NSHTÖU 0.6/1 kV : Trailing cable with tensile force

Rubber insulation, innersheath and sheath with textile braided reinforcement

Benefits

- Ozone resistance
- High impact strength
- Enhanced abrasion resistance
- Resistance to oil, grease and chemicals
- High insulation resistance
- Cable construction VDE 0250-814

Application

Suitable for use as trailing cable for forced guidance around reversing rolls or on cable caterpillars of hoisting gear or conveyor systems with exposure to high mechanical strain. Able to used in the water maximum depth up to 20 m and Temperature up to 40°C. Used in dry, damp, wet environments aswell as in industrial water and for outdoor instllation.

Electrical and technical specifications

- Rated voltage Uo/U: 600/1000 V
- Test voltage: 2500 V
- Insulation resistance @ +20°C: >10 MOhm x km
- Bending radius:
  - For cable OD < 21.5 mm: 5 x cable diameter
  - For cable OD > 21.5 mm: 6.5 x cable diameter
- Temperature range:
  - Flexible: -25°C to +70°C
  - Fixed: -40°C to +70°C
- Flame retardant to IEC 60332-1-2

Cable structure

- Stranded tinned copper conductor, fine wire
- Strand structure to VDE 0295 class 5/ IEC 60228 class 5
- Rubber core insulation GI1 (Synthetic Rubber/SR) to DIN VDE 0207 part 20
- Core identification colour coded to VDE 0293-308 with green-yellow protective conductor
- Cored twisted in layers , lay length of 8 x OD
- Rubber innersheath 5GM1b elastomer compound to DIN VDE 0207 part 21
- Textile braided for reinforcement
- Outer sheath elastomer outer sheath 5GM2 (Chloroprene Rubber/CR : Neoprene), to DIN VDE 0207 part 21, oil-resistant
- Sheath black colour with type marking

Part NO.	Core x Conductor size (mm^2)	NO of strands* x Max strand Dia.(mm)	Outer Dia.* (mm)	Tensile force max. (N)	Weight* (kg/km)	Conductor Resistance @ 20°C (Ohm/km)
798017 160311	3X16	128x0.40	22.5 - 28.6	720	1080	1.21
798017 250311	3X25	200x0.40	27.7 - 35.0	1125	1470	0.78
798017 350311	3X35	280x0.40	31.7 - 40.0	1575	2030	0.554
798017 500311	3X50	400x0.40	37.1 - 46.8	2250	2680	0.386
798017 700311	3X70	356x0.50	42.5 - 53.5	3150	3530	0.272
798017 950311	3X95	485x0.50	48.2 - 60.6	4275	4400	0.206
798019 120311	3X120	614x0.50	51.6 - 64.9	5400	5250	0.161
798019 150311	3X150	765x0.50	56.2 - 70.7	6750	7040	0.129
798019 180311	3X185	944x0.50	63.3 - 79.4	8325	8320	0.106
798019 240311	3X240	1225x0.50	69.9 - 87.7	10800	5730	0.0801
798011 500411	4X1.5	30x0.25	12.1 - 15.5	90	274	13.3
798012 500411	4X2.5	50x0.25	14.7 - 18.7	150	416	7.98
798014 000411	4X4	56x0.30	16.6 - 21.1	240	550	4.95
798016 000411	4X6	84x0.30	17.7 - 22.6	360	683	3.3
798017 100411	4X10	80x0.40	22.0 - 27.8	600	1018	1.91
798017 160411	4X16	128x0.40	25.5 - 32.3	960	1370	1.21
798017 250411	4X25	200x0.40	31.6 - 39.8	1500	1970	0.78
798017 350411	4X35	280x0.40	34.5 - 43.6	2100	2610	0.554
798017 500411	4X50	400x0.40	40.5 - 51.0	3000	3600	0.386
798017 700411	4X70	356x0.50	46.5 - 58.6	4200	5356	0.272
798017 950411	4X95	485x0.50	52.7 - 66.2	5700	7018	0.206
798019 120411	4X120	614x0.50	58.4 - 73.3	7200	8220	0.161
798019 150411	4X150	765x0.50	63.4 - 79.7	9000	8905	0.129
798019 180411	4X185	944x0.50	71.2 - 89.4	11100	10730	0.106
798019 240411	4X240	1225x0.50	78.8 - 98.2	14400	13560	0.0801

