

YKGSLYkonoyńżo-P; YKGSLYkonoyńżo-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**

YKGSLYkonoyńżo-P (multipair) and **YKGSLYkonoyńżo-T** (multitriples) are 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” degree explosion hazard.
- underground mines in workings of class A 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.

Paired or tripled structure decreases mutual influence between signals transmitted along the cable and reduces influence of outer sources of interference.

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 **Certificate No. 05/53/A1/2** 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,
- 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

YKGSXLXkonoyńżo-P, YKGSXLXkonoyńżo-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).

XnKGSXLXkonoxńżo-P, XnKGSXLXkonoxńżo-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.

YKGSLYkonoyńzo-P; YKGSLYkonoyńzo-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 in short-circuit	from - 30 to + 70°C from - 5 to + 70°C	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	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.)	Copper index	Cable weight (appr.)
300/300 V	mm ²	mm	kg/km	kg/km
1745 001	2 x 2 x 0,75 + 0,75	12.3	67	188
1745 002	4 x 2 x 0,75 + 0,75	13.7	100	250
1745 003	7 x 2 x 0,75 + 0,75	15.7	150	340
1745 004	12 x 2 x 0,75 + 0,75	19.6	252	525
1745 005	16 x 2 x 0,75 + 0,75	21.7	319	640
1745 006	18 x 2 x 0,75 + 0,75	22.6	352	700
1745 007	2 x 2 x 1 + 1	12.6	80	210
1745 008	4 x 2 x 1 + 1	14.1	123	280
1745 009	7 x 2 x 1 + 1	16.2	188	385
1745 010	12 x 2 x 1 + 1	20.3	315	600

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
300/300 V	mm ²	mm	kg/km	kg/km
1745 011	16 x 2 x 1 + 1	22.5	401	740
1745 012	2 x 2 x 1,5 + 1,5	14.3	110	265
1745 013	4 x 2 x 1,5 + 1,5	16.2	173	365
1745 014	7 x 2 x 1,5 + 1,5	19.4	287	550
1745 015	12 x 2 x 1,5 + 1,5	24.3	472	855
1745 016	2 x 2 x 2,5 + 2,5	15.7	162	335
1745 017	4 x 2 x 2,5 + 2,5	18.4	282	515
1745 018	7 x 2 x 2,5 + 2,5	21.4	440	740
1745 019	12 x 2 x 2,5 + 2,5	27.0	728	1160

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
300/500 V	mm ²	mm	kg/km	kg/km
1506 002	2 x 2 x 0,75 + 0,75	13.7	71	220
1506 003	4 x 2 x 0,75 + 0,75	15.3	106	290
1506 004	7 x 2 x 0,75 + 0,75	18.3	174	435
1506 005	12 x 2 x 0,75 + 0,75	22.3	264	620
1506 006	16 x 2 x 0,75 + 0,75	25.4	357	805
1506 007	18 x 2 x 0,75 + 0,75	26.6	392	875
1506 008	2 x 2 x 1 + 1	14.0	84	240
1506 009	4 x 2 x 1 + 1	15.7	129	320
1506 010	7 x 2 x 1 + 1	18.9	212	485
1506 011	12 x 2 x 1 + 1	23.0	327	700

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
300/500 V	mm ²	mm	kg/km	kg/km
1506 011	16 x 2 x 1 + 1	26.2	440	910
1506 012	2 x 2 x 1,5 + 1,5	15.0	112	280
1506 013	4 x 2 x 1,5 + 1,5	17.2	192	405
1506 014	7 x 2 x 1,5 + 1,5	20.4	291	585
1506 015	12 x 2 x 1,5 + 1,5	25.6	480	910
1506 016	2 x 2 x 2,5 + 2,5	16.4	164	350
1506 017	4 x 2 x 2,5 + 2,5	19.2	286	540
1506 018	7 x 2 x 2,5 + 2,5	22.4	444	775
1506 019	12 x 2 x 2,5 + 2,5	28.3	735	1220

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
0,6/1 kV	mm ²	mm	kg/km	kg/km
1746 001	2 x 2 x 0,75 + 0,75	15.0	76	250
1746 002	4 x 2 x 0,75 + 0,75	17.2	127	355
1746 003	7 x 2 x 0,75 + 0,75	20.4	183	505
1746 004	12 x 2 x 0,75 + 0,75	25.6	300	770
1746 005	16 x 2 x 0,75 + 0,75	28.5	374	940
1746 006	18 x 2 x 0,75 + 0,75	30.3	410	1050
1746 007	2 x 2 x 1 + 1	15.4	89	270
1746 008	4 x 2 x 1 + 1	17.6	151	385
1746 009	7 x 2 x 1 + 1	20.9	222	550
1746 010	12 x 2 x 1 + 1	26.3	364	850

Product No.	Number of pairs (x 2) x conductor cross- section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
0,6/1 kV	mm ²	mm	kg/km	kg/km
1746 011	16 x 2 x 1 + 1	29.7	457	1080
1746 012	2 x 2 x 1,5 + 1,5	16.4	116	310
1746 013	4 x 2 x 1,5 + 1,5	19.2	200	470
1746 014	7 x 2 x 1,5 + 1,5	22.4	300	660
1746 015	12 x 2 x 1,5 + 1,5	28.3	495	1030
1746 016	2 x 2 x 2,5 + 2,5	18.3	186	420
1746 017	4 x 2 x 2,5 + 2,5	20.9	293	595
1746 018	7 x 2 x 2,5 + 2,5	25.1	477	905
1746 019	12 x 2 x 2,5 + 2,5	31.4	750	1380

Other cross-sections and conductor counts available on request.

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