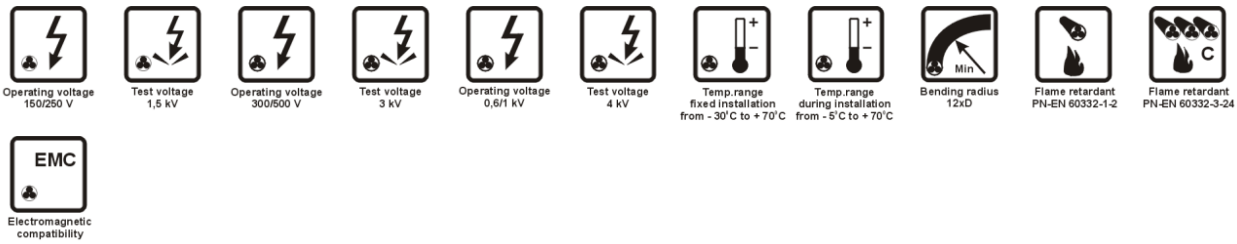
TECHNOKABEL®

CE RoHS EMAG®

ISO 9001:2008

YKGSYkonoyn

MINING CONTROL CABLES



APPLICATIONS

YKGSYkonoyn 150/250 V, **YKGSYkonoyn 300/500 V** and **YKGSYkonoyn 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.

Cable inner sheath offers enhanced protection against mechanical damage.

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

Cables have positive **Technical Opinion No. 06/09** regarding application in underground mines and **Certificate No. 06/09/A1** issued by **TI EMAG Institute**.

CONSTRUCTION

- bare annealed copper conductors (tin-plated on request), meeting requirements of class 1 per PN-EN 60228,
- PVC insulation, colours of insulation:

Number of conductors	Colour 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, 21, 24, 27, 30, 33, 37, 40, 44, 48, 52, 56, 61, 65, 70 and 75 conductors,
- 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

YKGSXkonoyn - 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).

XnKGSXkonoxn - 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.

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CHARACTERISTICS

Conductor cross-section	mm^2	**1.0**	**1.5**	**2.5**	**4**
DC conductor resistance at 20°C, maximum	Ω/km	18.1	12.1	7.41	4.61

Operating voltage Uo/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	12 x cable diameter
Conductor temperature limit		Cable combustibility	flame retardant
in work conditions	from - 30 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)
in short-circuit	from - 5 to + 70°C	Reference standards	WT-TK-25

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
1731 002	2 x 1 + 1	9.6	47.6	141
1731 003	4 x 1 + 1	10.6	70	183
1731 004	6 x 1 + 1	11.2	91	215
1731 005	9 x 1 + 1	13.2	130	290
1731 006	13 x 1 + 1	14.0	171	350
1731 007	20 x 1 + 1	15.7	244	465
1731 008	2 x 1,5 + 1,5	10.5	65	177
1731 009	4 x 1,5 + 1,5	11.8	97	240
1731 010	6 x 1,5 + 1,5	12.6	133	290
1731 011	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
1731 001	13 x 1,5 + 1,5	16.0	245	475
1731 012	2 x 2,5 + 2,5	11.4	96	225
1731 013	4 x 2,5 + 2,5	13.0	153	315
1731 014	6 x 2,5 + 2,5	13.8	204	385
1731 015	9 x 2,5 + 2,5	16.6	285	520
1731 016	2 x 4 + 4	12.9	148	310
1731 017	4 x 4 + 4	14.8	231	440
1731 018	6 x 4 + 4	15.9	312	540
1731 019	9 x 4 + 4	19.9	457	780

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
1106 002	2 x 1 + 1	10.4	50	163
1106 003	4 x 1 + 1	11.7	73	215
1106 005	6 x 1 + 1	12.5	99	260
1106 006	9 x 1 + 1	14.8	135	340
1106 009	13 x 1 + 1	15.8	177	415
1106 007	20 x 1 + 1	18.5	268	580
1106 010	2 x 1,5 + 1,5	11.0	66	189
1106 011	4 x 1,5 + 1,5	12.5	103	260
1106 012	6 x 1,5 + 1,5	13.2	135	310
1106 008	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
1106 013	13 x 1,5 + 1,5	17.1	264	525
1106 001	2 x 2,5 + 2,5	11.8	97	240
1106 004	4 x 2,5 + 2,5	13.5	155	335
1106 014	6 x 2,5 + 2,5	14.4	206	405
1106 015	9 x 2,5 + 2,5	17.6	305	565
1106 016	2 x 4 + 4	13.8	151	340
1106 017	4 x 4 + 4	15.9	235	480
1106 018	6 x 4 + 4	17.3	332	610
1106 019	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
1644 002	2 x 1 + 1	11.3	52	187
1644 003	4 x 1 + 1	12.9	81	255
1644 004	6 x 1 + 1	13.7	103	295
1644 005	9 x 1 + 1	16.4	141	395
1644 006	13 x 1 + 1	17.8	200	500
1644 007	20 x 1 + 1	20.6	278	680
1644 001	2 x 1,5 + 1,5	11.8	69	215
1644 008	3 x 1,5 + 1,5	12.0	89	230
1644 009	4 x 1,5 + 1,5	13.5	107	295
1644 010	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
1644 011	9 x 1,5 + 1,5	17.6	209	490
1644 012	13 x 1,5 + 1,5	16.1	240	415
1644 013	18 x 1,5 + 1,5	17.8	317	530
1644 014	2 x 2,5 + 2,5	12.8	104	270
1644 015	4 x 2,5 + 2,5	14.6	159	370
1644 016	6 x 2,5 + 2,5	15.6	210	450
1644 017	9 x 2,5 + 2,5	19.6	312	650
1644 018	2 x 4 + 4	14.7	154	375
1644 019	4 x 4 + 4	17.2	255	545
1644 020	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.

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