



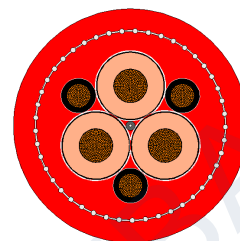
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrialcable

R-(N)TSCGEWÖU + FO

3.6/6 kV to 12/20 kV red fibre optic reeling cable



APPLICATION

Flexible reeling cable with integrated fibre optic cores and reduced dimensions for extremely high mechanical stress, including monospiral and cylindrical reels, high reeling speed and torsional stress. Suitable for material handling equipment in wet or dry industrial, underground and opencast mining applications.

CONSTRUCTION

Component	Description
Phase conductor	Class 5 annealed flexible stranded tinned or bare copper
Separator	Semi-conductive tape
Conductor screen	Semi-conductive special rubber layer
Insulation	Special EPDM rubber
Insulation screen	Semi-conductive, special strippable layer
Earth conductor	Class 5 tinned or bare copper with extruded semi-conductive rubber compound
Fibre optic module	A-D(ZN)13Y with 6, 12, 18 or 24 fibres; G50/125, G62.5/125 or E9/125
Inner sheath	Synthetic thermosetting compound type 5GM3
Anti-torsion braid	Polyamide thread braid
Outer sheath	Synthetic thermosetting compound type 5GM5
Sheath colour	Red

CHARACTERISTICS

- Integrated fibre optic cores for combined power and data transmission.
- Designed for reeling duty under extreme mechanical and torsional stress.
- Oil, UV, ozone, tear, impact and abrasion resistant.
- Flame retardant according to IEC 60332-1-2.

OPERATING CHARACTERISTICS

Parameter	Value
Voltage rating U ₀ /U	3.6/6 kV; 6/10 kV; 8.7/15 kV; 12/20 kV
Test voltage	11 kV; 17 kV; 24 kV; 29 kV
Maximum conductor temperature	+90 °C operating; +250 °C short circuit
Minimum ambient temperature	-40 °C fixed; -25 °C mobile
Minimum bending radius	6 x OD fixed; 12 x OD on drums; 15 x OD on pulleys; 10 x OD moving freely

STANDARDS

Parameter	Value
Cable standards	DIN VDE 0250-813, IEC 60228, DIN VDE 0207-21, DIN VDE 0298-4, DIN VDE 0298-3
Flame retardant	PN-EN 60332-1-2, IEC 60332-1-2
Environmental resistance	IEC 60811-404, UL 2556, ISO 4892-2, PN-ISO 1431-1
Regulatory compliance	RoHS Directive ; REACH EC

TECHNICAL DATA

DIMENSIONS

Values are technical parameters only. Cable dimensions may vary due to manufacturing tolerances.

Voltage kV	Cores	Cross section mm2	Cond. dia. mm	Nominal OD mm	Weight kg/km	Tensile N
3.6/6 kV						
3.6/6	3+2+FO	25+25/2	6.5	39.9	2479	1500
3.6/6	3+2+FO	35+25/2	7.5	42.0	2882	2100
3.6/6	3+2+FO	50+25/2	9.3	45.8	3534	3000
3.6/6	3+2+FO	70+35/2	11.1	51.5	4653	4200
3.6/6	3+2+FO	95+50/2	13.0	55.6	5689	5700
3.6/6	3+2+FO	120+70/2	14.5	58.8	6842	7200
3.6/6	3+2+FO	150+70/2	16.2	64.3	8259	9000
3.6/6	3+2+FO	185+95/2	18.3	68.8	9624	11100
6/10 kV						
6/10	3+2+FO	25+25/2	6.5	41.6	2624	1500
6/10	3+2+FO	35+25/2	7.5	43.7	3035	2100
6/10	3+2+FO	50+25/2	9.3	47.5	3699	3000
6/10	3+2+FO	70+35/2	11.1	53.2	4840	4200
6/10	3+2+FO	95+50/2	13.0	57.3	5890	5700
6/10	3+2+FO	120+70/2	14.5	60.6	7054	7200
6/10	3+2+FO	150+70/2	16.2	66.0	8490	9000
6/10	3+2+FO	185+95/2	18.3	70.5	9871	11100
8.7/15 kV						
8.7/15	3+2+FO	25+25/2	6.5	45.1	2933	1500
8.7/15	3+2+FO	35+25/2	7.5	47.1	3359	2100
8.7/15	3+2+FO	50+25/2	9.3	52.7	4270	3000
8.7/15	3+2+FO	70+35/2	11.1	56.7	5231	4200
8.7/15	3+2+FO	95+50/2	13.0	60.7	6309	5700
8.7/15	3+2+FO	120+70/2	14.5	65.8	7772	7200
8.7/15	3+2+FO	150+70/2	16.2	69.4	8971	9000
8.7/15	3+2+FO	185+95/2	18.3	75.8	10702	11100
12/20 kV						
12/20	3+2+FO	25+25/2	6.5	48.1	3229	1500
12/20	3+2+FO	35+25/2	7.5	52.0	3885	2100
12/20	3+2+FO	50+25/2	9.3	55.7	4600	3000
12/20	3+2+FO	70+35/2	11.1	59.7	5584	4200
12/20	3+2+FO	95+50/2	13.0	65.6	6961	5700
12/20	3+2+FO	120+70/2	14.5	68.8	8181	7200
12/20	3+2+FO	150+70/2	16.2	72.5	9401	9000

NOTES

- Dimensions and weights are nominal technical values. Manufacturing tolerances may apply.

ELECTRICAL AND OPTICAL DATA

FIBRE OPTICS

Fibre	Att. 850	Att. 1300	Att. 1550	BW 850	BW 1300	NA 850	Index 850	Index 1300	Index 1550
G50/125	<=2.5	<=0.6	-	700	500	0.200	1.483	1.479	-
G62.5/125	<=3.0	<=1.0	-	220	500	0.275	1.496	1.491	-
E9/125	-	-	<=0.21 / <=0.19	-	-	-	-	-	1.468

ELECTRICAL CHARACTERISTICS

Area mm2	DC resistance plain ohm/km	DC resistance tinned ohm/km	Twist limit deg/m	Travel speed m/min	Tensile load N/mm2
25	0.780	0.795	100	180	20
35	0.554	0.565	100	180	20
50	0.386	0.393	100	180	20
70	0.272	0.277	100	180	20
95	0.206	0.210	100	180	20
120	0.161	0.164	100	180	20
150	0.129	0.132	100	180	20
185	0.106	0.108	100	180	20

MINIMUM BENDING RADIUS

Fixed installation	On drums	On deflection pulleys	Moving freely
6 x OD	12 x OD	15 x OD	10 x OD

CERTIFICATIONS



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