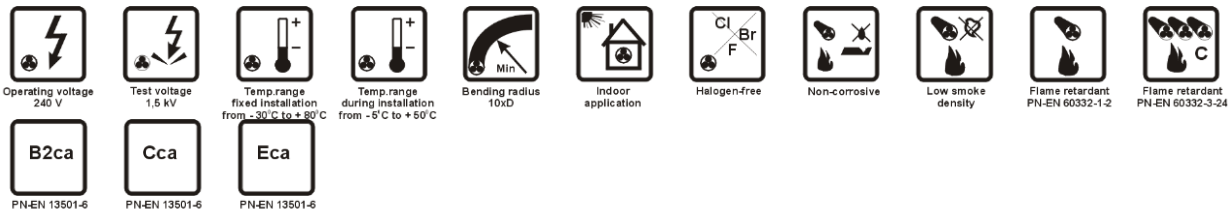
HTKSH, HTKSHekw

HALOGEN FREE TELECOMMUNICATION SWITCHBOARD CABLES



APPLICATIONS

TECHNOFLAME HTKSH and **TECHNOFLAME HTKSHekw** halogen free cables are intended for interconnections between switching and transmission equipment, for analogue or digital data transmission in industrial electronics and control applications all in objects of sharp fire protection requirements, particularly in fire alarm and fire automatic control systems.

The cables are certified by Scientific and Research Centre for Fire Protection - National Research Institute (Centrum Naukowo-Badawcze Ochrony Przeciwpożarowej - PIB) at Józefów.

Cable circuits are protected by an overall electrostatic shield (**ekw**) against external electric field interferences.

Halogen free cables are applied in locations where, in case of fire, higher safety for human beings and expensive electronic equipment is required. The cables are flame retardant and their smoke emission is low, emitted fumes are non toxic and non corrosive.

The cables are suitable for fixed indoor installations.

CONSTRUCTION

- bare annealed copper single wire round conductors,
- halogen free compound insulation - colours in accordance with PN-92/T-90321 standard,
- insulated conductors twisted into pairs or quad,
- pairs laid-up into a cable core,
- cable core wrapped in a polyester tape,
- overall electrostatic shield incorporating a plastic laminated metal foil and a tinned copper drain wire - **TECHNOFLAME HTKSHekw**,
- red cable sheath made of halogen free compound type HM2 according to EN 50290-2-27 and VDE 0250-214 standard.

CHARACTERISTICS

Cable type			HTKSH						HTKSHekw					
Conductor diameter		mm	0,5	0,6	0,8	1,0	1,4	1,5	0,5	0,6	0.8	1,0	1,4	1,5
DC loop resistance at 20°C, maximum		Ω/km	195.6	135.8	75	48	24.5	24.0	195.6	135.8	75	48	24.5	24.0
Mutual capacitance at 1 kHz	maximum	nF/km	120	120	120	120	120	120	200	200	200	200	200	200
	average	nF/km	60	60	60	70	70	70	90	90	90	130	150	150

Operating voltage	240 V
Voltage test	1500 V rms
Insulation resistance, minimum	500 MΩ·km
Inductance, approximate	0.7 mH/km
Corrosivity of emitted gases per	PN-EN 60754-1, PN-EN 60754-2, IEC 60754-2
pH, approximate conductivity, approximate	6.8 0.4 µS/mm
Smoke density per	PN-EN 61034-2, IEC 61034-2
light transmittance, minimum	80%

Operating temperature range during operation during installation	 from - 30 to + 80°C from - 5 to + 50°C
Minimum bending radius	10 x cable diameter
Cable combustibility	flame retardant
Combustibility tests	PN-EN 60332-1-2, IEC 60332-1-2, PN-EN 60332-3-24, IEC 60332-3-24 (cat. C)
Reference standards	CNBOP-PIB-KOT-2019/0111-3701 wyd.3, WT-TK-4:2019
Class reaction to fire (according to PN-EN 13501-6)	B2ca-s1a,d0,a1; Cca-s1a,d0,a1; Eca

