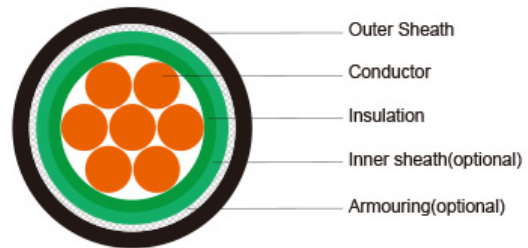


**600/1000V LSZH Sheathed, Armoured (single core)**



**Application:** The cables are mainly used in power stations, mass transit underground passenger systems, airports, petrochemical plants, hotels, hospitals, and high-rise buildings.

**Standard:** Basic design to BS 7211

**FIRE PERFORMANCE**

<b>Flame Retardance (Single Vertical Wire Test)</b>	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; CEI 20-35/1-2; EN 50265-2-1; DIN VDE 0482-265-2-1
<b>Reduced Fire Propagation (Vertically-mounted bundled wires &amp; cable test)</b>	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; CEI 20-22/3-4; EN 50266-2- 4; DIN VDE 0482-266-2-4
<b>Halogen Free</b>	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1
<b>No Corrosive Gas Emission</b>	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2
<b>minimum Smoke Emission</b>	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2; BS 7622-1&2
<b>No Toxic gases</b>	NES 02-713

**VOLTAGE RATING**

600/1000V

**CABLE CONSTRUCTION**

Conductor: Plain annealed copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Extruded cross-linked XLPE compound.

Inner sheath(optional): LSZH Compound

Armouring(optional): Aluminium Wire

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.)

**COLOUR CODE**

Insulation colour as per bs7671

	with earth conductor	without earth conductor
<b>2Cores</b>	-	Brown,Blue
<b>3Cores</b>	Yellow/Green,Brown,Blue	Brown,Gray,Black

<b>4Cores</b>	Yellow/Green,Brown,Gray,Black	Brown,Gray,Black,Blue
<b>5Cores</b>	Yellow/Green,Brown,Gray,Black,Blue	Brown,Gray,Black,Blue,Black
<b>above 5 Cores</b>	Yellow/Green,Black Numbered	Black Numbered

sheath colour: Black

**Physical AND THERMAL PROPERTIES**

Temperature range during operation: Max.90°C

250°C in short-circuit for 5s max.

Minimum bending radius: 8 x Overall Diameter (unarmoured cable)

10 x Overall Diameter (armoured cable)

**CONSTRUCTION PARAMETERS**

Conductor		Insulated, Non-Armoured			Armoured			
No. of Core Cross Section	No./ Nominal Diameter Of Strands	Nominal Insulation Thickness	Nominal Overall Diameter	Approx. Weight	Diameter Under Armour	Armour Wire Diameter	Nominal Overall Diameter	Approx. Weight
Noxmm2	No./mm	mm	mm	kg/km	mm	mm	mm	kg/km
1x1.5	7/0.53	0.7	6	48	-	-	-	-
1x2.5	7/0.67	0.7	6.4	63	-	-	-	-
1x4	7/0.85	0.7	7.0	78	-	-	-	-
1x6	7/1.04	0.7	7.5	105	-	-	-	-
1x10	7/1.35	0.7	8.5	151	-	-	-	-
1x16	7/1.70	0.7	9.5	211	-	-	-	-
1x25	7/2.14	0.9	11.2	315	-	-	-	-
1x35	7/2.52	0.9	12.4	416	-	-	-	-
1x50	19/1.78	1.0	14	569	-	-	-	-
1x70	19/2.14	1.1	16	792	15.4	1.25	21.5	960
1x95	19/2.52	1.1	18	1068	17.3	1.25	23.4	1240
1x120	37/2.03	1.2	20	1325	19.1	1.6	25.9	1650
1x150	37/2.25	1.4	22	1627	21.1	1.6	27.9	1970
1x185	37/2.52	1.6	24.4	2021	23.2	1.6	30.1	2390
1x240	61/2.25	1.7	27.5	2617	26.2	1.6	33.2	3040
1x300	61/2.52	1.8	30.3	3252	28.8	1.6	35.8	3790
1x400	61/2.85	2.0	33.9	4131	32.7	2.0	40.9	4790
1x500	61/3.20	2.2	37.6	5175	36.2	2.0	44.6	5880
1x630	127/2.52	2.4	42.4	6631	40.6	2.0	49.2	7400
1x800	127/2.85	2.6	47.3	8412	45.7	2.5	55.7	9500

1x1000	127/3.20	2.8	52.4	10530	50.6	2.5	61.0	11750
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**Electrical PROPERTIES**

