0	2 325	2 000	51.0	4 110	1 000
300	29.6	1 340	2 000	41.0	2 740	1 000	56.9	5 005	500
350				43.8	3 160	1 000	60.9	5 775	500
400	34.5	1 795	2 000	47.1	3 630	1 000	64.4	6 535	500
500	37.5	2 170	2 000	51.8	4 455	1 000			
600	40.8	2 595	1 000	57.7	5 455	500			
700	43.5	2 980	1 000	60.7	6 200	500			
800	46.8	3 420	1 000	65.7	7 100	500			
1 000	51.5	4 220	1 000						
1 200	56.5	5 050	500						

A-2YF(L)2Y
...x2x0.6 (0.8)ST III BD (H52, H55)

Specification
VDE 0816

Cable codes

A – outdoor cable
2Y – PE-conductor insulation
F – fully filled
(L)2Y – laminated sheath (PE + Al tape)
ST III – star quad in cable
BD – unit stranding
H(n) – operating capacity of the pair

Make up

Wire – bare copper conductor with a diameter of 0.6 or 0.8 mm

Core insulation – solid PE

Transmission element – each 4 wires are twisted to one star quad, the quads stranded to units, the units are stranded to the cable core

Cable core – filled

Shield – made of laminated aluminum foil

Sheath – PE, black

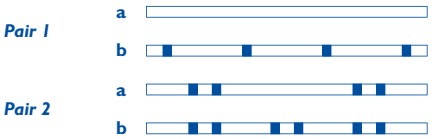
Packing on drums

Application

» connection cables in Local Area Networks and in private branch exchanges for telephony and signal transfer

» suitable for placement as underground and conduit cables

Rings identify the individual conductors



Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.6	0.8
Max. loop resistance	Ω/km	130.0	73.2
Insulation resistance	GΩ.km	1.5	1.5
Mutual capacitance	nF/km	52	55
Effective test voltage wire/wire at 50 Hz	V	500	500
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000
Operating voltage	Vss	225	225

A-2YF(L)2Y

	Core/wire diameter 0.6/1.3 mm			Core/wire diameter 0.8/1.6 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
2	9.0	80	2 000	10.0	100	2 000
4	13.0	150	2 000	14.5	195	2 000
6	12.0	140	2 000	13.5	200	2 000
10	13.5	190	2 000	15.5	280	2 000
20	16.5	315	2 000	20.0	485	2 000
30	19.5	440	2 000	23.0	675	2 000
40	21.5	555	2 000	26.5	885	2 000
50	23.5	670	2 000	28.5	1 070	2 000
70	27.0	910	2 000	33.0	1 445	2 000
100	31.5	1 245	2 000	38.5	2 015	2 000
150	38.5	1 835	2 000	47.5	3 010	1 000
200	43.0	2 375	1 000	54.0	3 920	500
250	48.5	2 975	1 000	60.0	4 890	500
300	52.0	3 505	1 000	64.5	5 780	500
400	58.4	4 080	500			
500	64.0	5 010	500			

A-02Y(L)2Y
...x2x0.5 ST III BD (H42)

Specification
Technical Agreement

Cable codes

A – outdoor cable
02Y – foam-skin PE conductor insulation
(L)2Y – laminated sheath (PE + Al tape)
ST III – star quad in cable
BD – unit stranding
H(n) – operating capacity of the pair

Make up

Wire – bare copper conductor with a diameter of 0.5 mm

Core insulation – foam-skin PE

Transmission element – star quads twisted to units

Shield – made of laminated aluminum foil

Sheath – PE, black

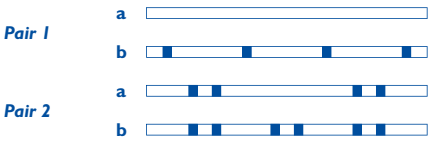
Packing on drums

Application

» connection cables in Local Area Networks and in private branch exchanges for telephony and signal transfer

» suitable for placement as underground and conduit cables

Rings identify the individual conductors



Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.5
Max. loop resistance	Ω/km	196.0
Insulation resistance	GΩ.km	5
Mutual capacitance	nF/km	42
Effective test voltage wire/wire at 50 Hz	V	500
Effective test voltage wire/shield at 50 Hz	V	2 000
Operating voltage	Vss	150

HALLEY CABLES
CABLES & WIRES

A-02Y(L)2Y

Number of units	Core/wire diameter 0.5/0.8 mm External diameter *(mm)*	Net weight *(kg/km)*	Standard production length *(m)*
2	9.4	70	2 000
4	11.1	95	2 000
6	11.6	105	2 000
10	12.5	120	2 000
20	15.1	180	2 000
30	16.8	220	2 000
40	18.1	255	2 000
50	19.1	270	2 000
70	21.2	310	2 000
100	23.9	580	2 000
150	28.3	750	2 000
200	31.4	950	2 000
250	34.0	1 200	2 000
300	36.8	1 350	2 000
400	39.0	1 400	2 000
500	41.1	1 750	1 000
600	44.9	1 900	1 000
700	49.2	2 200	1 000
800	52.9	2 620	1 000
1 000	63.7	4 250	500

A-2Y(L)2Y
...x2x0.6 (0.8) ST III BD (H52, H55)

Specification
Technical Agreement

Cable codes

A – outdoor cable
2Y – PE-conductor insulation
(L)2Y – laminated sheath (PE + Al tape)
ST III – star quad in cable
BD – unit stranding
H(n) – operating capacity of the pair

Make up

Wire – bare copper conductor with a diameter of 0.6 or 0.8 mm

Core insulation – solid PE

Transmission element – star quads twisted to units

Shield – made of laminated aluminum foil

Sheath – PE, black

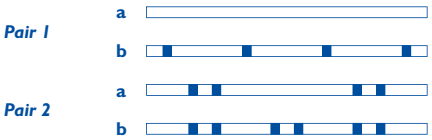
Packing on drums

Application

» connection cables in Local Area Networks and in private branch exchanges for telephony and signal transfer

» suitable for placement as underground and conduit cables

Rings identify the individual conductors



Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

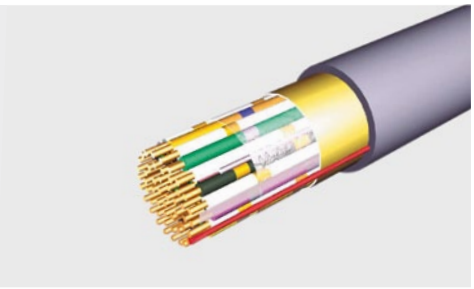
Conductor diameter	mm	0.6	0.8
Max. loop resistance	Ω/km	130.0	73.2
Insulation resistance	GΩ.km	1.5	1.5
Mutual capacitance	nF/km	52	55
Effective test voltage wire/wire at 50 Hz	V	500	500
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000
Operating voltage	Vss	225	225

HALLEY CABLES
CABLES & WIRES

A-2Y(L)2Y

	Core/wire diameter 0.6/1.1 mm			Core/wire diameter 0.8/1.4 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
2	11.5	130	2 000	8.2	69	2 000
4	12.5	165	2 000	10.5	107	2 000
6	15.5	265	2 000	13.0	175	2 000
10	17.5	355	2 000	14.5	235	2 000
20	19.5	440	2 000	18.0	390	2 000
30	21.0	525	2 000	21.0	540	2 000
40	24.5	705	2 000	23.0	680	2 000
50	28.0	950	2 000	25.5	835	2 000
70	32.5	1 345	2 000	29.0	1 110	2 000
100	37.0	1 755	2 000	33.5	1 515	2 000
150	40.5	2 140	2 000	40.0	2 205	2 000
200	44.0	2 525	2 000	46.5	2 920	1 000
250	48.0	2 950	2 000	51.0	3 575	1 000
300	50.5	3 340	1 000	55.0	4 230	1 000
400	55.5	4 090	1 000	62.5	5 595	500
500	60.5	4 910	1 000	70.0	6 960	500
600	64.5	5 655	750	76.0	8 250	333
700	69.5	6 500	750			
800	76.5	7 970	500			
1 000	83.5	9 545	500			

J-Y(ST)Y
...x2x0.6 (0.8) LG (ST III BD)



Specification
DIN VDE 0815

Cable codes

J – installation cable
Y – PVC conductor insulation
(ST) – static shield
Y – PVC sheath
LG – stranded in layers
ST III – star quad
BD – unit stranding

Make up

Stranded in layers

Wire – bare copper conductor with a diameter of 0.6 or 0.8 mm

Transmission element – each 2 wires twisted to a pair

Cable core – transmission elements stranded in layers

Cable core wrapping

Drain wire – with a diameter of 0.4 mm

Shield – made of laminated aluminum foil

Sheath – PVC, grey

Packing in coils / on reels / on drums

Unit stranding

Wire – bare copper conductor with a diameter of 0.6 or 0.8 mm

Transmission element – 4 wires twisted to a star quad

Unit – five transmission element twisted to a unit

Cable core – stranded units

Cable core wrapping

Drain wire – copper conductor with a diameter of 0.6 or 0.8 mm

Shield – made of laminated aluminum foil

Sheath – PVC, grey

Packing in coils / on reels / on drums

Application

- telephone, signaling and data transmission
- permanent installation on and under plaster in dry or damp rooms, permanent installation on external walls

Environmental conditions

Temperature ranges for laying and assembly	–5 °C ÷ +50 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

J-Y(ST)Y

Electrical parameters (20 °C)

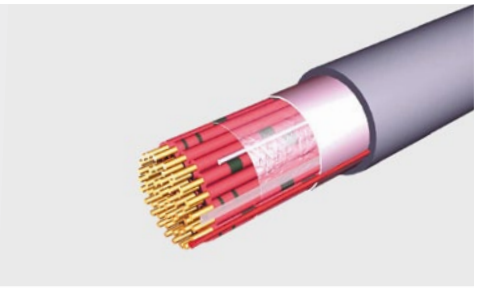
Conductor diameter	mm	0.6	0.8
Max. loop resistance	Ω/km	130.0	73.2
Insulation resistance	GΩ.km	100	100
Mutual capacitance	MΩ.km	100[1)]	100[1)]
Capacity unbalance k_1 at 800 Hz	pF/100 m	300[2)]	300[2)]
Effective test voltage wire/wire at 50 Hz	V	800	800
Effective test voltage wire/shield at 50 Hz	V	800	800
Operating voltage	Vss	300	300

[1)] in cables up to 4 pairs: 120 nF/km
[2)] in cables up to 4 pairs only one value can reach max. 500 pF/100 m
[2)] in cables with more than 4 pairs only 20 % values can reach max. 500 pF/100 m

	Core/wire diameter 0.6/0.93 mm			Core/wire diameter 0.8/1.43 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
Stranded in layers						
1	4.3	30	100, 250, 500, 1 000	5.4	40	100, 250, 500, 1 000
2	4.5	35	100, 250, 500, 1 000	6.1	55	100, 250, 500, 1 000
3	5.4	45	100, 250, 500, 1 000	7.6	75	100, 250, 500, 1 000
4	5.9	50	100, 250, 500, 1 000	8.4	95	100, 250, 500, 1 000
5	6.4	60	100, 250, 500, 1 000	9.3	115	100, 250, 500, 1 000
6	6.8	75	100, 250, 500, 1 000	9.8	130	100, 250, 500, 1 000

	Core/wire diameter 0.6/1.20 mm			Core/wire diameter 0.8/1.60 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
Unit stranding						
10	9.0	110	2 000	14.0	200	2 000
20	12.0	195	2 000	19.0	400	2 000
30	15.0	275	2 000	22.0	540	2 000
40	16.5	380	2 000	26.0	780	2 000
50	18.0	430	2 000	28.0	870	1 000
70	21.5	430	2 000	35.0	1 000	1 000
100	24.0	815	1 000	38.0	1 675	1 000
200	40.0	1 500	1 000	51.5	3 100	1 000

J-H(ST)H
...x2x0.6 (0.8) ST III BD FRNC



Specification
DIN VDE 0815

Cable codes

J – installation cable
H – FRNC conductor insulation
(ST) – static shield
H – FRNC sheath
LG – stranded in layers
ST III – star quad
BD – unit stranding
FRNC – flame retardant non halogen

Make up

Wire – bare copper conductor with a diameter of 0.6 or 0.8 mm

Core insulation – solid PE

Transmission element – each 4 wires twisted to a star quad

Unit – five transmission element twisted to a unit

Cable core wrapping

Drain wire – copper conductor with a diameter of 0.6 or 0.8 mm

Shield – made of laminated tape

Sheath – FRNC, grey

Packing on drums

Application

» distributions in communicating technology, transfers of signals and measured values

» designed especially for using in areas danger of fire

Environmental conditions

Temperature ranges for laying and assembly	–5 °C ÷ +50 °C
Operation and store temperatures	–30 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.6	0.8
Max. loop resistance	Ω/km	133.0	73.2
Insulation resistance	MΩ.km	120	120
Mutual capacitance	nF/km	120	120
Capacity unbalance k_1 at 800 Hz	pF/100 m	300	300
Effective test voltage wire/wire at 50 Hz	V	800	800
Effective test voltage wire/shield at 50 Hz	V	800	800
Operating voltage	Vss	300	300

HALLEY CABLES
CABLES & WIRES

J-H(ST)H

	Core/wire diameter 0.6/1.2 mm			Core/wire diameter 0.8/1.6 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
2	6.0	85	2 000	7.0	102	2 000
4	8.4	114	2 000	10.5	148	2 000
6	8.8	130	2 000	10.8	174	1 000
10	10.1	165	2 000	13.1	207	2 000
20	13.5	245	2 000	17.0	380	2 000
30	15.6	332	2 000	21.0	543	2 000
40	17.6	413	2 000	24.0	683	2 000
50	19.2	507	2 000	26.5	885	1 000
70	22.0	661	2 000	29.8	1 143	1 000
100	25.9	917	1 000	34.7	1 600	1 000

A-HH, A-H(L)H

...x2x... P LG FRNC (...x2x... PIMF LG FRNC)

Specification

TP 31.30.13 – HC – 01/00
ČSN IEC 332-3A
ČSN EN 50268-2
ČSN EN 50267-2-2

Cable codes

A – outdoor cable
H – halogen free conductor insulation
(L)H – laminated halogen free sheath (Al tape + FRNC)
LG – stranding in layers
FR – flame resistivity
NC – non corrosive
P – unscreened pairs
PIMF – screened pairs
J – protective conductor

Make up

A-HH

Wire – bare copper conductor with a diameter of 1.0 mm or 1.12 mm

Core insulation – solid PE

Transmission element – each 2 wires twisted to a pair (screened or unscreened)

Cable core – concentrically twisted pairs

Flame retardant tape

Sheath – FRNC, orange

Packing on drums

A-H(L)H

Wire – bare copper conductor with a diameter of 1.0 mm or 1.12 mm

Core insulation – solid PE

Transmission element – each 2 wires twisted to a pair (screened or unscreened)

Cable core – concentrically twisted pairs

Flame retardant tape

Shield – made of laminated aluminum foil

Sheath – FRNC, orange

Packing on drums

Application

» transmission of electric signal of telecommunication, controlling and protecting purposes or control circuits

» designed especially for using in area danger of fire

» for indoor installations, tunnels or collectors, laying at cable ducts, on cable bridges, on cable grids or supports, burial in sand bedding, grasp or free placing in standard

» wet or moist ambient, spraying water and fleet immersion, dropping water with pH 7÷11

Environmental conditions

Temperature ranges for laying and assembly	–5 °C
Operation and store temperatures	–40 °C ÷ +65 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 40 years

D – outside cable diameter

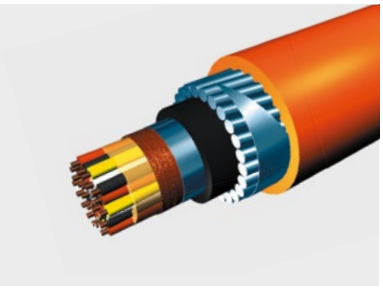
	A-HH ... P A-HH-J ... P			A-H(L)H ... P A-H(L)H-J ... P		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
Core diameter 1.0 mm						
1	11.2	107	2 000	11.6	124	2 000
2	13.2	145	2 000	13.6	165	2 000
3	15.0	181	2 000	15.4	205	2 000
4	15.4	205	2 000	15.8	230	2 000
6	15.9	249	2 000	16.3	273	2 000
7	16.6	275	2 000	17.0	302	2 000
12	20.0	404	2 000	20.4	437	2 000
16	22.3	504	2 000	22.7	541	2 000
24	27.4	708	1 000	27.8	754	1 000
30	29.7	843	1 000	30.1	889	1 000
48	34.3	1 398	1 000	34.7	1 454	1 000
61	38.7	1 715	500	39.1	1 778	500
Core diameter 1.12 mm						
1	11.2	110	2 000	11.6	127	2 000
2	13.2	151	2 000	13.6	171	2 000
3	15.0	191	2 000	15.4	215	2 000
4	15.4	217	2 000	15.8	241	2 000
6	15.9	268	2 000	16.3	293	2 000
7	16.6	297	2 000	17.0	324	2 000
12	20.0	443	2 000	20.4	475	2 000
16	22.3	555	2 000	22.7	592	2 000
24	27.4	785	1 000	27.8	831	1 000
30	29.7	939	1 000	30.1	985	1 000
48	34.3	1 552	1 000	34.7	1 607	1 000
61	38.7	1 910	500	39.1	1 974	500

