



LX SERIES

ESP POWER CABLE DATASHEET

V.25

GENERAL INFORMATION

Optimum's LX ESP power cable product series features an Alloy Lead Sheath that provides robust protection for inner components against mechanical stress during installation and operation, down-hole pressure and chemicals (corrosive agents, water, gas and hydrocarbons). This ensures LX's long-term performance reliability and insulation integrity in harsh downhole environments.

LX SELECTION GUIDE

Good For

- ✓ Extremely corrosive wells
- ✓ High-pressure and dynamic wells
- ✓ Applications where system reliability is critical

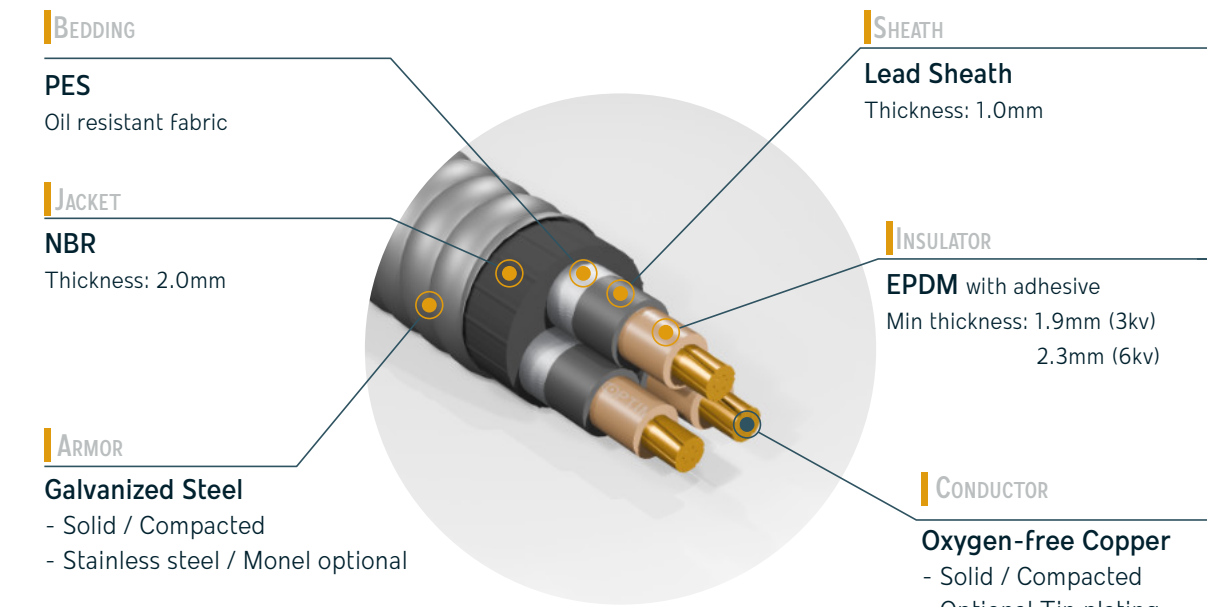
Not Suitable For

- ✗ Deep, extreme high-temperature wells
- ✗ Environmental concerns

LX PRODUCT LIST

Name	Shape	Insulation	Reinforcement	Temp. Ratings
LX 350R	Round	EPDM	Lead Sheath + Fabric Barrier + NBR	356F / 180C
LX 400F MLE	Flat	FHF + EPDM	Lead Sheath + Fabric Barrier + PTFE	400F / 204C
LX 450F	Flat	FHF + EPDM	Lead Sheath + Fabric Barrier	450F / 232C
LX 450R	Round	FHF + EPDM	Lead Sheath + Fabric Barrier + NBR	450F / 232C

LX 350R



DESIGN & CONSTRUCTION

Description	LX-350 ESP power cable with oxygen-free copper conductor,EPDM insulation, alloy lead sheath protected by oil resisting fabric bedding, outer Nitrile Rubber Jacket, fully galvanized steel interlocking armor.
Temperature Rating	356F / 180C
Voltage Rating	3KV, 6KV
Conductor	Solid drawn bare copper, solid or compacted diameter tolerance ± 1%
Insulation	EPDM - thickness 1.9mm (3KV), 2.3mm (6KV) ± 10%
Sheath	Special alloy Lead sheath - thickness 1.0mm ± 10%
Bedding	PES fabric - oil resistant barrier / cushion
Jacket	NBR (Nitrile Butadiene Rubber) - thickness 2.0mm ± 10%
Armor	Fully galvanized steel, interlocking Stainless steel, Monel optional

