ISO
9001:2000

HTKSH, HTKSHekw

HALOGEN FREE SWITCHBOARD CABLES

APPLICATIONS

HTKSH and **HTKSHekw** 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.

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 certified by Research and Development Centre for Fire Protection (Centrum Naukowo-Badawcze Ochrony Przeciwpożarowej) at Józefów – **Certificate of Conformity No. 1282/2002**.

The cables are protected by an overall electrostatic shield against external electric field interferences.

The cables are suitable for indoor installations.

CONSTRUCTION

- bare annealed copper single wire round conductors meeting requirements of class 1 per PN-EN 60228,
- halogen free compound insulation - colours in accordance with PN-92/T-90321 standard,
- insulated conductors twisted into pairs,
- 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,
- red cable sheath of special halogen free compound (oxygen index bigger than 35%).

TECHNOKABEL®

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CHARACTERISTICS

Cable type			HTKSH			HTKSHekw		
Conductor diameter		mm	0.8	1.0	1.5	0.8	1.0	1.5
DC loop resistance at 20°C, maximum		Ω/km	75	48	24	75	48	24
Capacitance between conductors at 1 kHz	maximum	nF/km	120	120	120	200	200	200
	average		60	70	70	90	130	130

Operating voltage	150 V
Voltage test	1.5 kV rms
Insulation resistance, minimum	500 MΩ·km
Inductance, approximate	0.7 mH/km
Corrosivity of emitted gases per PN-EN 50267-2-3, IEC 60754-2	
pH, approximate	6.8
conductivity, approximate	0.4 µS/mm
Smoke density per PN-EN 50268-2-3, IEC 61034-2	
light transmittance, minimum	94%

Operating temperature range	
during operation	from -30 to +80°C
during installation	from -5 to +70°C
Minimum bending radius	10 x cable diameter
Cable combustibility	flame retardant
Combustibility tests	PN-EN 50265-2-1 and IEC 60332-1
Reference standards	WT-TK-4 PN-92/T-90320 PN-92/T-90321

CE = **the cable meets requirements of the low voltage directive 73/23/EEC and 93/68/EEC**

Cable type	Number of pairs (x 2) x conductor diameter	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
	number x mm²	mm	kg/km	kg/km
HTKSH	1 x 4 x 0.5	5.1	7.5	39.0
HTKSH	2 x 2 x 0.5	6.0	7.5	45.3
HTKSH	3 x 2 x 0.5	6.2	11.3	52.1
HTKSH	1 x 2 x 0.8	5.7	9.6	43.8
HTKSH	2 x 2 x 0.8	7.6	19.3	70.3
HTKSH	3 x 2 x 0.8	7.9	30.0	57.5
HTKSH	1 x 2 x 1.0	6.4	15.1	56.7
HTKSH	2 x 2 x 1.0	8.9	30.2	95.0

Cable type	Number of pairs (x 2) x conductor diameter	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
	number x mm²	mm	kg/km	kg/km
HTKSHekw	1 x 4 x 0.8	6.4	19.3	63.6
HTKSHekw	3 x 2 x 0.8	8.1	29.0	89.8
HTKSHekw	5 x 2 x 0.8	10.6	49.5	126.7
HTKSHekw	11 x 2 x 0.8	12.7	107.5	225.8
HTKSHekw	1 x 2 x 1.0	6.6	15.1	59.8

Other diameters and pair counts available on request.