

YnKGSLYkono

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
10xD



Flame retardant
PN-EN 60332-1-2



Flame retardant
PN-EN 60332-3-24



EMC
Electromagnetic
compatibility

APPLICATIONS

YnKGSLYkono 150/250 V, **YnKGSLYkono 300/500 V** and **YnKGSLYkono 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” 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.

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. 05/53** regarding application in underground mines and **Certificate No. 05/53/A1/2** issued by **TI EMAG Institute**.

CONSTRUCTION

- flexible, multiwire conductors, stranded of bare annealed copper wires (tin-plated on request), meeting requirements of class 5 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, 24, 27, 30, 33, 37, 40, 48, 52, 56 and 61 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

YnKGSXLXkono - 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).

XnKGSXLXkono - 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.

YnKGSlykono

CHARACTERISTICS

Conductor cross-section	mm ²	1.0	1.5	2.5	4
DC conductor resistance at 20°C, maximum	Ω/km	19.5	13.3	7.98	4.95
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	10 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-22

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
0366 008	2 x 1 + 1	7.9	42.9	97
0366 002	3 x 1 + 1	8.0	54.0	100
0366 018	4 x 1 + 1	9.1	65.0	136
0366 021	6 x 1 + 1	9.7	86.0	165
0366 024	9 x 1 + 1	11.8	121.0	225
0366 016	13 x 1 + 1	12.8	167.0	290
0366 020	23 x 1 + 1	16.1	274.0	450
0366 003	2 x 1,5 + 1,5	9.0	60.0	126
0366 009	4 x 1,5 + 1,5	10.4	93.0	181
0366 010	6 x 1,5 + 1,5	11.2	124.0	225
0366 011	9 x 1,5 + 1,5	13.9	180.0	310

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
0367 009	2 x 1 + 1	8.8	45.3	112
0367 011	3 x 1 + 1	9.4	57.0	130
0367 008	4 x 1 + 1	10.2	68.0	158
0367 010	6 x 1 + 1	10.9	90.0	192
0367 022	9 x 1 + 1	13.5	131.0	265
0367 015	13 x 1 + 1	14.5	173.0	335
0367 019	23 x 1 + 1	19.1	300.0	560
0367 001	2 x 1,5 + 1,5	9.4	62.0	133
0367 006	4 x 1,5 + 1,5	11.0	95.0	193
0367 023	6 x 1,5 + 1,5	11.8	126.0	240
0367 004	9 x 1,5 + 1,5	14.7	183.0	330

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
0365 005	2 x 1 + 1	9.7	47.8	128
0365 008	3 x 1 + 1	10.4	59.0	147
0365 011	4 x 1 + 1	11.2	72.0	181
0365 007	6 x 1 + 1	12.2	98.0	225
0365 016	9 x 1 + 1	15.1	136.0	310
0365 015	13 x 1 + 1	16.3	179.0	390
0365 010	23 x 1 + 1	21.5	311.0	650
0365 001	2 x 1,5 + 1,5	10.3	64.0	150
0365 009	4 x 1,5 + 1,5	12.1	102.0	225
0365 003	6 x 1,5 + 1,5	13.1	134.0	275
0365 023	9 x 1,5 + 1,5	16.3	188.0	375

Other cross-sections and conductor counts available on request.

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

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
0366 012	13 x 1,5 + 1,5	15.0	241.0	400
0366 005	2 x 2,5 + 2,5	9.9	92.0	165
0366 019	4 x 2,5 + 2,5	11.5	144.0	245
0366 004	6 x 2,5 + 2,5	12.5	199.0	315
0366 026	9 x 2,5 + 2,5	15.5	281.0	430
0366 036	2 x 4 + 4	11.6	140.0	235
0366 037	4 x 4 + 4	13.8	228.0	360
0366 035	6 x 4 + 4	14.9	308.0	460
0366 038	9 x 4 + 4	19.3	454.0	675

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
0367 025	13 x 1,5 + 1,5	15.9	244.0	425
0367 013	2 x 2,5 + 2,5	10.3	93.0	173
0367 018	4 x 2,5 + 2,5	12.1	150.0	265
0367 012	6 x 2,5 + 2,5	13.1	201.0	330
0367 032	9 x 2,5 + 2,5	16.3	284.0	455
0367 037	2 x 4 + 4	12.5	147.0	260
0367 038	4 x 4 + 4	14.8	231.0	390
0367 036	6 x 4 + 4	16.1	312.0	495
0367 039	9 x 4 + 4	20.9	462.0	730

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
0365 024	13 x 1,5 + 1,5	17.8	267.0	495
0365 022	2 x 2,5 + 2,5	11.2	95.0	191
0365 025	4 x 2,5 + 2,5	13.2	154.0	290
0365 004	6 x 2,5 + 2,5	14.3	205.0	360
0365 026	9 x 2,5 + 2,5	18.5	307.0	535
0365 018	2 x 4 + 4	13.4	150.0	280
0365 027	4 x 4 + 4	15.9	235.0	425
0365 028	6 x 4 + 4	17.5	333.0	555
0365 029	9 x 4 + 4	22.5	469.0	790