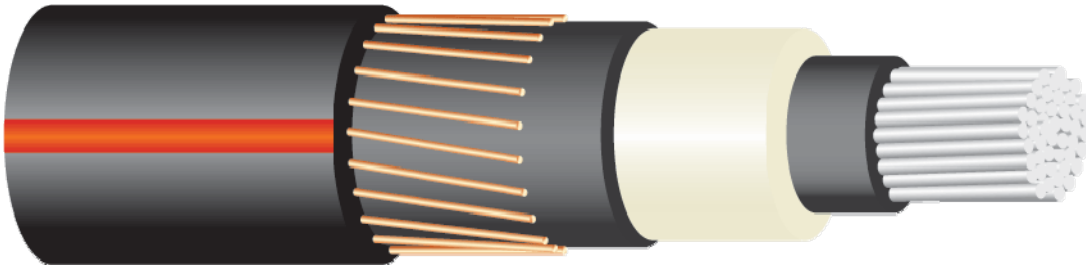




UD (Underground Distribution) Primary Power Cables TR-XLP Insulated 15kv to 35kv



APPLICATIONS

TR-XLP insulated Primary UD cables are designed and manufactured to meet the applications of primary underground distribution; suitable for use in wet or dry locations, direct burial, underground ducts, and exposed to sunlight for above ground applications. To be used at 15kv up to 35kv at conductor temperatures not to exceed 90 degrees C. for normal operation.

SPECIFICATIONS

TR-XLP insulated Primary UD cables meet or exceed all applicable requirements of the following standards:

- ANSI / ICEA S-94-649, Standard for concentric neutral cables rated 5,000 - 46,000 VOLTS.
- AEIC CS8, Specification for extruded dielectric shielded power cables rated 5 through 46 KV.
- ASTM B-3, ASTM B-8, ASTM B-230 & ASTM B-231

CONSTRUCTION

Conductor:	Bare aluminum or copper, class B compressed concentric stranding.
Conductor Shield:	Extruded semi-conducting thermosetting compound.
Insulation:	TR-XLP (Tree-Retardant XLP), 100% or 133% Insulation levels.
Insulation Shield:	Extruded semi-conducting thermosetting compound.
Concentric Neutral:	Uncoated copper concentric neutral wires.
Encapsulated Jacket:	Non-conductive LLDPE embedded jacket with extruded red stripes.

MAXIMUM CONDUCTOR TEMPERATURE

Normal continuous @ 90 degrees C, overload @ 130 degrees C, and Short circuit @ 250 degrees C.

FEATURES & BENEFITS, OPTIONS

- Triple extruded construction by dry curing process guarantees excellent quality of cables.
- TR-XLP insulation offers proven superior life span than conventional XLP cables.
- Clean stripping insulation shield.
- Triplex configuration option; offers cost saving at the installation stage.
- Strand-filled conductor & Water-blocking jacket is available upon request.
- Concentric Neutral - Coated wires are available upon request.
- Embedded Semi-Conducting jackets or PVC jacket with/without separator tape are available upon request.

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UD (Underground Distribution) Primary Power Cables 15kV TR-XLP 175 Mils (100% Insulation Level)

