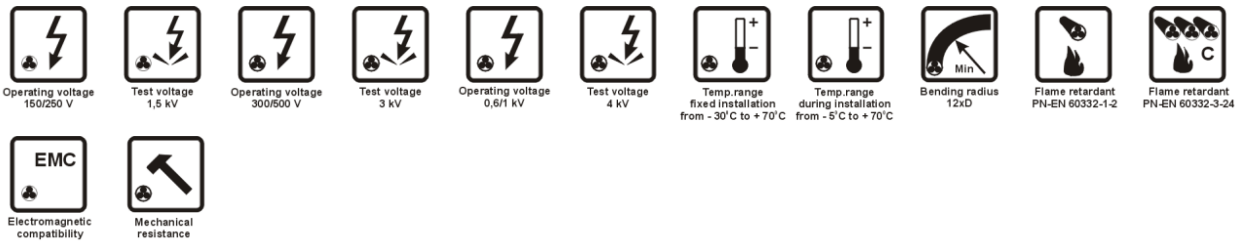
TECHNOKABEL®

ISO 9001:2008

YHKGSYFoyn

MINING CONTROL CABLES



APPLICATIONS

YHKGSYFoyn 150/250 V, **YHKGSYFoyn 300/500 V** and **YHKGSYFoyn 0,6/1 kV** are armoured, 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.
- 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 **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,
- 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.

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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
1728 001	2 x 1 + 1	12.9	41.8	345
1728 002	4 x 1 + 1	14.3	74	430
1728 003	6 x 1 + 1	15.7	106	570
1728 004	9 x 1 + 1	18.6	155	750
1728 005	13 x 1 + 1	19.6	219	855
1728 006	20 x 1 + 1	22.6	332	1210
1728 007	2 x 1,5 + 1,5	13.7	59	395
1728 008	4 x 1,5 + 1,5	16.0	103	595
1728 009	6 x 1,5 + 1,5	16.9	148	675
1728 010	9 x 1,5 + 1,5	20.2	214	885

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
1728 011	13 x 1,5 + 1,5	22.1	303	1160
1728 012	2 x 2,5 + 2,5	15.3	90	555
1728 013	4 x 2,5 + 2,5	17.1	156	690
1728 014	6 x 2,5 + 2,5	18.5	222	825
1728 015	9 x 2,5 + 2,5	22.5	321	1200
1728 016	2 x 4 + 4	16.8	137	670
1728 017	4 x 4 + 4	19.4	236	895
1728 018	6 x 4 + 4	20.6	335	1040
1728 019	9 x 4 + 4	26.1	483	1600

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
1485 003	2 x 1 + 1	13.7	44.1	380
1485 004	4 x 1 + 1	16.0	79	575
1485 005	6 x 1 + 1	16.9	113	645
1485 006	9 x 1 + 1	20.2	165	840
1485 007	13 x 1 + 1	22.1	234	1100
1485 008	20 x 1 + 1	25.5	355	1420
1485 009	2 x 1,5 + 1,5	14.2	60	420
1485 010	4 x 1,5 + 1,5	16.6	106	625
1485 011	6 x 1,5 + 1,5	17.5	151	710
1485 012	9 x 1,5 + 1,5	21.7	220	1080

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
1485 013	13 x 1,5 + 1,5	23.0	311	1230
1485 014	2 x 2,5 + 2,5	15.7	91	565
1485 015	4 x 2,5 + 2,5	17.7	158	735
1485 016	6 x 2,5 + 2,5	19.1	226	860
1485 017	9 x 2,5 + 2,5	23.7	327	1280
1485 002	2 x 4 + 4	17.7	140	725
1485 018	4 x 4 + 4	20.5	241	965
1485 019	6 x 4 + 4	22.5	342	1260
1485 020	9 x 4 + 4	27.7	494	1710

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
1117 006	2 x 1 + 1	15.3	46.6	520
1117 013	4 x 1 + 1	17.1	84	635
1117 014	6 x 1 + 1	18.5	121	740
1117 015	9 x 1 + 1	22.5	176	1080
1117 016	13 x 1 + 1	24.3	250	1260
1117 017	20 x 1 + 1	27.6	380	1610
1117 001	2 x 1,5 + 1,5	15.7	62	545
1117 004	4 x 1,5 + 1,5	17.7	110	695
1117 018	6 x 1,5 + 1,5	19.1	158	805
1117 019	9 x 1,5 + 1,5	23.7	231	1200

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
1117 002	13 x 1,5 + 1,5	24.7	327	1200
1117 008	18 x 1,5 + 1,5	26.1	390	1420
1117 020	2 x 2,5 + 2,5	16.6	94	620
1117 003	4 x 2,5 + 2,5	19.1	163	815
1117 007	6 x 2,5 + 2,5	20.3	233	935
1117 021	9 x 2,5 + 2,5	25.7	338	1440
1117 022	2 x 4 + 4	18.9	142	795
1117 012	4 x 4 + 4	22.3	246	1180
1117 023	6 x 4 + 4	24.1	349	1380
1117 024	9 x 4 + 4	29.7	505	1880

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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