Conductor Operating Temperature : 90°C

Ambient Temperature : 30°C

**Unarmoured Current-Carrying Capacities (Amp)**

Conductor cross-sectional area	Reference Method 4 (enclosed in conduit in thermally insulating wall etc)		Reference Method 3 (enclosed in conduit on a wall or in trunking etc)		Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated cable tray, horizontal or vertical)		Reference Method 12 (free air)		
	2 cables, single phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c. or d.c. flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	2 cables, single-phase a.c. or d.c. or flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	Horizontal flat spaced	Vertical flat spaced	Trefoil
1	2	3	4	5	6	7	8	9	10	11	12
mm2	A	A	A	A	A	A	A	A	A	A	A
1.5	18	17	22	19	25	23	-	-	-	-	-
2.5	24	23	30	26	34	31	-	-	-	-	-
4	33	30	40	35	46	41	-	-	-	-	-
6	43	39	51	45	59	54	-	-	-	-	-
10	58	53	71	63	81	74	-	-	-	-	-
16	76	70	95	85	109	99	-	-	-	-	-
25	100	91	126	111	143	130	158	140	183	163	138
35	125	111	156	138	176	161	195	176	226	203	171
50	149	135	189	168	228	209	293	215	274	246	209
70	189	170	240	214	293	268	308	279	351	318	270
95	228	205	290	259	355	326	375	341	426	389	330
120	263	235	336	299	413	379	436	398	495	453	385
150	300	270	375	328	476	436	505	461	570	524	445

185	341	306	426	370	545	500	579	530	651	600	511
240	400	358	500	433	644	590	686	630	769	711	606
300	459	410	573	493	743	681	791	730	886	824	701
400	-	-	684	584	868	793	915	849	1065	994	820
500	-	-	783	666	990	904	1044	973	1228	1150	936
630	-	-	900	764	1130	1033	1191	1115	1423	1338	1069
800	-	-	-	-	1288	1179	1358	1275	1580	1485	1214
1000	-	-	-	-	1443	1323	1520	1426	1775	1671	1349

**Voltage Drop (Per Amp Per Meter)**

Nominal Cross Section Area	2 cable s d.c.	2 cables, single-phase a.c.						3 or 4 cables, 3-phase a.c.								
		Ref. Methods 3 and 4 (enclosed in conduit etc, in or on a wall)			Ref. Methods 1 and 11 (clipped direct or on trays touching)			Ref. Methods 3 and 4 (enclosed in conduit etc, in or on a wall)			Ref. Methods 1, 11 and 12 (in trefoil)			Ref. Methods 1 and 11(Flat and touching)		
1	2	3			4			5			6			7		
mm <sup>2</sup>	mV/A/m	mV/A/m			mV/A/m			mV/A/m			mV/A/m			mV/A/m		
1.5	31	31			27			27			27			27		
2.5	19	19			16			16			16			16		
4	33	12			10			10			10			10		
6	7.8	7.9			6.8			6.8			6.8			6.8		
10	4.7	4.7			4.7			4			4			4		
16	2.9	2.9			2.9			2.5			2.5			2.5		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
25	1.85	1.85	0.31	1.90	1.85	0.190	1.85	1.60	0.27	1.6	1.60	0.165	1.60	1.60	0.190	1.60
35	1.35	1.35	0.29	1.35	1.35	0.180	1.35	1.15	0.25	1.1	1.15	0.155	1.50	1.15	0.180	1.15
50	0.99	1.00	0.29	1.05	0.99	0.180	1.00	0.87	0.25	0.9	0.86	0.150	0.87	0.86	0.180	0.87
70	0.68	0.70	0.28	0.75	0.68	0.175	0.71	0.60	0.24	0.6	0.59	0.150	0.61	0.59	0.175	0.62
95	0.49	0.51	0.27	0.58	0.49	0.170	0.52	0.44	0.23	0.5	0.43	0.145	0.45	0.43	0.170	0.46
120	0.39	0.41	0.26	0.48	0.39	0.165	0.43	0.35	0.23	0.4	0.34	0.140	0.37	0.34	0.165	0.38
150	0.32	0.33	0.26	0.43	0.32	0.165	0.36	0.29	0.23	0.3	0.28	0.140	0.31	0.28	0.165	0.32
185	0.25	0.27	0.2	0.3	0.26	0.16	0.30	0.23	0.2	0.3	0.22	0.14	0.26	0.22	0.16	0.28