ALUMINUM CONDUCTOR

Phase Conductor		Copper Neutral		Thickness (mils)				Diameter (Inches)			Net Weight (lbs./1000ft)		Allowable Ampacities+		
Size (AWG / kcmil)	No. of Wires	No. of Wires	Wire Size (AWG)	Cond. Shield	Insul. (Min. Avg.)	Insul. Shield	Jkt.	Bare Phase Cond.	Over Insul.	Over Jkt.	With-out Jacket	Comp. Cable	1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
FULL NEUTRAL															
2	7	10	14	20	175	40	50	0.283	0.695	1.003	370	487	170	115	100
1	19	13	14	20	175	40	50	0.322	0.730	1.038	437	556	195	140	123
1/0	19	16	14	20	175	40	50	0.362	0.770	1.078	510	632	230	155	135
2/0	19	13	12	20	175	40	50	0.405	0.815	1.157	616	760	270	185	162
3/0	19	16	12	20	175	40	50	0.456	0.865	1.207	730	874	295	210	184
4/0	19	20	12	20	175	40	50	0.512	0.920	1.262	875	1030	335	240	210
ONE - THIRD (1/3) NEUTRAL													3/C Direct Buried	3/C Duct Buried	3/C Duct In Air
1/0	19	6	14	20	175	40	50	0.362	0.770	1.078	373	515	230	165	145
2/0	19	7	14	20	175	40	50	0.405	0.815	1.123	434	575	250	190	167
3/0	19	9	14	20	175	40	50	0.456	0.865	1.173	510	655	280	215	189
4/0	19	11	14	20	175	40	50	0.512	0.920	1.228	598	759	320	245	215
250	37	13	14	25	175	40	50	0.558	0.980	1.288	684	889	345	270	237
350	37	11	12	25	175	60	50	0.660	1.080	1.462	913	1175	405	325	285
500	37	16	12	25	175	60	50	0.789	1.210	1.562	1207	1498	460	385	338
750	61	15	10	30	175	60	80	0.968	1.400	1.884	1685	2057	515	475	417
1000	61	20	10	30	175	80	80	1.117	1.545	2.069	2210	2516	565	540	475

COPPER CONDUCTOR

Phase Conductor		Copper Neutral		Thickness (mils)				Diameter (Inches)			Net Weight (lbs./1000ft)		Allowable Ampacities+		
Size (AWG or kcmil)	No. of Wires	No. of Wires	Wire Size (AWG)	Cond. Shield	Insul. (Min. Avg.)	Insul. Shield	Jkt.	Bare Phase Cond.	Over Insul.	Over Jkt.	With-out Jacket	Comp. Cable	1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
FULL NEUTRAL															
2	7	16	14	20	175	40	50	0.283	0.695	1.003	642	700	225	160	140
1	19	13	12	20	175	40	50	0.322	0.730	1.072	804	870	260	185	162
1/0	19	16	12	20	175	40	50	0.362	0.770	1.112	923	993	295	210	185
2/0	19	20	12	20	175	40	50	0.405	0.815	1.157	1107	1176	330	240	210
3/0	19	25	12	20	175	40	50	0.456	0.865	1.207	1334	1402	375	270	237
4/0	19	32	12	20	175	40	50	0.512	0.920	1.262	1642	1708	430	305	268
ONE - THIRD (1/3) NEUTRAL													3/C Direct Buried	3/C Duct Buried	3/C Duct In Air
1/0	19	9	14	20	175	40	50	0.362	0.770	1.078	708	777	290	210	185
2/0	19	11	14	20	175	40	50	0.405	0.815	1.123	836	907	320	240	210
3/0	19	14	14	20	175	40	50	0.456	0.865	1.173	1002	1074	350	275	241
4/0	19	11	12	20	175	40	50	0.512	0.920	1.262	1227	1317	390	315	276
250	37	13	12	25	175	40	50	0.558	0.980	1.322	1427	1546	415	340	298
350	37	12	10	25	175	60	50	0.660	1.080	1.504	1904	2055	475	415	364
500	37	17	10	25	175	60	50	0.789	1.210	1.694	2664	2823	525	480	420
750	61	25	10	30	175	60	80	0.968	1.400	1.884	3794	3964	560	530	465
1000	61	32	10	30	175	80	80	1.117	1.545	2.090	4948	5127	600	590	518

+ Ampacities based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor, and 36" depth of burial. Values are based on one-three phase circuit, on conductor per phase, in adjacent configuration with neutral wires bonded at each end.



