

# (N)SSHÖU O/J, (N)SSHÖU 3E, (N)SSHÖU 3E + ST 0.6/1kV Cable



Eland Product Group: **A7JS**

## APPLICATION

Heavy duty tough rubber flexible cable with or without individually earth screened cores for dynamic or static applications in aggressive environments. Flame retardant, abrasion, cut, notch and tear resistant. Good resistance to oil and fats. Suitable for installation in dry, damp, wet and in hazardous environments. For power supplies where high levels of mechanical stress and abrasion are expected. Can be permanently submersed in fresh water, salt water, storm water, oily water and sewage contaminated water to a depth of 100 metres. Suitable for indoor and outdoor applications.

## CABLE STANDARDS

Generally to VDE 0250 Part 812, VDE 0295,  
BS EN/IEC 60332-1-2, BS EN/IEC 60811-2-1, HD 22.16



The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

## CONSTRUCTION

### Phase Conductor

Class 5 flexible tinned copper conductor according to VDE 0295 (IEC 60228)

### Insulation

Rubber compound Type 3GI3 according to VDE 0207 Part 20

### Individual Core Screen\*

Copper braid up to 10mm<sup>2</sup>, copper wires from 16mm<sup>2</sup>

### Control Conductors\*

Class 5 flexible tinned copper conductor according to VDE 0295 (IEC 60228)

### Inner Sheath

Rubber compound Type GM1b according to VDE 0207 Part 21

### Outer Sheath

Rubber compound Type 5GM5 according to VDE 0207 Part 21

### Note

\*Available with control conductors and individual core screen upon request

## CHARACTERISTICS

### Voltage Rating

600/1000V

### Test Voltage

3kV

### Maximum Short Circuit Temperature

+250°C

### Ambient Temperature<sup>1</sup>

Fixed: -40°C to +80°C

Flexed: -25°C to +80°C

### Minimum Bending Radius

Fixed: 4 x overall diameter

Flexed: 5 x overall diameter

### Submersible

100m

### Maximum Tensile Load<sup>2</sup>

15N/mm<sup>2</sup>

### Sheath Colour

● Yellow

### Note

<sup>1</sup>Alternative temperature ratings available on request

<sup>2</sup>Referred to the total phase conductors cross section

## DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM TENSILE LOAD N
A7JS10015	1	1.5	1.5	6.3	7	60	23
A7JS10025	1	2.5	1.9	7	7.7	75	38
A7JS10040	1	4	2.4	7.6	8.3	95	60
A7JS10060	1	6	2.9	8.2	8.9	120	90
A7JS1010	1	10	3.8	9.5	10.2	180	150
A7JS1016	1	16	4.8	10.5	11.2	245	240
A7JS1025	1	25	6.1	13	13.7	375	375
A7JS1035	1	35	7.2	14.1	14.8	480	525
A7JS1050	1	50	8.9	16.2	16.9	660	750
A7JS1070	1	70	10.6	18.3	19	875	1050
A7JS1095	1	95	12.5	20.5	21.7	1150	1425
A7JS1120	1	120	14.2	22.8	24	1430	1800
A7JS1150	1	150	15.9	25	26.2	1750	2250
A7JS1185	1	185	17.7	28.2	29.4	2180	2775
A7JS1240	1	240	20.1	31.1	32.3	2770	3600
A7JS1300	1	300	22.5	34.9	36.1	3510	4500
A7JS3015	3	1.5	1.5	11.7	12.3	190	68
A7JS3025	3	2.5	1.9	13.1	13.7	255	113
A7JS3040	3	4	2.4	15.6	16.2	375	180
A7JS3060	3	6	2.9	16.8	17.4	465	270
A7JS310	3	10	3.8	20.2	21.3	710	450
A7JS316	3	16	4.8	22.3	23.4	930	720
A7JS325	3	25	6.1	26.9	28	1390	1125
A7JS335	3	35	7.2	30.2	31.4	1880	1575
A7JS350	3	50	8.9	35.8	37	2500	2250
A7JS370	3	70	10.6	39.3	40.5	3460	3150
A7JS395	3	95	12.5	45.7	47.4	4570	4275
A7JS3120	3	120	14.2	48.2	49.9	5220	5400
A7JS3150	3	150	15.9	52.6	54.4	6460	6750
A7JS3185	3	185	17.7	58.7	61	7980	8325
A7JS4015	4	1.5	1.5	12.5	13.1	225	90
A7JS4025	4	2.5	1.9	15.3	15.9	350	150
A7JS4040	4	4	2.4	16.7	17.3	440	240
A7JS4060	4	6	2.9	18.1	18.7	550	360
A7JS410	4	10	3.8	21.9	23	860	600
A7JS416	4	16	4.8	25.2	26.3	1210	960
A7JS425	4	25	6.1	30.6	31.8	1810	1500
A7JS435	4	35	7.2	32.8	34	2330	2100
A7JS450	4	50	8.9	39	40.2	3300	3000
A7JS470	4	70	10.6	42.8	44.5	4300	4200
A7JS495	4	95	12.5	49.9	51.7	5680	5700
A7JS4120	4	120	14.2	55.6	57.4	6820	7200
A7JS4150	4	150	15.9	60.6	62.9	8270	9000
A7JS4185	4	185	17.7	67.4	69.7	10350	11100
A7JS5015	5	1	1.5	13.4	14	270	113
A7JS5025	5	2	1.9	16.4	17	410	188
A7JS5040	5	4	2.4	18	18.6	525	300

