

YKGSYFoyyn

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



Mechanical
resistance

APPLICATIONS

YKGSYFoyyn 150/250 V, YKGSYFoyyn 300/500 V and YKGSYFoyyn 0,6/1 kV are armoured, 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.
- in vertical mine workings and with an angle of inclination over 45°.

Cables can not be used for power supplying in power engineering installations.

Galvanized steel wire armour provides carrying an axial load of the cable during exploitation. It also offers enhanced protection against mechanical damages.

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,
- inner PVC sheath,
- galvanized steel wire armour,
- special (oxygen index bigger than 29%) PVC cable covering, black (RAL 9005) or blue (RAL 5015 – for intrinsically safe circuits), other colours also available.

AVAILABLE UPON REQUEST

YKGSXFoyyn - 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).

XnKGSXFoyyn - 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 .

YKGSYFoy

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
1737 001	2 x 1 + 1	11.7	28.8	295
1737 002	4 x 1 + 1	12.7	48	355
1737 003	6 x 1 + 1	13.3	67	395
1737 004	9 x 1 + 1	15.9	96	590
1737 005	13 x 1 + 1	16.7	134	675
1737 006	20 x 1 + 1	18.8	202	840
1737 007	2 x 1,5 + 1,5	12.6	43.2	345
1737 008	4 x 1,5 + 1,5	13.9	72	430
1737 009	6 x 1,5 + 1,5	15.3	101	580
1737 010	9 x 1,5 + 1,5	17.7	144	730

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
1737 011	13 x 1,5 + 1,5	19.1	202	860
1737 012	2 x 2,5 + 2,5	13.5	72	410
1737 013	4 x 2,5 + 2,5	15.7	120	605
1737 014	6 x 2,5 + 2,5	16.5	168	695
1737 015	9 x 2,5 + 2,5	19.7	240	915
1737 016	2 x 4 + 4	15.7	115	600
1737 017	4 x 4 + 4	17.5	192	775
1737 018	6 x 4 + 4	19.0	269	925
1737 019	9 x 4 + 4	23.1	384	1350

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
1410 004	2 x 1 + 1	12.5	28.8	335
1410 001	4 x 1 + 1	13.8	48	405
1410 007	6 x 1 + 1	14.5	67	455
1410 008	9 x 1 + 1	17.5	96	675
1410 009	13 x 1 + 1	18.9	134	785
1410 010	20 x 1 + 1	21.7	202	1110
1410 002	2 x 1,5 + 1,5	13.1	43.2	365
1410 011	4 x 1,5 + 1,5	14.5	72	455
1410 012	6 x 1,5 + 1,5	15.9	101	610
1410 013	9 x 1,5 + 1,5	18.9	144	785

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
1410 014	13 x 1,5 + 1,5	20.0	202	915
1410 015	2 x 2,5 + 2,5	13.9	72	430
1410 006	4 x 2,5 + 2,5	16.2	120	645
1410 016	6 x 2,5 + 2,5	17.1	168	725
1410 017	9 x 2,5 + 2,5	20.5	240	965
1410 018	2 x 4 + 4	16.5	115	655
1410 019	4 x 4 + 4	19.0	192	865
1410 020	6 x 4 + 4	20.2	269	1000
1410 021	9 x 4 + 4	25.5	384	1540

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
0982 007	2 x 1 + 1	13.4	28.8	365
0982 024	4 x 1 + 1	15.6	48	545
0982 006	6 x 1 + 1	16.4	67	610
0982 030	9 x 1 + 1	19.5	96	790
0982 031	13 x 1 + 1	20.7	134	900
0982 032	20 x 1 + 1	24.2	202	1290
0982 010	2 x 1,5 + 1,5	13.9	43.2	405
0982 005	3 x 1,5 + 1,5	14.5	57.6	450
0982 025	4 x 1,5 + 1,5	16.2	72	610
0982 026	6 x 1,5 + 1,5	17.1	101	675
0982 027	9 x 1,5 + 1,5	20.5	144	890

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
0982 009	13 x 1,5 + 1,5	22.5	202	1170
0982 014	36 x 1,5 + 1,5	31.5	533	2170
0982 012	47 x 1,5 + 1,5	35.8	691	2810
0982 001	2 x 2,5 + 2,5	15.5	72	560
0982 028	4 x 2,5 + 2,5	17.3	120	705
0982 029	6 x 2,5 + 2,5	18.7	168	825
0982 022	9 x 2,5 + 2,5	22.8	240	1220
0982 033	2 x 4 + 4	17.4	115	705
0982 034	4 x 4 + 4	20.1	192	935
0982 035	6 x 4 + 4	22.1	269	1210
0982 036	9 x 4 + 4	27.1	384	1650

Other cross-sections and conductor counts available on request.

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