UD (Underground Distribution) Primary Power Cables 15kV TR-XLP 220 Mils (133% Insulation Level)

ALUMINUM CONDUCTOR

Phase Conductor		Copper Neutral		Thickness (mils)				Diameter (Inches)			Net Weight (lbs./1000ft)		Allowable Ampacities+		
Size (AWG) / kcmil	No. of Wires	No. of Wires	Wire Size (AWG)	Cond. Shield	Insul. (Min. Avg.)	Insul. Shield	Jkt.	Bare Phase Cond.	Over Insul.	Over Jkt.	With-out Jacket	Comp. Cable	1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
FULL NEUTRAL															
2	7	10	14	20	220	40	50	0.283	0.785	1.093	415	549	170	115	100
1	19	13	14	20	220	40	50	0.322	0.820	1.128	487	619	195	140	123
1/0	19	16	14	20	220	40	50	0.362	0.860	1.168	562	697	230	155	135
2/0	19	13	12	20	220	40	50	0.405	0.905	1.247	670	830	270	185	162
3/0	19	16	12	20	220	40	50	0.456	0.955	1.297	787	946	295	210	184
4/0	19	20	12	20	220	60	50	0.512	1.010	1.352	934	1148	335	240	210
ONE - THIRD (1/3) NEUTRAL													3/C Direct Buried	3/C Duct Buried	3/C Duct In Air
1/0	19	6	14	20	220	40	50	0.362	0.860	1.168	441	580	230	165	145
2/0	19	7	14	20	220	40	50	0.405	0.905	1.213	490	643	250	190	167
3/0	19	9	14	20	220	40	50	0.456	0.955	1.263	567	725	280	215	189
4/0	19	11	14	20	220	60	50	0.512	1.010	1.318	656	842	320	245	215
250	37	13	14	25	220	60	50	0.558	1.070	1.418	781	1013	345	270	237
350	37	11	12	25	220	60	50	0.660	1.170	1.612	987	1266	405	325	285
500	37	16	12	25	220	60	50	0.789	1.300	1.742	1284	1597	460	385	338
750	61	15	10	30	220	60	80	0.968	1.490	1.974	1774	2230	515	475	417
1000	61	20	10	30	220	80	80	1.117	1.635	2.159	2301	2718	565	540	475

COPPER CONDUCTOR

Phase Conductor		Copper Neutral		Thickness (mils)				Diameter (Inches)			Net Weight (lbs./1000ft)		Allowable Ampacities+		
Size (AWG) / kcmil	No. of Wires	No. of Wires	Wire Size (AWG)	Cond. Shield	Insul. (Min. Avg.)	Insul. Shield	Jkt.	Bare Phase Cond.	Over Insul.	Over Jkt.	With-out Jacket	Comp. Cable	1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
FULL NEUTRAL															
2	7	16	14	20	220	40	50	0.283	0.785	1.093	695	760	225	160	140
1	19	13	12	20	220	40	50	0.322	0.820	1.162	559	633	260	185	162
1/0	19	16	12	20	220	40	50	0.362	0.860	1.202	982	1060	295	210	185
2/0	19	20	12	20	220	40	50	0.405	0.905	1.247	1169	1246	330	240	210
3/0	19	25	12	20	220	40	50	0.456	0.955	1.293	1399	1475	375	270	237
4/0	19	32	12	20	220	60	50	0.512	1.010	1.394	1747	1825	430	305	268
ONE - THIRD (1/3) NEUTRAL													3/C Direct Buried	3/C Duct Buried	3/C Duct In Air
1/0	19	9	14	20	220	40	50	0.362	0.860	1.168	767	842	290	210	185
2/0	19	11	14	20	220	40	50	0.405	0.905	1.213	897	975	320	240	210
3/0	19	14	14	20	220	40	50	0.456	0.955	1.263	1066	1145	350	275	241
4/0	19	11	12	20	220	60	50	0.512	1.010	1.394	1333	1434	390	315	276
250	37	13	12	25	220	60	50	0.558	1.070	1.452	1539	1673	415	340	298
350	37	12	10	25	220	60	50	0.660	1.170	1.654	1987	2149	475	415	364
500	37	17	10	25	220	60	50	0.789	1.300	1.784	2754	2924	525	480	420
750	61	25	10	30	220	60	80	0.968	1.490	1.974	3952	4138	560	530	465
1000	61	32	10	30	220	80	80	1.117	1.635	2.159	5061	5251	600	590	518

+ Ampacities based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earthambient temperature, 75% load factor, and 36" depth of burial. Values are based on one-three phase circuit, on conductor per phase, in adjacent configuration with neutral wires bonded at each end.