3KV LX350R SPECIFICATION

Gauge AWG	Nominal Conductor Dimension		Nominal Cable Diameter		Nominal Cable Weight		Insulation Resistance	Leakage Current	DC Voltage Test 5min
	in	mm	in	mm	lbs/1000F	kg/km	MΩ · km	μA/kmKV	kv
5	0.18	4.62	1.26	32	1616	2405	1484	0.700	27
4	0.2	5.19	1.34	34	1773	2638	1352	0.775	27
2	0.26	6.54	1.42	36	2176	3238	1012	0.984	27
1	0.29	7.35	1.50	38	2443	3636	919	1.083	27

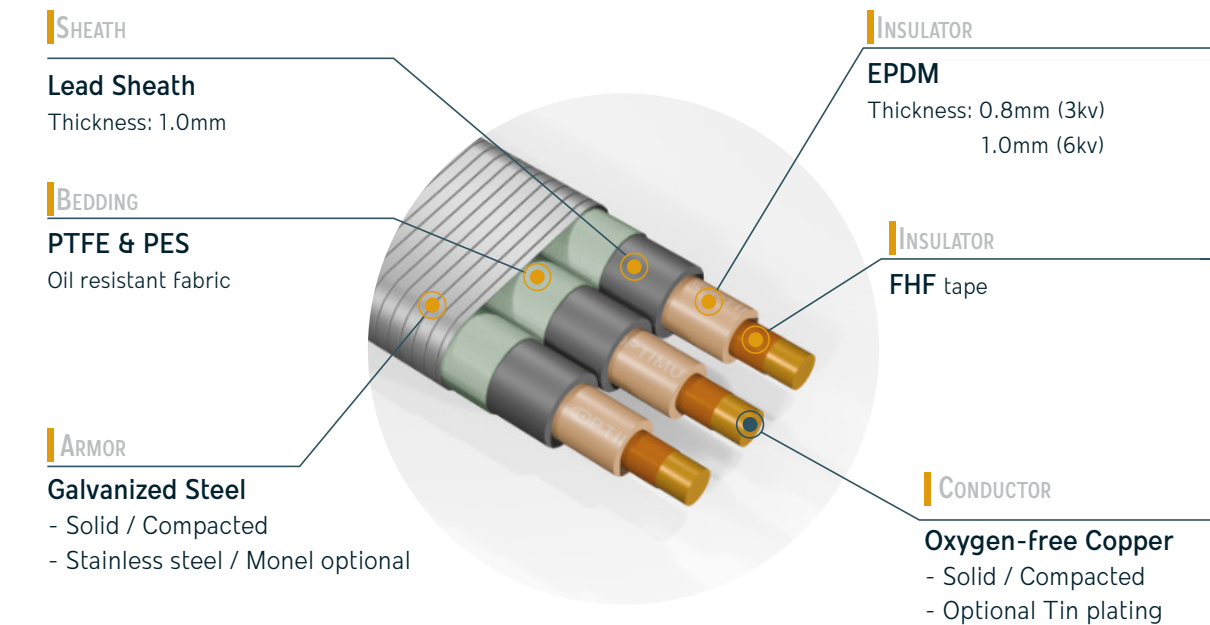
6KV LX350R SPECIFICATION

Conductor Gauge AWG	Nominal Conductor Diameter		Nominal Cable Diameter		Nominal Cable Weight		Insulation Resistance	Leakage Current	DC Voltage Test 5min
	in	mm	in	mm	lbs/1000F	kg/km	MΩ · km	μA/kmKV	kv
5	0.18	4.62	1.3	33	1709	2543	1692	0.607	35
4	0.2	5.19	1.38	35	1865	2776	1548	0.656	35
2	0.26	6.54	1.46	37	2271	3379	1170	0.853	35
1	0.29	7.35	1.54	39	2537	3776	1063	0.951	35

ADDITIONAL INFO

Standards and Approvals	• IEEE 1018 • API RP 11S 5 • API RP 11S 6
Packaging	Steel corrugated reels with fixed base Protective outside wrapping
Options	Armor - Galvanized steel / Stainless steel / Monel Conductor - Solid Copper / Tin plating
Customization	Capillary Tube Control Wires Marking Tape