	A-HH ... PIMF A-HH-J ... PIMF			A-H(L)H ... PIMF A-H(L)H-J ... PIMF		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
Core diameter 1.0 mm						
1	11.9	113	2 000	12.3	131	2 000
2	14.1	153	2 000	14.5	173	2 000
3	16.0	191	2 000	16.4	214	2 000
4	16.4	214	2 000	16.8	239	2 000
6	17.5	263	2 000	17.9	289	2 000
7	18.4	291	2 000	18.8	318	2 000
12	22.7	429	2 000	23.1	465	2 000
16	25.5	534	2 000	25.9	574	2 000
24	31.8	749	1 000	32.2	802	1 000
30	33.9	886	1 000	34.3	944	1 000
48	41.6	1 479	500	42.0	1 545	500
61	46.9	1 808	500	47.3	1 883	500
Core diameter 1.12 mm						
1	11.9	117	2 000	12.3	134	2 000
2	14.1	160	2 000	14.5	179	2 000
3	16.0	200	2 000	16.4	224	2 000
4	16.4	227	2 000	16.8	252	2 000
6	17.5	283	2 000	17.9	309	2 000
7	18.4	314	2 000	18.8	341	2 000
12	22.7	468	2 000	23.1	503	2 000
16	25.5	585	2 000	25.9	625	2 000
24	31.8	826	1 000	32.2	879	1 000
30	33.9	982	1 000	34.3	1 040	1 000
48	41.6	1 632	1 000	42.0	1 698	1 000
61	46.9	2 003	500	47.3	2 078	500

A-HHBH, AJ-HHAH

...x2x... P LG (R...VZK) FRNC (...x2x... PIMF LG (R...VZK) FRNC)
...x2x... P LG (...AL) FRNC (...x2x... PIMF LG (...AL) FRNC)

Specification
TP 31.30.13 – HC – 01/00
ČSN IEC 332-3A
ČSN EN 50268-2
ČSN EN 50267-2-2



Cable codes

A	–	outdoor cable
AJ	–	inductive protected outdoor cable
H	–	halogen free conductor insulation
H	–	inner halogen free sheath
A	–	Al wires armor
B	–	steel wires armor
H	–	outer halogen free sheath
LG	–	stranding in layers
(R...)	–	armor wires diameter
VZK	–	galvanized wires
(...Al)	–	total cross section of Al wires
FR	–	flame resistivity
NC	–	non corrosive
P	–	unscreened pairs
PIMF	–	screened pairs
J	–	protective conductor

Make up

A-HHBH

Wire – bare copper conductor with a diameter of 1.0 mm or 1.12 mm

Core insulation – solid PE

Transmission element – each 2 wires twisted to a pair (screened or unscreened)

Cable core – concentrically twisted pairs

Protective conductor – insulated copper conductor with a diameter of 1.2 mm for A-HHBH-J design

Inner sheath – PE, black

Flame retardant tape

Armor – steel wires

Outer sheath – FRNC, orange

Packing on drums

AJ-HHAH

Wire – bare copper conductor with a diameter of 1.0 mm or 1.12 mm

Core insulation – solid PE

Transmission element – each 2 wires twisted to a pair (screened or unscreened)

Cable core – concentrically twisted pairs

Protective conductor – insulated copper conductor with a diameter of 1.2 mm for A-HHAH-J design

Inner sheath – PE, black

Flame retardant tape

Shield – made of laminated aluminum foil

Armor – Al wires

Outer sheath – FRNC, orange

Packing on drums

Application

- transmission of electric signal of telecommunication, controlling and protecting purposes of control circuit
- for using in area danger of fire
- for indoor and outdoor installations, tunnels or collectors, direct burial placing with highest tension or supporting without carrying wire
- grasp or free placing in areas with alternating electromagnetic field danger
- standard, wet or moist ambient, spraying water and fleet immersion, dropping water with pH 7÷11

Environmental conditions

Temperature ranges for laying and assembly	–5 °C
Operation and store temperatures	–40 °C ÷ +65 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 40 years

D – outside cable diameter

	A-HHAH ... P A-HHAH-J ... P			A-HHBH ... P A-HHBH-J ... P		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
Core diameter 1.0 mm						
3	24.8	635	1 000	23.9	1 010	1 000
4	25.2	661	1 000	24.3	1 040	1 000
6	25.7	729	1 000	24.8	1 130	1 000
7	26.4	759	1 000	25.5	1 200	1 000
12	29.8	993	1 000	28.9	1 520	1 000
16	32.6	1 148	1 000	31.2	1 760	1 000
24	37.7	1 487	500	36.8	2 245	1 000
30	39.5	1 653	500	28.6	2 480	500
48	44.1	2 381	500	43.2	3 280	500
61	48.5	2 807	500	47.6	3 880	500
Core diameter 1.12 mm						
3	24.8	645	1 000	23.9	1 020	2 000
4	25.2	674	1 000	24.3	1 050	2 000
6	25.7	748	1 000	24.8	1 150	2 000
7	26.4	781	1 000	25.5	1 220	2 000
12	29.8	1 031	1 000	28.9	1 555	2 000
16	32.6	1 200	1 000	31.2	1 810	2 000
24	37.7	1 564	500	36.8	2 320	1 000
30	39.5	1 749	500	28.6	2 570	1 000
48	44.1	2 534	500	43.2	3 430	1 000
61	48.5	3 002	500	47.6	4 060	500

	A-HHAH ... PIMF A-HHAH-J ... PIMF			A-HHBH ... PIMF A-HHBH-J ... PIMF		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
Core diameter 1.0 mm						
3	25.5	674	1 000	24.4	1 120	1 000
4	25.9	700	1 000	24.6	1 150	1 000
6	27.0	775	1 000	25.7	1 255	1 000
7	27.9	831	1 000	26.6	1 330	1 000
12	32.2	1 079	1 000	30.9	1 725	1 000
16	35.0	1 262	1 000	34.1	2 035	1 000
24	41.3	1 641	500	40.4	2 610	500
30	43.4	1 832	500	42.5	2 910	500
48	51.1	2 604	500	50.2	3 940	500
61	56.4	3 090	500	55.5	4 610	500
Core diameter 1.12 mm						
3	25.5	684	1 000	24.4	1 130	1 000
4	25.9	713	1 000	24.6	1 160	1 000
6	27.0	796	1 000	25.7	1 275	1 000
7	27.9	854	1 000	26.6	1 355	1 000
12	32.2	1 117	1 000	30.9	1 760	1 000
16	35.0	1 314	1 000	34.1	2 080	1 000
24	41.3	1 718	500	40.4	2 680	500
30	43.4	1 928	500	42.5	3 000	500
48	51.1	2 758	500	50.2	4 085	500
61	56.4	3 285	500	55.5	4 795	500

A-2Y2YV

... x1x0.9 (1.4; 1.8) S LG (H95, H115, H145)

Specification

Dlk. 1.013.107y
Dlk. 1.013.108y
Dlk. 1.013.110y

Cable codes

A – outdoor cable
2Y – solid PE conductor insulation
2YV – PE sheath with increased wall thickness
S – signal cable
LG – layer stranding
H(n) – operating capacity

Make up

Wire – bare copper conductor with a diameter of 0.9; 1.4 or 1.8 mm

Core insulation – solid PE

Cable core – wires stranded in concentric layers

Cable core wrapping

Control wires – 2 copper conductors with a diameter of 0.5 mm starting with 14 stranded elements

Sheath – PE, black

Packing on drums

Application

» for general use in protective devices
» for use as underground and counduit cables

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.9	1.4	1.8
Max. loop resistance	Ω/km	28.9	11.9	7.2
Insulation resistance	GΩ.km	10	10	10
Effective test voltage wire/wire at 50 Hz	V	2 500	2 500	2 500
Effective test voltage wire/shield at 50 Hz	V	2 500	2 500	2 500
Operating voltage	Vss	600	600	600

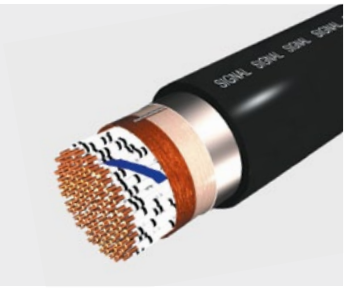
A-2Y2YV

	Core/wire diameter 0.9/1.55 mm			Core/wire diameter 1.4/2.2 mm			Core/wire diameter 1.8/2.7 mm		
Number of units	External diameter (mm)	Net weight (kg/km)	Standard production length (m)	External diameter (mm)	Net weight (kg/km)	Standard production length (m)	External diameter (mm)	Net weight (kg/km)	Standard production length (m)
	H115			H145					
2	8.0	50	1 000						
4	9.0	70	1 000	11.0	120	1 000	12.0	170	1 000
7	10.0	100	1 000	12.0	170	1 000	14.0	260	1 000
10	11.0	130	1 000	14.0	240	1 000	16.0	370	1 000
14	12.0	160	1 000	15.0	320	1 000	18.0	490	1 000
20	13.0	210	1 000	17.0	430	1 000	21.0	670	1 000
24	14.0	250	1 000	18.0	500	1 000	22.0	790	1 000
30	15.0	300	1 000	20.0	610	1 000	24.0	960	1 000
40	16.0	380	1 000	21.0	790	1 000	27.0	1 260	1 000
50	18.0	460	1 000	24.0	970	1 000	29.0	1 540	1 000
60	19.0	530	1 000	25.0	1 150	1 000	31.0	1 830	1 000
80	21.0	680	1 000	28.0	1 490	1 000	35.0	2 420	1 000
100	23.0	850	1 000	32.0	1 870	1 000	40.0	3 000	1 000
120	25.0	990	1 000	34.0	2 220	1 000	42.0	3 570	500
140	26.0	1 150	1 000	37.0	2 560	1 000	45.0	4 130	500
160	28.0	1 300	1 000	39.0	2 910	1 000	49.0	4 730	500
180	29.0	1 460	1 000	41.0	3 260	1 000	52.0	5 310	500
200	30.0	1 600	1 000	42.0	3 590	500	53.0	5 870	500

	Core/wire diameter 1.4/2.7 mm			Core/wire diameter 1.8/3.4 mm		
Number of units	External diameter (mm)	Net weight (kg/km)	Standard production length (m)	External diameter (mm)	Net weight (kg/km)	Standard production length (m)
	H95					
10	16.0	280	1 000	19.0	410	1 000
14	18.0	370	1 000	21.0	560	1 000
20	20.0	500	1 000	24.0	760	1 000
30	24.0	700	1 000	28.0	1 090	1 000
50	29.0	1 120	1 000	36.0	1 770	1 000

A-2Y(L)2YV
... x4x0.9 S LG (H45)

Specification
Dlk. 1.013.109y
Dlk.1.013.110y



Cable codes

A – outdoor cable
2Y – solid PE conductor insulation
(L)2YV – laminated sheath with increased wall thickness
S – signal cable
LG – layer stranding
H(n) – operating capacity

Make up

Wire – bare copper conductor with a diameter of 0.9 mm

Core insulation – solid PE

Stranding element – every 4 conductors stranded in a star quad

Cable core – the quads are stranded to the core in concentric layers

Cable core wrapping

Control wires – 2 control wires, copper conductor with a diameter of 0.5 mm starting with 7 stranded elements

Shield – made of laminated aluminum foil

Sheath – PE, black

Packing on drums

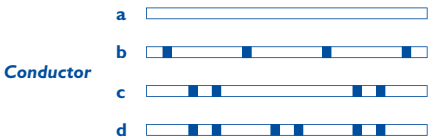
Application

» cables are designed for general use in protective equipment

» cables are suitable for placement as in earth or conduits

Conductor insulation primary color – transparent

The individual conductors are identified by rings



Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–25 °C ÷ +60 °C
Permitted minimum bending radius	min. 15D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.9
Max. loop resistance	Ω/km	56.6
Insulation resistance	GΩ.km	10
Mutual capacitance	nF/km	45
Effective test voltage wire/wire at 50 Hz	V	2 500
Effective test voltage wire/shield at 50 Hz	V	2 500
Operating voltage	Vss	600

A-2Y(L)2YV

	Core/wire diameter 0.9/1.8 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*
1	10.0	100	1 000
3	15.0	190	1 000
5	17.0	290	1 000
7	19.0	360	1 000
10	22.0	490	1 000
14	25.0	640	1 000
20	28.0	860	1 000
30	34.0	1 240	1 000
40	38.0	1 610	1 000

A-2Y2YB2Y

... x1x0.9 (1.4; 1.8) S LG...B 0 (H95, H115 resp. H145)

Specification

Dlk. 1.013.107y
Dlk. 1.013.108y
Dlk. 1.013.110y

Cable codes

A – outdoor cable
2Y – solid PE conductor insulation
2Y – inner PE sheath
B – steel tape armor
2Y – PE outer sheath
S – signal cable
LG – layer stranding
H(n) – operating capacity

Make up

Wire – bare copper conductor with a diameter of 0.9; 1.4 or 1.8 mm

Core insulation – solid PE

Cable core – conductors stranded in concentric layers

Cable core wrapping

Control wires – 2 copper conductors with a diameter of 0.5 mm starting with 14 stranded elements

Inner sheath – PE, black

Stell tape armor

Outer sheath – PE, black

Packing on drums

Application

» for general use in protective devices
» for use as underground and counduit cables

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.9	1.4	1.8
Max. loop resistance	Ω/km	28.9	11.9	7.2
Insulation resistance	GΩ.km	10	10	10
Effective test voltage wire/wire at 50 Hz	V	2 500	2 500	2 500
Effective test voltage wire/shield at 50 Hz	V	2 500	2 500	2 500
Operating voltage	Vss	600	600	600

A-2Y2YB2Y

	Core/wire diameter 0.9/1.55 mm			Core/wire diameter 1.4/2.2 mm			Core/wire diameter 1.8/2.7 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
	H115			**H145**					
2	10.0	110	1 000	13.0	180	1 000			
4	11.0	130	1 000	14.0	250	1 000	14.0	250	1 000
7	12.0	150	1 000	16.0	330	1 000	16.0	360	1 000
10	13.0	190	1 000	17.0	410	1 000	18.0	470	1 000
14	14.0	240	1 000	19.0	540	1 000	20.0	630	1 000
20	15.0	300	1 000	21.0	650	1 000	23.8	840	1 000
24	16.0	350	1 000	22.0	760	1 000	24.0	960	1 000
30	17.0	400	1 000	24.0	950	1 000	26.0	1 150	1 000
40	18.0	480	1 000	26.0	1 160	1 000	29.0	1 470	1 000
50	20.0	600	1 000	27.0	1 340	1 000			
60	21.0	680	1 000						
80	23.0	850	1 000						
100	26.0	1 030	1 000						
120	27.0	1 190	1 000						
140	29.0	1 360	1 000						

	Core/wire diameter 1.4/2.7 mm			Core/wire diameter 1.8/3.4 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
10	18.0	390	1 000	21.0	570	1 000
14	20.0	500	1 000	23.0	720	1 000
20	22.0	660	1 000			

Note: Cable versions according to Dlk 1.013.102 on reguest

A-2Y(L)2YB2Y

...x4x0.9 S LG (...B 0...) (H45)

Specification

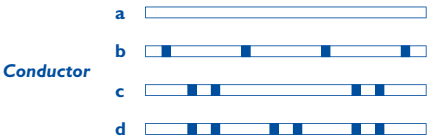
Dlk. 1.013.109y
Dlk.1.013.110y

Cable codes

A – outdoor cable
2Y – solid PE conductor insulation
(L)2Y – PE inner laminated sheath
B – steel tape armored
2Y – PE outer sheath
S – signal cable
LG – layer stranding
H(n) – operating capacity

Conductor insulation primary color – transparent

The individual conductors are identified by rings



Make up

Wire – bare copper conductor with a diameter of 0.9 mm

Core insulation – solid PE

Stranding element – every 4 conductors stranded in a star quad

Core – the quads are stranded to the core in concentric layers

Cable core wrapping

Control wires – 2 control wires, copper conductor with a diameter of 0.5 mm starting with 7 stranded elements

Shield – made of laminated aluminum foil

Inner sheath – PE, black

Steel tape armor

Outer sheath

Packing on drums

Application

» cables are designed for general use in protective equipment

» cables are suitable for placement as in earth or conduits

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–25 °C ÷ +60 °C
Permitted minimum bending radius	min. 15D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.9
Max. loop resistance	Ω/km	56.6
Insulation resistance	GΩ.km	10
Mutual capacitance	nF/km	45
Effective test voltage wire/wire at 50 Hz	V	2 500
Effective test voltage wire/shield at 50 Hz	V	2 500
Operating voltage	Vss	600

HALLEY CABLES
CABLES & WIRES

A-2Y(L)2YB2Y

	Core/wire diameter 0.9/1.8 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*
1	12.0	160	1 000
3	17.0	290	1 000
5	19.0	410	1 000
7	21.0	510	1 000
10	24.0	660	1 000
14	27.0	830	1 000

AJ-2Y2YDB2Y

...x1x0.9 (1.4; 1.8) S LG (...Cu/2B 0....) (H95, H115, H145)

Specification

Dlk. 1.013.107y
Dlk. 1.013.108y
Dlk. 1.013.110y

Cable codes

AJ – outdoor cable
2Y – solid PE conductor insulation
2Y – inner PE sheath
D – copper wire concentric screen
B – steel tape armor
2Y – outer PE sheath
S – signal cable
LG – layer stranding
H (n) – operating capacity

Make up

Wire – bare copper conductor with a diameter of 0.9; 1.4 or 1.8 mm

Core insulation – solid PE

Cable core – conductors stranded in concentric layers

Control wires – 2 copper conductors with a diameter of 0.5 mm starting with 14 stranded elements

Cable core wrapping

Inner sheath – PE, black

Anti-induction protection – copper wires

Armor steel tape

Outer sheath – PE, black

Packing on drums

Application

» general use in protective devices
» as underground and counduit cables
» use in areas with danger of electro-magnetic field

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +60 °C
Permitted minimum bending radius	min. 20D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.9	1.4	1.8
Max. loop resistance	Ω/km	28.9	11.9	7.2
Insulation resistance	GΩ.km	10	10	10
Effective test voltage wire/wire at 50 Hz	V	2 500	2 500	2 500
Effective test voltage wire/shield at 50 Hz	V	2 500	2 500	2 500
Operating voltage	Vss	600	600	600

Value of reduction factor according to Dlk. 1.013.110y – type code RKZ 601, 602, ...