UD (Underground Distribution) Primary Power Cables 25kV TR-XLP 260 Mils (100% Insulation Level)

ALUMINUM CONDUCTOR

Phase Conductor		Copper Neutral		Thickness (mils)				Diameter (Inches)			Net Weight (lbs./1000ft)		Allowable Ampacities+		
Size (AWG / kcmil)	No. of Wires	No. of Wires	Wire Size (AWG)	Cond. Shield	Insul. (Min. Avg.)	Insul. Shield	Jkt.	Bare Phase Cond.	Over Insul.	Over Jkt.	With-out Jacket	Comp. Cable	1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
FULL NEUTRAL															
1	19	13	14	20	260	40	50	0.322	0.900	1.208	535	687	195	145	127
1/0	19	16	14	20	260	40	50	0.362	0.940	1.250	614	767	220	165	145
2/0	19	13	12	20	260	40	50	0.405	0.985	1.327	722	905	250	190	167
3/0	19	16	12	20	260	60	50	0.456	1.035	1.417	875	1065	290	210	185
4/0	19	20	12	20	260	60	50	0.512	1.090	1.472	1025	1241	325	245	215
ONE - THIRD (1/3) NEUTRAL													3/C Direct Buried	3/C Duct Buried	3/C Duct In Air
1/0	19	6	14	20	260	40	50	0.362	0.940	1.250	475	650	225	165	145
2/0	19	7	14	20	260	40	50	0.405	0.985	1.293	540	715	250	180	158
3/0	19	9	14	20	260	60	50	0.456	1.035	1.383	655	842	275	205	180
4/0	19	11	14	20	260	60	50	0.512	1.090	1.438	750	966	310	240	210
250	37	13	14	25	260	60	50	0.558	1.160	1.508	852	1117	335	260	228
350	37	11	12	25	260	60	80	0.660	1.260	1.702	1060	1380	395	325	285
500	37	16	12	25	260	60	80	0.789	1.390	1.832	1369	1721	445	390	342
750	61	15	10	30	260	80	80	0.968	1.580	2.104	1920	2373	515	475	417
1000	61	20	10	30	260	80	80	1.117	1.725	2.249	2405	2870	560	525	460

COPPER CONDUCTOR

Phase Conductor		Copper Neutral		Thickness (mils)				Diameter (Inches)			Net Weight (lbs./1000ft)		Allowable Ampacities+		
Size (AWG / kcmil)	No. of Wires	No. of Wires	Wire Size (AWG)	Cond. Shield	Insul. (Min. Avg.)	Insul. Shield	Jkt.	Bare Phase Cond.	Over Insul.	Over Jkt.	With-out Jacket	Comp. Cable	1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
FULL NEUTRAL															
1	19	13	12	20	260	40	50	0.322	0.900	1.242	615	701	245	185	162
1/0	19	16	12	20	260	40	50	0.362	0.940	1.284	1044	1133	280	215	189
2/0	19	20	12	20	260	40	50	0.405	0.985	1.327	1232	1321	315	240	210
3/0	19	25	12	20	260	60	50	0.456	1.035	1.417	1502	1594	360	275	241
4/0	19	32	12	20	260	60	50	0.512	1.090	1.472	1828	1919	415	315	276
ONE - THIRD (1/3) NEUTRAL													3/C Direct Buried	3/C Duct Buried	3/C Duct In Air
1/0	19	9	14	20	260	40	50	0.362	0.940	1.250	826	912	275	215	189
2/0	19	11	14	20	260	40	50	0.405	0.985	1.293	960	1048	310	250	220
3/0	19	14	14	20	260	60	50	0.456	1.035	1.383	1166	1261	345	285	250
4/0	19	11	12	20	260	60	50	0.512	1.090	1.471	1414	1528	385	320	280
250	37	13	12	25	260	60	50	0.558	1.160	1.602	1628	1780	410	345	303
350	37	12	10	25	260	60	80	0.660	1.260	1.744	2083	2266	460	405	355
500	37	17	10	25	260	60	80	0.789	1.390	1.874	2858	3050	520	470	412
750	61	25	10	30	260	80	80	0.968	1.580	2.104	4071	4280	567	550	483
1000	61	32	10	30	260	80	80	1.117	1.725	2.249	5190	5404	625	615	540

+ Ampacities based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earthambient temperature, 75% load factor, and 36" depth of burial. Values are based on one-three phase circuit, on conductor per phase, in adjacent configuration with neutral wires bonded at each end.



