

YHKGSLYkonoyńżo-P; YHKGSLYkonoyńżo-T

MINING CONTROL CABLES

Operating voltage
150/250 VTest voltage
1,5 kVOperating voltage
300/500 VTest voltage
3 kVOperating voltage
0,6/1 kVTest voltage
4 kVTemp. range
fixed installation
from - 30°C to + 70°CTemp. range
during installation
from - 5°C to + 70°CBending radius
10xDFlame retardant
PN-EN 60332-1-2Flame retardant
PN-EN 60332-3-24EMC
Electromagnetic
compatibility

APPLICATIONS

YHKGSLYkonoyńżo-P are multipair, pair and overall shielded and **YHKGSLYkonoyńżo-T** are multitriple, triple and overall shielded, mining control cables intended for control, communication, measuring and monitoring systems in mines.

Cables can be applied in:

- opencast and underground mines, except explosive condition zones.
- underground mines in their non-methane and methane fields in areas of „a”, „b” or „c” degree explosion hazard.
- underground mines in workings of class A or B coal dust explosion hazard.
- intrinsically safe circuits in opencast and underground mines in explosion hazardous areas.
- intrinsically safe circuits in underground mines in areas classified as „a”, „b”, or „c” degree explosion hazard.

Cables can not be used for power supplying in power engineering installations.

Shielded pair or triple structure substantially decreases mutual influence between signals transmitted along the cable.

The overall shield protects the cables against external electromagnetic interferences and prevents emission of interferences produced in the cables.

Cable inner sheath offers enhanced protection against mechanical damage.

Cables have positive **Technical Opinion No. 05/53** regarding application in underground mines and **Certificates No. 05/53/A1/2** and **05/53/A2/2** issued by **TI EMAG Institute**.

CONSTRUCTION

- flexible, multiwire conductors, stranded of bare annealed copper wires (tin-plated on request), meeting requirements of class 5 per PN-EN 60228,
- PVC insulation, identification colour code:
 - pairs – black and brown insulation and white pair number printed on it,
 - triples – black, brown and blue insulation and white triple number printed on it,
- insulated conductors twisted into pairs or triples,
- tinned copper wire braid shield of coverage bigger than 70% on pairs or triples (bare copper wire braid available on request),
- shielded pairs or triples laid-up in layers into a cable core, green-yellow protective conductor located in the outer layer, cables are made of 2, 3, 4, 5, 7, 8, 10, 12, 14, 15, 16, 18, 19, 21, 24, 25, 28, 30, 40 and 50 pairs or triples,
- cable core wrapped in polyester tape,
- inner PVC sheath,
- tinned copper wire braid shield of coverage bigger than 70%,
- special (oxygen index bigger than 29%) PVC cable sheath, black (RAL 9005) or blue (RAL 5015 – for intrinsically safe circuits), other colours also available.

AVAILABLE UPON REQUEST

YHKGSXLXkonoyńżo-P. YHKGSXLXkonoyńżo-T - polyethylene insulated cables (X) of low capacitance, designed to transmit signals over long distances. Cables are designed for operating voltage 150/250 V. Cable sheath made of special self-extinguishing and flame retardant PVC (Yn).

XnHKGSXLXkonoxńżo-P. XnHKGSXLXkonoxńżo-T - halogen free cables of reduced combustibility, sheathed with special halogen free material (Xn), applied when higher safety in case of fire is required. The cables are flame retardant, their smoke emission in fire is low and released gases are not corrosive. Cables are designed for operating voltage 150/250 V.

YHKGSLYkonoyńżo-P; YHKGSLYkonoyńżo-T

CHARACTERISTICS

Conductor cross-section	mm ²	0.5	0.75	1.0	1.5	2.5
DC conductor resistance at 20°C, maximum	Ω/km	78.0	52.0	39.0	26.6	16.0
Operating voltage U ₀ /U	V	300/300		300/500		600/1000
Voltage test	V rms	1500		3000		3500
Insulation resistance, minimum	MΩ·km	20		20		100

Inductance, approximate	0.7 mH/km	Minimum bending radius	10 x cable diameter
Conductor temperature limit in work conditions	from - 30 to + 70°C	Cable combustibility	flame retardant
in short-circuit	from - 5 to + 70°C	Combustibility tests	PN-EN 60332-1-2, IEC 60332-1-2 PN-EN 60332-3-24, IEC 60332-3-24 (cat. C)
Reference standards			WT-TK-24

