



Control & signal cable

KUGVSh

Flexible Underground Mining Control and Signalling Cable

380 V AC / 500 V DC Class 5 flexible hose-sheathed underground mine control cable



КУГВШ (KUGVSh) Mine Cable

380 V AC / 500 V DC

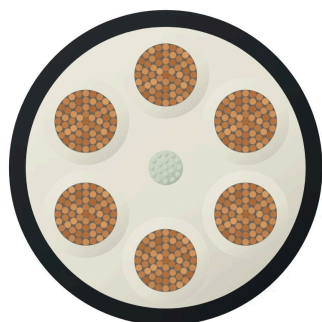
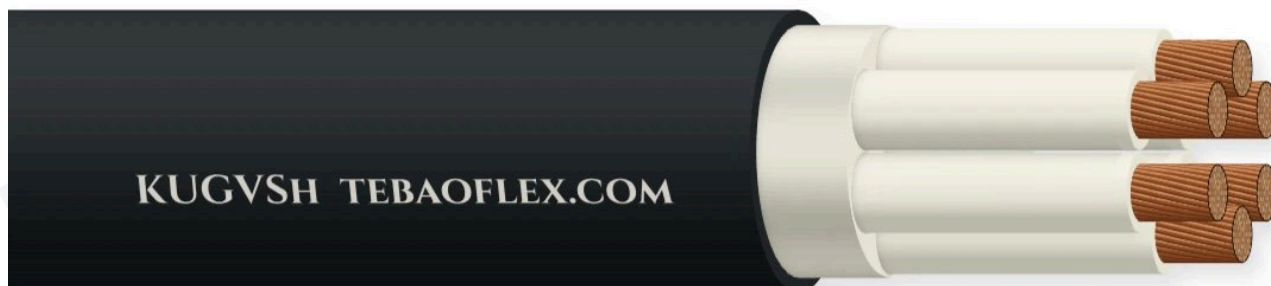
4-52 Cores × 0.35-1.5 mm²

Application

KUGVSh (КУГВШ) flexible underground mining control and signalling cable (380 V AC / 500 V DC, -40 to +70 °C) for mine roadways, hydraulic roof supports, and Ex i intercoms, with 4-52 Class 5 copper cores around a textile center in a heavy PVC hose sheath.

Typical uses: Underground Longwall Roof-Support Controls, Mine Conveyor Pull-Cord & Alignment Interlocks, Intrinsically Safe (Ex i) Mine Voice & Gas Telemetry, Roadheader & Room-and-Pillar Automation, Ore Processing & Concentrator Plant Control

Construction



Cross-section, not to scale

- 1 Flexible Class 5 copper (Г)
- 2 Central synthetic textile core
- 3 Moisture-resistant PVC/PE insulation
- 4 PET film separation wrap
- 5 Heavy PVC hose outer sheath (БШ)

Technical data

Typical values

Rated voltage	380 V AC (50/60 Hz) or 500 V DC	AC dielectric test voltage	2,000 V AC (50 Hz, 5 min)
Insulation resistance	≥ 60–100 MΩ·km at +20 °C	Conductor DC resistance	GOST 22483 / IEC 60228 Class 5 copper
Operating ambient temp.	-40 °C to +70 °C (climatic class UHL5/T5)	Relative humidity rating	Up to 98 % RH at +35 °C (condensing mine air)
Conductor stranding	Class 5 flexible copper around textile core	Min. bending radius	5 × OD (fixed) · 10 × OD (flexing)
Crushing & impact resistance	Thickened hose-grade PVC jacket ('Ш')	Flame retardance	IEC 60332-1-2 / GOST IEC 60332-1-2 pass
Mine water, mould & oil	Resistant to mine water, lubricants & mould	Standards	TU 16.K71 · GOST 22483 · GOST 15150

