

# (N)TSCGEWÖU 8.7/15kV and 12/20kV 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** U<sub>0</sub>/U  
 8.7/15kV  
 12/20kV

**Test Voltage**  
 8.7/15kV: 24kV  
 12/20kV: 29kV

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

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

**Maximum Working Speed**  
 120m/min

## CONSTRUCTION

**Phase Conductor**  
 Class 5 tinned copper conductor

**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

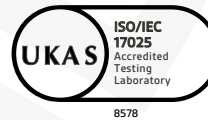
## STANDARDS

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.



## 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™.





## DIMENSIONS

ELAND PART NO.	VOLTAGE kV	NO. OF CORES (PHASE + EARTH + FIBRE OPTICS)	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>		CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	MAXIMUM TENSILE LOAD N	NOMINAL WEIGHT kg/km
			Phase Conductor	Earth Conductor					
A7HF15KV1025RD	8.7/15	3 + 2 + FO	25	25/2E	6.8	52	55	1500	3680
A7HF15KV1035RD	8.7/15	3 + 2 + FO	35	25/2E	7.8	55.2	58.2	2100	4310
A7HF15KV1050RD	8.7/15	3 + 2 + FO	50	25/2E	9.4	58.4	61.4	3000	5020
A7HF15KV1070RD	8.7/15	3 + 2 + FO	70	35/2E	11.2	62.1	66	4200	6170
A7HF15KV1095RD	8.7/15	3 + 2 + FO	95	50/2E	12.7	67.2	71.2	5700	7380
A7HF20KV1025RD	12/20	3 + 2 + FO	25	25/2E	6.8	58	61	1500	4490
A7HF20KV1035RD	12/20	3 + 2 + FO	35	25/2E	7.8	59.4	62.4	2100	4830
A7HF20KV1050RD	12/20	3 + 2 + FO	50	25/2E	9.4	64.3	68.2	3000	5840
A7HF20KV1070RD	12/20	3 + 2 + FO	70	35/2E	11.2	68.1	72.1	4200	7030

## CURRENT CARRYING CAPACITY

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	LAYING ON THE FLOOR Amps	REELED Amps						
		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

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	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

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## 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

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.