

YnKGSY

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

APPLICATIONS

YnKGSY 150/250 V, YnKGSY 300/500 V and YnKGSY 0,6/1 kV are 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.

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	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,
- 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

YnKGSX - 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).

YnKGSXS - 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).

XnKGSX - 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.

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	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-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
0909 003	2 x 1 + 1	7.0	28.8	85
0909 004	4 x 1 + 1	8.0	48.0	120
0909 005	6 x 1 + 1	8.7	67.0	138
0909 001	9 x 1 + 1	10.6	96.0	189
0909 006	13 x 1 + 1	11.4	134.0	245
0909 007	20 x 1 + 1	13.1	202.0	345
0909 008	2 x 1.5 + 1.5	7.9	43.2	114
0909 002	4 x 1.5 + 1.5	9.2	72.0	155
0909 009	6 x 1.5 + 1.5	10.0	101.0	192
0909 010	9 x 1.5 + 1.5	12.4	144.0	265

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
0909 011	13 x 1.5 + 1.5	13.4	202.0	350
0909 012	2 x 2.5 + 2.5	8.8	72.0	156
0909 013	4 x 2.5 + 2.5	10.3	120.0	230
0909 014	6 x 2.5 + 2.5	11.2	168.0	275
0909 015	9 x 2.5 + 2.5	14.0	240.0	380
0909 016	2 x 4 + 4	10.3	115.0	230
0909 017	4 x 4 + 4	12.1	192.0	340
0909 018	6 x 4 + 4	13.3	269.0	410
0909 019	9 x 4 + 4	16.7	384.0	570

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
0907 009	2 x 1 + 1	7.8	28.8	101
0907 010	4 x 1 + 1	9.1	48.0	143
0907 011	6 x 1 + 1	9.9	67.0	162
0907 012	9 x 1 + 1	12.2	96.0	225
0907 013	13 x 1 + 1	13.2	134.0	290
0907 014	20 x 1 + 1	15.3	202.0	405
0907 005	2 x 1.5 + 1.5	8.3	43.2	117
0907 006	4 x 1.5 + 1.5	9.7	72.0	170
0907 001	6 x 1.5 + 1.5	10.6	101.0	205
0907 003	9 x 1.5 + 1.5	13.1	144.0	285

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
0907 004	13 x 1.5 + 1.5	14.2	202.0	355
0907 015	2 x 2.5 + 2.5	9.2	72.0	166
0907 016	4 x 2.5 + 2.5	10.8	120.0	245
0907 017	6 x 2.5 + 2.5	11.8	168.0	290
0907 018	9 x 2.5 + 2.5	14.8	240.0	400
0907 019	2 x 4 + 4	11.1	115.0	250
0907 020	4 x 4 + 4	13.2	192.0	375
0907 021	6 x 4 + 4	14.5	269.0	445
0907 022	9 x 4 + 4	18.7	384.0	635

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
0897 025	2 x 1 + 1	8.7	28.8	119
0897 019	4 x 1 + 1	10.2	48.0	169
0897 015	6 x 1 + 1	11.0	67.0	179
0897 014	9 x 1 + 1	13.7	96.0	255
0897 017	13 x 1 + 1	14.4	134.0	310
0897 027	20 x 1 + 1	17.4	202.0	475
0897 011	2 x 1.5 + 1.5	9.2	43.2	138
0897 002	3 x 1.5 + 1.5	10.0	57.6	168
0897 005	4 x 1.5 + 1.5	10.8	72.0	201
0897 006	6 x 1.5 + 1.5	11.8	101.0	235
0897 012	9 x 1.5 + 1.5	14.7	144.0	315

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
0897 008	13 x 1.5 + 1.5	16.1	202.0	420
0897 003	18 x 1.5 + 1.5	17.8	274.0	544
0897 007	23 x 1.5 + 1.5	21.2	345.0	690
0897 028	2 x 2.5 + 2.5	10.1	72.0	187
0897 004	4 x 2.5 + 2.5	11.9	120.0	270
0897 010	6 x 2.5 + 2.5	12.9	168.0	305
0897 029	9 x 2.5 + 2.5	16.4	240.0	445
0897 026	2 x 4 + 4	12.0	115.0	280
0897 016	4 x 4 + 4	13.9	192.0	380
0897 030	6 x 4 + 4	15.7	269.0	480
0897 031	9 x 4 + 4	20.3	384.0	690

Other cross-sections and conductor counts available on request.

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