

YKGSLYkonoyñ

MINING CONTROL CABLES



Operating voltage
150/250 V



Test voltage
1,5 kV



Operating voltage
300/500 V



Test voltage
3 kV



Operating voltage
0,6/1 kV



Test voltage
4 kV



Temp. range
fixed installation
from -30°C to +70°C



Temp. range
during installation
from -5°C to +70°C



Bending radius
10xD



Flame retardant
PN-EN 60332-1-2



Flame retardant
PN-EN 60332-3-24



EMC
Electromagnetic
compatibility

APPLICATIONS

YKGSLYkonoyñ 150/250 V, **YKGSLYkonoyñ 300/500 V** and **YKGSLYkonoyñ 0.6/1 kV** 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”, „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.

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, colours of insulation:

Number of conductors	Colours of insulation	
	protective conductor	insulated conductors
3	green-yellow	black and blue
4	green-yellow	black, blue and brown
5	green-yellow	black, blue, brown and black
> 5	green-yellow	black and white conductor number printed on it

- insulated conductors laid-up in layers into a cable core, cables are made of 3, 4, 5, 7, 10, 12, 14, 16, 19, 24, 27, 30, 33, 37, 40, 48, 52, 56 and 61 conductors,
- 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

YKGSXLXkonoyñ - 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).

XnKGSXLXkonoxn - 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.

YKGSLYkonoyñ

CHARACTERISTICS

Conductor cross-section	mm ²	1.0	1.5	2.5	4
DC conductor resistance at 20°C, maximum	Ω/km	19.5	13.3	7.98	4.95
Operating voltage U ₀ /U	V	150/250	300/500	600/1000	
Voltage test	V rms	1500	3000	4000	
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-22

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

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
150/250 V	mm ²	mm	kg/km	kg/km
1744 001	2 x 1 + 1	9.6	47.6	141
1744 002	4 x 1 + 1	10.6	70	183
1744 003	6 x 1 + 1	11.2	91	215
1744 004	9 x 1 + 1	13.2	130	290
1744 005	13 x 1 + 1	14.0	171	350
1744 006	20 x 1 + 1	15.7	244	465
1744 007	2 x 1,5 + 1,5	10.5	65	177
1744 008	4 x 1,5 + 1,5	11.8	97	240
1744 009	6 x 1,5 + 1,5	12.6	133	290
1744 010	9 x 1,5 + 1,5	15.0	184	385

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
150/250 V	mm ²	mm	kg/km	kg/km
1744 011	13 x 1,5 + 1,5	16.0	245	475
1744 012	2 x 2,5 + 2,5	11.4	96	225
1744 013	4 x 2,5 + 2,5	13.0	153	315
1744 014	6 x 2,5 + 2,5	13.8	204	385
1744 015	9 x 2,5 + 2,5	16.6	285	520
1744 016	2 x 4 + 4	12.9	148	310
1744 017	4 x 4 + 4	14.8	231	440
1744 018	6 x 4 + 4	15.9	312	540
1744 019	9 x 4 + 4	19.3	454	675

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
300/500 V	mm ²	mm	kg/km	kg/km
1000 005	2 x 1 + 1	10.4	50	163
1000 009	4 x 1 + 1	11.7	73	215
1000 004	6 x 1 + 1	12.5	99	260
1000 010	9 x 1 + 1	14.8	135	340
1000 011	13 x 1 + 1	15.8	177	415
1000 012	20 x 1 + 1	18.5	268	580
1000 008	3 x 1,5 + 1,5	11.6	88	249
1000 013	4 x 1,5 + 1,5	12.5	103	260
1000 014	6 x 1,5 + 1,5	13.2	135	310
1000 015	9 x 1,5 + 1,5	15.8	186	415

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
300/500 V	mm ²	mm	kg/km	kg/km
1000 016	13 x 1,5 + 1,5	17.1	264	525
1000 002	2 x 2,5 + 2,5	11.8	97	240
1000 017	4 x 2,5 + 2,5	13.5	155	335
1000 006	6 x 2,5 + 2,5	14.4	206	405
1000 003	9 x 2,5 + 2,5	17.6	305	565
1000 018	2 x 4 + 4	13.8	151	340
1000 019	4 x 4 + 4	15.9	235	480
1000 020	6 x 4 + 4	17.3	332	610
1000 021	9 x 4 + 4	21.5	464	855

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
0,6/1 kV	mm ²	mm	kg/km	kg/km
1311 010	2 x 1 + 1	11.3	52	187
1311 009	4 x 1 + 1	12.9	81	255
1311 002	6 x 1 + 1	13.7	103	295
1311 006	9 x 1 + 1	16.4	141	395
1311 007	13 x 1 + 1	17.8	200	500
1311 011	20 x 1 + 1	20.6	278	680
1311 012	2 x 1,5 + 1,5	11.8	69	215
1311 004	3 x 1,5 + 1,5	12.0	89	230
1311 005	4 x 1,5 + 1,5	13.5	107	295
1311 013	6 x 1,5 + 1,5	14.4	139	350

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
0,6/1 kV	mm ²	mm	kg/km	kg/km
1311 003	9 x 1,5 + 1,5	17.6	209	490
1311 014	13 x 1,5 + 1,5	16.1	240	415
1311 008	18 x 1,5 + 1,5	17.8	317	530
1311 015	2 x 2,5 + 2,5	12.8	104	270
1311 016	4 x 2,5 + 2,5	14.6	159	370
1311 017	6 x 2,5 + 2,5	15.6	210	450
1311 018	9 x 2,5 + 2,5	19.6	312	650
1311 019	2 x 4 + 4	14.7	154	375
1311 020	4 x 4 + 4	17.2	255	545
1311 021	6 x 4 + 4	18.9	337	680

Other cross-sections and conductor counts available on request.

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