NR/L2/SIGELP/27408: Enhanced Unarmoured Level II Signalling Power Supply LSZH Cable

Eland Product Group: 6

APPLICATION

Signalling power distribution only (not suitable for general signalling use). Rodent-proof. For installations where fire, smoke emissions and toxic fumes create a potential risk to life and equipment.

CHARACTERISTICS

Voltage Rating Uo/U
0.6/1kV

CONSTRUCTION

Conductor
Class 1 solid or Class 2, aluminium circular or sectorial-shaped
Class 2 stranded circular copper

Insulation
XLPE (Cross-Linked Polyethylene) Type GP8

Identification Tape
Longitudinally applied stating 'Property of Network Rail'[manuf] [year]'

Tape
Waterblocking tape

Rodent Protection
FGT (Fibre-Glass Tape)

Sheath
LSZH (Low Smoke Zero Halogen) Type LTS4

Core Identification
2 core: ● Brown ● Black
3 core: ● Brown ● Black ● Grey
4 core: ● Brown ● Black ● Grey ● Red

Sheath Colour
● Black

Sheath Marking
[manuf] [factory ID] ELECTRIC CABLE 600/1000 V (core x CSA mm²) LSOH (Year No.) NMR WB NR/L2/SIGELP/27408 PROPERTY OF NETWORK RAIL PADS No X/XXXXXX

For Harmonised Core colours (3 core only)
[manuf] [factory ID] ELECTRIC CABLE 600/1000 V (core x CSA mm²) LSOH (Year No.) H NMR WB NR/L2/SIGELP/27408 PROPERTY OF NETWORK RAIL PADS No X/XXXXXX

CABLE THIRD-PARTY ACCREDITATION

Network Rail (NR) certified and PADS listed as meeting the requirements for installation on their network

Network Rail Certificate of Acceptance No: PA05/05446

CABLE STANDARDS

NR/L2/SIGELP/27408

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

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

Copper Conductor

ELAND PART NO.	NO. OF CORES	CONDUCTOR CLASS	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL INSULATION THICKNESS mm	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MINIMUM BEND RADIUS mm	MAXIMUM PULLING FORCE kN	MAXIMUM DRUM LENGTH m
6/186027	2	2	10	2.0	2.4	21.9	516	88	0.98	2800
6/186028	2	2	16	2.0	2.4	23.7	653	95	1.57	2400
6/186029	2	2	25	2.0	2.4	26.2	862	158	2.45	1900
6/186030	2	2	35	2.0	2.6	28.8	1095	173	3.43	1600
6/186031	2	2	50	2.0	2.7	25.6	1323	205	4.90	1500
6/186032	2	2	70	2.0	2.9	29.4	1811	236	6.86	1000
6/186033	2	2	95	2.0	3.0	31.6	2329	253	9.31	800
6/186034	2	2	120	2.0	3.2	33.8	2868	271	11.76	700
6/186119	3	2	10	2.0	2.4	23.1	654	93	1.47	2500
6/186120	3	2	16	2.0	2.4	25.1	850	151	2.35	2100
6/186121	3	2	25	2.0	2.4	27.8	1148	167	3.68	1800
6/186122	3	2	35	2.0	2.6	30.6	1472	184	5.15	1300
6/186123	3	2	50	2.0	2.7	31.9	1836	256	7.35	1100
6/186124	3	2	70	2.0	3.1	36.0	2566	288	10.29	900
6/186125	3	2	95	2.0	3.2	39.6	3341	317	13.97	700
6/186126	3	2	120	2.0	3.4	42.0	4146	336	17.64	600
6/186155	4	2	10	2.0	2.4	25.2	804	152	1.96	2100
6/186156	4	2	16	2.0	2.4	27.4	1059	165	3.14	1800
6/186157	4	2	25	2.0	2.4	30.4	1449	183	4.90	1400
6/186158	4	2	35	2.0	2.6	33.5	1864	201	6.86	1100
6/186159	4	2	50	2.0	2.7	35.2	2346	282	9.80	900
6/186160	4	2	70	2.0	3.2	44.0	3398	352	13.72	700
6/186161	4	2	95	2.0	3.3	47.2	4420	378	18.62	600
6/186162	4	2	120	2.0	3.5	50.5	5493	404	23.52	500