LX 400F (MLE)



DESIGN & CONSTRUCTION

Description	LX-400F MLE ESP low profile power cable with oxygen-free copper conductor, combined insulation of FHF tape and EPDM, alloy lead sheath, PTFE & PES oil resistant fabric bedding, fully galvanized steel interlocking armor, low profile flat type for pump connection.
Temperature Rating	401F / 205C
Voltage Rating	3KV, 6KV
Conductor	Solid drawn bare copper, solid diameter tolerance ± 1%
Insulation	EPDM - thickness 0.8mm (3KV), 1.0mm (6KV) ± 10%
Sheath	Special Alloy Lead Sheath - thickness 1.0mm ± 10%
Bedding	PTFE & PES fabric - oil resistant barrier / cushion
Armor	Fully galvanized steel, interlocking Stainless steel, Monel optional

3KV LX 400F MLE SPECIFICATION

Gauge	Nominal Conductor Dimension		Nominal Cable Dimension		Nominal Cable Weight		Insulation Resistance	Leakage Current	DC Voltage Test 5min
AWG	in	mm	in	mm	lbs/1000F	kg/km	MΩ · km	μAkmkV	kv
7	0.14	3.67	0.4x1	10×25.6	908	1352	1723	0.34	27
6	0.16	4.12	0.4x1.1	10.5×27	1013	1508	1570	0.38	27
5	0.18	4.62	0.4x1.1	11×28.5	1311	1951	1429	0.41	27
4	0.2	5.19	0.5x1.2	12×30	1446	2152	1297	0.45	27

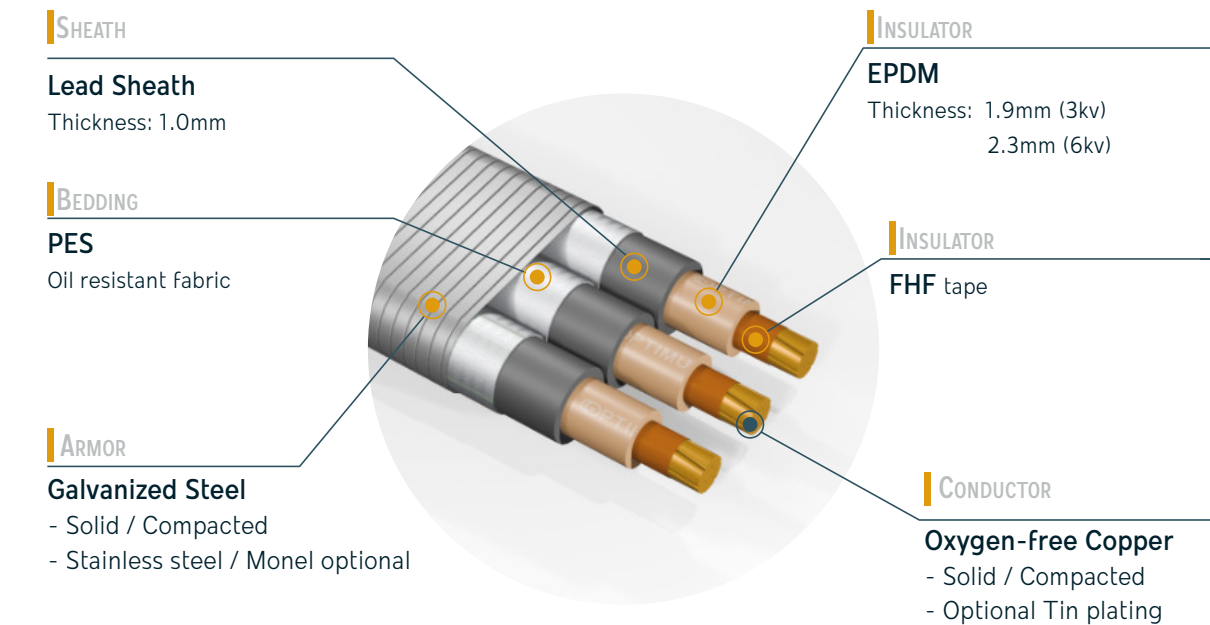
6KV LX 400F MLE SPECIFICATION

Conductor Gauge	Nominal Conductor Diameter		Nominal Cable Dimension		Nominal Cable Weight		Insulation Resistance	Leakage Current	DC Voltage Test 5min
AWG	in	mm	in	mm	lbs/1000F	kg/km	MΩ · km	μAkmkV	kv
7	0.14	3.67	0.4x1.1	10.5×27.5	908	1352	1965	0.3	35
6	0.16	4.12	0.4x1.1	11×29	1013	1508	1795	0.33	35
5	0.18	4.62	0.4x1.2	11.5×30.5	1311	1951	1638	0.36	35
4	0.2	5.19	0.5x1.3	12×32	1446	2152	1490	0.4	35