HALLEY CABLES
CABLES & WIRES

AJ-2Y2YDB2Y

	Core/wire diameter 1.4/2.2 mm (H145)			Core/wire diameter 1.8/2.7 mm (H145)		
Number of units	External diameter (mm)	Net weight (kg/km)	Standard production length (m)	External diameter (mm)	Net weight (kg/km)	Standard production length (m)
RKZ 401						
50				38.0	3 630	500
80	37.0	3 500	500	44.0	4 850	500
120	42.0	4 570	500	51.0	6 410	500
160	47.0	5 550	500	56.0	7 910	250
200	51.0	6 460	500	61.0	9 300	250

	Core/wire diameter 1.4/2.7 mm (H95)			Core/wire diameter 1.8/3.4 mm (H95)		
Number of units	External diameter (mm)	Net weight (kg/km)	Standard production length (m)	External diameter (mm)	Net weight (kg/km)	Standard production length (m)
RKZ 401						
50	38.0	3 180	1 000	44.0	4 230	500
RKZ 403						
30	32.0	2 350	1 000	37.0	3 100	1 000

	Core/wire diameter 1.4/2.2 mm (H145)			Core/wire diameter 1.8/2.7 mm (H145)		
Number of units	External diameter (mm)	Net weight (kg/km)	Standard production length (m)	External diameter (mm)	Net weight (kg/km)	Standard production length (m)
RKZ 403						
50	32.0	2 620	1 000	31.0	2 560	1 000

	Core/wire diameter 1.4/2.7 mm (H95)		
Number of units	External diameter (mm)	Net weight (kg/km)	Standard production length (m)
RKZ 501			
10	22.0	990	1 000

AJ-2Y2YDB2Y

	Core/wire diameter 1.4/2.2 mm (H145)			Core/wire diameter 1.8/2.7 mm (H145)			Core/wire diameter 1.8/3.6 mm (H95)		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
RKZ 502									
50							42.0	3 240	500
80							41.0	3 860	500
120	40.0	3 610	500	48.0	5 290	500			
160	44.0	4 470	500	54.0	6 660	250			
200	48.0	5 320	500	59.0	7 960	250			

	Core/wire diameter 0.9/1.5 mm (H115)		
Number of units	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*
RKZ 503			
160	34.0	2 430	1 000
200	36.0	2 810	1 000

	Core/wire diameter 1.4/2.7 mm (H95)			Core/wire diameter 1.8/3.4 mm (H95)		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
RKZ 504						
10				25.0	1 220	1 000
14	24.0	1 130	1 000	27.0	1 430	1 000
20	27.0	1 360	1 000	30.0	1 760	1 000
30	30.0	1 680	1 000	34.0	2 250	1 000
50	35.0	2 300	1 000			

AJ-2Y2YDB2Y

	Core/wire diameter 0.9/1.5 mm (H115)			Core/wire diameter 1.4/2.2 mm (H145)			Core/wire diameter 1.8/2.7 mm (H145)		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
RKZ 504									
10	17.0	610	1 000	20.0	840	1 000	22.0	1 050	1 000
20	18.0	770	1 000	23.0	1 150	1 000	27.0	1 540	1 000
30	21.0	940	1 000	25.0	1 420	1 000	30.0	1 930	1 000
50	24.0	1 220	1 000	30.0	1 960	1 000	35.0	2 730	1 000
80	27.0	1 560	1 000	34.0	2 650	1 000			
120	31.0	2 020	1 000						

	Core/wire diameter 0.9/1.5 mm (H115)			Core/wire diameter 1.4/2.2 mm (H145)			Core/wire diameter 1.8/2.7 mm (H145)		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
RKZ 601									
10	17.0	540	1 000	19.0	740	1 000	22.0	950	1 000
20				22.0	1 040	1 000			
30	20.0	830	1 000				29.0	1 770	1 000
50	23.0	1 090	1 000				34.0	2 550	1 000
160							53.0	6 350	500

	Core/wire diameter 0.9/1.5 mm (H115)			Core/wire diameter 1.4/2.2 mm (H145)			Core/wire diameter 1.8/2.7 mm (H145)		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
RKZ 602									
20	18.0	690	1 000				26.0	1 400	1 000
30				25.0	1 290	1 000			
50				29.0	1 790	1 000			
80	26.0	1 410	1 000	34.0	2 470	1 000	40.0	3 620	500
120	30.0	1 850	1 000	39.0	3 370	500	48.0	5 010	500
160	33.0	2 250	1 000	44.0	4 210	500			
200	35.0	2 630	1 000	47.0	5 040	500	58.0	7 600	250

AJ-2Y(L)2YDB2Y
x4x0.9 S (H45) LG (...Cu/2B 0....)

Specification
Dlk 1.013.109y
Dlk.1.013.110y

Cable codes

AJ – outdoor cable with anti-inductive protection
2Y – solid PE conductor insulation
(L)2Y – inner laminated PE sheath
D – copper wire concentric screen
B – steel tape armor
2Y – outer PE sheath
S – signal cable
LG – layer stranding
H(n) – operating capacity

Make up

Wire – bare copper conductor with a diameter of 0.9 mm

Core insulation – solid PE

Transmission element – each 4 wires stranded in a star quad

Cable core – the quads are stranded to the core in concentric layers

Cable core wrapping

Control wires – 2 control wires, copper conductor with a diameter of 0.5 mm starting with 7 stranded elements

Shield – made of laminated aluminum foil

Inner sheath – PE, black

Anti-inductive protection – copper wire screen and steel tape armor

Outer sheath – PE, black

Packing on drums

Application

» general use in protective equipment
» underground and conduit cables
» use in areas with danger of electromagnetic field

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 20D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

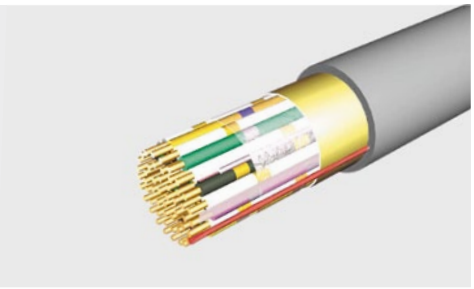
Conductor diameter	mm	0.9
Max. loop resistance	Ω/km	56.6
Insulation resistance	GΩ.km	10
Mutual capacitance	nF/km	45
Effective test voltage wire/wire at 50 Hz	V	2 500
Effective test voltage wire/shield at 50 Hz	V	2 500
Operating voltage	Vss	600

Value of reduction factor according to Dlk. 1.013.110y – type code RKZ 601, 602, ...

AJ-2Y(L)2YDB2Y

	Core/wire diameter 0.9/1.8 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
RKZ 601			
3	20.1	700	1 000
5	22.4	890	1 000
10	27.0	1 260	1 000
20	32.7	1 880	1 000
30	38.1	2 470	1 000
40	42.1	2 990	1 000
RKZ 504			
3			
5			
10			
RKZ 503			
20			
30			
RKZ 502			
40			
RKZ 403			
5			
10	29.9	1 990	1 000
RKZ 402			
10			
20	36.7	2 860	1 000
30	42.1	3 610	500
40	46.5	4 240	500

U72 | U72-H
...x4x0.5 (0.8)



Specification
PTT 844.13

Make up

Stranded in layers

Wire – CuSn 0.5 or 0.8 mm

Core insulation – U72 – PVC; U72-H – Polyethylen

Transmission element – each 4 wires twisted in a star quad

Cable core – transmission elements stranded in layers

Cable core wrapping – plastic tape

Sheath – PVC, grey RAL 7035 or 9010

Packing in coils / on reels / on drums

Application

- » telephone, signaling and data transmission
- » permanent installation on and under plaster in dry or damp rooms, permanent installation on external walls

Environmental conditions

Temperature ranges for laying and assembly	–5 °C ÷ +50 °C
Operation and store temperatures	–30 °C ÷ +70 °C
Permitted minimum bending radius	min. 7.5 x D
Cable lifetime	min. 30 years

D – outside cable diameter

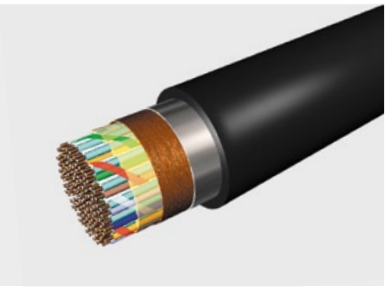
Electrical parameters (20 °C)

Conductor diameter	mm	0.5	0.8
Max. conductor resistance	Ω/km	97.8	37.5
Insulation resistance	GΩ.km	2	2
Mutual capacitance	nF/km	70/60	70/60
Capacity unbalance k_1 at 800 Hz	pF/500 m	450	450
Effective test voltage wire/wire at 50 Hz	V	2 000	2 000
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000
Operating voltage	Vss	300	300

	Core/wire diameter 0.5/0.9 mm			Core/wire diameter 0.8/1.4 mm		
Number of units	**External diameter** *(mm)*	**Standard production length** *(m)*	**Net weight** *(kg/km)*	**External diameter** *(mm)*	**Standard production length** *(m)*	**Net weight** *(kg/km)*
Stranded in layers						
1	5	500, 1 000, 2 000	19	5.6	500, 1 000, 2 000	39
2	7.5	500, 1 000, 2 000	34	8.6	500, 1 000, 2 000	76
3	7	500, 1 000, 2 000	44	9	500, 1 000, 2 000	100
5	8.5	500, 1 000, 2 000	65	11.4	500, 1 000, 2 000	157
7	9.5	2 000	95	13.5	2 000	221
10	11.5	2 000	127	15	2 000	297
13	12	2 000	157	–	–	374
15	13.5	2 000	182	17	2 000	440
20	15.5	2 000	239	19.5	2 000	567
25	17	2 000	292	22	2 000	699
30	18	1 000	340	23	1 000	878
50	23	1 000	548	29.5	1 000	1 452
60	25	1 000	652			
80	28.5	1 000	866			
100	32	1 000	1 085			

TK 59 GM

...x4x0.4 (0.6; 0.8)



Specification

PTT 7/81

Jelly Filled subscriber cable with foam skin insulation and polyethylene laminated sheath

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Core insulation – PE foam-skin

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Cable core – filled

Shield – made of laminated aluminum foil

Sheath – PE

Packing on drums

Application

- local network
- can be laid into cable ductand and directly into ground

Environmental conditions

Temperature ranges for laying and assembly	10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.6	0.8
Max. loop resistance	Ω/km	300	130	72
Insulation resistance	GΩ.km	min. 5	min. 5	min. 5
Mutual capacitance	nF/km	38	42	42
Capacity unbalance k_1 at 800 Hz	pF/500 m	800	800	300
Effective test voltage wire/wire at 50 Hz	V	500	500	500
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000
Operating voltage	Vss	250	250	250

HALLEY CABLES
CABLES & WIRES

TK 59 GM

	Core/wire diameter 0.4/0.99 mm			Core/wire diameter 0.6/1.33 mm			Core/wire diameter 0.8/1.75 mm		
Number of units	**External diameter**	**Standard production length**	**Net weight**	**External diameter**	**Standard production length**	**Net weight**	**External diameter**	**Standard production length**	**Net weight**
	(mm)	*(m)*	*(kg/km)*	*(mm)*	*(m)*	*(kg/km)*	*(mm)*	*(m)*	*(kg/km)*
1	7.7	2 000	47	8.5	2 000	61	9.5	2 000	80
3	11	2 000	98	13	2 000	146	14.3	2 000	190
5	11.7	2 000	116	13.6	2 000	173	16.6	2 000	269
10	13.5	2 000	165	16.5	2 000	274	19.4	2 000	410
15	15.8	2 000	229	19.6	2 000	393	23.4	2 000	602
20	17.2	2 000	279	21.4	2 000	485	26.9	2 000	798
25	18.3	2 000	323	23.8	2 000	602	29.7	1 000	980
30	19.9	2 000	383	25.3	2 000	693	31.8	1 000	1 142
35	21.1	2 000	434	26.9	2 000	792	33.9	1 000	1 310
40	22.2	2 000	485	28.4	1 000	890	36.2	1 000	1 495
50	23.2	2 000	550	31.2	1 000	1 087	39.5	1 000	1 812
60	–	2 000	–	33.3	1 000	1 261	42.5	1 000	2 127
75	27.9	2 000	803	37	1 000	1 564	46.8	500	2 609
100	31.4	1 000	1 033	41.6	1 000	2 016	59.5	500	3 919
125	34.8	1 000	1 275	46.8	500	2 540	66.2	500	4 869
150	38.2	1 000	1 533	51.6	500	3 071			
175	40.8	1 000	1 761	55.2	500	3 539			
200	41.1	1 000	1 860	59.3	500	4 070			
225	43.2	500	2 068	62.4	500	4 533			
250	48.1	500	2 470	66.6	500	5 113			
300	52.1	500	2 918						
350	56.5	500	3 424						
400	61.8	500	4 033						
500	67.9	500	4 925						

TK 53 UM (aerial)

...x4 (0.6; 0.8)

Specification

TDO 18/08

Jelly Filled subscriber cable with foam skin insulation and polyethylene laminated sheath

Make up

Wire – bare copper conductor with a diameter of 0.6 or 0.8 mm

Core insulation – PE foam-skin

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Cable core – filled

Shield – made of laminated aluminum foil

Sheath – PE, black

Steel wire messenger

Packing on drums

Application

- for basic phone services in analogue and digital transmission systems
- for aerial use

Environmental conditions

Temperature ranges for laying and assembly	10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

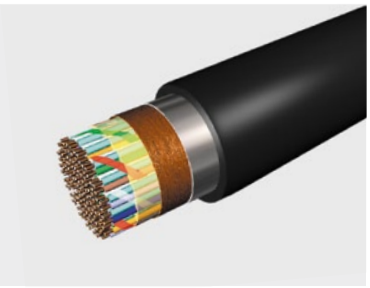
Conductor diameter	mm	0.6	0.8
Max. loop resistance	Ω/km	130	72
Insulation resistance	GΩ.km	min. 5	min. 5
Mutual capacitance	nF/km	42	42
Capacity unbalance k_1 at 800 Hz	pF/500 m	800	300
Effective test voltage wire/wire at 50 Hz	V	500	500
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000
Operating voltage	Vss	250	250

TK 53 UM (aerial)

	Core/wire diameter 0.6/1.33 mm				Core/wire diameter 0.8/1.75 mm			
Number of units	**External diameter cable**	**External diameter *steel rope***	**Standard production length**	**Net weight**	**External diameter cable**	**External diameter *steel rope***	**Standard production length**	**Net weight**
	(mm)	***(mm)***	***(m)***	***(kg/km)***	***(mm)***	***(mm)***	***(m)***	***(kg/km)***
1	8.5	2.15	2 000	86	9.5	2.15	2 000	105
3	13	2.15	1 000	171	14.3	3.0	1 000	240
5	13.6	3.0	1 000	223	16.6	4.15	1 000	360
10	16.5	4.15	1 000	365	19.4	4.15	1 000	501
15	19.6	4.15	1 000	484	23.4	4.15	1 000	693
20	21.4	4.15	1 000	576	26.9	5.0	1 000	913
25	23.8	5.0	1 000	717	29.7	6.0	1 000	1 095

HRQhQzKAhQ (Qv – jelly filled)

...x4x0.4 (0.6; 0.8)



Specification

MMD-59V5

Cable codes

H – local telephone cable
R – copper core
QhQ – foam skin PE insulation
z – jelly filling
K – (space in the denomination)
Ah – aluminium foil applied – longitudionally
Q – PE sheath

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Core insulation – PE foam-skin

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Cable core – filled

Shield – made of laminated aluminum foil

Sheath – PEALPE

Packing on drums

Application

» for basic phone services in analogue and digital transmission systems

» to be placed in cable ducts, under ground laying and areas without higher danger of mechanical cable damage

Environmental conditions

Temperature ranges for laying and assembly	0 °C ÷ +40 °C
Operation and store temperatures	–30 °C ÷ +50 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

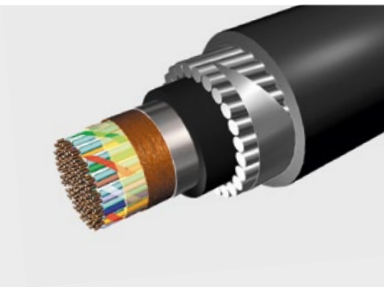
Conductor diameter	mm	0.4	0.6	0.8
Max. loop resistance	Ω/km	300	133	73.2
Insulation resistance	GΩ.km	min. 10	min. 10	min. 10
Mutual capacitance	nF/km	43 ± 3	43 ± 3	43 ± 3
Capacity unbalance k_l at 800 Hz	pF/500 m	800	800	800
Effective test voltage wire/wire at 50 Hz	V	600	600	600
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000
Operating voltage	Vss	250	250	250

HRQhQzKAhQ (Qv – jelly filled)