Aluminium Solid Conductor

ELAND PART NO.	NO. OF CORES	CONDUCTOR CLASS	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL INSULATION THICKNESS mm	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MINIMUM BEND RADIUS mm	MAXIMUM PULLING FORCE kN	MAXIMUM DRUM LENGTH m
6/186042	2	1	16	2.0	2.4	23.5	476	188	0.80	2500
6/186043	2	1	25	2.0	2.4	25.6	572	205	1.25	2100
6/186044	2	1	35	2.0	2.6	27.6	661	221	1.74	1800
6/186045	2	1	50	2.0	2.7	25.4	769	204	2.49	2200
6/186046	2	1	70	2.0	2.9	27.6	937	221	3.49	1800
6/186047	2	1	95	2.0	3.0	29.8	1137	239	4.73	1500
6/186048	2	1	120	2.0	3.2	33.0	1407	264	5.98	1300
6/186134	3	1	16	2.0	2.4	24.4	510	196	1.20	2200
6/186135	3	1	25	2.0	2.4	26.8	636	215	1.87	1800
6/186136	3	1	35	2.0	2.6	29.3	778	235	2.61	1500
6/186137	3	1	50	2.0	2.7	29.6	995	237	3.74	1800
6/186138	3	1	70	2.0	3.1	33.1	1302	265	5.23	1500
6/186139	3	1	95	2.0	3.2	36.1	1608	289	7.10	1300
6/186140	3	1	120	2.0	3.4	38.9	1916	312	8.96	1000

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Aluminium Solid Conductor

ELAND PART NO.	NO. OF CORES	CONDUCTOR CLASS	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL INSULATION THICKNESS mm	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MINIMUM BEND RADIUS mm	MAXIMUM PULLING FORCE kN	MAXIMUM DRUM LENGTH m
6/186170	4	1	16	2.0	2.4	26.6	662	213	1.59	1800
6/186171	4	1	25	2.0	2.4	29.2	829	234	2.49	1500
6/186172	4	1	35	2.0	2.6	32.0	1012	256	3.49	1300
6/186173	4	1	50	2.0	2.7	32.2	1273	258	4.98	1800
6/186174	4	1	70	2.0	3.2	36.3	1677	291	6.97	1400
6/186175	4	1	95	2.0	3.3	39.8	2068	319	9.46	1100
6/186176	4	1	120	2.0	3.5	43.0	2458	344	11.95	1000

Aluminium Stranded Conductor

ELAND PART NO.	NO. OF CORES	CONDUCTOR CLASS	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL INSULATION THICKNESS mm	NOMINAL SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MINIMUM BEND RADIUS mm	MAXIMUM PULLING FORCE kN	MAXIMUM DRUM LENGTH m
6/186016	2	2	120	2.0	3.2	33.0	1387	264	5.98	1300
6/186017	2	2	150	2.0	3.3	36.3	1613	291	7.47	1000
6/186018	2	2	185	2.0	3.4	38.8	1934	311	9.21	700
6/186144	3	2	120	2.0	3.4	42.0	1929	336	8.96	1000
6/186145	3	2	150	2.0	3.5	45.4	2266	364	11.21	800
6/186146	3	2	185	2.0	3.6	48.4	2734	387	13.82	600
6/186180	4	2	120	2.0	3.5	49.0	2456	392	11.95	1000
6/186181	4	2	150	2.0	3.5	52.9	2842	424	14.94	600
6/186182	4	2	185	2.0	3.6	57.9	3421	464	18.43	500

ELECTRICAL CHARACTERISTICS

Copper Conductor

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	MAX CONDUCTOR DC RESISTANCE AT 20oC ohms/km	NOMINAL CORE TO CORE CAPACITANCE µF/km²	NOMINAL CORE TO EARTH CAPACITANCE µF/km²	INDUCTANCE mH/km	REACTANCE ohms/km	IMPEDANCE ohms/km	ZERO SEQUENCE DATA ohms/km	SEQUENCE DATA POSITIVE / NEGATIVE ohms/km
2	10	1.83	0.12	0.11	0.39	0.111	1.70	2.38+j2.31	2.33+j0.124
2	16	1.15	0.13	0.12	0.37	0.104	1.13	1.52+j2.28	1.47+j0.117
2	25	0.727	0.17	0.16	0.35	0.098	0.73	0.98+j2.25	0.93+j0.110
2	35	0.524	0.18	0.18	0.34	0.093	0.54	0.72+j2.22	0.67+j0.105
2	50	0.387	0.20	0.19	0.32	0.086	0.40	0.54+j2.20	0.49+j0.100
2	70	0.268	0.23	0.22	0.31	0.083	0.30	0.39+j2.17	0.34+j0.097
2	95	0.193	0.26	0.24	0.30	0.080	0.23	0.30+j2.15	0.25+0.094
2	120	0.153	0.29	0.26	0.29	0.078	0.19	0.25+j2.16	0.20+j0.092
2	150	0.124	0.33	0.29	0.29	0.076	0.17	0.19+j2.11	0.14+0.090
2	185	0.0991	0.36	0.32	0.28	0.074	0.14	0.15+j2.10	0.10+j0.089