			6	7		5			3	2	0	0	0	0	5	0
240	0.19	0.21	0.26	0.33	0.20	0.160	0.25	0.185	0.22	0.29	0.170	0.140	0.220	0.170	0.165	0.240
300	0.155	0.175	0.25	0.31	0.16	0.160	0.22	0.150	0.22	0.27	0.140	0.140	0.195	0.135	0.160	0.210
400	0.12	0.140	0.25	0.29	0.13	0.155	0.20	0.125	0.22	0.25	0.110	0.135	0.175	0.110	0.160	0.195
500	0.093	0.120	0.25	0.28	0.105	0.155	0.185	0.100	0.22	0.24	0.090	0.135	0.160	0.088	0.160	0.180
630	0.072	0.100	0.25	0.27	0.086	0.155	0.175	0.088	0.22	0.23	0.074	0.135	0.150	0.071	0.160	0.170
800	0.056	-	-	-	0.072	0.150	0.170	-	-	-	0.062	0.130	0.145	0.059	0.155	0.165
1000	0.045	-	-	-	0.063	0.150	0.165	-	-	-	0.055	0.130	0.140	0.050	0.155	0.165

**Armoured Current-Carrying Capacities (Amp)**

Conductor cross-sectional area	Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated horizontal cable tray or Reference Method 13 [free air])		Reference Method 12 (free air)	In ducts		Laid direct in ground	
	one 2-core cable single phase a.c. or d.c.	one 3-core or 4-core cable 3-phase a.c.	one 2-core cable single phase a.c. or d.c.	one 3-core or 4-core cable 3-phase a.c.		3 cables 3-phase a.c. trefoil touching	one 2-core cable single phase a.c. or d.c.	one 3-core or 4-core cable 3-phase a.c.	one 2-core cable single phase a.c. or d.c.
1	2	3	4	5	6	7	8	9	10
mm2	A	A	A	A	A	A	A	A	A
70	303	277	322	293	285	310	280	340	290
95	367	333	389	352	346	365	330	405	345
120	425	383	449	405	402	410	370	460	389
150	488	437	516	462	463	445	405	510	435
185	557	496	587	524	529	485	440	580	490
240	656	579	689	612	625	550	500	670	560
300	755	662	792	700	720	610	550	750	630

400	853	717	899	767	815	640	580	830	700
500	962	791	1016	851	918	690	620	910	770
630	1082	861	1146	935	1027	750	670	1000	840
800	1170	904	1246	987	1119	828	735	1117	931
1000	1261	961	1345	1055	1214	919	811	1254	1038

**Voltage Drop (Per Amp Per Meter)**

Conductor crossecti onal area	2 cable s d.c.	2 cables singlephase a.c.			3 or 4 cables three-phase a.c.						2 cables singlephase a.c.		3 or 4 cables, 3-phase a.c. touching	
		Reference Method 1 & 11 (touching)			Reference Method 1, 11 & 12 (in trefoil touching)			Reference Method 1 & 11 (Flat touching)			In ducts	In ground	In ducts	In ground
1	2	3			4			5			6	7	8	9
mm <sup>2</sup>	mV/A /m	mV/A/m			mV/A/m			mV/A/m			mV/A /m	mV/A /m	mV/A /m	mV/A /m
		r	x	z	r	x	z	r	x	z				
70	0.67	0.68	0.20	0.71	0.59	0.17	0.62	0.65	0.25	0.65	0.80	0.70	0.70	0.61
95	0.49	0.51	0.195	0.55	0.44	0.17	0.47	0.46	0.24	0.52	0.65	0.53	0.56	0.46
120	0.39	0.41	0.19	0.45	0.35	0.165	0.39	0.38	0.24	0.44	0.55	0.43	0.48	0.37
150	0.31	0.33	0.185	0.38	0.29	0.16	0.33	0.31	0.23	0.39	0.50	0.37	0.43	0.32
185	0.25	0.27	0.18	0.33	0.23	0.16	0.28	0.26	0.23	0.34	0.45	0.31	0.39	0.27
240	0.195	0.21	0.18	0.28	0.18	0.155	0.24	0.21	0.22	0.30	0.40	0.26	0.35	0.23
300	0.155	0.17	0.175	0.25	0.17	0.15	0.21	0.17	0.22	0.28	0.37	0.24	0.32	0.21
400	0.115	0.145	0.17	0.22	0.17	0.15	0.21	0.17	0.22	0.27	0.35	0.21	0.30	0.19
500	0.093	0.125	0.17	0.21	0.17	0.15	0.21	0.17	0.22	0.25	0.33	0.20	0.28	0.18
630	0.073	0.105	0.165	0.195	0.16	0.15	0.21	0.17	0.22	0.24	0.30	0.19	0.26	0.17
800	0.056	0.09	0.16	0.19	0.16	0.15	0.21	0.17	0.22	0.23	0.28	0.18	0.24	0.16
1000	0.045	0.09	0.16	0.19	0.16	0.15	0.21	0.17	0.22	0.23	0.26	0.17	0.22	0.15

		92	55	80	80	35	55	25	70	1				
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