

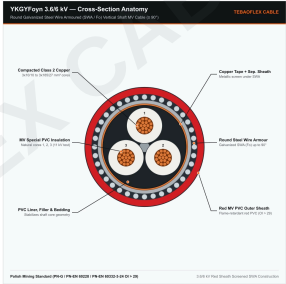
YKGYFoyn 0.6/1 kV & 3.6/6 kV SWA Vertical Shaft & Steep-Incline Mining Cable

YKGYFoyn is a Polish standard round galvanized steel wire armoured (Fo / SWA) mining power cable engineered to withstand high suspended self-weight, rockfall impact, and shaft-water corrosion in vertical mine shafts, blind winzes, boreholes, and steep drifts up to 90° at 0.6/1 kV and 3.6/6 kV.

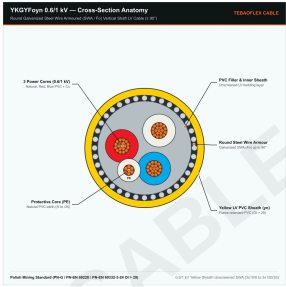
1. CABLE CONSTRUCTION

1. Conductors (PN-EN 60228)	0.6/1 kV: Bare copper Class 1/2 (3 phase cores 10–120 mm² + 1 PE core 6–35 mm²). 3.6/6 kV: Compacted circular stranded bare copper Class 2 (3 phase cores 10–185 mm²).
2. Core Insulation & Identification	Special mining PVC insulation. 0.6/1 kV: Power cores Natural, Red, Blue + Protective core Natural. 3.6/6 kV: Natural phase cores printed 1, 2, 3 stranded around a central PVC liner.
3. Filler & Inner Sheath	Extruded PVC inner sheath (over interstitial PVC / non-vulcanised rubber filler on 3.6/6 kV) forming a dense circular bedding.
4. MV Screen & Separating Sheath (3.6/6 kV Only)	3.6/6 kV incorporates a concentric bare copper tape common screen (/10 to /27 mm²) covered by an extruded/taped PVC separating sheath; 0.6/1 kV is unscreened.
5. Round Steel Wire Armour (Fo)	Helically applied full ring of round galvanized steel wires engineered for high axial tensile load in vertical shafts (≤ 90°) and severe rock-crush resistance.
6. Outer Sheath (Voltage Color-Coded)	Special non-flammable PVC outer sheath (OI > 29, PN-EN 60332-1 & PN-EN 60332-3-24): Bright Yellow for 0.6/1 kV; Deep Red for 3.6/6 kV.

Cross-Section Anatomy



3.6/6 kV Medium-Voltage YKGYFoyn (Red Sheath): 3 numbered compacted Class 2 Cu cores + PVC inner sheath + copper-tape common screen (/10–/27 mm²) + PVC separating sheath + round galvanized steel wire armour (Fo) + Red OI > 29 PVC outer sheath.



0.6/1 kV Low-Voltage YKGYFoyn (Yellow Sheath): 3 Class 1/2 Cu power cores (Natural, Red, Blue) + 1 Natural PE core (/6–/35 mm²) + extruded PVC inner sheath + round galvanized steel wire armour (Fo) + Yellow OI > 29 PVC outer sheath.

2. ELECTRICAL, MECHANICAL & FLAME-RETARDANT DATA

Cable Type Designation	YKGYFoyn 0.6/1 kV (LV Yellow) & YKGYFoyn 3.6/6 kV (MV Red Screened) SWA Shaft Cable
Rated & Routine Test Voltages	0.6/1 kV (3.5 kV AC Test) 3.6/6 kV (11 kV AC Test)
Permissible Route Gradient	Horizontal, inclined, and vertical mine shafts up to 90°
Conductor Standard	PN-EN 60228 Class 1 / Class 2 bare copper (compacted Class 2 on 3.6/6 kV)
Armour Construction (Fo)	Round galvanized steel wire armour (SWA) sized for vertical shaft clamping
Operating & Short-Circuit Temp.	-30°C to +70°C continuous (-5°C min. laying) +160°C short-circuit max.
Minimum Bending Radius	10 × Overall Cable Diameter (259–529 mm on LV; 468–845 mm on MV)
Flame Retardancy & Oxygen Index	Oxygen Index OI > 29; compliant with PN-EN 60332-1 & PN-EN 60332-3-24 (IEC 60332-3)

3. DIMENSIONAL, WEIGHT & ELECTRICAL SPECIFICATIONS

Table 1 — YKGYFoyn 0.6/1 kV (Yellow Sheath, Unscreened 3+PE SWA) Shaft Schedule							
Part Construction (mm²)	Approx. OD (mm)	Cable Weight (kg/km)	Max. DC Res. 20°C (Ω/km)	Inductivity (mH/km)	Reactance 50 Hz (Ω/km)	Current Rating (A)	1s SC Rating (kA)
3x10/6	25.9	1600	1.83	0.31	0.098	64	1.15
3x16/16	28.4	2040	1.15	0.30	0.092	86	1.84
3x25/16	32.6	2600	0.727	0.30	0.092	113	2.88
3x35/16	34.3	2990	0.524	0.29	0.090	139	4.03
3x50/16	37.9	3680	0.387	0.28	0.088	173	5.75
3x70/25	43.2	4780	0.268	0.26	0.085	212	8.05
3x95/25	48.6	5950	0.193	0.26	0.084	257	10.93
3x120/35	52.9	7140	0.153	0.26	0.083	294	13.80

Table 2 — YKGYFoyn 3.6/6 kV (Red Sheath, Copper-Tape Screened SWA) Vertical Shaft Schedule									
Part Construction (mm²)	Approx. OD (mm)	Cable Weight (kg/km)	Max. DC Res. 20°C (Ω/km)	Inductivity (mH/km)	Reactance 50 Hz (Ω/km)	Earth Cap. (µF/km)	Earth Fault (A/km)	1s SC (kA)	Current (A)
3x10/10	46.8	4715	1.83	0.400	0.126	0.11	0.35	1.15	68
3x16/10	49.6	5290	1.15	0.372	0.117	0.11	0.37	1.84	87
3x25/14	52.5	5963	0.727	0.349	0.110	0.12	0.40	2.88	113
3x35/16	53.9	6460	0.524	0.338	0.106	0.13	0.41	4.03	137
3x50/18	59.2	8315	0.387	0.317	0.100	0.13	0.43	5.75	164
3x70/18	64.5	9753	0.268	0.299	0.094	0.14	0.45	8.05	202
3x95/20	68.8	11178	0.193	0.286	0.090	0.15	0.47	10.93	245
3x120/22	71.3	12670	0.153	0.278	0.087	0.15	0.49	13.80	281
3x150/24	75.5	14455	0.124	0.268	0.084	0.15	0.50	17.25	319
3x185/27	84.5	18462	0.0991	0.262	0.082	0.16	0.51	21.28	369

Vertical Shaft Engineering Support: Always state the rated voltage (0.6/1 kV Yellow or 3.6/6 kV Red), vertical shaft drop depth, and shaft-clamp spacing when ordering YKGYFoyn so steel-flange drum payload and pulling-eye/armour-cone accessories are matched.