	Core/wire diameter 0.4/0.74 mm			Core/wire diameter 0.6/1.33 mm			Core/wire diameter 0.8/1.45 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
3	8.7	66	2 000	10	96	2 000	12.1	151	2 000
5	9.2	80	2 000	11.7	138	2 000	14.6	229	2 000
10	11.2	128	2 000	14.1	222	2 000	17	358	2 000
15	13.1	180	2 000	16.8	321	2 000	20.1	514	2 000
25	15.4	264	2 000	19.6	471	2 000	25.6	843	2 000
35	16.6	329	2 000	22.6	640	2 000	29.1	1 129	2 000
50	20.1	476	2 000	26.6	897	2 000	33.1	1 530	2 000
75	22.1	629	2 000	30.8	1 264	2 000	40	2 263	1 000
100	26.4	871	2 000	35.2	1 666	1 000	46.4	3 031	1 000
150	29.7	1 188	2 000	41.3	2 388	1 000	56.4	4 511	500
200	34	1 568	1 000	48.2	3 219	1 000	64	5 907	500
300	42.7	2 415	1 000	58.7	4 800	500			
400	47.4	3 089	1 000	67.5	6 244	500			
500	52.2	3 799	500						
600	56.4	4 497	500						
800	67.5	6 216	500						

HRQhQzKAhQ – AkVQ (Qvr – armoured)

...x4x0.4 (0.6; 0.8)



Specification

MMD59V5

Cable codes

Jelly Filled subscriber cable with foam skin insulation and polyethylene laminated sheath

H – local telephone cable
R – copper core
QhQ – foam skin PE insulation
z – jelly filling
K – (space in the denomination)
Ah – aluminium foil applied – longitudionally
Q – PE sheath
Ak – round alu wire
V – steel tape

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Core insulation – PE foam-skin

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Cable core – crape paper

Shield – made of laminated aluminum foil

Sheath (Inner sheath) – PE, black

Armouring – Alu wire

Fixing – FeZn tape

Outer sheath – PE, black

Packing on drums

Application

» for basic phone services in analogue and digital transmission systems

» to be placed in cable ducts, under ground laying and areas without higher danger of mechanical cable damage

Environmental conditions

Temperature ranges for laying and assembly	0 °C ÷ +40 °C
Operation and store temperatures	–30 °C ÷ +50 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

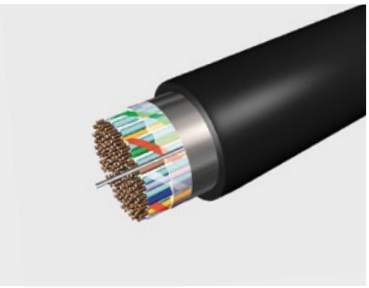
Conductor diameter	mm	0.4	0.6	0.8
Max. loop resistance	Ω/km	300	133	73.2
Insulation resistance	GΩ.km	min. 10	min. 10	min. 10
Mutual capacitance	nF/km	43 ± 3	43 ± 3	43 ± 3
Capacity unbalance k_l at 800 Hz	pF/500 m	800	800	800
Effective test voltage wire/wire at 50 Hz	V	600	600	600
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000
Operating voltage	Vss	250	250	250

HRQhQzKAhQ –AkVQ (Qvr – armoured)

	Core/wire diameter 0.4/0.74 mm			Core/wire diameter 0.6/1.33 mm			Core/wire diameter 0.8/1.45 mm		
Number of units	**External diameter**	**Standard production length**	**Net weight**	**External diameter**	**Standard production length**	**Net weight**	**External diameter**	**Standard production length**	**Net weight**
	(mm)	*(m)*	*(kg/km)*	*(mm)*	*(m)*	*(kg/km)*	*(mm)*	*(m)*	*(kg/km)*
5	20.6	2 000	266	23.1	2 000	359	26	2 000	495
10	22,6	2 000	339	25.5	2 000	485	28.4	2 000	680
15	24.5	2 000	430	28.2	2 000	628	31.5	1 000	876
25	26.8	2 000	542	31	1 000	830	38.4	1 000	1 432
35	28	2 000	642	35.4	1 000	1 140	41.9	1 000	1 763
50	31.5	1 000	838	39.4	1 000	1 492	47.7	500	2 374
75	34.9	1 000	1 115	45.4	500	2 022	54.6	500	3 281
100	39.2	1 000	1 464	49.8	500	2 527	61.8	500	4 282
150	42.5	1 000	1 879	56.7	500	3 490	73	500	5 971
200	48.6	500	2 420	63.6	500	4 503	80.6	250	7 539
300	58.1	500	3 718						
400	62.8	500	4 520						
500	68.8	500	5 360						
600	73	500	6 181						
800	84.1	250	8 154						

FRQKAhM (Qf – indoor)

...x4x0.4 (0.6)



Specification

MMD57V4

Cable codes

F – indoor
R – copper core
Q – solid PE insulation
K – (space in the denomination)
Ah – aluminium foil applied – longitudionally
M – PVC sheath

Make up

Wire – bare copper conductor with a diameter of 0.4 or 0.6 mm

Core insulation – PE solid

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Cable – wrapping – plastic tape

Shield – CuSn wire, laminated Al foil

Sheath – PVC black

Packing on drums

Application

» for basic phone services in analogue and digital transmission systems

» the cables with PVC shield are designed to be placed in areas with fire spread danger

Environmental conditions

Temperature ranges for laying and assembly	0 °C ÷ +40 °C
Operation and store temperatures	–30 °C ÷ +50 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

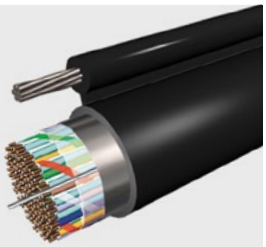
Conductor diameter	mm	0.4	0.6
Max. loop resistance	Ω/km	300	130
Insulation resistance	GΩ.km	min. 10	min. 10
Mutual capacitance	nF/km	43 ± 3	43 ± 3
Capacity unbalance k_1 at 800 Hz	pF/500 m	800	800
Effective test voltage wire/wire at 50 Hz	V	600	600
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000
Operating voltage	Vss	250	250

FRQKAhM (Qf – indoor)

	Core/wire diameter 0.4/0.73 mm			Core/wire diameter 0.6/1.07 mm		
Number of units	**External diameter**	**Net weight**	**Standard production length**	**External diameter**	**Net weight**	**Standard production length**
	(mm)	*(kg/km)*	*(m)*	*(mm)*	*(kg/km)*	*(m)*
1	-	-	-	5.5	34	2 000
5	9.3	81	2 000	8.6	74	2 000
10	10.9	120	2 000	11.2	129	2 000
15	11.7	154	2 000			
25	14.4	237	2 000			
50	18.4	409	2 000			
75	21.8	584	1 000			
100	25.2	772	1 000			

LRQhQkAhQ (Ql – aerial)

...x4x0.6 (0.8)



Specification

MMD59V5

Cable codes

L – areial telephone cable
R – copper core
QhQ – foam-skin
K – (space in the denomination)
Ah – aluminium foil applied – longitudionally
Q – PE sheath

Make up

Wire – bare copper conductor with a diameter of 0.6 or 0.8 mm

Core insulation – PE-foam-skin

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Cable – wrapping – plastic tape

Shield – CuSn wire, laminated Al foil

Sheath – PE black

Steel wire messenger

Packing on drums

Application

» for basic phone services in analogue and digital transmission systems

» for aerial use

Environmental conditions

Temperature ranges for laying and assembly	0 °C ÷ +40 °C
Operation and store temperatures	–30 °C ÷ +50 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.6	0.8
Max. loop resistance	Ω/km	130	73.2
Insulation resistance	GΩ.km	min. 10	min. 10
Mutual capacitance	nF/km	43 ± 3	43 ± 3
Capacity unbalance k_l at 800 Hz	pF/500 m	800	800
Effective test voltage wire/wire at 50 Hz	V	600	600
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000
Operating voltage	Vss	250	250

LRQhQkAhQ (QI – aerial)

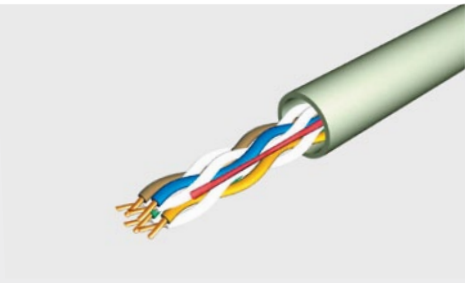
	Core/wire diameter 0.6/1.0 mm				Core/wire diameter 0.8/1.35 mm			
Number of units	**External diameter cable**	**External diameter *steel rope***	**Standard production length**	**Net weight**	**External diameter cable**	**External diameter *steel rope***	**Standard production length**	**Net weight**
	(mm)	***(mm)***	***(m)***	***(kg/km)***	***(mm)***	***(mm)***	***(m)***	***(kg/km)***
3	9.9	2.55	2 000	117	11.8	2.55	2 000	156
5	11.4	3	2 000	161	13.8	3	2 000	209
10	13.5	3.6	2 000	256	17	3.6	1 000	340
15	15.8	3.6	1 000	329	-	-	-	-
25	18.5	3.6	1 000	464	-	-	-	-
50	24.9	4.2	1 000	834	-	-	-	-

UTP CAT 5, CAT 5e

4x2xAWG 24 PVC (FRNC)

Specification

EIA/TIA 568/A
ISO/IEC 11801
EN 50173



Cable codes

UTP – unscreneed cable
4 x 2 – structure cable core – 4 pairs
AWG 24 – diameter Cu core – 0.5 mm
PVC – sheat of PVC
FRNC – sheat of non corrosiv flame retardant material

Make up

Wire – bare copper conductor with a diameter of 0.5 mm

Core insulation – solid PE

Transmission element – every 2 conductors stranded in pair

Cable core – the pairs are stranded to the core in concentric layers

Ripcord – non metalic

Jacket – PVC or FRNC

External diameter – 5.5 mm

Production lengths – 305, 500, 1 000 m

Packing – boxes, reels

Application

» instalation LAN net
» data transfer

Environmental conditions

Temperature ranges for laying and assembly	–5 °C ÷ +40 °C
Operation and store temperatures	–30 °C ÷ +60 °C
Transport and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.5
Max. loop resistance	Ω/km	93.8
Insulation resistance	GΩ.km	10
Mutual capacitance	nF/km	56
Mean impedance	Ω	100 ± 15
Max. capacity unbalance	pF/500m	330
Min. Structural Return Loss (SRL)		
1–20 MHz	dB/100 m	23
20–100 MHz		23–10 log (f/20)
Max. attenuation	dB/100 m	1.967 x √f + 0.023 f+0.05 /√f
Min. near END Crosstalk (NEXT)	dB/100 m	23–15 log (f/0.772)

Colour conductors

Pair No.	A – conductor	B – conductor
1	white with blue rings	blue
2	white with orange rings	orange
3	white with green rings	green
4	white with brown rings	braun

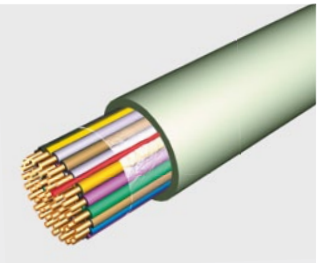
HALLEY CABLES
CABLES & WIRES

UTP CAT 3 – 100 Ω

x2xAWG 24 PVC (x2xAWG 24 FRNC)

Specification

EIA/TIA 568/A
ISO/IEC 11801
EN 50173



Cable codes

UTP – unscreneed cable
AWG 24 – diameter Cu core – 0.5 mm
PVC – sheat of PVC
FRNC – sheat of non corrosiv flame retardant material

Make up

Wire – bare copper conductor with a diameter of 0.5 mm

Core insulation – solid PE

Transmission element – every 2 conductors stranded in pair

Group – 5 pairs

Cable core – the groups are stranded to units

Ripcord – non metalic

Sheath – PVC or FRNC

Production lengths – 300, 500, 1 000 m

Packing – boxes, reels

Application

» instalation LAN net
» data transfer

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation temperatures	–20 °C ÷ +60 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

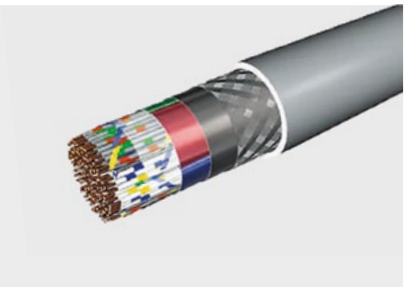
Electrical parameters (20 °C)

Conductor diameter	mm	0.5
Insulation resistance	GΩ.km	10
Max. resistance of the conductor	Ω/km	93.8
Max.mutual capacity of the pair	nF/km	56
Max. capacity unbalance	pF/100m	330
Min. Structural Return Loss (SRL) 1–10 MHz	dB/100 m	12
Max. attenuation	dB/100 m	2.32 x √f + 0.238 f
Min. near END Crosstalk (NEXT)	dB/100 m	43–15 log (f/0.772)

Number of units	External diameter (mm)	Net weight (kg/km)	Standard production length (m)
25	11.5	134	1 000
50	16.5	300	1 000
100	23.5	600	1 000
200	31.5	1 150	1 000
300	39.0	1 700	1 000

HALLEY CABLES
CABLES & WIRES

S-Y(ST)Y, S-Y(ST)CY
...x2x0.4 (0.5; 0.6) BD



Specification
DIN VDE 0813

Cable codes

S – switchboard cable
Y – PVC conductor insulation
(ST) – electrostatic shield
C – Cu braiding
Y – PVC sheath
BD – unit stranding

Application

» used as connecting cables between racks and main distribution frames in telecommunication exchanges for telephone, measuring and signaling purposes

» suitable for permanent installation in dry and damp rooms

Make up

S-Y(ST)Y ...x2x0.4; 0.5; 0.6 BD

Wire – bare copper conductor with a diameter of 0.4; 0.5; 0.6 mm

Core insulation – PVC

Transmission element – 2 wires twisted to a pair

Unit – 4 or 5 elements

Cable core – units stranded to the cable core

Cable core wrapping

Tinned drain wire

Shield – made of laminated aluminum foil

Sheath – PVC, grey

Packing on drums

S-Y(ST)CY ...x2x0.4; 0.5; 0.6 BD

Wire – bare copper conductor with a diameter of 0.4; 0.5; 0.6 mm

Core insulation – PVC

Transmission element – 2 wires twisted to a pair

Unit – 4 or 5 elements

Cable core – units stranded to the cable core

Cable core wrapping

Tinned drain wire

Shield – made of laminated aluminum foil

– braiding with

Packing on drums

Environmental conditions

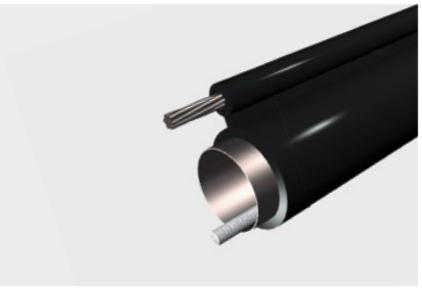
Temperature ranges for laying and assembly	–5 °C ÷ +50 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.5	0.6
Max. loop resistance	Ω/km	300	192	130
Insulation resistance	GΩ.km	10	10	10
Max.mutual capacity of the pair	nF/km	120	120	120
Max. capacity unbalance k_1 at 800 Hz	pF/500 m	50	50	50
Effective test voltage wire/wire at 50 Hz	V	800	800	800
Effective test voltage wire/shield at 50 Hz	V	800	800	800
Operating voltage	Vss	300	300	300

FLES
8.5 (20)



Specification
TDOj 32/00

Cable codes

FL – electrostatic shield
E – PE Jacket
S – self supporting cables

Make up

Supporting element – steel cord Ø 3.15 or 4.32 mm

Retractable element – POP twine

Pipe – longitudinally laid aluminum tape, PE laminated on both sides

Packing on drums

Application

» for drawing and supporting metallic or optical fibre cables

Environmental conditions

Temperature ranges for laying and assembly	–5 °C ÷ +50 °C
Operation and store temperatures	–30 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

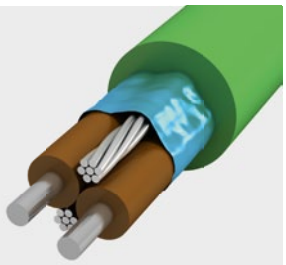
D – outside cable diameter

Design code	Supporting element diameter (mm)	Tensile strenght (kN)	Internal diameter (mm)	External diameter (mm)	Cable maximal height (mm)
FLES 8,5	3.15	7	8.5	14	23.5
FLES 20	4.32	15	20	26	38.5

HALLEY CABLES
CABLES & WIRES

KD – Therm CJPSN
Heating Cable

Specification
KD – Therm CJPSN



Design

Core – resistance wire solid

Izolace – modified Polyphenylene Oxide, diameter 1.0 mm, thickness ca 0.4 mm

Protective conductor – CuSn 7 × 0.254 mm (2×)

Screening – ALU/PET foil

Outer sheat – LSZH (Colour – see table sheat colour), diameter 3.4 mm, thickness ca 0.65 mm

Sheat Marking

Print colour – black or white (according to sheat colour)

Print method – INK-JET

Print legend – KD – Therm CJPSN XXXX* Ohm/m, job number, length marking @ 1 m intervals

Other print legends available on request

*** resistance of wire**

Application

- this cable is suitable for the production of heating mats
- suitable for wet interior

Mechanical and Environmental properties

Max. power	11 W/m	
Voltage	230 V	
Screen/earth wire resistance	≤ 26.5 Ω/km	
Test voltage	5,0 kV DC or 2,0 kV AC, 1 min.	
Min. bend radius	30 mm	
Ingress Protection	IPx7	
Minimal installation temperature	–5 °C	
Maximal operation temperature	90°C	
Material of sheat	IEC 60332-3	
	IEC 61034	
	IEC 754-1	
Standard put-up length	250, 500, 2 000 m	
Packaging	250 m	paper box, ring
	500 m	paper box, ring
	2 000 m	reel (plywood) 400 × 150 × 280

