

POLYETHYLENE INSULATED, PAIR TWISTED, PETROLEUM JELLY FILLED, PE-SHEATHED TELECOMMUNICATION CABLE

Type: DK-ELLYV 0.7 T 70 NF

I. GENERAL

This specification covers solid polyethylene insulated, pair twisted telecommunication cables with PE-sheath. The cables are laid up in units.

To make the cable continuous water blocked, the interstices of the cable core are filled with petroleum jelly.

II. CONSTRUCTION

- | | | | | |
|----|------------|--|------|----|
| A. | Conductor | Solid, annealed, tinned copper. | | |
| | | Nominal diameter | 0.7 | mm |
| | | | | |
| B. | Insulation | Solid polyethylene, coloured.
The polyethylene compound used meets the requirements of EN 50290-2-23, grade L/MD. | | |
| | | Nominal thickness | 0.25 | mm |
| | | | | |
| C. | Twisting | Two insulated conductors are twisted to form a pair.
Colour scheme according to table No 1 in this specification. | | |

D.	Stranding	Required number of pairs and 10-pair units are stranded together to form the cable core. Lay up according to tables No 2 and 3.
E.	Petroleum jelly core. filling	The interstices of the cable core are filled with petroleum jelly along the whole cable Drop point of petroleum jelly ≥ 60 °C.
F.	Wrapping	Nonwoven fibre, paper or plastic tape laid on helically or longitudinally with overlap.
G.	Sheath	Black, weather resistant polyethylene. The polyethylene compound meets the requirements of EN 50290-2-24, grade LLD. Nominal thickness of sheath according to table No 4, where also dimensions and weights are given.
H.	Sheath marking	Type of cable, number of pairs, conductor diameter, manufacturer, year and length marking.

Table No 1 - Colour scheme

Pair No	Colour of the PE-insulation	
	Conductor a	Conductor b
1	white	blue
2	"	orange
3	"	green
4	"	brown
5	"	grey
6	red	blue
7	"	orange
8	"	green
9	"	brown
10	"	grey

Table No 2 - Lay up and identification of 5-pair cable and 10-pair units

5-pair cable and 10-pair unit No	Pair No (See table No 1)	Colour of the unit identification tape
5-pair cable	1 - 5	-
10-pair unit No 1	1 - 10	blue
No 2	1 - 10	orange
No 3	1 - 10	green

Table No 3 - Lay up of cables

Number of pairs in the cable or unit	Number of 10-pair units in centre and layer	10-pair unit No (see table No 2)
5	- (5 pairs)	-
10	Centre 1	1
20	Centre 2	1 - 2
30	Centre 3	1 - 3

Table No 4 - Dimensions and weights

Cable	Nominal thickness of outer sheath	Nominal outer diameter	Net weight per 100 m
DK-ELLYV 0.7 T	mm	mm	approx kg
5x2x0.7	1.3	8.5	8.5
10x2x0.7	1.4	10.5	14.0
20x2x0.7	1.6	14.5	26.5
30x2x0.7	1.6	16.0	37.0

III. ELECTRICAL DATA AT 20 °C

Conductor resistance (single conductor)		max	48 Ω /km
Insulation resistance (after 300 V D.C. i min)		min	5 000 $M\Omega \times km$
Mutual capacitance at 800 Hz		aver	≤ 70 nF/km
		max aver	77 nF/km
Capacitance unbalance at 800 Hz	pair-pair	max	$250 \times L / 500$ pF where L=length of cable under test (m)
Dielectric strength	conductor-conductor	min	1.2 kV DC

IV. THICKNESS TOLERANCES FOR INSULATION AND SHEATHS

The average radial thickness at any section shall be not less than 90 % of the nominal thickness.

The minimum radial thickness at any point shall be not less than 75 % of the nominal thickness.