



Halogen-free signal cables



Application:

Signal cables are suited for signal transmission, with resistance to flame propagation according to STN EN 60332-3... (STN EN 50266-2-...), halogen-free, with low density of smoke according to STN EN 61034-2 and low corrosivity of combustion gases according to STN EN 50267-2-3. These are used for fixed installation both in normal and moist environments (STN 33 2000-5-51). Cables can be used in the fire hazard conditions and can be installed on flammable material. Cables type -V are functional in fire for time period 180 min. according to IEC 60331-23.

Cable construction:

- **Number of pairs:** 1, 2, 3, 4, 5, 8, 10, 12, 15, 16, 20
- **Cable cores:** Cu or CuSn, conductor cl. 1, cl. 2 or cl.5
- **Nominal diameter for conductors cl. 1:** 0,4; 0,5; 0,6; 0,8; 1,0; 1,15; 1,5 mm
- **Nominal cross-section for conductors cl. 2 or cl. 5:** 0,35; 0,5; 0,75; 1,0; 1,5; 2,5; 4 mm²
- **Conductor insulation:** special EPR and combinations (-V type in combination with mica-glass tape)
- Conductors are coiled to pairs. Halogen-free, flame-retarding filler is placed above the coiled pairs.
- **Shield construction:** K- unshielded cable
F(or St) - AlPET foil + enclosed CuSn wire
O - Cu braiding with min. covering 75 %
S - CuSn braiding with min. covering 75 %
J - longitudinal AlPET foil + CuSn braiding with min. covering 45 %
- **Filler:** halogen-free, flame-retardant material + glass tape
- **Sheath cable:** halogen-free, flame-retardant material
- **Colour of sheath:** orange, red or other if required

Technical data:

- **Nominal voltage:** 225 V
- **Test voltage :** 500 V
- **Insulation resistance, min.:** 100 MΩ.km
- **Mutual capacitance (at 800 Hz), max.:** 120 nF/km*
(* the value can exceed of 20% by cables up to 4-pairs)
- **Max. admissible conductor temperature:** +70 °C
- **Operating temperature:** -40 °C to +70 °C
- **Min. temperature for laying:** -5 °C
- **Min. bending radius:** conductors cl. 1 - 15 x cable diameter,
conductors cl. 2 or cl. 5 - 12 x cable diameter

Letter code:

position	letter	meaning
1.	J(or JE)	copper conductor cl. 1, cl. 2 or cl. 5
	C	copper conductor cl. 1
	L	copper conductor cl. 2 or cl.5
2.	H	EPR and combinations (-V type in combination with mica-glass tape)
	X	cross-linked polyethylene (-V type in combination with mica-glass tape)
3.	K	unshielded cable
	F, St, O, S, J	shielded cable
4.	E	halogen-free, flame-retardant material
5.	R	cable is flame-retardant
	V	cable is flame-retardant with maintaining its functionality at fire



5. INDUSTRIAL CABLES / 5.1 HALOGEN-FREE / J(JE,L,C)H(X)K(F,St,O,S,J)E(H)-R(V)



Marking:

- Colour coded for type JE-H(St)H... acc. to VDE 0815.

Pair	1		2		3		4	
Core	a	b	a	b	a	b	a	b
Colour	blue	red	grey	yellow	green	brown	white	black

Groups are distinguished by identify tape.

Conductor colour in 5-pair cable: a-purple, b-orange

2-pair cable as X-shape:

1 in pair	a-conductor	blue	b-conductor	red
2 in pair	a-conductor	grey	b-conductor	yellow

- Colour coded in pairs for type J(C,L)X

A cores colour is for	1-5 white
elements:	6-10 yellow
	11-15 orange
	16-20 purple
	21-25 black

B cores colour repeats in every group of 5 elements to differential conductor A in order:

red, green, blue, brown, grey