

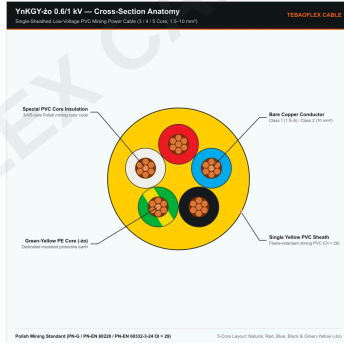
YnKGY-żo 0.6/1 kV Fixed-Installation Yellow PVC Mining Power Cable

YnKGY-żo 0.6/1 kV is a Polish PN-G and PN-EN compliant single-sheathed flame-retardant PVC power cable engineered for fixed electrical sub-distribution, permanent roadway lighting strings, and control-cabinet interconnections across non-explosion-hazard underground mine headings, open-pit excavations, and methane-free coal-dust class A galleries.

1. CABLE CONSTRUCTION

1. Conductors	Annealed bare copper conductors to PN-EN 60228: Class 1 solid single-wire for 1.5, 2.5, 4, and 6 mm ² ; Class 2 multi-wire stranded copper for 10 mm ² .*
2. Core Insulation	Special mining-grade polyvinyl chloride (PVC) dielectric rated for 0.6/1 kV continuous service and 3.5 kV AC routine withstand testing.
3. Core Color Identification	3-core: Natural, Red, Green-Yellow; 4-core: Natural, Red, Blue, Green-Yellow; 5-core: Natural, Red, Blue, Black, Green-Yellow (-żo).
4. Core Stranding	Three, four, or five insulated cores helically twisted together with compact lay pitch.
5. Outer Sheath	Extruded single-wall Yellow special non-flammable PVC outer sheath (Oxygen Index OI > 29) filling core interstices and passing PN-EN 60332-1 & PN-EN 60332-3-24.

Cross-Section Anatomy



YnKGY-żo 0.6/1 kV Cross-Section (5-Core): Five PN-EN 60228 Class 1/2 bare copper conductors insulated with Special PVC (Natural, Red, Blue, Black, and Green-Yellow -żo protective core) enclosed directly inside a single-wall yellow flame-retardant PVC outer sheath (OI > 29).

2. ELECTRICAL, MECHANICAL & FLAME-RETARDANT DATA

Cable Type Designation	YnKGY-żo 0.6/1 kV (Single-Sheathed Fixed Mining Power Cable with Green-Yellow PE)
Rated Voltage (Uo/U)	0.6/1 kV (600/1000 V AC)
Routine AC Test Voltage	3.5 kV (50 Hz)
Conductor Class (PN-EN 60228)	Class 1 solid bare copper (1.5–6 mm ²) Class 2 stranded bare copper (10 mm ² *)
Operating & Installation Temp.	-30°C to +70°C operating Min. -5°C cable temperature during installation without preheating
Max. Short-Circuit Temperature	+160°C (1-second short-circuit ratings 0.17 kA to 1.15 kA)
Minimum Bending Radius	10 × Overall Cable Diameter
Flame Retardancy & Oxygen Index	Oxygen Index OI > 29; compliant with PN-EN 60332-1 and PN-EN 60332-3-24 (IEC 60332-3)
Permissible Mine Zones	Fixed installations in non-explosion-hazard underground/open-pit mines, including methane-free workings classified as coal-dust hazard class A

3. DIMENSIONAL, WEIGHT & ELECTRICAL SPECIFICATIONS

Table 1 — YnKGY-žo Dimensional & Weight Schedule (3, 4 & 5 Cores × 1.5–10 mm²)				
Number & Cross-Section of Conductors (mm²)	Conductor Class (PN-EN 60228)	Core Color Code (incl. -žo PE)	Approx. Outer Diameter (mm)	Approx. Cable Weight (kg/km)
3x1.5	Class 1 Solid	Nat / Red / G-Y	10.2	153
4x1.5	Class 1 Solid	Nat / Red / Blu / G-Y	11.1	180
5x1.5	Class 1 Solid	Nat / Red / Blu / Blk / G-Y	11.8	215
3x2.5	Class 1 Solid	Nat / Red / G-Y	11.0	195
4x2.5	Class 1 Solid	Nat / Red / Blu / G-Y	12.0	235
5x2.5	Class 1 Solid	Nat / Red / Blu / Blk / G-Y	12.9	280
3x4	Class 1 Solid	Nat / Red / G-Y	12.9	280
4x4	Class 1 Solid	Nat / Red / Blu / G-Y	14.2	345
5x4	Class 1 Solid	Nat / Red / Blu / Blk / G-Y	15.2	410
3x6	Class 1 Solid	Nat / Red / G-Y	13.9	355
4x6	Class 1 Solid	Nat / Red / Blu / G-Y	15.4	440
5x6	Class 1 Solid	Nat / Red / Blu / Blk / G-Y	16.6	525
3x10*	Class 2 Stranded	Nat / Red / G-Y	16.4	520
4x10*	Class 2 Stranded	Nat / Red / Blu / G-Y	18.1	655
5x10*	Class 2 Stranded	Nat / Red / Blu / Blk / G-Y	19.6	790

Table 2 — YnKGY-žo Electrical & Short-Circuit Ratings (1.5–10 mm²)					
Conductor Cross-Section (mm²)	Max. Conductor Resistance at 20°C (Ω/km)	Phase Inductivity (mH/km)	Inductive Reactance at 50 Hz (Ω/km)	Current-Carrying Capacity (A)	1s Short-Circuit Current (kA)
1.5	12.1	0.34	0.107	19	0.17
2.5	7.41	0.32	0.099	27	0.29
4	4.61	0.32	0.100	37	0.46
6	3.08	0.30	0.095	47	0.69
10*	1.83	0.28	0.089	62	1.15

***Stranded Conductor Note:** Sizes marked with an asterisk (3x10*, 4x10*, 5x10*) utilize multi-wire **Class 2** stranded copper conductors; 1.5–6 mm² sizes use Class 1 solid copper conductors.