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

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.) mm	Copper index kg/km	Cable weight (appr.) kg/km
300/300 V	mm ²			
1246 002	2 x 2 x 0,75 + 0,75	13.1	94	225
1246 003	4 x 2 x 0,75 + 0,75	14.7	153	310
1246 004	7 x 2 x 0,75 + 0,75	17.2	257	455
1246 005	12 x 2 x 0,75 + 0,75	21.3	407	690
1246 006	16 x 2 x 0,75 + 0,75	24.3	547	900
1246 007	18 x 2 x 0,75 + 0,75	25.3	606	985
1246 001	2 x 2 x 1 + 1	13.5	108	245
1246 008	4 x 2 x 1 + 1	15.1	178	340
1246 009	7 x 2 x 1 + 1	17.7	299	505
1246 010	12 x 2 x 1 + 1	22.0	476	770

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.) mm	Copper index kg/km	Cable weight (appr.) kg/km
300/300 V	mm ²			
1246 011	16 x 2 x 1 + 1	25.0	639	1010
1246 012	2 x 2 x 1,5 + 1,5	15.2	144	305
1246 013	4 x 2 x 1,5 + 1,5	17.4	256	455
1246 014	7 x 2 x 1,5 + 1,5	20.6	402	675
1246 015	12 x 2 x 1,5 + 1,5	26.0	671	1060
1246 016	2 x 2 x 2,5 + 2,5	16.5	201	380
1246 017	4 x 2 x 2,5 + 2,5	19.4	359	600
1246 018	7 x 2 x 2,5 + 2,5	22.7	572	875
1246 019	12 x 2 x 2,5 + 2,5	29.1	953	1420

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.) mm	Copper index kg/km	Cable weight (appr.) kg/km
300/500 V	mm ²			
1732 004	2 x 2 x 0,75 + 0,75	14.5	103	260
1732 005	4 x 2 x 0,75 + 0,75	16.4	167	360
1732 006	7 x 2 x 0,75 + 0,75	19.6	282	550
1732 007	12 x 2 x 0,75 + 0,75	24.6	469	855
1732 008	16 x 2 x 0,75 + 0,75	27.4	600	1060
1732 009	18 x 2 x 0,75 + 0,75	28.6	665	1160
1732 001	2 x 2 x 1 + 1	14.8	118	280
1732 010	4 x 2 x 1 + 1	16.8	193	395
1732 011	7 x 2 x 1 + 1	20.1	324	600
1732 012	12 x 2 x 1 + 1	25.3	540	940

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.) mm	Copper index kg/km	Cable weight (appr.) kg/km
300/500 V	mm ²			
1732 013	16 x 2 x 1 + 1	28.2	693	1170
1732 002	2 x 2 x 1,5 + 1,5	15.9	148	320
1732 014	4 x 2 x 1,5 + 1,5	18.6	264	500
1732 015	7 x 2 x 1,5 + 1,5	21.7	415	715
1732 016	12 x 2 x 1,5 + 1,5	27.3	692	1130
1732 003	2 x 2 x 2,5 + 2,5	17.4	222	415
1732 017	4 x 2 x 2,5 + 2,5	20.2	367	630
1732 018	7 x 2 x 2,5 + 2,5	24.3	607	965
1732 019	12 x 2 x 2,5 + 2,5	30.4	975	1500

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.) mm	Copper index kg/km	Cable weight (appr.) kg/km
0,6/1 kV	mm ²			
1733 004	2 x 2 x 0,75 + 0,75	15.9	112	295
1733 005	4 x 2 x 0,75 + 0,75	18.6	200	450
1733 006	7 x 2 x 0,75 + 0,75	21.7	307	635
1733 007	12 x 2 x 0,75 + 0,75	27.3	512	990
1733 008	16 x 2 x 0,75 + 0,75	30.9	655	1260
1733 009	18 x 2 x 0,75 + 0,75	32.7	728	1410
1733 001	2 x 2 x 1 + 1	16.2	127	315
1733 010	4 x 2 x 1 + 1	19.0	225	485
1733 011	7 x 2 x 1 + 1	22.2	350	685
1733 012	12 x 2 x 1 + 1	28.0	583	1080

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.) mm	Copper index kg/km	Cable weight (appr.) kg/km
0,6/1 kV	mm ²			
1733 013	16 x 2 x 1 + 1	31.7	748	1370
1733 002	2 x 2 x 1,5 + 1,5	17.4	174	375
1733 014	4 x 2 x 1,5 + 1,5	20.2	281	560
1733 015	7 x 2 x 1,5 + 1,5	24.3	463	850
1733 016	12 x 2 x 1,5 + 1,5	30.4	735	1300
1733 003	2 x 2 x 2,5 + 2,5	19.2	233	475
1733 017	4 x 2 x 2,5 + 2,5	21.9	384	690
1733 018	7 x 2 x 2,5 + 2,5	26.3	634	1070
1733 019	12 x 2 x 2,5 + 2,5	33.7	1052	1710

Other cross-sections and conductor counts available on request.

TECHNOKABEL S.A. reserves the right to change specifications without prior notice.