Sheat Colour

Colour	Code	Colour	Code
Red	RED	Brown	BRO
Green	GRN	Violet	VIO
Blue	BLU	Turquoise	TRQ
Yellow	YEL	Black	BLK
White	WHI	Orange	ORG
Grey	GRY	Pink	PNK

KD – Therm CJPSN

Design

Cable	Wire A	Wire B
CJPSN 0116	red	red
CJPSN 0046	white	white
CJPSN 0094	violet	violet
CJPSN 0057	green	green
CJPSN 0073	black	black
CJPSN 0232	pink	pink
CJPSN 0185	orange	orange
CJPSN 0033	grey	grey
CJPSN 0514	yellow	yellow
CJPSN 0018	brown	brown
CJPSN 0130	blue	blue

Cable	Wire A	Wire B
CJPSN 0290	turquoise	turquoise
CJPSN 1180	red	red
CJPSN 0143	yellow	yellow
CJPSN 3600	red	red
CJPSN 0917	white	white
CJPSN 0425	violet	violet
CJPSN 0215	green	green
CJPSN 0147	black	black
CJPSN 0105	pink	pink
CJPSN 0036	orange	orange

Specific resistance of cable at 20 °C

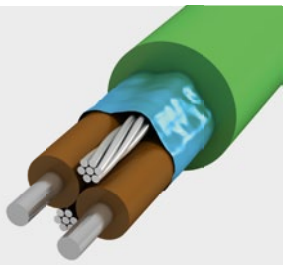
Cable	Ω/m $^{+10\,\%}_{-5\,\%}$
CJPSN 0116	0.232
CJPSN 0046	0.92
CJPSN 0094	1.88
CJPSN 0057	1.14
CJPSN 0073	1.46
CJPSN 0232	0.464
CJPSN 0185	3.7
CJPSN 0033	0.66
CJPSN 0514	10.28
CJPSN 0018	0.36
CJPSN 0130	2.60
CJPSN 0290	5.80
CJPSN 1180	23.60
CJPSN 0143	0.286
CJPSN 3600	72.000
CJPSN 0917	18.340
CJPSN 0425	8.500
CJPSN 0215	4.300
CJPSN 0147	2.940
CJPSN 0105	2.100
CJPSN 0036	0.72

Order example

10 × 500 m CJPSN 0665 BLU

KD – Therm CJTSN
Heating Cable

Specification
KD – Therm CJTSN



Design

Core – resistance wire solid

Izolace – thermoplatic copolyester elastomer, diameter 1.1 ± 0.03 mm, thickness 0.38 mm

Protective conductor – CuSn 7 × 0.254 mm (2×)

Screening – ALU/PET foil

Outer sheat – LSZH (Colour – see table sheat colour), diameter 3.4±0.1 mm, thickness 0.5 (min. 0.4) mm

Sheat Marking

Print colour – black or white (according to sheat colour)

Print method – INK-JET

Print legend – KD – Therm CJTSN XXXX* Ohm/m, job number, length marking @ 1 m intervals

Other print legends available on request

*** resistance of wire**

Application

- this cable is suitable for the production of heating mats
- suitable for wet interior

Mechanical and Environmental properties

Max. power	8 W/m	
Voltage	230 V	
Screen/earth wire resistance	≤ 26.5 Ω/km	
Test voltage	5,0 kV DC or 2,0 kV AC, 1 min.	
Min. bend radius	30 mm	
Ingress Protection	IPx7	
Minimal installation temperature	–5 °C	
Maximal operation temperature	90°C	
Material of sheat	IEC 60332-3	
	IEC 61034	
	IEC 754-1	
Standard put-up length	250, 500, 2 000 m	
Packaging	250 m	paper box, ring
	500 m	paper box, ring
	2 000 m	reel (plywood) 400 × 150 × 280

Sheat Colour

Colour	Code	Colour	Code
Red	RED	Brown	BRO
Green	GRN	Violet	VIO
Blue	BLU	Turquoise	TRQ
Yellow	YEL	Black	BLK
White	WHI	Orange	ORG
Grey	GRY	Pink	PNK

KD – Therm CJTSN

Design

Cable	Wire A	Wire B
CJTSN 0665	red	red
CJTSN 0165	white	white
CJTSN 0290	violet	violet
CJTSN 0105	green	green
CJTSN 0073	black	black
CJTSN 0054	pink	pink
CJTSN 0041	orange	orange
CJTSN 0033	grey	grey
CJTSN 0026	yellow	yellow
CJTSN 0018	brown	brown
CJTSN 0130	blue	blue
CJTSN 0215	turquoise	turquoise
CJTSN 0425	brown	brown
CJTSN 1180	yellow	yellow
CJTSN 2650	grey	grey

Specific resistance of cable at 20 °C

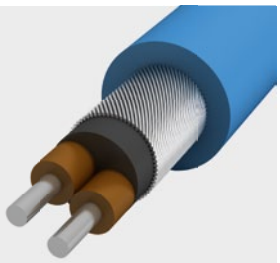
Cable	Ω/m $^{+10\,\%}_{-5\,\%}$
KITSN 0665	13.3
KITSN 0165	3.3
KITSN 0290	5.80
KITSN 0105	2.1
KITSN 0073	1.46
KITSN 0054	1.08
KITSN 0041	0.82
KITSN 0033	0.66
KITSN 0026	0.52
KITSN 0018	0.36
KITSN 0130	2.60
KITSN 0215	4.3
KITSN 0425	8.5
KITSN 1180	23.6
KITSN 2650	53.0

Order example

10 × 500 m CJTSN 0665 BLU

KD – Therm CJTBLN 5W

Heating Cable



Specification

KD – Therm CJTBLN 5W

Design

Core – resistance wire solid

Izolace – thermoplastic elastomer (TPE), diameter 0.9–1.2 ± 0.03 mm

Inner jacket – HDPE black

Braiding – Cu 18×0,32 mm

Outer sheat – LSZH (Colour – see table jacket colour) diameter 5.1±0.15 mm, thickness 0.9 (min. 0.7) mm

Jacket Marking

Print colour – black or white (according to sheat colour)

Print method – INK-JET

Print legend – KD – Therm CJTBLN XXXX* Ohm/m, job number, length marking @ 1 m intervals

Other print legends available on request

*** resistance of wire**

Application

- this cable is suitable for direct burial in concrete
- suitable for wet interior

Mechanical and Environmental properties

Voltage	230 V	
Screen/earth wire resistance	≤ 26.5 Ω/km	
Test voltage	5,0 kV DC or 2,0 kV AC, 1 min.	
Min. cable spacing	50 mm	
Min. bend radius	30 mm	
Ingress Protection	IPx7	
Minimal installation temperature	+5 °C	
Maximal operation temperature	90°C	
Standard put-up length	250, 500, 2 000 m	
Packaging	250 m	paper box, ring
	500 m	ring
	2 000 m	reel (plywood) 600 × 300 × 390

Jacket Colour

Colour	Code	Colour	Code
Red	RED	Brown	BRO
Green	GRN	Violet	VIO
Blue	BLU	Turquoise	TRQ
Yellow	YEL	Black	BLK
White	WHI	Orange	ORG
Grey	GRY	Pink	PNK

HALLEY CABLES
CABLES & WIRES

KD – Therm CJTBLN 5W

Design

Cable	Wire A	Wire B
CJTBLN 0665	red	red
CJTBLN 3600	white	white
CJTBLN 0280	violet	violet
CJTBLN 0105	green	green
CJTBLN 0207	green	green
CJTBLN 0159	black	black
CJTBLN 0070	pink	pink
CJTBLN 0052	turquoise	turquoise
CJTBLN 0039	orange	orange
CJTBLN 0036	blue	blue
CJTBLN 0130	blue	blue
CJTBLN 0265	green	green
CJTBLN 0425	brown	brown
CJTBLN 1180	yellow	yellow
CJTBLN 0202	red	red
CJTBLN 0013	red	red
CJTBLN 0016	brown	brown

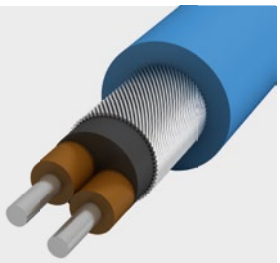
Cable	Length (m)	Circuit resistance (Ω)	Output (W)
CJTBLN 3600	12	864	61
CJTBLN 1180	21	496	107
CJTBLN 0665	28	372	142
CJTBLN 0425	35	297	177
CJTBLN 0280	43	241	220
CJTBLN 0207	50	207	256
CJTBLN 0159	57	181	292
CJTBLN 0130	63	164	323
CJTBLN 0105	71	147	360
CJTBLN 0070	86	120	439
CJTBLN 0052	100	104	509
CJTBLN 0039	115	90	590
CJTBLN 0036	120	86	612
CJTBLN 0265	140	74	713
CJTBLN 0202	160	65	818
CJTBLN 0016	180	58	918
CJTBLN 0013	200	52	1 017

Order example

10 × 500 m CJTBLN 0665 BLU

KD – Therm CJTBLN 10W

Heating Cable



Specification

KD – Therm CJTBLN 10W

Design

Core – resistance wire solid

Izolace – thermoplastic elastomer (TPE), diameter 0.9–1.2 ± 0.03 mm

Inner jacket – HDPE black

Braiding – Cu 18×0.32 mm

Outer sheat – LSZH (Colour – see table jacket colour) diameter 5.1±0.15 mm, thickness 0.9 (min. 0.7) mm

Jacket Marking

Print colour – black or white (according to sheat colour)

Print method – INK-JET

Print legend – KD – Therm CJTBLN XXXX* Ohm/m, job number, length marking @ 1 m intervals

Other print legends available on request

*** resistance of wire**

Application

- this cable is suitable for direct burial in concrete
- suitable for wet interior

Mechanical and Environmental properties

Voltage	230 V	
Screen/earth wire resistance	≤ 26.5 Ω/km	
Test voltage	5,0 kV DC or 2,0 kV AC, 1 min.	
Min. cable spacing	50 mm	
Min. bend radius	30 mm	
Ingress Protection	IPx7	
Minimal installation temperature	+5 °C	
Maximal operation temperature	90°C	
Standard put-up length	250, 500, 2 000 m	
Packaging	250 m	paper box, ring
	500 m	ring
	2 000 m	reel (plywood) 600 × 300 × 390

Jacket Colour

Colour	Code	Colour	Code
Red	RED	Brown	BRO
Green	GRN	Violet	VIO
Blue	BLU	Turquoise	TRQ
Yellow	YEL	Black	BLK
White	WHI	Orange	ORG
Grey	GRY	Pink	PNK

HALLEY CABLES
CABLES & WIRES

KD – Therm CJTBLN 10W

Design

Cable	Wire A	Wire B
CJTBLN 0665	red	red
CJTBLN 0290	violet	violet
CJTBLN 0165	white	white
CJTBLN 0105	green	green
CJTBLN 0073	black	black
CJTBLN 0054	pink	pink
CJTBLN 0041	orange	orange
CJTBLN 0033	grey	grey
CJTBLN 0026	yellow	yellow
CJTBLN 0018	brown	brown
CJTBLN 0013	red	red
CJTBLN 0010	yellow	yellow
CJTBLN 0008	grey	grey
CJTBLN 0065	brown	brown

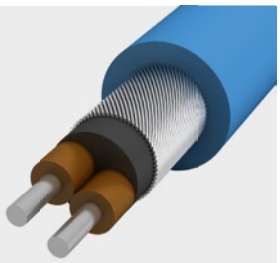
Cable	Length (m)	Circuit resistance (Ω)	Output (W)
CJTBLN 0665	20	266	200
CJTBLN 0290	30	174	300
CJTBLN 0165	40	132	400
CJTBLN 0105	50	105	500
CJTBLN 0073	60	88	600
CJTBLN 0054	70	76	700
CJTBLN 0041	80	66	800
CJTBLN 0033	90	59	900
CJTBLN 0026	101	53	1 010
CJTBLN 0018	121	44	1 210
CJTBLN 0013	142	37	1 420
CJTBLN 0010	160	32	1 600
CJTBLN 0008	180	29	1 800
CJTBLN 0065	200	26	2 000

Order example

10 × 500 m CJTBLN 0665 BLU

KD – Therm CJTBLN 20W

Heating Cable



Specification

KD – Therm CJTBLN 20W

Design

Core – resistance wire solid

Izolace – thermoplastic elastomer (TPE), diameter 0.9–1.2 ± 0.03 mm

Inner jacket – HDPE black

Braiding – Cu 18×0.32 mm

Outer sheat – LSZH (Colour – see table jacket colour) diameter 5.1±0.15 mm, thickness 0.9 (min. 0.7) mm

Jacket Marking

Print colour – black or white (according to sheat colour)

Print method – INK-JET

Print legend – KD – Therm CJTBLN XXXX* Ohm/m, job number, length marking @ 1 m intervals

Other print legends available on request

*** resistance of wire**

Application

- this cable is suitable for direct burial in concrete
- suitable for wet interior

Mechanical and Environmental properties

Voltage	230 V	
Screen/earth wire resistance	≤ 26.5 Ω/km	
Test voltage	5,0 kV DC or 2,0 kV AC, 1 min.	
Min. cable spacing	50 mm	
Min. bend radius	30 mm	
Ingress Protection	IPx7	
Minimal installation temperature	+5 °C	
Maximal operation temperature	90°C	
Standard put-up length	250, 500, 2 000 m	
Packaging	250 m	paper box, ring
	500 m	ring
	2 000 m	reel (plywood) 600 × 300 × 390

Jacket Colour

Colour	Code	Colour	Code
Red	RED	Brown	BRO
Green	GRN	Violet	VIO
Blue	BLU	Turquoise	TRQ
Yellow	YEL	Black	BLK
White	WHI	Orange	ORG
Grey	GRY	Pink	PNK

HALLEY CABLES
CABLES & WIRES

KD – Therm CJTBLN 20W

Design

Cable	Wire A	Wire B
CJTBLN 0665	red	red
CJTBLN 0290	violet	violet
CJTBLN 0165	white	white
CJTBLN 0105	green	green
CJTBLN 0073	black	black
CJTBLN 0054	pink	pink
CJTBLN 0041	orange	orange
CJTBLN 0033	grey	grey
CJTBLN 0026	yellow	yellow
CJTBLN 0018	brown	brown
CJTBLN 0013	red	red
CJTBLN 1180	yellow	yellow
CJTBLN 0425	brown	brown
CJTBLN 0010	yellow	yellow

Cable	Length (m)	Circuit resistance (Ω)	Output (m)
CJTBLN 0665	14	186	280
CJTBLN 1180	11	259	204
CJTBLN 0425	18	153	346
CJTBLN 0290	21	122	420
CJTBLN 0165	28	92	560
CJTBLN 0105	35	74	700
CJTBLN 0073	43	63	860
CJTBLN 0054	50	54	1 000
CJTBLN 0041	57	47	1 140
CJTBLN 0033	63	42	1 260
CJTBLN 0026	71	37	1 420
CJTBLN 0018	86	31	1 720
CJTBLN 0013	101	26	2 020
CJTBLN 0010	115	23	2 300

Order example

10 × 500 m CJTBLN 0665 BLU

CW1128, CW1128/1179

...x2x0.4 (0.5; 0.6; 0.63; 0.9)

Specification

CW1128/1179

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.5; 0.6; 0.63 or 0.9 mm

Core insulation – skin-foam-skin PE

Transmission element – twin pair twisted to units

Cable core – twisted units

Cable core filled

Cable core wrapping

Shield – made of laminated aluminum foil (CW1179)

Sheath – PE, black

Packing on drums

Application

- connection cables in Local Area Networks and in private branch exchanges for telephony and signal transfer
- suitable for placement as underground and conduit cables

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Colour of conductors

Pair No.	A – conductor	B – conductor
1	white	blue
2	white	orange
3	white	green
4	white	brown
5	white	grey
6	red	blue
7	red	orange
8	red	green
9	red	brown
10	red	grey

Make up

No. of pairs	Middle	1st. layer
2P	1 × 2	
5P	1 × 5	
10P	1 × 10	
20P	4 × 5	
	2 × 10	
50P	5 × 10	
	1 × 10	4 × 10
100P	2 × 10	8 × 10
	3 × 10	7 × 10
	4 × 5	8 × 10

Identification of groups

Group No.	Tape colour
1	blue
2	orange
3	green
4	brown
5	grey
6	white
7	red
8	black
9	yellow
10	violet

HALLEY CABLES
CABLES & WIRES

CW1128, CW1128/1179

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.5	0.6	0.63	0.9
Max. loop resistance	Ω/km	143	91	63	58	28
Insulation resistance	GΩ.km	1.5	1.5	1.5	1.5	1.5
Mutual capacitance	nF/km	56	56	42	56	59
Effective test voltage wire/wire at 50 Hz	V	500	500	500	500	500
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000	2 000	2 000
Capacity unbalance	Vss	275	275	275	275	275

