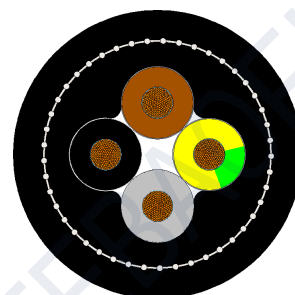




(N)SHTÖU-O/J

Flexible power and signalling cable for reeling applications

Voltage rating: 0.6/1 kV.



APPLICATION

Flexible cable designed for power and signalling mobile connections under severe mechanical stresses, including tensile strength and torsion, in heavy duty conditions with abrasion and crushing. Typically used in cable winding reels for harbour cranes, container cranes, conveyors, handling machines, mining and tunnelling equipment.

CONSTRUCTION

Component	Description
Conductor	Class 5 flexible tinned copper
Insulation	Rubber compound
Inner sheath	Rubber compound
Anti-twisting element	Polyester braid
Outer sheath	Rubber compound
Core identification	3 core: green/yellow, blue, brown; 4 core: green/yellow, brown, black, grey; 5 core: green/yellow, blue, brown, black, grey; 7 core and above: black with white numerals plus green/yellow
Outer sheath colour	Black or yellow

CHARACTERISTICS

Parameter	Value
Voltage rating U ₀ /U	0.6/1 kV
Test voltage	3 kV
Twist limits	50 deg/m
Travel speed	Up to 100 m/min
Temperature rating, flexing	-25 deg C to +90 deg C
Temperature rating, fixed	-40 deg C to +90 deg C
Standards	DIN VDE 0250-814, IEC 60228, DIN VDE 0207/20, DIN VDE 0207/21, DIN VDE 0298-4, DIN VDE 0298-3
Resistance	Flame propagation, oil, UV and ozone resistant

TECHNICAL DATA

DIMENSIONS				
Construction	Conductor dia. (mm)	OD (mm)	Weight (kg/km)	Tensile load (N)
3G 1.5	1.5	11.9	205	135
3G 2.5	2.1	13.5	271	225
3G 4	2.7	16.9	418	360
3G 6	3	17.6	487	540
3G 10	4.1	21.6	764	900
3G 16	5.2	23.8	1014	1440
3G 25	6.6	28.7	1501	2250
3G 35	7.5	32.2	1975	3150
3G 50	9.3	38.3	2774	4500
3G 70	11.1	42.1	3568	6300
3G 95	13	48.8	4746	8550
3G 120	14.5	52.0	5730	10800
3G 150	16.2	56.6	6991	13500
3G 185	18.3	63.8	8572	16650
3G 240	20.7	71.6	11227	21600
4G 1.5	1.5	12.7	238	180
4G 2.5	2.1	15.7	362	300
4G 4	2.7	18.1	495	480
4G 6	3	19.0	583	720
4G 10	4.1	23.3	924	1200
4G 16	5.2	27.0	1307	1920
4G 25	6.6	32.6	1951	3000
4G 35	7.5	34.9	2434	4200
4G 50	9.3	41.5	3428	6000
4G 70	11.1	45.8	4442	8400
4G 95	13	53.1	5905	11400
4G 120	14.5	58.6	7417	14400
4G 150	16.2	63.6	9062	18000
4G 185	18.3	71.5	11048	22200
5G 1.5	1.5	13.6	276	225
5G 2.5	2.1	16.8	420	375
5G 4	2.7	19.5	581	600
5G 6	3	21.3	728	900
5G 10	4.1	25.2	1104	1500
5G 16	5.2	29.0	1562	2400
5G 25	6.6	35.3	2339	3750

TECHNICAL DATA CONTINUED

DIMENSIONS				
Construction	Conductor dia. (mm)	OD (mm)	Weight (kg/km)	Tensile load (N)
5G 35	7.5	39.3	3066	5250
5G 50	9.3	45.2	4142	7500
5G 70	11.1	51.7	5613	10500
7G 1.5	1.5	16.9	410	2315
7G 2.5	2.1	19.4	556	2525
12G 1.5	1.5	22.6	724	2540
12G 2.5	2.1	26.2	1002	2900
18G 1.5	1.5	24.9	893	2810
18G 2.5	2.1	30.1	1320	3350
24G 1.5	1.5	25.9	1028	3080
24G 2.5	2.5	31.3	1527	3800
30G 1.5	1.5	29.8	1333	3350
30G 2.5	2.1	36.3	2000	4250
36G 1.5	1.5	32.4	1547	3620
36G 2.5	2.1	39.4	2322	4700
42G 1.5	1.5	34.8	1795	3890
42G 2.5	2.1	42.0	2671	5150
44G 1.5	1.5	34.8	1817	3980
44G 2.5	2.1	42.0	2706	5300
48G 1.5	1.5	34.0	1680	4160
48G 2.5	2.1	39.9	2380	5600
50G 1.5	1.5	36.7	2032	4250
50G 2.5	2.1	44.4	3030	5750
56G 1.5	1.5	38.5	2090	4520
56G 2.5	2.5	47.1	3443	6200

ELECTRICAL DATA

ELECTRICAL CHARACTERISTICS

Cross-section (mm ²)	DC resistance plain wires (Ohm/km)	DC resistance tinned wires (Ohm/km)	Twist (deg/m)	Speed (m/min)
1.5	13.3	13.7	50	100
2.5	7.98	8.21	50	100
4	4.95	5.09	50	100
6	3.3	3.39	50	100
10	1.91	1.95	50	100
16	1.21	1.24	50	100
25	0.78	0.795	50	100
35	0.554	0.565	50	100
50	0.386	0.393	50	100
70	0.272	0.277	50	100
95	0.206	0.21	50	100
120	0.161	0.164	50	100
150	0.129	0.132	50	100
185	0.106	0.108	50	100

DE-RATING FACTORS

Ambient temp.	10C	15C	20C	25C	30C	35C	40C	45C	50C	55C	60C	65C	70C	75C	80C
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

CURRENT CARRYING CAPACITY

mm ²	Floor (A)	Free air (A)	1 layer	2 layer	3 layer	4 layer	5 layer	6 layer	7 layer
1.5	24	25	19	15	12	10	9	6	5
2.5	30	32	24	18	15	13	11	8	7
4	41	42	33	25	20	17	16	11	9
6	53	56	42	32	26	22	20	14	12
10	74	78	59	45	36	31	28	20	16
16	99	104	79	60	49	42	38	27	22
25	131	138	105	80	64	55	50	35	29
35	162	170	130	99	79	68	62	44	36
50	202	212	162	123	99	85	77	55	44
70	250	263	200	153	123	105	95	68	55
95	301	316	241	184	147	126	114	81	66
120	352	370	282	215	172	148	134	95	77
150	404	424	323	246	198	170	154	109	89
185	461	484	369	281	226	194	175	124	101
240	528	554	422	322	259	222	201	143	116

MINIMUM BENDING RADIUS

Cable OD	Fixed	On drums	On deflection pulleys	Moving freely
>8 <= 12 mm	3 x OD	5 x OD	7.5 x OD	4 x OD
>12 <= 20 mm	4 x OD	5 x OD	7.5 x OD	5 x OD
>20 mm	4 x OD	5 x OD	7.5 x OD	5 x OD

CERTIFICATIONS



TEBAOFLEX CABLE