

YnOGYekm 0,6/1 kV (YnHOGY)



Mining power cables with individually shielded power cores, PVC insulation and fire retardant PVC sheath rated for a voltage of 0,6/1kV	
According to	ZN-FKR-022:2009/A3:2022; PN-EN 60332-1-2:2010/A1:2016-02
CONSTRUCTION	
Conductor	Tinned, annealed multi-wire copper class 5 flexible conductor according to PN-EN 60228.
Insulation	PVC type TI 1 according to PN-EN 50363-3:2010/A1:2011
Power cores shield	Each power core individually shielded by a screen made of braided tinned copper wire and synthetic threads with an opacity of at least 65%.
Cable core	Cable core consists of 3 shielded power cores and 1 or 3 auxiliary cores twisted over bare protective conductor remaining in contact with shielding along the whole length of the cable.
Inner sheath	PVC type TM 2 according to PN-EN 50363-4-1:2010
Outer sheath	PVC type TM 1 with self-extinguishing and flame retardant properties according to PN-EN 50363-4-1:2010; PN-EN 60332-1-2:2010
Sheath colour	I layer – white; II layer - yellow
Insulation colour	Power conductors: natural, red, blue Protective conductor : non-insulated 1 auxiliary conductor : brown 3 auxiliary conductors : brown, red, blue Colour could be changed according to clients demand
CHARACTERISTIC	
Rated voltage Uo/U	0,6/1 kV
Test voltage for power conductors	3,2 kV
Test voltage for auxiliary conductors	2 kV
Minimum ambient temperature for installation	-5°C
Maximum core temperature during operation	+70°C
Maximum core temperature during short circuit	+160 °C
Minimum ambient temperature for permanently installed cables	-30 °C
Minimum bending radius	Fixed installation – 6D
Cable name explanation	YnOGYekm (YnHOGY) – Sheathed power cable (O) for mining application (G), with flexible multi-wire copper conductor, insulation made of PVC (Y), sheath made of flame retardant PVC (Yn) and cores individually shielded by a braided copper wire (ekm)

Cable marking	YnOGYekm (YnHOGY) 0,6/1kV ROGUM KABLE sp. z o.o. + cable ID + length + year of production Each cable has a legible and permanent marking repeated cyclically, printed longitudinally on outer sheath including in particular: manufacturer's name, cable / wire type, cross-section, number of wires, rated voltage, identifier, year of production and the length of the delivered section.		
APPLICATION			
Cables designed for powering fixed power devices operating in open pit and underground mines in the fields of non-methane and in excavations classified as "a" "b" or "c" methane explosion class and "A" or "B" coal dust explosion.			
CERTIFICATES AND APPROVALS			
EMAG certificate (Łukasiewicz Research Network – Institute of Innovative Technologies)			
ADDITIONAL INFORMATION			
On request there is a possibility: <ul style="list-style-type: none">to change the color of the sheath In all cases concerning detailed technical data please contact our Client Advisor: doradztwotechniczne@rogum.com.pl			
CARD NUMBER	3	EDITION	21/03/2023

NUMBER AND TYPE OF CORES			
Total number of cores in cable	Type of core		
	Power cores	Protective conductor	Auxiliary cores
n	n	n	n
5	3	1	1
7	3	1	3

CABLE CONSTRUCTION			
Total number of cores	Number and cross-section of cores	Maximum cable diameter	Approximated cable weight
	Power cores + Protective cores + Auxiliary cores		
n	n x mm ²	mm	kg/km
5	3x2,5+2,5+2,5	20,7	450
	3x4+4+4	22,8	560
	3x6+6+4	26,4	730
	3x10+10+6	30,5	1100
	3x16+16+10	34,0	1500
	3x25+16+16	43,2	2220
7	3x16+16+3x1,5	33,3	1560
	3x25+16+3x2,5	42,2	2260
	3x35+16+3x2,5	45,5	2760
	3x50+25+3x4	52,5	3750
	3x70+35+3x4	59,7	4730
	3x95+35+3x4	70,5	6070
	3x120+50+3x4	74,8	7430

PARAMETERS					
Nominal cross-section of the power conductor	Highest core resistance at 20 °C	Current carrying capacity at ambient temperature at 25 °C	Unit inductance	Unit inductive reactance	Unit capacity to ground
mm ²	Ω/km	A	mH/km	Ω/km	μF/km
2,5	8,21	27	0,37329	0,11721	0,40107
4	5,09	37	0,35132	0,11032	0,47296
6	3,39	47	0,33755	0,10599	0,50865
10	1,95	66	0,31087	0,09761	0,59486
16	1,24	87	0,29008	0,09108	0,65743
25	0,795	113	0,28944	0,09088	0,69346
35	0,565	140	0,28640	0,08993	0,77942
50	0,393	172	0,26387	0,08286	0,84726
70	0,277	212	0,25709	0,08073	0,98734
95	0,210	257	0,25424	0,07983	1,01722
120	0,164	295	0,25071	0,07872	1,13159

CORRECTION FACTORS (Kt) FOR AMBIENT TEMPERATURE GREATER THAN 25 °C	
Ambient temperature	Correction factors (Kt) for cables rated for permissible long-term operation at limit temperature of 70 °C
°C	A
30	0,94
35	0,88
40	0,82
45	0,75
50	0,67
55	0,58