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ELECTRICAL CHARACTERISTICS

Copper Conductor

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	MAX CONDUCTOR DC RESISTANCE AT 20oC ohms/km	NOMINAL CORE TO CORE CAPACITANCE µF/km²	NOMINAL CORE TO EARTH CAPACITANCE µF/km²	INDUCTANCE mH/km	REACTANCE ohms/km	IMPEDANCE ohms/km	ZERO SEQUENCE DATA ohms/km	SEQUENCE DATA POSITIVE / NEGATIVE ohms/km
3	10	1.83	0.25	0.10	0.34	0.111	1.70	2.38+j2.31	2.31+j0.124
3	16	1.15	0.35	0.12	0.31	0.104	1.13	1.52+j2.28	1.45+j0.117
3	25	0.727	0.45	0.21	0.29	0.098	0.73	0.98+j2.25	0.91+j0.110
3	35	0.524	0.50	0.25	0.27	0.093	0.54	0.72+j2.22	0.65+j0.105
3	50	0.387	0.60	0.35	0.25	0.086	0.40	0.54+j2.20	0.47+j0.100
3	70	0.268	0.65	0.37	0.24	0.083	0.30	0.39+j2.17	0.32+j0.097
3	95	0.193	0.70	0.42	0.24	0.080	0.23	0.30+j2.15	0.23+0.094
3	120	0.153	0.75	0.46	0.23	0.078	0.19	0.25+j2.16	0.18+j0.092
3	150	0.124	0.80	0.51	0.21	0.076	0.17	0.21+j2.11	0.12+0.090
3	185	0.0991	0.85	0.54	0.20	0.074	0.14	0.18+j2.10	0.08+j0.089
4	10	1.83	0.20	0.08	0.44	0.111	1.70	2.38+j2.31	2.29+j0.124
4	16	1.15	0.30	0.11	0.40	0.104	1.13	1.52+j2.28	1.43+j0.117
4	25	0.727	0.40	0.17	0.36	0.098	0.73	0.98+j2.25	0.89+j0.110
4	35	0.524	0.45	0.20	0.34	0.093	0.54	0.72+j2.22	0.63+j0.105
4	50	0.387	0.50	0.23	0.32	0.086	0.40	0.54+j2.20	0.45+j0.100
4	70	0.268	0.55	0.30	0.31	0.083	0.30	0.39+j2.17	0.30+j0.097
4	95	0.193	0.65	0.35	0.30	0.080	0.23	0.30+j2.15	0.21+0.094
4	120	0.153	0.70	0.38	0.29	0.078	0.19	0.25+j2.16	0.16+j0.092
4	150	0.124	0.80	0.53	0.27	0.076	0.17	0.21+j2.15	0.10+0.094
4	185	0.0991	0.85	0.59	0.26	0.074	0.14	0.18+j2.16	0.06+j0.092

