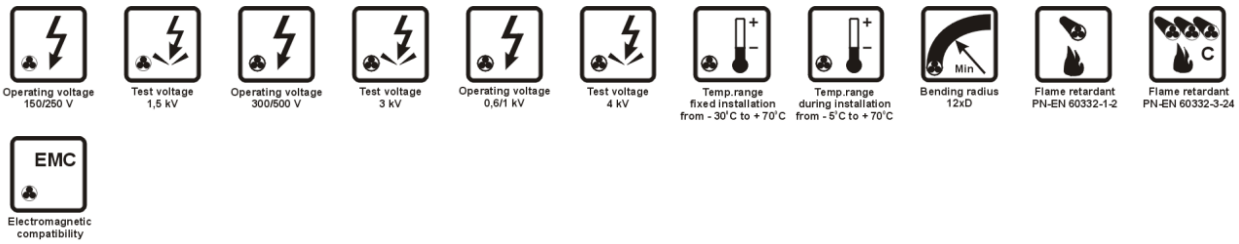
TECHNOKABEL®

ISO 9001:2008

YnHKGSYkono

MINING CONTROL CABLES



APPLICATIONS

YnHKGSYkono 150/250 V, **YnHKGSYkono 300/500 V** and **YnHKGSYkono 0,6/1 kV** are overall shielded, mining control cables with individually shielded wires 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.

Cables have positive **Technical Opinion No. 06/09** regarding application in underground mines and **Certificates No. 06/09/A1** and **06/09/A2** 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

- tinned copper wire braid shield of coverage bigger than 70% on insulated conductors (bare copper wire braid available on request),
- shielded 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

XnHKGSXkono - 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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CE RoHS EMAG®

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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 Uo/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		Cable combustibility	flame retardant
in work conditions	from - 30 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)
in short-circuit	from - 5 to + 70°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
1739 001	2 x 1 + 1	8.6	57	115
1739 002	4 x 1 + 1	9.9	93	168
1739 003	6 x 1 + 1	10.6	127	210
1739 004	9 x 1 + 1	13.1	186	300
1739 005	13 x 1 + 1	14.1	253	380
1739 006	20 x 1 + 1	16.2	372	535
1739 007	2 x 1,5 + 1,5	9.7	77	147
1739 008	4 x 1,5 + 1,5	11.2	126	220
1739 009	6 x 1,5 + 1,5	12.2	177	280
1739 010	9 x 1,5 + 1,5	15.1	253	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
1739 011	13 x 1,5 + 1,5	16.3	345	510
1739 012	2 x 2,5 + 2,5	10.5	111	188
1739 013	4 x 2,5 + 2,5	12.4	186	295
1739 014	6 x 2,5 + 2,5	13.4	255	375
1739 015	9 x 2,5 + 2,5	16.7	364	525
1739 016	2 x 4 + 4	12.1	167	265
1739 017	4 x 4 + 4	14.3	272	410
1739 018	6 x 4 + 4	15.5	375	525
1739 019	9 x 4 + 4	20.1	555	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
1740 006	2 x 1 + 1	9.4	62	132
1740 007	4 x 1 + 1	11.0	101	196
1740 008	6 x 1 + 1	11.8	137	245
1740 009	9 x 1 + 1	14.7	202	350
1740 010	13 x 1 + 1	15.9	274	445
1740 011	20 x 1 + 1	19.0	420	660
1740 001	2 x 1,5 + 1,5	10.1	80	156
1740 003	4 x 1,5 + 1,5	11.8	130	235
1740 004	6 x 1,5 + 1,5	12.8	182	300
1740 005	9 x 1,5 + 1,5	15.9	260	420

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
1740 002	13 x 1,5 + 1,5	17.4	371	560
1740 012	2 x 2,5 + 2,5	10.9	113	198
1740 013	4 x 2,5 + 2,5	12.9	190	310
1740 014	6 x 2,5 + 2,5	14.0	260	395
1740 015	9 x 2,5 + 2,5	17.7	389	570
1740 016	2 x 4 + 4	13.0	172	285
1740 017	4 x 4 + 4	15.4	281	445
1740 018	6 x 4 + 4	16.7	386	570
1740 019	9 x 4 + 4	21.7	572	850

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
1464 006	2 x 1 + 1	10.3	67	151
1464 007	4 x 1 + 1	12.1	113	230
1464 008	6 x 1 + 1	13.1	152	285
1464 009	9 x 1 + 1	16.3	218	400
1464 010	13 x 1 + 1	17.8	312	530
1464 011	20 x 1 + 1	21.1	452	765
1464 002	2 x 1,5 + 1,5	10.9	85	175
1464 003	3 x 1,5 + 1,5	11.5	102	200
1464 004	4 x 1,5 + 1,5	12.9	142	270
1464 012	6 x 1,5 + 1,5	14.0	193	340
1464 013	9 x 1,5 + 1,5	17.7	293	495

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
1464 014	13 x 1,5 + 1,5	19.5	394	650
1464 005	2 x 2,5 + 2,5	11.8	118	220
1464 001	4 x 2,5 + 2,5	14.0	198	340
1464 015	6 x 2,5 + 2,5	15.2	271	435
1464 016	9 x 2,5 + 2,5	19.7	406	650
1464 017	2 x 4 + 4	13.8	177	310
1464 018	4 x 4 + 4	16.5	289	485
1464 019	6 x 4 + 4	18.5	414	655
1464 020	9 x 4 + 4	23.7	589	945

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

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