Sizes

26 standard constructions

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Order designation	Cross-section / size	Conductor build	Wall ≈ mm	Outer Ø ≈ mm	Metal kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard KUGVSh configurations 26 sizes							
☐ KUGVSh 7×0.35	7×0.35 mm ²	Class 5 Cu (GOST 22483) (0.35 mm ²)	1.60	8.30	23.5	111.7	66
☐ KUGVSh 12×0.35	12×0.35 mm ²	Class 5 Cu (GOST 22483) (0.35 mm ²)	1.80	10.60	40.3	184.1	85
☐ KUGVSh 19×0.35	19×0.35 mm ²	Class 5 Cu (GOST 22483) (0.35 mm ²)	1.80	12.30	63.8	257.5	98
☐ KUGVSh 24×0.35	24×0.35 mm ²	Class 5 Cu (GOST 22483) (0.35 mm ²)	1.80	13.60	80.6	317.3	109
☐ KUGVSh 37×0.35	37×0.35 mm ²	Class 5 Cu (GOST 22483) (0.35 mm ²)	1.80	15.70	124.3	439.8	126
☐ KUGVSh 4×0.5	4×0.5 mm ²	Class 5 Cu (GOST 22483) (0.5 mm ²)	1.60	7.70	19.2	95.1	62
☐ KUGVSh 7×0.5	7×0.5 mm ²	Class 5 Cu (GOST 22483) (0.5 mm ²)	1.60	8.70	33.6	130.5	70
☐ KUGVSh 12×0.5	12×0.5 mm ²	Class 5 Cu (GOST 22483) (0.5 mm ²)	1.80	11.30	57.6	221.0	90
☐ KUGVSh 19×0.5	19×0.5 mm ²	Class 5 Cu (GOST 22483) (0.5 mm ²)	1.80	13.10	91.2	310.9	105
☐ KUGVSh 27×0.5	27×0.5 mm ²	Class 5 Cu (GOST 22483) (0.5 mm ²)	1.80	14.90	129.6	413.8	119
☐ KUGVSh 37×0.5	37×0.5 mm ²	Class 5 Cu (GOST 22483) (0.5 mm ²)	1.80	16.80	177.6	538.9	134
☐ KUGVSh 4×0.75	4×0.75 mm ²	Class 5 Cu (GOST 22483) (0.75 mm ²)	1.60	8.20	28.8	114.9	66
☐ KUGVSh 7×0.75	7×0.75 mm ²	Class 5 Cu (GOST 22483) (0.75 mm ²)	1.60	9.40	50.4	163.5	75
☐ KUGVSh 10×0.75	10×0.75 mm ²	Class 5 Cu (GOST 22483) (0.75 mm ²)	1.60	11.00	72.0	226.9	88
☐ KUGVSh 14×0.75	14×0.75 mm ²	Class 5 Cu (GOST 22483) (0.75 mm ²)	1.80	12.70	100.8	307.3	102
☐ KUGVSh 19×0.75	19×0.75 mm ²	Class 5 Cu (GOST 22483) (0.75 mm ²)	1.80	14.20	136.8	394.9	114
☐ KUGVSh 27×0.75	27×0.75 mm ²	Class 5 Cu (GOST 22483) (0.75 mm ²)	1.80	16.20	194.4	530.3	130
☐ KUGVSh 37×0.75	37×0.75 mm ²	Class 5 Cu (GOST 22483) (0.75 mm ²)	1.80	18.30	266.4	695.1	146
☐ KUGVSh 4×1	4×1 mm ²	Class 5 Cu (GOST 22483) (1 mm ²)	1.60	8.60	38.4	133.1	69
☐ KUGVSh 7×1	7×1 mm ²	Class 5 Cu (GOST 22483) (1 mm ²)	1.60	9.90	67.2	192.7	79
☐ KUGVSh 12×1	12×1 mm ²	Class 5 Cu (GOST 22483) (1 mm ²)	1.80	12.90	115.2	328.2	103
☐ KUGVSh 19×1	19×1 mm ²	Class 5 Cu (GOST 22483) (1 mm ²)	1.80	15.10	182.4	474.3	121
☐ KUGVSh 4×1.5	4×1.5 mm ²	Class 5 Cu (GOST 22483) (1.5 mm ²)	1.60	9.80	57.6	180.5	78
☐ KUGVSh 7×1.5	7×1.5 mm ²	Class 5 Cu (GOST 22483) (1.5 mm ²)	1.60	11.40	100.8	267.1	91
☐ KUGVSh 12×1.5	12×1.5 mm ²	Class 5 Cu (GOST 22483) (1.5 mm ²)	1.80	15.00	172.8	460.8	120
☐ KUGVSh 19×1.5	19×1.5 mm ²	Class 5 Cu (GOST 22483) (1.5 mm ²)	1.80	17.60	273.6	670.1	141

– Outer diameters and weights are nominal engineering values for KUGVSh subject to standard manufacturing tolerances per TU 16.K71 / GOST 15150 / GOST 22483 Underground Mining Control Specification.

Electrical & rating data

26 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Primary rating (A or nF/km)	Secondary rating	Dielectric test V AC rms
7×0.35 mm ²	55.50	6.0	5.0	2,000
12×0.35 mm ²	55.50	6.0	5.0	2,000
19×0.35 mm ²	55.50	6.0	5.0	2,000
24×0.35 mm ²	55.50	6.0	5.0	2,000
37×0.35 mm ²	55.50	6.0	5.0	2,000
4×0.5 mm ²	39.00	9.0	7.0	2,000
7×0.5 mm ²	39.00	9.0	7.0	2,000
12×0.5 mm ²	39.00	9.0	7.0	2,000
19×0.5 mm ²	39.00	9.0	7.0	2,000
27×0.5 mm ²	39.00	9.0	7.0	2,000
37×0.5 mm ²	39.00	9.0	7.0	2,000
4×0.75 mm ²	26.00	12.0	9.0	2,000
7×0.75 mm ²	26.00	12.0	9.0	2,000
10×0.75 mm ²	26.00	12.0	9.0	2,000
14×0.75 mm ²	26.00	12.0	9.0	2,000
19×0.75 mm ²	26.00	12.0	9.0	2,000
27×0.75 mm ²	26.00	12.0	9.0	2,000
37×0.75 mm ²	26.00	12.0	9.0	2,000
4×1 mm ²	19.50	15.0	11.0	2,000
7×1 mm ²	19.50	15.0	11.0	2,000
12×1 mm ²	19.50	15.0	11.0	2,000
19×1 mm ²	19.50	15.0	11.0	2,000
4×1.5 mm ²	13.30	18.0	14.0	2,000
7×1.5 mm ²	13.30	18.0	14.0	2,000
12×1.5 mm ²	13.30	18.0	14.0	2,000
19×1.5 mm ²	13.30	18.0	14.0	2,000

– Electrical resistance at +20 °C and dielectric withstand voltages verified per TU 16.K71 / GOST 15150 / GOST 22483 Underground Mining Control Specification.

Standards and approvals

- ✓ TU 16.K71 / GOST 15150 / GOST 22483 Underground Mining Control Specification
- ✓ CE (2014/35/EU) & RoHS 3 (2015/863/EU) Compliant
- ✓ REACH SVHC Compliance Verified

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

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Typical values for this cable type, based on TU 16.K71 / GOST 15150 / GOST 22483 Underground Mining Control Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.