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Part NO.	Core x Conductor size (mm^2)	NO of strands* x Max strand Dia.(mm)	Outer Dia.* (mm)	Tensile force max. (N)	Weight* (kg/km)	Conductor Resistance @ 20°C (Ohm/km)
798011 500311	3X1.5	30x0.25	11.2 - 14.4	68	236	13.3
798012 500311	3X2.5	50x0.25	12.6 - 16.1	113	305	7.98
798014 000311	3X4	56x0.30	15.3 - 19.6	180	395	4.95
798016 000311	3X6	84x0.30	16.4 - 20.9	270	525	3.30
798017 100311	3X10	80x0.40	20.2 - 25.7	450	765	1.91
798017 250611	3X25+3X16/3	200x0.40+43x0.40	29.2 - 36.9	1125	2312	0.78
798017 250411	3X25+16	200x0.40+128x0.40	30.4 - 38.4	1125	2720	0.78
798017 350611	3X35+3X16/3	280x0.40+43x0.40	32.6 - 41.0	1575	2559	0.554
798017 350411	3X35+16	280x0.40+128x0.40	34.0 - 42.8	1575	3010	0.554
798017 500611	3X50+3X25/3	400x0.40+67x0.40	37.1 - 46.8	2250	3070	0.386
798017 500411	3X50+25	400x0.40+200x0.40	38.6 - 48.6	2250	3430	0.386
798017 700611	3X70+3X35/3	356x0.50+93x0.40	42.5 - 53.5	3150	3740	0.272
798017 700411	3X70+35	356x0.50+280x0.40	45.6 - 57.4	3150	4010	0.272
798017 950611	3X95+3X50/3	485x0.50+133x0.40	48.2 - 60.6	4275	4690	0.206
798017 950411	3X95+50	485x0.50+400x0.40	53.1 - 66.7	4275	5405	0.206
798019 120611	3X120+3X70/3	614x0.50+119x0.50	51.6 - 64.9	5400	6220	0.161
798019 120411	3X120+70	614x0.50+356x0.50	55.5 - 69.7	5400	6818	0.161
798019 150611	3X150+3X70/3	765x0.50+119x0.50	56.2 - 70.7	6750	7480	0.129
798019 150411	3X150+70	765x0.50+356x0.50	64.0 - 80.4	6750	9190	0.129
798019 180611	3X185+3X95/3	944x0.50+315x0.50	63.3 - 77.4	8325	9020	0.106
798019 180411	3X185+95	944x0.50+944x0.50	68.8 - 86.4	8325	9850	0.106
798019 240611	3X240+3X120/3	1225x0.50+614x0.50	69.9 - 87.7	10800	11760	0.0801
798011 500511	5X1.5	30x0.25	12.9 - 16.6	113	316	13.3
798012 500511	5X2.5	50x0.25	15.8 - 20.2	188	465	7.98
798014 000511	5X4	56x0.30	17.9 - 22.8	300	641	4.95
798016 000511	5X6	84x0.30	20.0 - 25.3	450	820	3.30
798017 100511	5X10	80x0.40	23.9 - 30.2	750	1200	1.91
798017 160511	5X16	128x0.40	27.7 - 35.0	1200	1630	1.21
798017 250511	5X25	200x0.40	34.5 - 43.4	1875	2470	0.78
798017 350511	5X35	280x0.40	39.1 - 49.2	2625	3250	0.554
798017 500511	5X50	400x0.40	44.2 - 55.7	3750	4350	0.386
798017 700511	5X70	356x0.50	52.8 - 66.4	5250	6200	0.272
798011 500611	6X1.5	30x0.25	15.0 - 19.1	135	390	13.3
798012 500611	6X2.5	50x0.25	16.8 - 21.4	225	500	7.98
798011 500711	7X1.5	30x0.25	15.1 - 19.2	158	390	13.3
798012 500711	7X2.5	50x0.25	16.8 - 21.4	263	576	7.98
798014 000711	7X4	56x0.30	19.9 - 25.2	420	750	4.95
798011 501011	10X1.5	30x0.25	17.9 - 22.8	225	530	13.3
798012 501011	10X2.5	50x0.25	21.2 - 26.9	375	760	7.98
798011 501211	12X1.5	30x0.25	18.4 - 23.4	270	606	13.3
798012 501211	12X2.5	50x0.25	21.9 - 27.7	450	905	7.98
798011 501611	16X1.5	30x0.25	20.6 - 26.2	360	696	13.3
798012 501611	16X2.5	50x0.25	23.8 - 30.1	600	1030	7.98
798011 501811	18X1.5	30x0.25	21.8 - 27.6	405	743	13.3
798012 501811	18X2.5	50x0.25	24.9 - 31.4	675	1181	7.98
798011 502411	24X1.5	30x0.25	24.8 - 31.3	540	1115	13.3
798012 502411	24X2.5	50x0.25	29.5 - 37.2	900	1585	7.98
798011 503011	30X1.5	30x0.25	26.1 - 33.0	675	1280	13.3
798012 503011	30X2.5	50x0.25	31.0 - 39.1	1125	1840	7.98
798011 504011	40X1.5	30x0.25	29.5 - 37.2	900	2000	13.3
798012 504011	40X2.5	50x0.25	35.7 - 45.0	1500	3110	7.98
798012 502411	19X2.5+5X1(C)	50x0.25+32x0.20	29.0 - 35.0	713	1550	7.98/19.5
798012 503011	25X2.5+5X1(C)	50x0.25+32x0.20	31.5 - 37.5	938	1840	7.98/19.5

Current carrying capacities (According to DIN VDE 0298 Part 4)

Rubber insulated LV AND MV reeling cables up to 10kV

Cross-section	Stretched laying	Suspended freely in air	Reeled in						
			1 layer	2 layers	3 layers	4 layers	5 layers	6 layers	7 layers
mm^2	A	A	A	A	A	A	A	A	A
	Factor 1	1.05	0.8	0.61	0.49	0.42	0.38	0.27	0.22
1	18	19	14	11	9	8	7	5	4
1.5	23	24	18	14	11	10	9	6	5
2.5	30	32	24	18	15	13	11	8	7
4	41	43	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	78	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	540	567	432	329	265	227	205	146	119
300	620	651	496	378	304	260	236	167	136

Conversion factors for varying ambient temperatures according to DIN VDE 0298 T4 08.03, table 17 (other than 30°C tree in the air)

Ambient temperature°C															
10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85
1.15	1.12	1.08	1.04	1.0	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.50	0.50	0.29