

YKGSYektyn

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

YKGSYektyn 150/250 V, **KGSYektyn 300/500 V** and **YKGSYektyn 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. 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,
- copper tape shield,
- 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

YKGSXektyn - 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).

XnKGSXektyn - 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 U _o /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
1735 001	2 x 1 + 1	9.5	55	149
1735 002	4 x 1 + 1	10.5	79	192
1735 003	6 x 1 + 1	11.1	100	225
1735 004	9 x 1 + 1	13.0	137	295
1735 005	13 x 1 + 1	13.8	179	360
1735 006	20 x 1 + 1	15.5	253	475
1735 007	2 x 1,5 + 1,5	10.4	74	186
1735 008	4 x 1,5 + 1,5	11.7	109	250
1735 009	6 x 1,5 + 1,5	12.4	139	295
1735 010	9 x 1,5 + 1,5	14.8	192	395

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
1735 011	13 x 1,5 + 1,5	15.8	254	485
1735 012	2 x 2,5 + 2,5	11.3	105	235
1735 013	4 x 2,5 + 2,5	12.8	160	325
1735 014	6 x 2,5 + 2,5	13.6	211	390
1735 015	9 x 2,5 + 2,5	16.4	295	530
1735 016	2 x 4 + 4	12.8	155	320
1735 017	4 x 4 + 4	14.6	240	450
1735 018	6 x 4 + 4	15.7	321	550
1735 019	9 x 4 + 4	19.5	450	775

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
1736 001	2 x 1 + 1	10.3	59	172
1736 002	4 x 1 + 1	11.6	84	225
1736 003	6 x 1 + 1	12.3	105	265
1736 004	9 x 1 + 1	14.6	143	350
1736 005	13 x 1 + 1	15.6	186	420
1736 006	20 x 1 + 1	17.7	262	560
1736 007	2 x 1,5 + 1,5	10.9	75	198
1736 008	4 x 1,5 + 1,5	12.3	110	265
1736 009	6 x 1,5 + 1,5	13.0	142	315
1736 010	9 x 1,5 + 1,5	15.6	196	425

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
1736 011	13 x 1,5 + 1,5	16.7	258	520
1736 012	2 x 2,5 + 2,5	11.7	109	250
1736 013	4 x 2,5 + 2,5	13.3	163	340
1736 014	6 x 2,5 + 2,5	14.2	214	415
1736 015	9 x 2,5 + 2,5	17.2	298	560
1736 016	2 x 4 + 4	13.6	159	350
1736 017	4 x 4 + 4	15.7	244	490
1736 018	6 x 4 + 4	16.9	326	600
1736 019	9 x 4 + 4	21.1	457	845

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
0953 007	2 x 1 + 1	11.2	62	196
0953 002	4 x 1 + 1	12.7	88	260
0953 014	6 x 1 + 1	13.5	110	305
0953 004	9 x 1 + 1	16.2	150	405
0953 001	13 x 1 + 1	17.4	194	490
0953 015	20 x 1 + 1	20.2	270	670
0953 008	2 x 1,5 + 1,5	11.7	80	225
0953 009	4 x 1,5 + 1,5	13.3	115	305
0953 012	6 x 1,5 + 1,5	14.2	147	360
0953 013	9 x 1,5 + 1,5	17.2	202	480

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
0953 016	13 x 1,5 + 1,5	18.9	265	610
0953 017	2 x 2,5 + 2,5	12.6	111	280
0953 006	4 x 2,5 + 2,5	14.4	167	380
0953 010	6 x 2,5 + 2,5	15.4	219	460
0953 018	9 x 2,5 + 2,5	19.2	305	640
0953 019	2 x 4 + 4	14.5	162	380
0953 011	4 x 4 + 4	16.8	249	535
0953 020	6 x 4 + 4	18.5	331	675
0953 021	9 x 4 + 4	22.7	464	925

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