CW1128

	Core/wire diameter 0.4/0.75 mm		Core/wire diameter 0.5/0.9 mm		Core/wire diameter 0.6/1.30 mm		Core/wire diameter 0.63/1.15 mm		Core/wire diameter 0.9/1.5 mm	
Number of units	**External diameter**	**Standard production length**	**External diameter**	**Standard production length**	**External diameter**	**Standard production length**	**External diameter**	**Standard production length**	**External diameter**	**Standard production length**
	(mm)	*(m)*	*(mm)*	*(m)*	*(mm)*	*(m)*	*(mm)*	*(m)*	*(mm)*	*(m)*
2	-	-	7.5	1 000	8.5	1 000	8.0	1 000	9.0	1 000
4	8.7	1 000	7.8	1 000	10.5	1 000	9.0	1 000	11.0	1 000
5	9.0	1 000	8.0	1 000	11.0	1 000	9.5	1 000	11.5	1 000
10	10.0	1 000	9.5	1 000	13.0	1 000	11.5	1 000	14.0	1 000
20	11.5	1 000	12.0	1 000	16.0	1 000	14.0	1 000	18.0	1 000
50	15.5	1 000	16.5	1 000	24.0	1 000	20.5	1 000	26.5	1 000
100	20.0	1 000	22.0	1 000	32.0	1 000	27.5	1 000	36.0	1 000

CW1128/1179

	Core/wire diameter 0.4/0.75 mm		Core/wire diameter 0.5/0.9 mm		Core/wire diameter 0.6/1.30 mm		Core/wire diameter 0.63/1.15 mm		Core/wire diameter 0.9/1.5 mm	
Number of units	**External diameter**	**Standard production length**	**External diameter**	**Standard production length**	**External diameter**	**Standard production length**	**External diameter**	**Standard production length**	**External diameter**	**Standard production length**
	(mm)	*(m)*	*(mm)*	*(m)*	*(mm)*	*(m)*	*(mm)*	*(m)*	*(mm)*	*(m)*
2	-	-	9 .0	1 000	10.0	1 000	9.5	1 000	10.5	1 000
4	8.7	1 000	9.3	1 000	12.0	1 000	10.5	1 000	12.5	1 000
5	9.0	1 000	9.5	1 000	12.5	1 000	11.0	1 000	13.0	1 000
10	10.0	1 000	11.0	1 000	14.5	1 000	13.0	1 000	15.5	1 000
20	11.5	1 000	13.5	1 000	17.5	1 000	15.5	1 000	19.5	1 000
50	15.5	1 000	18.0	1 000	25.5	1 000	22.0	1 000	28.0	1 000
100	20.0	1 000	23.5	1 000	33.5	1 000	29.0	1 000	37.5	1 000

CW 1171/CW 1179

...x2x0.4 (0.5; 0.63; 0.9)

Specification

BT CW1171 and CW 1179

Make up

Bare – copper conductort with a diameter of 0.4; 0.5; 0.63 or 0.9 mm

Core insulation – PE

Transmission element – pair

Cable core wrapping

Screened – laminated Al foil

Sheath – PE black

Packing on drums

Application

- conection cables in Local Area Networks and in private branch exchanges for telephony and signal transfers
- suitable for placement as under ground and conduit cables

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Colour of conductors

Pair No.	A – conductor	B – conductor
1	white	blue
2	white	orange
3	white	green
4	white	brown
5	white	grey
6	red	blue
7	red	orange
8	red	green
9	red	brown
10	red	grey
11	black	blue
12	black	orange
13	black	green
14	black	brown
15	black	grey

Pair No.	A – conductor	B – conductor
16	yellow	blue
17	yellow	orange
18	yellow	green
19	yellow	brown
20	yellow	grey
21	violet	blue
22	violet	orange
23	violet	green
24	violet	brown
25	violet	grey

CW 1171/CW 1179

Identification of groups

No. of pairs	First	Second	Third	Fourth
50P	blue	blue	orange	orange
100P	blue	orange	green	brown

Identification of main groups

First	Others	Last
red	natural	green

Make up

No. of pairs	Middle	1st. layer	2nd. layer
50	1 × 50		
100	1 × 25, 1 × 100	3 × (12+13)	
200	1 × 50, 4 × 50	6 × 25	
300	1 × 50, 1 × 100	5 × 50, 8 × 25	
400	1 × 100	6 × 50	
500	3 × 50, 1 × 100	7 × 50, 8 × 50	
600	3 × 50, 1 × 100	9 × 50, 5 × 100	
800	1 × 50, 4 × 50	5 × 50, 6 × 100	10 × 50
1 000	4 × 50, 3 × 100	8 × 100, 7 × 100	
1 200	3 × 100, 4 × 100	9 × 100, 8 × 100	
1 600	1 × 100	5 × 100	10 × 100
2 000	4 × 50	6 × 100	12 × 100
2 400	3 × 100	8 × 100	13 × 100

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.5	0.63	0.9
Max. loop resistance	Ω/km	143	91	58	28
Insulation resistance	GΩ.km	6.5	6.5	6.5	6.5
Mutual capacitance	nF/km	53	53	56	59
Capacity unbalance	Vss	275	275	275	275

CW1128/1179

	Core/wire diameter 0.4/0.75 mm		Core/wire diameter 0.5/0.9 mm		Core/wire diameter 0.63/1.15 mm		Core/wire diameter 0.9/1.50 mm	
Number of units	External diameter *(mm)*	Standard production length *(m)*	External diameter *(mm)*	Standard production length *(m)*	External diameter *(mm)*	Standard production length *(m)*	External diameter *(mm)*	Standard production length *(m)*
25	14.0	1 000	16.0	1 000	19.0	1 000	22.5	1 000
50	16.0	1 000	19.0	1 000	22.0	1 000	27.5	1 000
100	20.5	1 000	23.5	1 000	28.0	1 000	37.0	1 000
200	26.0	1 000	30.5	1 000	37.5	1 000	49.2	1 000
300	30.5	1 000	37.0	1 000	46.0	1 000	59.7	500
400	35.0	1 000	42.5	1 000	52.5	1 000	68.2	500
500	37.5	1 000	46.0	1 000	56.5	500	75.6	400
600	40.5	1 000	49.5	1 000	61.0	500		
800	46.5	1 000	56.5	500	70.5	500		
1 000	51.5	1 000	62.5	500	74.9	400		
1 200	56.0	500	69.0	500				
1 600	65.5	500	75.0	400				
2 000	70.0	500						
2 400	75.0	400						

CW 1224/CW 1179

...x2x0.4 (0.5; 0.63; 0.9)

Specification

BT CW1224 and CW 1179

Make up

Bare – copper conductort with a diameter of 0.4; 0.5; 0.63 or 0.9 mm

Core insulation – skin-foam-skin

Transmission element – pair

Cable core wrapping

Screened – laminated Al foil

Sheath – PE black

Packing on drums

Application

- conection cables in Local Area Networks and in private branch exchanges for telephony and signal transfers
- suitable for placement as under ground and conduit cables

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Colour of conductors

Pair No.	A – conductor	B – conductor
1	white	blue
2	white	orange
3	white	green
4	white	brown
5	white	grey
6	red	blue
7	red	orange
8	red	green
9	red	brown
10	red	grey
11	black	blue
12	black	orange
13	black	green
14	black	brown
15	black	grey

Pair No.	A – conductor	B – conductor
16	yellow	blue
17	yellow	orange
18	yellow	green
19	yellow	brown
20	yellow	grey
21	violet	blue
22	violet	orange
23	violet	green
24	violet	brown
25	violet	grey

CW 1224/CW 1179

Identification of groups

No. of pairs	First	Second	Third	Fourth
50P	blue	blue	orange	orange
100P	blue	orange	green	brown

Identification of main groups

First	Others	Last
red	natural	green

Make up

No. of pairs	Middle	1st. layer	2nd. layer
50	1 × 50		
100	1 × 25, 1 × 100	3 × (12+13)	
200	1 × 50, 4 × 50	6 × 25	
300	1 × 50, 1 × 100	5 × 50, 8 × 25	
400	1 × 100	6 × 50	
500	3 × 50, 1 × 100	7 × 50, 8 × 50	
600	3 × 50, 1 × 100	9 × 50, 5 × 100	
800	1 × 50, 4 × 50	5 × 50, 6 × 100	10 × 50
1 000	4 × 50, 3 × 100	8 × 100, 7 × 100	
1 200	3 × 100, 4 × 100	9 × 100, 8 × 100	
1 600	1 × 100	5 × 100	10 × 100
2 000	4 × 50	6 × 100	12 × 100
2 400	3 × 100	8 × 100	13 × 100

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.5	0.63	0.9
Max. loop resistance	Ω/km	143	91	58	28
Insulation resistance	GΩ.km	6.5	6.5	6.5	6.5
Mutual capacitance	nF/km	53	53	56	59
Capacity unbalance	Vss	275	275	275	275

CW1128/1179

	Core/wire diameter 0.4/0.70 mm		Core/wire diameter 0.5/0.80 mm		Core/wire diameter 0.63/0.98 mm		Core/wire diameter 0.90/1.35 mm	
Number of units	External diameter *(mm)*	Standard production length *(m)*	External diameter *(mm)*	Standard production length *(m)*	External diameter *(mm)*	Standard production length *(m)*	External diameter *(mm)*	Standard production length *(m)*
50	15.5	1 000	17.0	1 000	19.5	1 000	24.5	1 000
100	19.0	1 000	22.0	1 000	25.0	1 000	32.5	1 000
200	24.5	1 000	28.5	1 000	33.5	1 000	45.0	1 000
300	28.5	1 000	33.5	1 000	39.5	1 000	56.0	500
400	32.5	1 000	37.5	1 000	44.5	1 000	62.0	500
500	35.5	1 000	41.5	1 000	49.5	1 000		
600	38.5	1 000	44.5	1 000	53.5	500		
800	44.0	1 000	51.5	1 000	61.0	500		
1 000	48.5	1 000	56.0	500	67.5	500		
1 200	52.5	1 000	61.5	500	73.5	500		
1 600	60.0	500	69.5	500				
2 000	66.5	500	75.0	400				
2 400	72.5	500						

CW 1236, CW 1236/CW 1179

…x2x0.4 (0.5; 0.63; 0.9)

Specification

BT CW1236 and CW 1179

Make up

Bare – copper conductort with a diameter of 0.4; 0.5; 0.63 or 0.9 mm

Core insulation – skin-foam-skin PE

Transmission element – pair

Cable core filled

Cable core wrapping

Screened – laminated Al foil

Sheath – PE, black

Packing on drums

Application

- conection cables in Local Area Networks and in private branch exchanges for telephony and signal transfers
- suitable for placement as under ground and conduit cables

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 20 years

D – outside cable diameter

Colour of conductors

Pair No.	A – conductor	B – conductor
1	white	blue
2	white	orange
3	white	green
4	white	brown
5	white	grey
6	red	blue
7	red	orange
8	red	green
9	red	brown
10	red	grey
11	black	blue
12	black	orange
13	black	green
14	black	brown
15	black	grey

Pair No.	A – conductor	B – conductor
16	yellow	blue
17	yellow	orange
18	yellow	green
19	yellow	brown
20	yellow	grey
21	violet	blue
22	violet	orange
23	violet	green
24	violet	brown
25	violet	grey

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.5	0.63	0.9
Max. loop resistance	Ω/km	143	91	58	28
Insulation resistance	GΩ.km	1.5	1.5	1.5	1.5
Mutual capacitance	nF/km	56	56	56	59
Effective test voltage wire/wire at 50 Hz	V	500	500	500	500
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000	2 000
Capacity unbalance	Vss	275	275	275	275

CW 1236, CW 1236/CW 1179

Identification of groups

No. of pairs	First	Second	Third	Fourth
50P	blue	blue	orange	orange
100P	blue	orange	green	brown

Identification of main groups

First	Others	Last
red	natural	green

Make up

No. of pairs	Middle	1st. layer	2nd. layer
50	1 × 50		
100	1 × 25, 1 × 100	3 × (12+13)	
200	1 × 50, 4 × 50	6 × 25	
300	1 × 50, 1 × 100	5 × 50, 8 × 25	
400	1 × 100	6 × 50	
500	3 × 50, 1 × 100	7 × 50, 8 × 50	
600	3 × 50, 1 × 100	9 × 50, 5 × 100	
800	1 × 50, 4 × 50	5 × 50, 6 × 100	10 × 50
1 000	4 × 50, 3 × 100	8 × 100, 7 × 100	
1 200	3 × 100, 4 × 100	9 × 100, 8 × 100	
1 600	1 × 100	5 × 100	10 × 100
2 000	4 × 50	6 × 100	12 × 100

CW 1236

	Core/wire diameter 0.4/0.75 mm		Core/wire diameter 0.5/0.9 mm		Core/wire diameter 0.63/1.15 mm		Core/wire diameter 0.90/1.50 mm	
Number of units	External diameter (mm)	Standard production length (m)	External diameter (mm)	Standard production length (m)	External diameter (mm)	Standard production length (m)	External diameter (mm)	Standard production length (m)
50	16.0	1 000	19.0	1 000	22.0	1 000	27.5	1 000
100	20.5	1 000	23.5	1 000	28.0	1 000	38.0	1 000
200	26.0	1 000	30.5	1 000	37.5	1 000		
300	30.5	1 000	37.0	1 000	46.0	1 000		
400	35.0	1 000	42.5	1 000	52.5	1 000		
500	37.5	1 000	46.0	1 000	56.5	500		
600	40.5	1 000	49.5	1 000	61.0	500		
800	46.5	1 000	56.5	500	70.5	500		
1 000	51.5	1 000	62.5	500				
1 200	56.0	500	69.0	500				
1 600	65.5	500						
2 000	70.0	500						

CW 1236/ CW 1179

	Core/wire diameter 0.4/0.75 mm		Core/wire diameter 0.5/0.9 mm		Core/wire diameter 0.63/1.15 mm		Core/wire diameter 0.90/1.50 mm	
Number of units	External diameter (mm)	Standard production length (m)	External diameter (mm)	Standard production length (m)	External diameter (mm)	Standard production length (m)	External diameter (mm)	Standard production length (m)
50	16.0	1 000	19.0	1 000	22.0	1 000	27.5	1 000
100	20.5	1 000	23.5	1 000	28.0	1 000	38.0	1 000
200	26.0	1 000	30.5	1 000	37.5	1 000		
300	30.5	1 000	37.0	1 000	46.0	1 000		
400	35.0	1 000	42.5	1 000	52.5	1 000		
500	37.5	1 000	46.0	1 000	56.5	500		
600	40.5	1 000	49.5	1 000	61.0	500		
800	46.5	1 000	56.5	500	70.5	500		
1 000	51.5	1 000	62.5	500				
1 200	56.0	500	69.0	500				
1 600	65.5	500						
2 000	70.0	500						

CW 1326, CW 1326/CW 1179
...x2x0.5

Specification
BT CW1326 and CW 1179

Make up

Bare – copper conductort with a diameter of 0.5 mm

Core insulation – PE

Transmission element – pair

Cable core wrapping

Screened – laminated AL foil

Sheath – PE black

Packing on drums

Application

- conection cables in Local Area Networks and in private branch exchanges for telephony and signal transfers
- suitable for placement as under ground and conduit cables

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 20 years

D – outside cable diameter

Colour of conductors

Pair No.	A – conductor	B – conductor
1	white	blue
2	white	orange
3	white	green
4	white	brown
5	white	grey
6	red	blue
7	red	orange
8	red	green
9	red	brown
10	red	grey

CW 1326, CW 1326/CW 1179

Identification of groups

Group No.	Tape colour
1	blue
2	orange
3	green
4	brown
5	grey
6	white
7	red
8	black
9	yellow
10	violet

Make up

No. of pairs	Middle	1st. layer
2	1 × 2	
5	1 × 5	
10	1 × 10	
20	4 × 5	
	2 × 10	
30	1 × 10	4 × 5
	1 × 5	5 × 5
	3 × 10	
50	1 × 10	4 × 10
100	2 × 10	8 × 10
	3 × 10	7 × 10
	4 × 5	8 × 10

Electrical parameters (20 °C)

Conductor diameter	mm	0.5
Max. loop resistance	Ω/km	91
Insulation resistance	GΩ.km	1.5
Mutual capacitance	nF/km	56
Effective test voltage wire/wire at 50 Hz	V	500
Effective test voltage wire/shield at 50 Hz	V	2 000
Capacity unbalance	Vss	275

CW1326

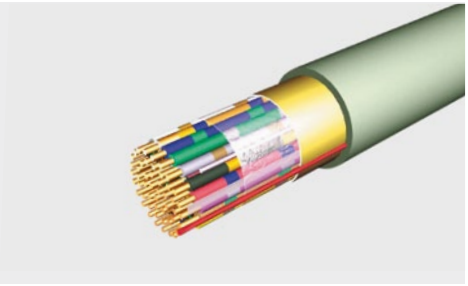
	Core/wire diameter 0.5/1.05 mm	
Number of units	**External diameter**	**Standard production length**
	(mm)	*(m)*
2	8.5	1 000
5	8.5	1 000
10	12.0	1 000
20	15.0	1 000
30	18.0	1 000
50	19.5	1 000
100	25.0	1 000

CW 1326/ CW 1179

	Core/wire diameter 0.5/1.05 mm	
Number of units	**External diameter**	**Standard production length**
	(mm)	*(m)*
2	10.0	1 000
5	10.0	1 000
10	13.5	1 000
20	16.5	1 000
30	19.5	1 000
50	21.0	1 000
100	26.5	1 000

CW1308
...x2x0.5

Specification
CW1308



Make up

Tinned – or bare copper conductor with a diameter of 0.5 mm

Core insulation – PVC

Transmission element – twin pair twisted to units

Screened or unscreened

Sheath – PVC, colour white, black, cream, grey

Packing on drums

Application

- connection cables in Local Area Networks and in private branch exchanges for telephony and signal transfer
- indoor cable

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Colour of conductors

Pair No.	A – conductor	B – conductor
1	white – blue	blue – white
2	white – blue	orange – white
3	white – green	green – white
4	white – brown	brown – white
5	white – grey	grey – white
6	red – blue	blue – red
7	red – orange	orange – red
8	red – green	green – red
9	red – brown	brown – red
10	red – grey	grey – red
11	black – blue	blue – black
12	black – orange	orange – black
13	black – green	green – black
14	black – brown	brown – black
15	black – grey	grey – black

Pair No.	A – conductor	B – conductor
16	yellow – blue	blue – yellow
17	yellow – orange	orange – yellow
18	yellow – green	green – yellow
19	yellow – brown	brown – yellow
20	yellow – grey	grey – yellow
21	violet – blue	blue – violet
22	violet – orange	orange – violet
23	violet – green	green – violet
24	violet – brown	brown – violet
25	violet – grey	grey – violet
26	pink – blue	blue – pink
27	pink – orange	orange – pink
28	pink – green	green – pink
29	pink – brown	brown – pink
30	pink – grey	grey – pink

CW1308

Colour

white	brown
green	red
grey	black
blue	violet
yellow	pink
orange	

Identification of groups

Group No.	Tape colour
first	orange
others	natur
last	green

Variations of this construction are available on request.