The cable meets requirements of the low voltage directive 2014/35/EU

Product No.	Number of pairs (x 2) x conductor diameter	Cable outer diameter (appr.)	Class reaction to fire	Copper index	Cable weight (appr.)
	mm	mm		kg/km	kg/km
HTKSH					
0019 015	1 x 2 x 0,5	3,1	Eca	3,8	14,0
0019 009	2 x 2 x 0,5	4,4	Eca	7,7	22,5
0019 010	3 x 2 x 0,5	4,6	Eca	11,5	28,0
0019 012	4 x 2 x 0,5	5,1	Cca-s1a,d0,a1	15,4	37,0
0019 019	3 x 2 x 0,6	5,1	Cca-s1a,d0,a1	16,3	37,0
0019 020	4 x 2 x 0,6	5,3	Cca-s1a,d0,a1	21,7	42,0
0019 021	5 x 2 x 0,6	5,8	Cca-s1a,d0,a1	27,1	50,0
0019 022	6 x 2 x 0,6	6,3	Eca	32,6	59,0
0019 025	7 x 2 x 0,6	6,3	Eca	38,0	65,0
0019 023	8 x 2 x 0,6	6,7	Eca	43,4	73,0
0019 024	10 x 2 x 0,6	7,8	Eca	54,3	92,0
0019 008	1 x 2 x 0,8	4,0	Eca	9,7	24,0
0019 006	1 x 4 x 0,8	4,8	Eca	19,2	38,5
0019 002	2 x 2 x 0,8	6,1	B2ca-s1a,d0,a1	19,2	45,0
0019 005	3 x 2 x 0,8	6,5	B2ca-s1a,d0,a1	28,8	57,0
0019 007	4 x 2 x 0,8	7,1	Cca-s1a,d0,a1	38,4	72,0
0019 001	1 x 2 x 1,0	4,6	Eca	15,4	32,0
0019 026	1 x 4 x 1,0	5,1	B2ca-s1a,d0,a1	30,2	51,0
0019 003	2 x 2 x 1,0	6,8	B2ca-s1a,d0,a1	30,7	58,0
0019 011	1 x 2 x 1,4	5,1	B2ca-s1a,d0,a1	29,6	46,0
0019 004	1 x 2 x 1,5	5,7	B2ca-s1a,d0,a1	33,9	53,0

Product No.	Number of pairs (x 2) x conductor diameter	Cable outer diameter (appr.)	Class reaction to fire	Copper index	Cable weight (appr.)
	mm	mm		kg/km	kg/km
HTKSHekw					
0533 034	1 x 2 x 0,5	3,3	Eca	5,0	17,0
0533 008	2 x 2 x 0,5	4,6	Eca	8,9	25,0
0533 009	3 x 2 x 0,5	4,8	Eca	12,7	31,0
0533 029	4 x 2 x 0,5	5,1	Eca	16,3	38,0
0533 020	5 x 2 x 0,5	5,6	B2ca-s1a,d0,a1	20,1	44,0
0533 021	2 x 2 x 0,6	5,1	B2ca-s1a,d0,a1	12,1	34,0
0533 022	3 x 2 x 0,6	5,1	B2ca-s1a,d0,a1	17,5	38,0
0533 023	4 x 2 x 0,6	5,5	B2ca-s1a,d0,a1	22,9	46,0
0533 025	5 x 2 x 0,6	6,0	B2ca-s1a,d0,a1	28,3	54,0
0533 024	6 x 2 x 0,6	6,5	B2ca-s1a,d0,a1	33,8	62,0
0533 030	7 x 2 x 0,6	6,5	Eca	39,2	68,0
0533 026	8 x 2 x 0,6	6,9	Eca	44,6	77,0
0533 027	10 x 2 x 0,6	8,0	Eca	55,5	97,0
0533 028	12 x 2 x 0,6	8,3	Eca	66,4	111,0
0533 002	1 x 2 x 0,8	4,2	B2ca-s1a,d0,a1	10,9	27,0
0533 003	1 x 4 x 0,8	5,1	B2ca-s1a,d0,a1	20,5	45,0
0533 010	2 x 2 x 0,8	6,3	B2ca-s1a,d0,a1	20,4	46,0
0533 004	3 x 2 x 0,8	6,7	B2ca-s1a,d0,a1	30,0	60,0
0533 006	4 x 2 x 0,8	7,3	B2ca-s1a,d0,a1	39,6	76,0
0533 005	5 x 2 x 0,8	8,2	B2ca-s1a,d0,a1	53,0	93,0
0533 035	20 x 2 x 0,8	17,4	Eca	194,2	515
0533 001	1 x 2 x 1,0	4,8	Eca	16,6	33,5
0533 007	2 x 2 x 1,0	7,0	B2ca-s1a,d0,a1	31,9	60,0
0533 031	1 x 4 x 1,0	5,2	B2ca-s1a,d0,a1	31,4	53,0
0533 011	1 x 2 x 1,4	5,3	B2ca-s1a,d0,a1	30,8	50,0
0533 016	1 x 2 x 1,5	5,6	B2ca-s1a,d0,a1	35,0	55,0
0533 032	1 x 4 x 1,4	6,1	B2ca-s1a,d0,a1	60,3	83,0