ADDITIONAL INFO

Standards and Approvals	• IEEE 1018 • API RP 11S 5 • API RP 11S 6
Packaging	Steel corrugated reels with fixed base Protective outside wrapping
Options	Armor - Galvanized steel / Stainless steel / Monel Conductor - Solid Copper / Tin plating
Customization	Capillary Tube Control Wires Marking Tape

LX 450F



DESIGN & CONSTRUCTION

Description	LX-450F ESP power cable with oxygen-free copper conductor, FHF tape and EPDM combined insulation, alloy lead sheath, PES oil resistant fabric bedding, fully galvanized steel interlocking armor, flat type.
Temperature Rating	450F / 232C
Voltage Rating	3KV, 6KV
Conductor	Solid drawn bare copper, solid or compacted diameter tolerance ± 1%
Insulation	EPDM - thickness 1.9mm (3KV), 2.3mm (6KV) ± 10%
Sheath	Special Alloy Lead Sheath - thickness 1.0mm ± 10%
Bedding	PES fabric - oil resistant barrier / cushion
Armor	Fully galvanized steel, interlocking Stainless steel, Monel optional

3KV LX 450F SPECIFICATION

Gauge	Nominal Conductor Dimension		Nominal Cable Dimension		Nominal Cable Weight		Insulation Resistance	Leakage Current	DC Voltage Test 5min
AWG	in	mm	in	mm	lbs/1000F	kg/km	MΩ · km	μAkmkV	kv
5	0.18	4.62	0.5x1.4	13×36	1449	2156	1797	0.56	27
4	0.2	5.19	0.6x1.5	14×38	1603	2385	1614	0.62	27
2	0.26	6.54	0.6x1.7	15×43	1995	2969	1503	0.67	27
1	0.29	7.35	0.6x1.8	16×45	225	335	1347	0.74	27