Coding	No. of pairs	Make up
2 503	3P	3
2 504	4P	4
2 506	6P	6
2 510	10P	2 + 8
2 512	12P	3 + 9
2 516	16P	4 × (4 × 2)
2 515	15P	3 × (5 × 2)
2 520	20P	4 × (5 × 2)
2 525	25P	5 × (5 × 2)
2 530	30P	6 × (5 × 2)
2 532	32P	4 × (8 × 2)
2 540	40P	4 × (10 × 2)
2 550	50P	5 × (10 × 2)
2 564	64P	1 × (16 × 2) + 6 × (8 × 2)
2 580	80P	1 × (20 × 2) + 6 × (10 × 2)
2 581	100P	1 × (20 × 2) + 8 × (10 × 2)
2 566	128P	4 × (8 × 2) + 6 × (16 × 2)
2 582	160P	4 × (10 × 2) + 6 × (20 × 2)
2 583	200P	2 × (20 × 2) + 8 × (20 × 2)
2 568	256P	1 × (16 × 2) + 5 × (16 × 2) + 10 × (16 × 2)
2 584	320P	1 × (20 × 2) + 5 × (20 × 2) + 10 × (20 × 2)

	Core/wire diameter 0.5/0.9 mm	
Coding	External diameter *(mm)*	Standard production length *(m)*
2 503	5.0	2 000
2 504	5.6	2 000
2 506	6.8	1 000
2 510	8.3	1 000
2 512	9.1	1 000
2 516	10.2	1 000
2 515	9.8	1 000
2 520	10.7	1 000
2 525	11.4	1 000
2 530	12.2	1 000
2 532	12.4	1 000
2 540	15.0	1 000
2 550	17.0	1 000
2 564	16.5	1 000
2 580	22.5	1 000
2 581	27.0	1 000
2 566	**25.4**	1 000
2 582	30.3	1 000
2 583	33.0	1 000
2 568	35.2	1 000
2 584	39.5	1 000

CW1600
...x2x0.5

Specification
CW1600

Make up

Bare – copper conductor with a diameter of 0.5 mm

Core insulation – PE

Transmission element – twin pair twisted to units

Earth wire – design EH

Cable core wrapping

Screened – made of ALU/PET foil + CuSn 0.5 mm

Glass tape

Sheath – FRNC (cream, grey, black, light gray)

Packing on drums

Application

- conection cables in Local Area Networks and in private branch exchanges for telephony and signal transfers
- suitable for placement as under groung and conduit cables
- LIMITED FIRE HAZARD CABLE, fire performance BT Spec. M84

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Colour of conductors

Pair No.	A – conductor	B – conductor
1	white – blue	blue
2	white – orange	orange
3	white – green	green
4	white – brown	brown
5	white – grey	grey
6	red – blue	blue
7	red – orange	orange
8	red – green	green
9	red – brown	brown
10	red – grey	grey
11	black – blue	blue
12	black – orange	orange
13	black – green	green
14	black – brown	brown
15	black – grey	grey

Pair No.	A – conductor	B – conductor
16	yellow – blue	blue
17	yellow – orange	orange
18	yellow – green	green
19	yellow – brown	brown
20	yellow – grey	grey
21	violet – blue	blue
22	violet – orange	orange
23	violet – green	green
24	violet – brown	brown
25	violet – grey	grey

CW1600

Identification of groups

Group No.	Tape colour
first	orange
others	natur
last	green

Variations of this construction are available on request.

Electrical parameters (20 °C)

Conductor diameter	mm	0.5
Max. loop resistance	Ω/km	97.8
Resistence earth wire	Ω/km	12.4
Insulation resistance	GΩ.km	50
Mutual capacitance	nF/km	80
Effective test voltage wire/wire at 50Hz	V	500
Operating voltage	V	500

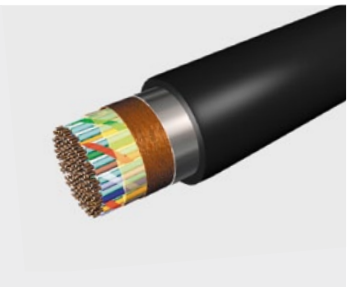
Coding	No. of pairs	Make up
CW 1600 1502H	2	2
CW 1600 1503H	3	3
CW 1600 1504H	4	4
CW 1600 1506H	6	1P +
CW 1600 1510H	10	2P + 8P
CW 1600 1512H	12	3P + 9P
CW 1600 1525H	25	2P + 8P + 15P
CW 1600 1532H	32	4× (8 × 2)
CW 1600 1510 EH	10	1× (10 × 2) + earth wire
CW 1600 1520 EH	20	1× (20 × 2) + earth wire
CW 1600 1540 EH	40	4× (10 × 2) + earth wire
CW 1600 1550 EH	50	5× (10 × 2) + earth wire
CW 1600 1580 EH	80	1× (20 × 2) + 6× (10 × 2) + earth wire
CW 1600 1581 EH	100	1× (20 × 2) + 8× (10 × 2) + earth wire
CW 1600 1582 EH	160	4× (10 × 2) + 6× (20 × 2) + earth wire
CW 1600 1583 EH	200	2× (20 × 2) + 8× (20 × 2) + earth wire
CW 1600 1584 EH	320	1× (20 × 2) + 5× (20 × 2) + 10× (20 × 2) + earth wire

Core/wire diameter 0.5/0.90

Coding	external diameter (mm)
CW 1600 1502H	5.2
CW 1600 1503H	5.5
CW 1600 1504H	6
CW 1600 1506H	7.5
CW 1600 1510H	8.8
CW 1600 1512H	9.1
CW 1600 1525H	11.8
CW 1600 1532H	13.5
CW 1600 1510 EH	9.0
CW 1600 1520 EH	12.0
CW 1600 1540 EH	15.0
CW 1600 1550 EH	18.5
CW 1600 1580 EH	22.5
CW 1600 1581 EH	27.0
CW 1600 1582 EH	30.3
CW 1600 1583 EH	35.0
CW 1600 1584 EH	39.5

TCEPKPFLE, TCEPKPFLEY

...x4x0.4 (0.6; 0.8)



Specification

TP 31.30.13 - KD - 001/94
TP 31.30.13 - KD - 002/94

Design

T – telecommunication cable
C – copper conductor
EP – PE skin-foam-skin conductor insulation
K – cable
P – filling compound
FL – static shield
E – PE sheath (inner sheath)
Y – PVC outer sheath

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Core insulation – PE skin-foam-skin

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Cable core – filled

Cable core – wrapping

Shield – made of laminated aluminum foil

Sheath (Inner sheath) – PE, black

Outer sheath – PVC, black

Packing on drums

Application

» for basic phone services in analogue and digital transmission systems

» to be placed in cable ducts, under ground laying and areas without higher danger of mechanical cable damage

» the cables with PVC shield are designed to be placed in areas with fire spread danger

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.6	0.8
Max. loop resistance	Ω/km	300	133.2	73.6
Insulation resistance	GΩ.km	min. 10	min. 10	min. 10
Mutual capacitance	nF/km	max. 49	max. 49	max. 49
Capacity unbalance k_1 at 800 Hz	pF/500 m	800	800	500
Effective test voltage wire/wire at 50 Hz	V	350	350	350
Effective test voltage wire/shield at 50 Hz	V	700	700	700
Operating voltage	Vss	250	250	250

TCEPKPFLE, TCEPKPFLEY

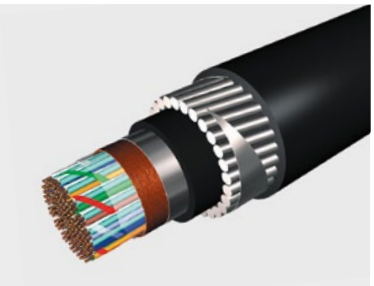
	Core/wire diameter 0.4/0.8 mm			Core/wire diameter 0.6/1.2 mm			Core/wire diameter 0.8/1.6 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
TCEPKPFLE									
1	10.5	55	2 000/F	11.0	80	2 000/F	11.5	120	2 000/E
3	12.5	75	2 000/F	14.5	130	2 000/E	15.0	160	2 000/E
5	13.0	100	2 000/F	15.5	165	2 000/E	18.5	265	2 000/D
10	15.0	150	2 000/E	18.0	260	2 000/D	21.0	410	2 000/D
15	17.0	205	2 000/E	21.5	370	2 000/D	24.5	590	2 000/B
20	18.0	250	2 000/D	23.5	470	2 000/D	28.5	775	2 000/A
25	20.0	295	2 000/D	24.5	555	2 000/D	31.5	975	2 000/A
35	21.5	380	2 000/D	29.0	765	2 000/A	36.0	1310	1 000/B
50	24.5	525	2 000/D	33.0	1 055	1 000/D	41.0	1795	1 000/A
75	28.0	720	2 000/B	37.5	1 495	1 000/B	48.0	2630	500/A
100	31.0	940	2 000/A	42.0	1 970	1 000/A	55.5	3495	500/A
150	36.0	1 355	1 000/B	48.5	2 835	500/B	66.0	5185	250/B
200	39.0	1 735	1 000/A	56.5	3 800	500/A			
250	42.5	2 145	500/B	63.5	4 795	250/B			
300	47.5	2 660	500/B	66.5	5 570	250/B			
400	56.0	3 605	500/A						
500	60.5	4 375	250/B						
600	65.5	5 235	250/B						
800	76.0	6 805	250/A						
TCEPKPFLEY									*Thickness of PVC sheath is 2.0 mm*
1	16.5	125	2 000/E	17.0	150	2 000/E	17.5	175	2 000/E
3	18.5	180	2 000/E	20.5	240	2 000/D	21.0	275	2 000/D
5	19.0	200	2 000/D	21.5	290	2 000/D	24.5	410	2 000/D
10	21.0	265	2 000/D	24.0	400	2 000/D	27.0	580	1 000/B
15	23.0	340	2 000/D	27.5	535	2 000/B	30.5	790	1 000/A
20	24.0	395	2 000/D	29.5	650	1 000/B	34.5	1 000	1 000/D
25	26.0	445	2 000/B	30.5	745	1 000/A	37.5	1 220	1 000/B
35	27.5	540	2 000/B	35.0	985	1 000/D	42.0	1 585	500/A
50	30.5	715	1 000/A	39.0	1 310	1 000/B	47.0	2 115	500/B
75	34.0	925	1 000/A	43.5	1 785	500/A	54.0	3 010	500/B
100	37.0	1 180	1 000/B	48.0	2 295	500/B	61.5	3 930	250/A
150	42.0	1 630	500/B	54.5	3 220	500/B	72.0	5 705	200/A
200	45.0	2 035	500/A	62.5	4 245	250/A			
250	48.5	2 480	500/B						
300	53.5	3 035	500/B						
400	62.0	4 045	250/A						
500	66.5	4 850	250/B						
600	71.5	5 750	200/A						
800	82.0	7 385	200/A						

TCEPKPFLEZE, TCEPKPFLEZY

...x4x0.4 (0.6; 0.8)

Specification

TP 31.30.13 - KD - 001/94
TP 31.30.13 - KD - 002/94



Design

T – telecommunication cable
C – copper conductor
EP – PE skin-foam-skin conductor insulation
K – cable
P – filling compound
FL – static shield
E – PE sheath (inner sheath)
Z – Al wires armor
Y – PVC outer sheath
E – PE outer sheath

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Core insulation – PE skin-foam-skin

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Cable core – filled

Cable core – wrapping

Static shield – made of laminated aluminum foil

Inner sheath – PE, black

Armor – aluminum wires

Outer sheath – PE or PVC, black

Packing on drums

Application

» the cables are used for basic phone services in analogue and digital transmission systems

» the cables are designed to be placed under ground and to areas with higher demands for tensile strength, suspension without supporting rope and laying in areas jeopardized by effects of alternate electromagnetic fields

» the cables with PVC shield are designed to be placed in areas with fire spread danger

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.6	0.8
Max. loop resistance	Ω/km	300	133.2	73.6
Insulation resistance	GΩ.km	min. 10	min. 10	min. 10
Mutual capacitance	nF/km	max. 49	max. 49	max. 49
Capacity unbalance k_1 at 800 Hz	pF/500 m	800	800	500
Effective test voltage wire/wire at 50 Hz	V	350	350	350
Effective test voltage wire/shield at 50 Hz	V	700	700	700
Operating voltage	Vss	250	250	250

TCEPKPFLEZE, TCEPKPFLEZY

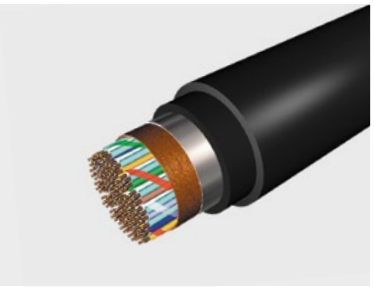
	Core/wire diameter 0.4/0.8 mm			Core/wire diameter 0.6/1.2 mm			Core/wire diameter 0.8/1.6 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
TCEPKPFLEZE									
3	25.0	440	2 000/D	27.0	540	2 000/B	27.5	600	2 000/B
5	25.5	480	2 000/D	28.0	610	2 000/B	31.0	790	2 000/A
10	27.5	565	2 000/B	30.5	760	2 000/A	33.5	1 025	1 000/D
15	29.5	680	2 000/A	34.0	955	1 000/A	37.0	1 290	1 000/B
20	30.5	755	2 000/A	36.0	1 110	1 000/D	41.0	1 560	1 000/B
25	32.5	825	2 000/A	37.0	1 225	1 000/B	44.0	1 840	1 000/A
35	34.0	965	1 000/A	41.5	1 545	1 000/B	48.5	2 285	500/B
50	37.0	1 195	1 000/B	45.5	1 950	500/A	53.5	2 895	500/B
75	40.5	1 445	1 000/B	50.0	2 500	500/B	60.5	3 950	500/A
100	43.5	1 780	1 000/A	54.5	3 115	500/B	68.0	4 990	250/A
150	48.5	2 310	500/B	61.0	4 160	500/A			
200	51.5	2 800	500/B	69.0	5 320	250/A			
250	55.0	3 300	500/B						
300	60.0	3 950	500/A						
400	68.5	5 125	250/A						
500	73.0	6 005	250/A						
TCEPKPFLEZY									
3	26.0	530	2 000/D	28.0	640	2 000/B	28.5	700	2 000/B
5	26.5	570	2 000/B	29.0	710	2 000/B	32.0	910	2 000/A
10	28.5	665	2 000/B	31.5	875	2 000/A	34.5	1 150	1 000/D
15	30.5	790	2 000/A	35.0	1 080	1 000/D	38.0	1 435	1 000/B
20	31.5	870	2 000/A	37.0	1 245	1 000/B	42.0	1 720	1 000/A
25	33.5	940	2 000/A	38.0	1 365	1 000/B	45.0	2 015	1 000/A
35	35.0	1 090	1 000/D	42.5	1 700	1 000/A	49.5	2 480	500/B
50	38.0	1 335	1 000/B	46.5	2 125	500/A	54.5	3 105	500/B
75	41.5	1 600	1 000/B	51.0	2 700	500/B	61.5	4 195	500/A
100	44.5	1 945	1 000/A	55.5	3 335	500/B	69.0	5 265	250/A
150	49.5	2 500	500/B	62.0	4 405	250/A			
200	52.5	3 000	500/B	70.0	5 605	250/A			
250	56.0	3 520	500/A						
300	61.0	4 195	500/A						
400	69.5	5 405	250/A						
500	74.0	6 305	250/A						

Drum diameter (mm)

A 2 250	**B 2 000**	**C 1 750**	**D 1 500**	**E 1 250**	**F 1 000**

TCEKFLE, TCEKFLEY

...x4x0.4 (0.6; 0.8)



Specification

TP 31.30.13 - KD - 001/94
TP 31.30.13 - KD - 002/94

Design

T – telecommunication cable
C – copper conductor
E – solid PE conductor insulation
K – cable
FL – static shield
E – PE sheath (inner sheath)
Y – PVC outer sheath

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Core insulation – solid PE

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Supervisory conductors

Cable core – wrapping

Shield – made of laminated aluminum foil

Sheath (Inner sheath) – PE, black

Outer sheath – PVC, black

Packing on drums

Application

» basic phone services in analogue and digital transmission systems

» to be placed in cable ducts, under ground laying and areas without higher danger of mechanical cable damage

» with PVC shield to be placed in areas with fire spread danger

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.6	0.8
Max. loop resistance	Ω/km	300	133.2	73.6
Insulation resistance	GΩ.km	min. 10	min. 10	min. 10
Mutual capacitance	nF/km	max. 49	max. 49	max. 49
Capacity unbalance k_1 at 800 Hz	pF/500 m	800	800	500
Effective test voltage wire/wire at 50 Hz	V	1 000	1 000	1 000
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000
Operating voltage	Vss	250	250	250

