(N)TSCGEWÖU 3.6/6kV and 6/10kV FO Cable

Eland Product Group: A7HF

APPLICATION

Flexible reeling cable with integrated fibre optic wires for high and extreme mechanical stresses, including torsional stress, deflection into different planes and high reeling speed. Suitable for indoor and outdoor applications.

CHARACTERISTICS

Voltage Rating Uo/U
3.6/6kV
6/10kV

Test Voltage
3.6/6kV: 11kV
6/10kV: 17kV

Minimum Bending Radius
Fixed: 6 x overall diameter
Flexed: 10 x overall diameter

Maximum Short Circuit Temperature
+250°C

Ambient Temperature
Fixed: -40°C to +80°C
Flexed: -25°C to +80°C

CONSTRUCTION

Phase Conductor
Class 5 tinned copper

Insulation
Rubber compound

Semi-Conductive Layers
Semi-conductive tape over the conductor and inner and outer semi-conductive rubber layer on the insulation

Earth Conductor
Class 5 tinned copper conductor

Fibre Optics
Transmission data kind 50/125 multimode, 62.5/125 multimode, 9/125 singlemode
Rubber compound over the 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

STANDARDS

VDE 0250 Part 813, VDE 0295, EN 60228

Flame Retardant according to IEC/EN 60332-1-2

ISO/IEC 17025 LABORATORY TESTED

This product is subject to the Quality Assurance protocols of The Cable Lab®, an ISO/IEC 17025 accredited cable testing laboratory. Testing includes vertical flame, conductor resistance, tensile & elongation, and dimensional consistency, verified to published standards and approved product drawings.

UKAS ISO/IEC 17025 Accredited Testing Laboratory 8578

bsi. ISO 9001 Quality Management FS 672069 | ISO 14001 Environmental Management EMS 672067 | ISO 45001 Occupational Health and Safety Management OHS 672066

REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab® as meeting the requirements of the BSI RoHS Trusted Kitemark™.

bsi. RoHS Trusted KITEMARK™ KM 634267

RoHS

DIMENSIONS

ELAND PART NO.	VOLTAGE kV	NO. OF CORES (PHASE + EARTH + FIBRE OPTICS)	NOMINAL CROSS SECTIONAL AREA mm²		CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	MAXIMUM TENSILE LOAD N	NOMINAL WEIGHT kg/km
			Phase Conductor	Earth Conductor					
A7HF06KV1025RD	3.6/6	3 + 2 + FO	25	25/2E	6.8	44.7	47.6	1500	2820
A7HF06KV1035RD	3.6/6	3 + 2 + FO	35	25/2E	7.8	46.6	49.5	2100	3190
A7HF06KV1050RD	3.6/6	3 + 2 + FO	50	25/2E	9.4	49.9	52.9	3000	3990
A7HF06KV1070RD	3.6/6	3 + 2 + FO	70	35/2E	11.2	55.5	58.5	4200	5070
A7HF06KV1095RD	3.6/6	3 + 2 + FO	95	50/2E	12.7	58.9	61.9	5700	5900
A7HF06KV1120RD	3.6/6	3 + 2 + FO	120	70/2E	14.4	64.4	68.3	7200	7490
A7HF06KV1150RD	3.6/6	3 + 2 + FO	150	70/2E	16.3	68.5	72.5	9000	8710
A7HF10KV1025RD	6/10	3 + 2 + FO	25	25/2E	6.8	47.3	50.3	1500	3370
A7HF10KV1035RD	6/10	3 + 2 + FO	35	25/2E	7.8	48.8	51.8	2100	3730
A7HF10KV1050RD	6/10	3 + 2 + FO	50	25/2E	9.4	53.7	56.7	3000	4680
A7HF10KV1070RD	6/10	3 + 2 + FO	70	35/2E	11.2	57.5	60.5	4200	5770
A7HF10KV1095RD	6/10	3 + 2 + FO	95	50/2E	12.7	60.8	64.7	5700	6720
A7HF10KV1120RD	6/10	3 + 2 + FO	120	70/2E	14.4	66.4	70.4	7200	8280

CURRENT CARRYING CAPACITY

NOMINAL CROSS SECTIONAL AREA mm²	LAYING ON THE FLOOR Amps	FREE IN AIR Amps	REELED Amps						
			1 Layer	2 Layer	3 Layer	4 Layer	5 Layer	6 Layer	7 Layer
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

Ambient temperature of 30°C

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VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA mm²	POWER FACTOR			
	0.7	0.8	0.9	1
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
120	0.34	0.36	0.38	0.36
150	0.29	0.31	0.32	0.29

FIBRE OPTICS

FIBRE	GRADED INDEX MULTIMODE FIBRE					STEP INDEX SINGLEMODE FIBRE			
	Attenuation at 850nm dB/km	Attenuation at 1300nm dB/km	Bandwidth at 850nm MHz*km	Bandwidth at 1300nm MHz*km	Numerical Aperture	Attenuation at 1310nm dB/km	Attenuation at 1550nm dB/km	Chromatic dispersion at 1285-1300nm ps/nm km	Chromatic dispersion at 1550nm ps/nm km
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 TEMPERATURE	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