



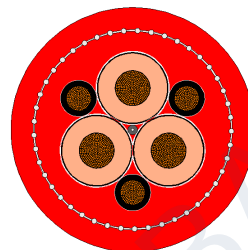
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

(N)TSCGEWÖU FO

8.7/15 kV and 12/20 kV fibre optic reeling cable



APPLICATION

Flexible reeling cable with integrated fibre optic cores for high and extreme mechanical stresses, including torsional stress, deflection into different planes and high reeling speed. Suitable for indoor and outdoor applications where medium-voltage power and data transmission are required.

CONSTRUCTION

Component	Description
Phase conductor	Class 5 tinned copper conductor
Insulation	Rubber compound
Semi-conductive layers	Semi-conductive tape over the conductor, plus inner and outer semi-conductive rubber layers on the insulation
Earth conductor	Class 5 tinned copper conductor
Fibre optics	50/125 multimode, 62.5/125 multimode and 9/125 singlemode options; rubber compound over twisted cores
Central filler	Semi-conductive compound on a textile polyester support
Inner sheath	Rubber compound
Anti-torsion braid	Polyester braid between the inner and outer sheath
Outer sheath	Rubber compound
Sheath colour	Red

CHARACTERISTICS

- Integrated fibre optic cores for combined power and data transmission.
- Designed for reeling duty under high mechanical and torsional stress.
- Maximum working speed: 120 m/min.
- Flame retardant according to IEC/EN 60332-1-2.

OPERATING CHARACTERISTICS

Parameter	Value
Voltage rating U ₀ /U	8.7/15 kV; 12/20 kV
Test voltage	24 kV for 8.7/15 kV; 29 kV for 12/20 kV
Fixed ambient temperature	-40 °C to +90 °C
Flexed ambient temperature	-25 °C to +90 °C
Maximum working speed	120 m/min
Minimum bending radius	6 x overall diameter fixed; 10 x overall diameter flexed

STANDARDS

Parameter	Value
Cable standards	VDE 0250 Part 813, VDE 0295, EN 60228
Flame retardant	IEC/EN 60332-1-2
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	Phase mm2	Earth mm2	Cond. dia. mm	Min OD mm	Max OD mm	Tensile N	Weight kg/km
8.7/15 kV								
8.7/15	3 + 2 + FO	25	25/2E	6.8	52	55	1500	3680
8.7/15	3 + 2 + FO	35	25/2E	7.8	55.2	58.2	2100	4310
8.7/15	3 + 2 + FO	50	25/2E	9.4	58.4	61.4	3000	5020
8.7/15	3 + 2 + FO	70	35/2E	11.2	62.1	66	4200	6170
8.7/15	3 + 2 + FO	95	50/2E	12.7	67.2	71.2	5700	7380
12/20 kV								
12/20	3 + 2 + FO	25	25/2E	6.8	58	61	1500	4490
12/20	3 + 2 + FO	35	25/2E	7.8	59.4	62.4	2100	4830
12/20	3 + 2 + FO	50	25/2E	9.4	64.3	68.2	3000	5840
12/20	3 + 2 + FO	70	35/2E	11.2	68.1	72.1	4200	7030

CURRENT CARRYING CAPACITY

Area mm2	Floor A	1 layer	2 layer	3 layer	4 layer	5 layer	6 layer	7 layer
25	139	111	85	68	58	53	38	31
35	172	138	105	84	72	65	46	38
50	216	173	132	106	91	82	58	48
70	265	212	162	130	111	101	72	58
95	319	255	195	156	134	121	86	70

Ambient temperature of 30 °C.

VOLTAGE DROP

Area mm2	PF 0.7	PF 0.8	PF 0.9	PF 1.0
25	1.29	1.45	1.6	1.71
35	0.95	1.06	1.16	1.23
50	0.69	0.77	0.83	0.87
70	0.51	0.56	0.6	0.61
95	0.41	0.45	0.47	0.47

OPTICAL DATA

FIBRE OPTICS

Fibre	Att. 850 dB/km	Att. 1300 dB/km	BW 850 MHz*km	BW 1300 MHz*km	Numerical aperture	Att. 1310 dB/km	Att. 1550 dB/km	Disp. 1285-1300	Disp. 1550
50/125	<= 2.5	<= 0.7	>= 200	>= 500	0.200 +/- 0.015	-	-	-	-
62.5/125	<= 3.0	<= 0.7	>= 200	>= 500	0.275 +/- 0.015	-	-	-	-
9/125	-	-	-	-	-	<= 0.35	<= 0.24	<= 3	<= 18

DE-RATING FACTORS

Ambient temp.	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C
De-rating factor	1.15	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.50	0.41

NOTES

- Cable dimensions may vary due to manufacturing tolerances.
- Current carrying capacity values are stated for the operating conditions shown above.

CERTIFICATIONS