TCEKFLE, TCEKFLEY

	Core/wire diameter 0.4/0.9 mm			Core/wire diameter 0.6/1.3 mm			Core/wire diameter 0.8/1.7 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
TCEKFLE									
1				11.0	110	2 000/E			
3	12.0	100	2 000/E	14.0	140	2 000/E	16.5	185	2 000/D
5	13.5	125	2 000/E	15.5	180	2 000/D	18.5	255	2 000/D
10	16.5	180	2 000/D	20.5	290	2 000/D	23.5	425	2 000/B
15	17.0	220	2 000/D	21.5	375	2 000/B	25.0	560	2 000/B
20	18.5	270	2 000/D	23.0	480	2 000/B	28.0	755	2 000/A
25	19,5	315	2 000/D	24.5	560	2 000/A	31.0	905	1 000/B
35	22.0	400	2 000/D	28.5	755	2 000/A	36.5	1 215	1 000/B
50	24.0	520	2 000/B	33.5	1 010	1 000/B	43.5	1 665	500/B
75	28.0	745	2 000/A	40.0	1 465	1 000/A	51.0	2 440	500/B
100	32.0	955	1 000/B	44.0	1 890	500/B	60.0	3 210	250/B
150	38.5	1 395	1 000/A	51.5	2 785	500/B	70.0	4 680	250/B
200	43.5	1 800	500/B	63.0	3 720	250/B	81.0	6 160	250/A
250	48.0	2 235	500/B	65.5	4 570	250/B			
300	51.5	2 620	500/B	73.0	5 410	250/B			
400	59.5	3 460	500/B	82.5	7 050	250/B			
500	65.0	4 235	250/B						
600	69.5	5 055	250/B						
TCEKFLEY									
1				20.0	240	2 000/D			
3	18.0	185	2 000/D	21.5	295	2000/D	22.5	310	2 000/D
5	19.5	215	2 000/D	26.5	450	1 000/B	24.5	395	2 000/D
10	22.5	300	2 000/D	27.5	545	1 000/B	29.5	620	1 000/A
15	23.0	350	2 000/D	29.0	655	1 000/A	31.0	775	1 000/A
20	24.5	405	2 000/D	30.5	755	1 000/A	34.0	980	1 000/B
25	25.5	460	2 000/B	34.5	990	1 000/B	37.0	1 165	1 000/B
35	28.0	570	1 000/B	39.5	1 300	500/B	42.5	1 530	500/A
50	30.0	715	1 000/A	46.0	1 815	500/B	49.5	2 065	500/B
75	34.0	975	1 000/B	50.0	2 285	500/B	57.0	2 920	250/A
100	38.0	1 220	500/B	57.5	3 245	250/A	66.0	3 775	200/A
150	44.5	1 695	500/A	69.0	4 285	200/A	76.0	5 385	200/A
200	49.5	2 140	500/B	71.5	5 170	200/A	87.0	7 020	200/A
250	54.0	2 610	500/B	79.0	6 105	200/A			
300	57.5	3 040	250/A	88.5	7 890	200/A			
400	65.5	3 950	200/A						
500	71.0	4 790	200/A						
600	75.5	5 640	200/A						

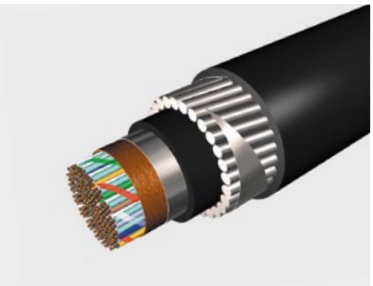
Drum diameter (mm)

A 2 250	**B 2 000**	**C 1 750**	**D 1 500**	**E 1 250**	**F 1 000**

HALLEY CABLES
CABLES & WIRES

TCEKFLEZE, TCEKFLEZY

...x4x0.4 (0.6; 0.8)



Specification

TP 31.30.13 – KD – 001/94
TP 31.30.13 – KD – 002/94

Design

T – telecommunication cable
C – copper conductor
E – solid PE conductor insulation
K – cable
FL – static shield
E – PE sheath (inner sheath)
Z – Al wires armor
E – PE outer sheath
Y – PVC outer sheath

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Core insulation – solid PE

Transmission element – each 4 cores are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Supervisory conductors

Cable core – wrapping

Shield – made of laminated aluminum foil

Inner sheath – PE, black

Armor – aluminum wires

Outer sheath – PE or PVC, black

Packing on drums

Application

- for basic phone services in analogue and digital transmission systems
- designed to be placed under ground and to areas with higher demands for tensile strength
- suspension without supporting rope and laying in areas jeopardised by effects of alternate electromagnetic fields
- with PVC shield designed to be placed in areas with fire spread danger

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.6	0.8
Max. loop resistance	Ω/km	300	133.2	73.6
Insulation resistance	GΩ.km	10	10	10
Mutual capacitance	nF/km	49	49	49
Capacity unbalance k_1 at 800 Hz	pF/500 m	800	800	500
Effective test voltage wire/wire at 50 Hz	V	1 000	1 000	1 000
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000
Operating voltage	Vss	250	250	250

TCEKFLEZE, TCEKFLEZY

	Core/wire diameter 0.4/0.9 mm			Core/wire diameter 0.6/1.3 mm			Core/wire diameter 0.8/1.7 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
TCEKFLEZE									
3	24.5	465	2 000/D	26.5	565	2 000/B	29.0	670	2 000/B
5	26.0	520	2 000/D	28.0	635	2 000/B	31.0	800	2 000/A
10	29.0	665	2 000/B	33.0	890	1 000/A	35.0	1 120	1 000/D
15	29.5	710	2 000/A	34.0	1 005	1 000/A	37.5	1 300	1 000/B
20	31.0	805	2 000/A	35.5	1 155	1 000/D	40.5	1 585	1 000/B
25	32.0	880	2 000/A	37.0	1 275	1 000/B	43.5	1 805	1 000/A
35	34.5	1 030	1 000/A	41.0	1 590	1 000/B	49.0	2 270	500/B
50	36.5	1 240	1 000/B	46.0	1 980	500/A	56.0	2 945	500/A
75	40.5	1 555	1 000/B	52.5	2 615	500/B	63.5	3 935	250/A
100	44.5	1 880	500/A	56.5	3 165	500/B			
150	51.0	2 475	500/B	64.0	4 280	250/A			
200	56.0	3 020	500/B						
250	60.5	3 570	500/B						
300	64.0	4 080	250/A						
TCEKFLEZY									
3	25.5	560	2 000/D	27.5	665	2 000/B	30.0	780	2 000/B
5	27.0	615	2 000/D	29.0	740	2 000/B	32.0	920	2 000/A
10	30.0	775	2 000/B	34.0	1 020	1 000/A	36.0	1 265	1 000/D
15	30.5	820	2 000/A	35.0	1 140	1 000/A	38.5	1 450	1 000/B
20	32.0	925	2 000/A	36.5	1 300	1 000/D	41.5	1 750	1 000/B
25	33.0	1 005	2 000/A	38.0	1 425	1 000/B	44.5	1 985	1 000/A
35	35.5	1 165	1 000/A	42.0	1 755	1 000/B	50.0	2 470	500/B
50	37.5	1 385	1 000/B	47.0	2 165	500/A	57.0	3 180	500/A
75	41.5	1 720	1 000/B	53.5	2 830	500/B	64.5	4 025	250/A
100	45.5	2 060	500/A	57.5	3 400	500/B			
150	52.0	2 685	500/B	65.0	4 555	250/A			
200	57.0	3 255	500/B						
250	61.5	3 825	500/B						
300	65.0	4 350	250/A						

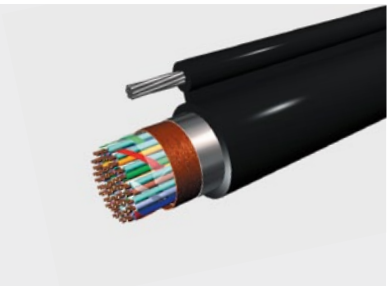
Drum diameter (mm)

A 2 250	**B 2 000**	**C 1 750**	**D 1 500**	**E 1 250**	**F 1 000**

Armor is made from Al wires of nominal diameter 3.15 mm.
Nominal thickness of PVC sheath above armor is 2.5 mm.
Nominal thickness of PE sheath above armor is 2.0 mm.

Note: Version DE, DY on demand.

TCEKFLES
...x4x0.4 (0.6; 0.8)



Specification
TP 31.30.13 - KD - 001/94
TP 31.30.13 - KD - 002/94

Design

T – telecommunication cable
C – copper conductor
E – solid PE conductor insulation
K – cable
FL – static shield
E – PE sheath
S – messenger wire

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Transmission element – star quad

Cable core – elements stranded to units

Cable core – wrapping

Supervisory conductors

Static shield – made of laminated aluminum foil

Sheath – PE, black

Messenger wire – steel rope or steel cord

Packing on drums

Application

» basic phone services in analogue and digital transmission systems

» designed to be suspended without special supporting rope

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.6	0.8
Max. loop resistance	Ω/km	300	133.2	73.6
Insulation resistance	GΩ.km	10	10	10
Mutual capacitance	nF/km	49	49	49
Capacity unbalance k_I at 800 Hz	pF/500 m	800	800	500
Effective test voltage wire/wire at 50 Hz	V	350	350	350
Effective test voltage wire/shield at 50 Hz	V	700	700	700
Operating voltage	V_{ss}	250	250	250

TCEKFLES

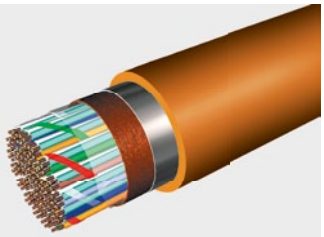
	Core/wire diameter 0.4/0.9 mm			Core/wire diameter 0.6/1.3 mm			Core/wire diameter 0.8/1.7 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
TCEKFLES									
1	12.0	280	2 000/D	14.0	320	2 000/D	16.0	370	2 000/A
3	13.0	220	2 000/D	15.0	280	2 000/B	18.0	360	2 000/A
5	16.0	360	2 000/A	20.0	480	2 000/A	23.0	620	1 000/B
10	17.0	405	2 000/A	21.0	565	1 000/B	24.5	770	1 000/B
15	18.0	450	1 000/D	23.0	660	1 000/B	28.0	945	1 000/A
20	19.0	495	1 000/D	24.5	750	1 000/B	31.0	1 105	500/B
25	21.5	585	1 000/B	28.5	950	1 000/A	36.5	1 435	500/B
35	24.0	710	1 000/B	33.5	1 225	500/B			
50	28.0	935	1 000/A	40.0	1 690	500/B			
75	32.0	1 150	500/B						
100									

Drum diameter (mm)

A 2 250	**B 2 000**	**C 1 750**	**D 1 500**	**E 1 250**	**F 1 000**

Nominal tensile strength of supporting element for cables up to 3 units is 7 000 N, for other cables 16 000 N.

TCEKFLH
...x4x0.4 (0.6; 0.8)



Specification
TP 31.30.13 - KD - 001/94
TP 31.30.13 - KD - 002/94

Design

T – telecommunication cable
C – copper conductor
E – solid PE conductor insulation
K – cable
FL – static shield
H – FRNC sheath

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Core insulation – solid PE

Transmission element – each 4 wires are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Supervisory conductors

Cable core wrapping – glass tape

Shield – made of laminated aluminum foil

Sheath – FRNC, orange

Packing on drums

Application

» basic phone services in analogue and digital transmission systems

» to be placed in cable ducts, under ground laying and areas without higher danger of mechanical cable damage

» designed especially for using in areas danger of fire

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0,4	0,6	0,8
Max. loop resistance	Ω/km	300	133.2	73.6
Insulation resistance	GΩ.km	10	10	10
Mutual capacitance	nF/km	49	49	49
Capacity unbalance k_1 at 800 Hz	pF/500 m	800	800	500
Effective test voltage wire/wire at 50 Hz	V	1 000	1 000	1 000
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000
Operating voltage	V_{ss}	250	250	250

TCEKFLH

	Core/wire diameter 0.4/0.9 mm			Core/wire diameter 0.6/1.3 mm			Core/wire diameter 0.8/1.7 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
TCEKFLH									
3	12.5	140	2 000/E	14.5	170	2 000/E	16.5	230	2 000/D
5	13.5	160	2 000/E	16.0	210	2 000/D	18.5	300	2 000/D
10	16.5	230	2 000/D	20.5	340	2 000/B	24.0	470	2 000/B
15	17.5	260	2 000/D	21.5	400	2 000/B	25.0	580	2 000/A
20	18.5	305	2 000/D	23.5	480	2 000/B	28.0	740	1 000/C
25	19.5	340	2 000/C	25.0	550	2 000/A	31.0	850	1 000/A
35	22.0	420	2 000/B	28.5	710	1 000/C	35.0	1 100	1 000/A
50	24.5	530	2 000/B	32.5	920	1 000/B	45.0	1 660	750/A
75	28.0	695	1 000/C	41.5	1 450	750/A	52.0	2 270	500/A
100	32.0	905	1 000/B	45.5	1 820	750/A	61.5	2 930	333/A
150	40.0	1 380	750/A	53.0	2 500	500/A			
200	45.0	1 720	750/A	63.5	3 250	333/A			
250	49.0	2 035	500/A	66.0	3 820	333/A			
300	53.0	2 335	500/A						
400	60.0	2 960	333/A						
500	65.5	3 535	333/A						
600	70.0	4 070	333/A						

Drum diameter (mm)

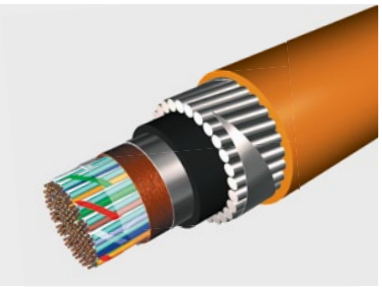
A 2 250	**B 2 000**	**C 1 750**	**D 1 500**	**E 1 250**	**F 1 000**

TCEKFLHZH

...x4x0.4 (0.6; 0.8)

Specification

TP 31.30.13 - KD - 001/94
TP 31.30.13 - KD - 002/94



Design

T – telecommunication cable
C – copper conductor
E – solid PE conductor insulation
K – cable
FL – static shield
H – PE inner sheath
Z – Al wires armor
H – FRNC outer sheath

Make up

Wire – bare copper conductor with a diameter of 0.4; 0.6 or 0.8 mm

Core insulation – solid PE

Transmission element – each 4 wires are twisted a star quad, the quads are stranded to units, the units are stranded to the cable core

Supervisory conductors

Cable core – wrapping

Shield – made of laminated aluminum foil

Inner sheath – PE, black

Glass tape

Armor – aluminum wires

Outer sheath – FRNC, orange

Packing on drums

Application

» for basic phone services in analogue and digital transmission systems

» designed to be placed under ground and to areas with higher demands for tensile strength

» suspension without supporting rope and laying in areas jeopardised by effects of alternate electromagnetic fields

» designed especially for using in areas danger of fire

Environmental conditions

Temperature ranges for laying and assembly	–10 °C ÷ +60 °C
Operation and store temperatures	–40 °C ÷ +70 °C
Permitted minimum bending radius	min. 10D
Cable lifetime	min. 30 years

D – outside cable diameter

Electrical parameters (20 °C)

Conductor diameter	mm	0.4	0.6	0.8
Max. loop resistance	Ω/km	300	133.2	73.6
Insulation resistance	GΩ.km	10	10	10
Mutual capacitance	nF/km	49	49	49
Capacity unbalance k_1 at 800 Hz	pF/500 m	800	800	500
Effective test voltage wire/wire at 50 Hz	V	1 000	1 000	1 000
Effective test voltage wire/shield at 50 Hz	V	2 000	2 000	2 000
Operating voltage	V_{ss}	250	250	250

TCEKFLHZH

	Core/wire diameter 0.4/0.9 mm			Core/wire diameter 0.6/1.3 mm			Core/wire diameter 0.8/1.7 mm		
Number of units	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*	**External diameter** *(mm)*	**Net weight** *(kg/km)*	**Standard production length** *(m)*
TCEKFLHZH									
3	21.9	590	2 000/B	23.9	700	2 000/B	25.7	810	1 000/D
5	22.7	640	2 000/B	24.9	770	1 000/D	27.7	940	1 000/C
10	25.8	810	2 000/A	29.8	1 050	1 000/B	33.0	1 270	1 000/B
15	26.4	840	2 000/A	30.7	1 150	1 000/B	34.2	1 410	1 000/B
20	27.7	960	1 000/C	32.6	1 260	1 000/B	37.2	1 670	1 000/A
25	28.8	1 010	1 000/B	33.9	1 390	1 000/B	39.9	1 870	1 000/A
35	31.2	1 160	1 000/B	37.4	1 640	1 000/A	43.9	2 230	750/A
50	33.6	1 340	1 000/B	41.7	2 000	750/A	53.4	2 850	500/A
75	37.1	1 630	1 000/A	49.9	2 540	500/A	60.8	3 640	333/A
100	40.9	1 900	750/A	53.9	2 950	500/A	70.0	4 450	333/A
150	48.6	2 400	500/A	61.4	3 850	333/A			
200	53.4	2 850	500/A						
250	57.7	3 270	333/A						
300	61.4	3 700	333/A						
400	68.4	4 500	333/A						

Drum diameter (mm)

A 2 250	**B 2 000**	**C 1 750**	**D 1 500**	**E 1 250**	**F 1 000**

Armor is made from Al wires of nominal diameter 3.15 mm. Nominal thickness of FRNC sheath above armor is 2.0 mm.

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