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM TENSILE LOAD N
A7JS5060	5	6	2.9	20.3	21.4	715	450
A7JS510	5	10	3.8	23.7	24.8	1040	750
A7JS516	5	16	4.8	27.3	28.4	1470	1200
A7JS525	5	25	6.1	33.2	34.4	2220	1875
A7JS7015	7	1.5	1.5	16.9	17.5	400	158
A7JS7025	7	2.5	1.9	19.2	19.8	560	263
A7JS1215	12	1.5	1.5	19.6	20.2	540	270
A7JS1225	12	2.5	1.9	22.3	23.4	790	450
A7JS1815	18	1.5	1.5	22.2	23.3	750	405
A7JS1825	18	2.5	1.9	26.5	27.6	1110	675
A7JS2415	24	1.5	1.5	23.7	25.1	900	540
A7JS2425	24	2.5	1.9	28.4	29.6	1350	900

### Including Earth Cores

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>		CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM TENSILE LOAD N
		Phase Conductor	Earth Conductor					
A7JS3E050	3 + 3	50	25/3E	8.9	36.3	37.5	2790	2250
A7JS3E070	3 + 3	70	35/3E	10.6	39.7	41.4	3660	3150
A7JS3E095	3 + 3	95	50/3E	12.5	46.3	48	4800	4275
A7JS3E120	3 + 3	120	70/3E	14.2	48.5	50.3	5990	5400
A7JS3E150	3 + 3	150	70/3E	15.9	54.3	56.1	7030	6750
A7JS3E185	3 + 3	185	95/3E	17.7	61.7	64	9030	8325
A7JS3E240	3 + 3	240	120/3E	20.1	66.5	68.8	11280	10800

