

## OnGcekgż-G FLEX 3,6/6 kV



### Mining sheathed power cables for mobile and portable power devices, shielded. Rated voltage 3,6/6 kV

According to	ZN-FKR-021:2008/A3:2022; PN-EN 60332-1-2:2010/A1:2016-02	
CONSTRUCTION		
Conductor	Annealed multi-stranded tinned copper, class 5 flexible conductor according to PN-EN 60228	
Insulation	Heat resistant polymer material with properties corresponding to IEP type material according to PN-89/E-29100	
Shield	Power cores conductor and insulation and protective conductor covered in a layer of conductive, non-metallic polymer material with properties corresponding to GP type material according to PN-E-29100:1989	
Protective conductor	Protective conductor split into 3 parts placed symmetrically between power cores	
Central filler	Conductive, non-metallic polymer material with properties corresponding to GP type material according to PN-E-29100:1989	
Cable core	Cable core consists of 3 power cores and protective conductor divided into 3 parts placed between power cores. All cores stranded around central filler piece made of conductive polymer material. Cable core wrapped in a layer of conductive tape.	
Sheath	Polymer material with flame retarding and oil-proof properties corresponding to material type ON4 according to PN-E-90140:1986	
Sheath colour	Red or black	
CHARACTERISTIC		
Rated voltage Uo/U		3,6/6 kV
Test voltage for power cores		11 kV
Maximum core temperature during operation		+90 °C
Maximum core temperature during short circuit		+250 °C
Ambient temperature range for permanently installed cables		-40°C to +90°C
Ambient temperature range for mobile connections		-25°C to +80°C
Minimalny promień gięcia		Fixed installation – 6D; Mobile connections – 12D
Cable name explanation	OnGcekgż-G FLEX – Sheathed power cable (O) for mining applications (G) with insulation made of heatproof polymer material (Gc), sheath made of flame retardant material (n), cores separately shielded by a layer of conductive polymer material (ekgż) and increased flexibility (FLEX)	
Cable marking	OnGcekgż-G FLEX 3,6/6kV 3x50+25+3x4 mm <sup>2</sup> ROGUM KABLE Sp. z o.o. + cable ID + meter mark + year of production Each cable has a legible and permanent marking repeated cyclically, printed or embossed (in case of power cores with diameter equal or greater than 25 mm <sup>2</sup> ) 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

Power cable for open pit mining machines

## CERTIFICATES AND APPROVALS

EMAG certificate (Łukasiewicz Research Network – Institute of Innovative Technologies)

## ADDITIONAL INFORMATION

In case of double layered sheath, outer sheath should make at least 50% of the sheath thickness given in the table.

Reinforcement made out of synthetic yarn could be embedded between sheath.

On request there is a possibility:

- change the colour of the sheath

In all cases concerning detailed technical data please contact our Client Advisor: [doradztwotechniczne@rogum.com.pl](mailto:doradztwotechniczne@rogum.com.pl)

## CARD NUMBER

21

## EDITION

21.03.2023

Total number of cores	Number of cores and cross-sectional area	Maximum cable diameter	Approximated cable weight
	Power cores + protective conductor + auxiliary cores		
n	n x mm <sup>2</sup>	mm	kg/km
4	3x10+3x10/3	40,6	1350
	3x16+3x16/3	42,3	1650
	3x25+3x16/3	46,3	2100
	3x35+3x16/3	48,3	2500
	3x50+3x25/3	53,0	3350
	3x70+3x35/3	58,3	4150
	3x95+3x50/3	62,2	5250
	3x120+3x70/3	66,5	6400
	3x150+3x70/3	70,3	7400
	3x185+3x95/3	77,0	9300

PARAMETERS				
Nominal cross-section of the working conductor	Highest core resistance at 20 °C	Current carrying capacity at ambient temperature at 25 °C	Unit inductance	Unit grounding capacity
mm <sup>2</sup>	Ω/km	A	mH/km	μF/km
10	1,95	88	0,42	0,28138
16	1,24	118	0,39	0,34561
25	0,795	152	0,37	0,36863
35	0,565	187	0,34	0,41712
50	0,393	233	0,33	0,46348
70	0,277	288	0,31	0,47345
95	0,210	345	0,30	0,56261
120	0,164	367	0,29	0,63961
150	0,132	418	0,28	0,69584
185	0,108	477	0,27	0,77843