

# (N)SHTÖU-FO (LWL) Low Voltage Reeling Cable



Eland Product Group: A7O

## APPLICATION

Reeling cable for power supply with integrated fiber optics, for winding operation with tensile stress and/or torsional stress, for connection and control in lifting devices, hoisting plants and transporting machines for heavy mechanical load, including ERTG's (Electrified Rubber Tyred Gantry cranes). For use in dry, damp or wet rooms and in wet industrial conditions.

## CHARACTERISTICS

**Voltage Rating (Uo/U)**  
0.6/1kV

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

**Minimum Bending Radius**  
Fixed: 4x overall diameter  
Flexed: 5x overall diameter

**Maximum Tensile Load**  
30 N/mm<sup>2</sup>

**Travel Speed**  
In festoon: up to 180m/min horizontal / 120m/min vertical

## CONSTRUCTION

**Conductor**  
Class 5 stranded tinned copper conductor

**Insulation**  
HEPR (Hard Ethylene Propylene Rubber)

**Optical Fibre**  
Cores laid up around central support element

**Inner Sheath**  
Rubber compound

**Braiding**  
Anti-torsion textile braid embedded in sheath

**Sheath**  
Rubber compound Type 5GM3/5GM5

**Core Identification**  
Coloured cores according to VDE 0293-308 with  green-yellow

**Sheath Colour**  
● Black or ● Yellow

## STANDARDS

Based on DIN VDE 0250-814, DIN VDE 0250-1, DIN VDE 0298-3, DIN VDE 0472-501/502/503/508, DIN VDE 0472-303/401/402/602/615, DIN VDE 0472-803/804, VDE 0482-332-1-2, HD/EN/IEC 60811-2-1, DIN VDE 0473-811-2-1, EN 60228

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

## THE CABLE LAB®

AN ISO/IEC 17025 AND IECEE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.



## SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: [www.elandcables.com/company/about-us/esg-sustainability](http://www.elandcables.com/company/about-us/esg-sustainability)



## REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab®.





## DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL OVERALL DIAMETER mm		NOMINAL WEIGHT kg/km
			Minimum	Maximum	
A703035/2016/**	3 + 2 + FO	35 + 16 / 2	35.7	38.7	2400
A703050/2025/**	3 + 2 + FO	50 + 25 / 2	37.1	46.8	3200
A703070/2035/**	3 + 2 + FO	70 + 35 / 2	42.5	53.5	4120
A703095/2050/**	3 + 2 + FO	95 + 50 / 2	48.2	60.6	4990
A703120/2070/**	3 + 2 + FO	120 + 70 / 2	51.6	64.9	6370
A703150/2070/**	3 + 2 + FO	150 + 70 / 2	56.2	70.7	7480
A703185/2095/**	3 + 2 + FO	185 + 95 / 2	63.3	79.4	9020
A703240/2120/**	3 + 2 + FO	240 + 120 / 2	69.7	87.7	12320

\*\* designates 06 / 12 / 18 / 24 fibres

## CONDUCTORS

### Class 5 Flexible Copper Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MAXIMUM DIAMETER OF WIRES IN CONDUCTOR mm	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km
		Metal-Coated Wires
1.5	0.26	13.7
2.5	0.26	8.21
4	0.31	5.09
6	0.31	3.39
10	0.41	1.95
16	0.41	1.24
25	0.41	0.795
35	0.41	0.565
50	0.41	0.393
70	0.51	0.277
95	0.51	0.21
120	0.51	0.164
150	0.51	0.132

The above table is in accordance with EN 60228

## ELECTRICAL CHARACTERISTICS

### Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CURRENT CARRYING CAPACITY Amps				
	In Air	In Conduit	Reeled		
			1 Layer	2 Layer	3 Layer
1.5	25	24	19	15	12
2.5	32	30	24	18	15
4	43	41	33	25	20
6	56	53	42	32	26
10	78	74	59	45	36
16	104	99	79	60	49
25	138	131	105	80	64
35	170	162	130	99	79
50	212	202	162	123	99



## ELECTRICAL CHARACTERISTICS

### Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CURRENT CARRYING CAPACITY Amps				
	In Air	In Conduit	Reeled		
			1 Layer	2 Layer	3 Layer
70	263	250	200	153	123
95	316	301	241	184	147
120	370	352	282	215	172
150	424	404	323	246	198

For ambient temperature of 30°C

### DE-RATING FACTORS

AIR TEMPERATURE	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C
DE-RATING FACTOR	1	0.96	0.91	0.87	0.82	0.76	0.71	0.65

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.