### Individual Core Screen

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>		CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM TENSILE LOAD N
		Phase Conductor	Earth Conductor					
A7JS3EST0025	3 + 3	2.5	2.5/3E	1.9	16.2	16.9	370	113
A7JS3EST0040	3 + 3	4	4/3E	2.4	17.7	18.4	490	180
A7JS3EST060	3 + 3	6	6/3E	2.9	18.9	19.6	590	270
A7JS3EST10	3 + 3	10	10/3E	3.8	22.4	23.5	890	450
A7JS3EST16	3 + 3	16	16/3E	4.8	26.6	27.7	1260	720
A7JS3EST25	3 + 3	25	16/3E	6.1	29.9	31.1	1700	1125
A7JS3EST35	3 + 3	35	16/3E	7.2	33.9	35.1	2100	1575
A7JS3EST50	3 + 3	50	25/3E	8.9	39.8	41.5	3060	2250
A7JS3EST70	3 + 3	70	35/3E	10.6	43.4	45.1	3940	3150
A7JS3EST95	3 + 3	95	50/3E	12.5	50	51.8	5240	4275
A7JS3EST120	3 + 3	120	70/3E	14.2	54.1	55.9	6580	5400
A7JS3EST150	3 + 3	150	70/3E	15.9	59.7	62	7590	6750
A7JS3EST185	3 + 3	185	95/3E	17.7	66.1	68.4	9400	8325

## Individual Core Screen and Control Conductors

ELAND PART NO.	VOLTAGE kV	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>			CONDUCTOR DIAMETER mm	MINIMUM OVERALL DIAMETER mm	MAXIMUM OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM TENSILE LOAD N
			Phase Conductor	Earth Conductor	Control Conductor					
A7JS33EST0025	0.6/1	3 + 3 + 3	2.5	2.5/3E	1.5ST	1.9	16.2	18.1	425	113
A7JS33EST0040	0.6/1	3 + 3 + 3	4	4/3E	1.5ST	2.4	17.7	19.6	540	180
A7JS33EST0060	0.6/1	3 + 3 + 3	6	6/3E	1.5ST	2.9	18.9	20.3	640	270
A7JS33EST010	0.6/1	3 + 3 + 3	10	10/3E	2.5ST	3.8	22.4	23.5	940	450
A7JS33EST016	0.6/1	3 + 3 + 3	16	16/3E	2.5ST	4.8	26.6	27.7	1310	720
A7JS33EST025	0.6/1	3 + 3 + 3	25	16/3E	2.5ST	6.1	29.9	31.1	1800	1125
A7JS33EST035	0.6/1	3 + 3 + 3	35	16/3E	2.5ST	7.2	33.9	35.1	2230	1575
A7JS33EST050	0.6/1	3 + 3 + 3	50	25/3E	2.5ST	8.9	39.8	41.5	3160	2250
A7JS33EST070	0.6/1	3 + 3 + 3	70	35/3E	2.5ST	10.6	43.4	45.1	4210	3150
A7JS33EST095	0.6/1	3 + 3 + 3	95	50/3E	2.5ST	12.5	50	51.8	5520	4275
A7JS33EST120	0.6/1	3 + 3 + 3	120	70/3E	2.5ST	14.2	54.1	55.9	6730	5400
A7JS33EST150	0.6/1	3 + 3 + 3	150	70/3E	2.5ST	15.9	59.7	62	7740	6750
A7JS33EST185	0.6/1	3 + 3 + 3	185	95/3E	2.5ST	17.7	66.1	68.4	9700	8325

## ELECTRICAL CHARACTERISTICS

## Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	LAYING ON THE FLOOR Amps	FREE IN AIR Amps	REELED						
			1 Layer Amps	2 Layer Amps	3 Layer Amps	4 Layer Amps	5 Layer Amps	6 Layer Amps	7 Layer Amps
1.5	24	25	19	15	12	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	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
300	608	638	486	371	298	255	231	164	134

Ambient temperature of 30°C

## Voltage Drop

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	POWER FACTOR			
	0.7	0.8	0.9	1
1.5	20.65	23.56	26.47	29.32
2.5	12.43	14.17	15.91	17.59
4	7.75	8.82	9.89	10.92
6	5.19	5.9	6.6	7.27
10	3.04	3.44	3.84	4.2
16	1.96	2.21	2.45	2.66
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
185	0.25	0.27	0.27	0.24
240	0.21	0.22	0.21	0.18

## DE-RATING FACTORS

NO. OF OPERATING CORES	5	7	10	14	19	24
DE-RATING FACTOR	0.75	0.65	0.55	0.50	0.45	0.40

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.