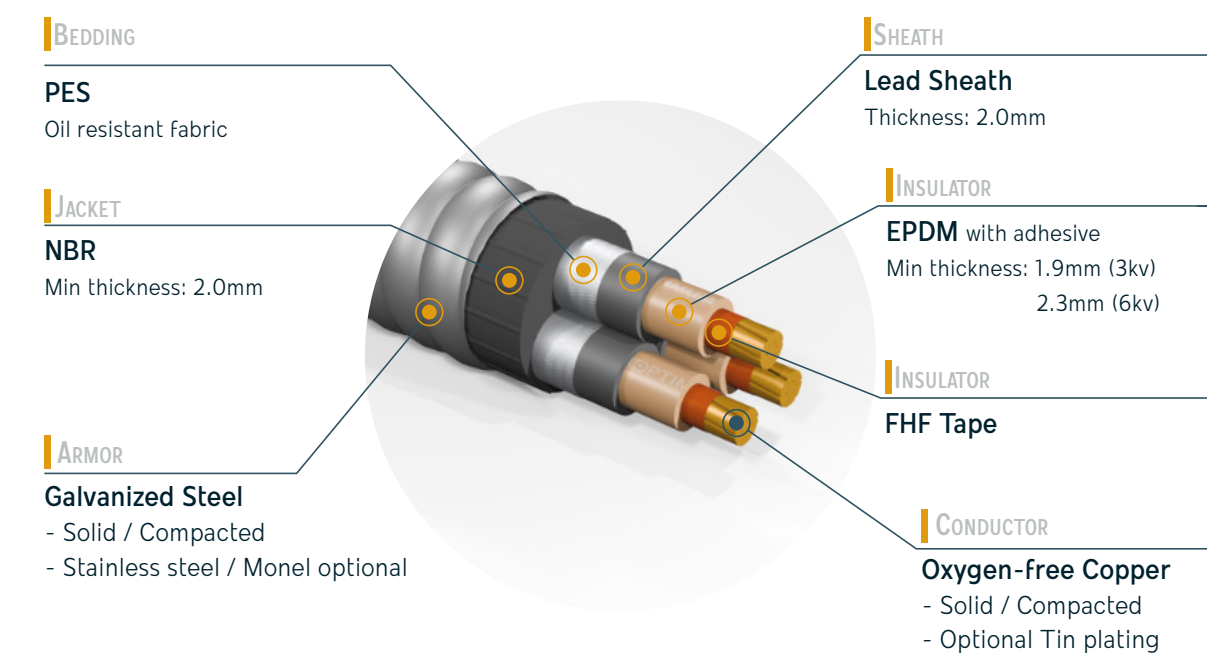
6KV LX 450F SPECIFICATION

Conductor Gauge	Nominal Conductor Diameter		Nominal Cable Dimension		Nominal Cable Weight		Insulation Resistance	Leakage Current	DC Voltage Test 5min
AWG	in	mm	in	mm	lbs/1000F	kg/km	MΩ · km	μAkmkV	kv
5	0.18	4.62	0.5x1.5	13×38	1507	2243	2035	0.49	35
4	0.2	5.19	0.6x1.6	14×40	1660	2470	1835	0.54	35
2	0.26	6.54	0.6x1.8	15×45	2053	3056	1713	0.58	35
1	0.29	7.35	0.6x1.9	16×47	2314	3443	1542	0.65	35

ADDITIONAL INFO

Standards and Approvals	• IEEE 1018 • API RP 11S 5 • API RP 11S 6
Packaging	Steel corrugated reels with fixed base Protective outside wrapping
Options	Armor - Galvanized steel / Stainless steel / Monel Conductor - Solid Copper / Tin plating
Customization	Capillary Tube Control Wires Marking Tape

LX 450R



DESIGN & CONSTRUCTION

Description	LX 450R ESP power cable with oxygen-free copper conductor, FHF tape + EPDM combo insulation, alloy lead sheath protected by oil resisting fabric bedding, outer Nitrile Rubber Jacket, fully galvanized steel interlocking armor.
Temperature Rating	450F / 232C
Voltage Rating	3KV, 6KV
Conductor	Solid drawn bare copper, solid or compacted diameter tolerance ± 1%
Insulation	EPDM - thickness 1.9mm (3KV), 2.3mm (6KV) ± 10%
Sheath	Special Alloy Lead Sheath - thickness 2.0mm ± 10%
Bedding	PES fabric - oil resistant barrier / cushion
Jacket	NBR (Nitrile Butadiene Rubber) - thickness 2.0mm ± 10%
Armor	Fully galvanized steel, interlocking Stainless steel, Monel optional

3KV LX 450R SPECIFICATION

Gauge AWG	Nominal Conductor Dimension		Nominal Cable Diameter		Nominal Cable Weight		Insulation Resistance	Leakage Current	DC Voltage Test 5min
	in	mm	in	mm	lbs/1000F	kg/km	MΩ · km	μA/kmV	kv
5	0.18	4.62	1.26	32	1616	2405	5112	0.240	27
4	0.2	5.19	1.34	34	1773	2638	4660	0.27	27
2	0.26	6.54	1.42	36	2176	3238	3905	0.344	27
1	0.29	7.35	1.50	38	2443	3636	2585	0.387	27

6KV LX 450R SPECIFICATION

Conductor Gauge AWG	Nominal Conductor Diameter		Nominal Cable Diameter		Nominal Cable Weight		Insulation Resistance	Leakage Current	DC Voltage Test 5min
	in	mm	in	mm	lbs/1000F	kg/km	MΩ · km	μA/kmV	kv
5	0.18	4.62	1.3	33	1709	2543	5978	0.2	35
4	0.2	5.19	1.38	35	1865	2776	5431	0.23	35
2	0.26	6.54	1.46	37	2271	3379	4516	0.284	35
1	0.29	7.35	1.54	39	2537	3776	4129	0.319	35

ADDITIONAL INFO

Standards and Approvals	• IEEE 1018 • API RP 11S 5 • API RP 11S 6
Packaging	Steel corrugated reels with fixed base Protective outside wrapping
Options	Armor - Galvanized steel / Stainless steel / Monel Conductor - Solid Copper / Tin plating
Customization	Capillary Tube Control Wires Marking Tape



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