

YnKGSYkono

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
12xD



Flame retardant
PN-EN 60332-1-2



Flame retardant
PN-EN 60332-3-24



EMC
Electromagnetic
compatibility

APPLICATIONS

YnKGSYkono 150/250 V, YnKGSYkono 300/500 V and YnKGSYkono 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 engendering installations.

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 conductor	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, 21, 24, 27, 30, 33, 37, 40, 44, 48, 52, 56, 61, 65, 70 and 75 conductors,
- cable core wrapped in polyester tape,
- 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

YnKGSXkono - 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).

YnKGSXSkono cross-linked polyethylene insulated cables (XS) of low capacitance and higher, up to 90°C, conductor temperature limit, designed to transmit signals over long distances. Cables are designed for operating voltages 300/500 V and 0,6/1 kV. Cable sheath made of special self-extinguishing and flame retardant PVC (Yn).

XnKGSXkono - 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.

YnKGSYkono

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 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	12 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-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
1734 001	2 x 1 + 1	7.6	41.8	93
1734 002	4 x 1 + 1	8.6	64.0	130
1734 003	6 x 1 + 1	9.2	85.0	158
1734 004	9 x 1 + 1	11.1	119.0	215
1734 005	13 x 1 + 1	12.0	164.0	280
1734 006	20 x 1 + 1	13.7	237.0	385
1734 007	2 x 1,5 + 1,5	8.5	59.0	121
1734 008	4 x 1,5 + 1,5	9.8	92.0	174
1734 009	6 x 1,5 + 1,5	10.5	122.0	215
1734 010	9 x 1,5 + 1,5	13.0	177.0	300

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
1734 011	13 x 1,5 + 1,5	14.0	238.0	385
1734 012	2 x 2,5 + 2,5	9.4	90.0	160
1734 013	4 x 2,5 + 2,5	10.9	143.0	240
1734 014	6 x 2,5 + 2,5	11.7	193.0	300
1734 015	9 x 2,5 + 2,5	14.6	278.0	420
1734 016	2 x 4 + 4	10.9	138.0	230
1734 017	4 x 4 + 4	12.8	225.0	350
1734 018	6 x 4 + 4	13.9	305.0	445
1734 019	9 x 4 + 4	17.5	448.0	635

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
1189 006	2 x 1 + 1	8.4	44.3	107
1189 022	4 x 1 + 1	9.7	67.0	152
1189 003	6 x 1 + 1	10.4	88.0	178
1189 004	9 x 1 + 1	12.8	128.0	255
1189 005	13 x 1 + 1	13.7	170.0	315
1189 023	20 x 1 + 1	15.9	244.0	450
1189 015	2 x 1,5 + 1,5	8.6	54.0	119
1189 021	4 x 1,5 + 1,5	10.3	92.0	177
1189 013	6 x 1,5 + 1,5	11.1	124.0	220
1189 012	9 x 1,5 + 1,5	13.7	179.0	315

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
1189 011	13 x 1,5 + 1,5	14.8	240.0	395
1189 014	2 x 2,5 + 2,5	9.7	90.0	158
1189 016	4 x 2,5 + 2,5	11.3	143.0	235
1189 024	6 x 2,5 + 2,5	12.4	199.0	320
1189 025	9 x 2,5 + 2,5	15.4	281.0	445
1189 026	2 x 4 + 4	11.7	140.0	245
1189 027	4 x 4 + 4	13.9	228.0	380
1189 028	6 x 4 + 4	15.1	309.0	485
1189 029	9 x 4 + 4	19.5	455.0	710

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
1369 007	2 x 1 + 1	8.9	40.3	111
1369 003	3 x 1 + 1	9.9	57.0	140
1369 011	6 x 1 + 1	11.6	92.0	215
1369 004	9 x 1 + 1	14.2	127.0	285
1369 009	13 x 1 + 1	14.9	164.0	340
1369 010	18 x 1 + 1	16.5	223.0	435
1369 005	29 x 1 + 1	21.3	346.0	695
1369 012	2 x 1,5 + 1,5	9.8	63.0	145
1369 002	4 x 1,5 + 1,5	11.4	95.0	205
1369 013	6 x 1,5 + 1,5	12.4	132.0	270
1369 014	9 x 1,5 + 1,5	15.4	185.0	365

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
1369 015	13 x 1,5 + 1,5	16.6	245.0	445
1369 016	2 x 2,5 + 2,5	10.7	94.0	187
1369 006	4 x 2,5 + 2,5	12.4	144.0	270
1369 017	6 x 2,5 + 2,5	13.6	203.0	355
1369 018	9 x 2,5 + 2,5	17.2	303.0	505
1369 019	2 x 4 + 4	12.7	147.0	275
1369 020	4 x 4 + 4	15.0	232.0	415
1369 021	6 x 4 + 4	16.3	313.0	525
1369 022	9 x 4 + 4	21.1	463.0	770

Other cross-sections and conductor counts available on request.
TECHNOKABEL S.A. reserves the right to change specifications without prior notice.