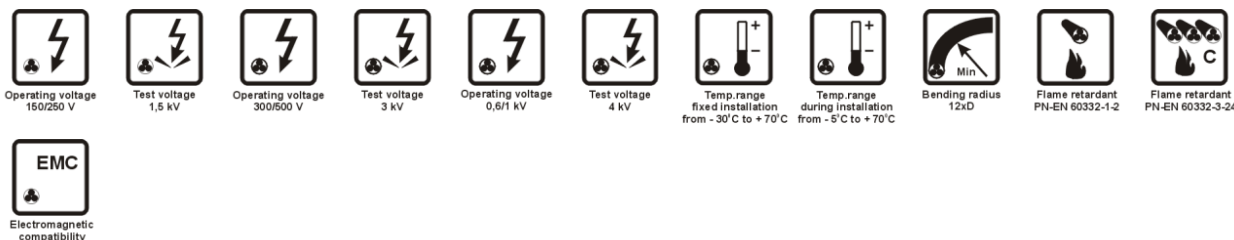


## YnHKGSY

### MINING CONTROL CABLES



### APPLICATIONS

YnHKGSY 150/250 V, YnHKGSY 300/500 V and YnHKGSY 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:

- w 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.

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,
- 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

**YnHKGSX** - 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).

**YnHKGSXS** - 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).

**XnHKGSX** - 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.

## YnHKGSY

### CHARACTERISTICS

Conductor cross-section	mm <sup>2</sup>	<b>1.0</b>	<b>1.5</b>	<b>2.5</b>	<b>4</b>
DC conductor resistance at 20°C, maximum	Ω/km	18.1	12.1	7.41	4.61
Operating voltage U <sub>o</sub> /U	V	<b>150/250</b>	<b>300/500</b>	<b>600/1000</b>	
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 Combustibility tests	flame retardant 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.)	Cable weight (appr.)
150/250 V	mm <sup>2</sup>	mm	kg/km
1738 001	2 x 1 + 1	8.1	101
1738 002	4 x 1 + 1	9.4	149
1738 003	6 x 1 + 1	10.1	183
1738 004	9 x 1 + 1	12.5	260
1738 005	13 x 1 + 1	13.5	335
1738 006	20 x 1 + 1	15.6	480
1738 007	2 x 1,5 + 1,5	9.1	133
1738 008	4 x 1,5 + 1,5	10.7	199
1738 009	6 x 1,5 + 1,5	11.6	245
1738 010	9 x 1,5 + 1,5	14.5	350

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Cable weight (appr.)
150/250 V	mm <sup>2</sup>	mm	kg/km
1738 011	13 x 1,5 + 1,5	15.7	455
1738 012	2 x 2,5 + 2,5	10.0	175
1738 013	4 x 2,5 + 2,5	11.8	270
1738 014	6 x 2,5 + 2,5	12.8	335
1738 015	9 x 2,5 + 2,5	16.1	475
1738 016	2 x 4 + 4	11.5	250
1738 017	4 x 4 + 4	13.7	385
1738 018	6 x 4 + 4	14.9	480
1738 019	9 x 4 + 4	19.3	700

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Cable weight (appr.)
300/500 V	mm <sup>2</sup>	mm	kg/km
1002 020	2 x 1 + 1	8.9	118
1002 021	4 x 1 + 1	10.5	175
1002 022	6 x 1 + 1	11.3	215
1002 023	9 x 1 + 1	14.1	305
1002 017	13 x 1 + 1	15.3	395
1002 024	20 x 1 + 1	17.8	560
1002 004	2 x 1,5 + 1,5	9.6	142
1002 002	3 x 1,5 + 1,5	10.0	170
1002 007	4 x 1,5 + 1,5	10.7	200
1002 003	6 x 1,5 + 1,5	11.7	235
1002 001	9 x 1,5 + 1,5	15.3	370
1002 009	13 x 1,5 + 1,5	15.8	440

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Cable weight (appr.)
300/500 V	mm <sup>2</sup>	mm	kg/km
1002 008	18 x 1,5 + 1,5	17.5	570
1002 011	23 x 1,5 + 1,5	20.9	730
1002 006	29 x 1,5 + 1,5	22.2	890
1002 014	2 x 2,5 + 2,5	10.4	186
1002 005	3 x 2,5 + 2,5	10.9	210
1002 025	4 x 2,5 + 2,5	11.2	220
1002 026	6 x 2,5 + 2,5	13.4	350
1002 019	9 x 2,5 + 2,5	16.1	440
1002 027	2 x 4 + 4	12.4	275
1002 015	4 x 4 + 4	14.8	420
1002 028	6 x 4 + 4	16.1	520
1002 029	9 x 4 + 4	20.9	760

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Cable weight (appr.)
0,6/1 kV	mm <sup>2</sup>	mm	kg/km
0906 014	2 x 1 + 1	9.8	137
0906 007	3 x 1 + 1	10.7	185
0906 015	4 x 1 + 1	11.5	205
0906 019	6 x 1 + 1	12.5	250
0906 009	9 x 1 + 1	15.7	350
0906 020	13 x 1 + 1	17.0	455
0906 021	20 x 1 + 1	20.3	670
0906 008	23 x 1 + 1	23.2	760
0906 018	29 x 1 + 1	23.9	890
0906 022	2 x 1,5 + 1,5	10.4	163
0906 002	3 x 1,5 + 1,5	10.9	200
0906 004	4 x 1,5 + 1,5	12.4	245
0906 001	6 x 1,5 + 1,5	13.4	300
0906 003	9 x 1,5 + 1,5	16.9	420

Product No.	Number of conductors x conductor cross-section	Cable outer diameter (appr.)	Cable weight (appr.)
0,6/1 kV	mm <sup>2</sup>	mm	kg/km
0906 005	13 x 1,5 + 1,5	18.7	570
0906 006	18 x 1,5 + 1,5	20.1	670
0906 011	23 x 1,5 + 1,5	24.2	860
0906 023	47 x 1,5 + 1,5	31.4	1600
0906 024	2 x 2,5 + 2,5	11.3	210
0906 016	3 x 2,5 + 2,5	12.1	240
0906 025	4 x 2,5 + 2,5	13.4	315
0906 010	6 x 2,5 + 2,5	14.6	390
0906 017	9 x 2,5 + 2,5	18.9	570
0906 026	13 x 2,5 + 2,5	18.7	650
0906 027	2 x 4 + 4	13.2	300
0906 028	4 x 4 + 4	15.9	460
0906 029	6 x 4 + 4	17.3	565
0906 030	9 x 4 + 4	22.5	825

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