Aluminium Solid Conductor

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	MAX CONDUCTOR DC RESISTANCE AT 20oC ohms/km	NOMINAL CORE TO CORE CAPACITANCE µF/km²	NOMINAL CORE TO EARTH CAPACITANCE µF/km²	INDUCTANCE mH/km	REACTANCE ohms/km	IMPEDANCE ohms/km	ZERO SEQUENCE DATA ohms/km	SEQUENCE DATA POSITIVE / NEGATIVE ohms/km
2	16	1.91	0.30	0.09	0.22	0.104	2.91	1.52+j2.28	1.47+j0.117
2	25	1.20	0.35	0.11	0.21	0.098	1.86	0.98+j2.25	0.93+j0.110
2	35	0.868	0.40	0.18	0.19	0.093	1.18	0.72+j2.22	0.67+j0.105
2	50	0.641	0.45	0.20	0.18	0.086	1.65	0.54+j2.20	0.49+j0.100
2	70	0.443	0.50	0.31	0.18	0.083	0.46	0.39+j2.17	0.34+j0.097
2	95	0.320	0.60	0.33	0.17	0.080	0.35	0.30+j2.15	0.25+0.094
2	120	0.253	0.65	0.35	0.17	0.078	0.28	0.25+j2.16	0.20+j0.092
2	150	0.206	0.70	0.41	0.16	0.076	0.18	0.19+j2.11	0.14+0.090
2	185	0.164	0.75	0.44	0.14	0.074	0.16	0.15+j2.10	0.10+j0.089
3	16	1.91	0.30	0.09	0.31	0.104	2.91	1.52+j2.28	1.47+j0.117
3	25	1.20	0.35	0.11	0.28	0.098	1.86	0.98+j2.25	0.93+j0.110
3	35	0.868	0.40	0.18	0.27	0.093	1.18	0.72+j2.22	0.67+j0.105
3	50	0.641	0.45	0.20	0.25	0.086	1.65	0.54+j2.20	0.49+j0.100
3	70	0.443	0.50	0.31	0.24	0.083	0.46	0.39+j2.17	0.34+j0.097
3	95	0.320	0.60	0.33	0.23	0.080	0.35	0.30+j2.15	0.25+0.094
3	120	0.253	0.65	0.35	0.22	0.078	0.28	0.25+j2.16	0.20+j0.092
3	150	0.206	0.70	0.41	0.21	0.076	0.18	0.19+j2.11	0.14+0.090
3	185	0.164	0.75	0.44	0.19	0.074	0.16	0.15+j2.10	0.10+j0.089

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Aluminium Solid Conductor

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	MAX CONDUCTOR DC RESISTANCE AT 20oC ohms/km	NOMINAL CORE TO CORE CAPACITANCE µF/km²	NOMINAL CORE TO EARTH CAPACITANCE µF/km²	INDUCTANCE mH/km	REACTANCE ohms/km	IMPEDANCE ohms/km	ZERO SEQUENCE DATA ohms/km	SEQUENCE DATA POSITIVE / NEGATIVE ohms/km
4	16	1.91	0.35	0.10	0.39	0.104	2.91	1.52+j2.28	1.47+j0.117
4	25	1.20	0.40	0.18	0.36	0.098	1.86	0.98+j2.25	0.93+j0.110
4	35	0.868	0.45	0.21	0.34	0.093	1.18	0.72+j2.22	0.67+j0.105
4	50	0.641	0.50	0.32	0.31	0.086	1.65	0.54+j2.20	0.49+j0.100
4	70	0.443	0.55	0.32	0.30	0.083	0.46	0.39+j2.17	0.34+j0.097
4	95	0.320	0.65	0.36	0.29	0.080	0.35	0.30+j2.15	0.25+0.094
4	120	0.253	0.70	0.39	0.28	0.078	0.28	0.25+j2.16	0.20+j0.092
4	150	0.206	0.75	0.48	0.23	0.076	0.18	0.19+j2.11	0.14+0.090
4	185	0.164	0.80	0.51	0.21	0.074	0.16	0.15+j2.10	0.10+j0.089

Aluminium Stranded Conductor

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	MAX CONDUCTOR DC RESISTANCE AT 20oC ohms/km	NOMINAL CORE TO CORE CAPACITANCE µF/km²	NOMINAL CORE TO EARTH CAPACITANCE µF/km²	INDUCTANCE mH/km	REACTANCE ohms/km	IMPEDANCE ohms/km	ZERO SEQUENCE DATA ohms/km	SEQUENCE DATA POSITIVE / NEGATIVE ohms/km
2	120	0.253	0.64	0.36	0.18	0.078	0.28	0.25+j2.16	0.20+j0..092
2	150	0.206	0.69	0.42	0.16	0.076	0.18	0.19+j2.11	0.14+j0.090
2	185	0.164	0.74	0.45	0.14	0.074	0.16	0.15+j2.10	0.10+j0.089
3	120	0.253	0.64	0.36	0.23	0.078	0.28	0.25+j2.13	0.18+j0.092
3	150	0.206	0.69	0.42	0.21	0.076	0.18	0.21+j2.11	0.12+0.090
3	185	0.164	0.74	0.45	0.19	0.074	0.16	0.18+j2.10	0.08+j0.089
4	120	0.253	0.64	0.36	0.28	0.078	0.28	0.25+j2.13	0.16+j0.092
4	150	0.206	0.69	0.42	0.23	0.076	0.18	0.21+j2.11	0.10+0.090
4	185	0.164	0.74	0.45	0.21	0.074	0.16	0.18+j2.10	0.06+j0.089

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.

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