UD (Underground Distribution) Primary Power Cables 35kV TR-XLP 345 Mils (100% Insulation Level)

ALUMINUM CONDUCTOR

Phase Conductor		Copper Neutral		Thickness (mils)				Diameter (Inches)			Net Weight (lbs./1000ft)		Allowable Ampacities+		
Size (AWG / kcmil)	No. of Wires	No. of Wires	Wire Size (AWG)	Cond. Shield	Insul. (Min. Avg.)	Insul. Shield	Jkt.	Bare Phase Cond.	Over Insul.	Over Jkt.	With-out Jacket	Comp. Cable	1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
FULL NEUTRAL															
1/0	19	16	14	20	345	60	50	0.362	1.110	1.458	768	957	220	165	145
2/0	19	13	12	20	345	60	50	0.405	1.155	1.593	885	1105	250	195	170
3/0	19	16	12	20	345	60	50	0.456	1.205	1.647	1010	1231	285	220	193
4/0	19	20	12	20	345	60	80	0.512	1.260	1.702	1170	1421	325	250	220
ONE - THIRD (1/3) NEUTRAL													3/C Direct Buried	3/C Duct Buried	3/C Duct In Air
1/0	19	6	14	20	345	60	50	0.362	1.110	1.458	635	840	215	165	145
2/0	19	7	14	20	345	60	50	0.405	1.155	1.503	703	911	245	190	167
3/0	19	9	14	20	345	60	50	0.456	1.205	1.613	790	1003	275	215	189
4/0	19	11	14	20	345	60	80	0.512	1.260	1.668	890	1120	305	245	215
250	37	13	14	25	345	60	80	0.558	1.335	1.743	1005	1305	335	270	238
350	37	11	12	25	345	60	80	0.660	1.435	1.877	1225	1584	390	320	280
500	37	16	12	25	345	80	80	0.789	1.565	2.047	1599	2001	440	385	338
750	61	15	10	30	345	80	80	0.968	1.755	2.279	2125	2623	515	475	417
1000	61	20	10	30	345	80	80	1.117	1.900	2.424	2730	3137	570	535	470

COPPER CONDUCTOR

Phase Conductor		Copper Neutral		Thickness (mils)				Diameter (Inches)			Net Weight (lbs./1000ft)		Allowable Ampacities+		
Size (AWG / kcmil)	No. of Wires	No. of Wires	Wire Size (AWG)	Cond. Shield	Insul. (Min. Avg.)	Insul. Shield	Jkt.	Bare Phase Cond.	Over Insul.	Over Jkt.	With-out Jacket	Comp. Cable	1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
FULL NEUTRAL															
1/0	19	16	12	20	345	60	50	0.362	1.110	1.492	1218	1327	280	215	189
2/0	19	20	12	20	345	60	50	0.405	1.155	1.597	1414	1522	310	240	211
3/0	19	25	12	20	345	60	50	0.456	1.205	1.647	1653	1760	355	275	241
4/0	19	32	12	20	345	60	80	0.512	1.260	1.702	1992	2099	410	315	276
ONE - THIRD (1/3) NEUTRAL													3/C Direct Buried	3/C Duct Buried	3/C Duct In Air
1/0	19	9	14	20	345	60	50	0.362	1.110	1.458	999	1102	270	215	189
2/0	19	11	14	20	345	60	50	0.405	1.155	1.503	1139	1244	305	240	211
3/0	19	14	14	20	345	60	50	0.456	1.205	1.613	1316	1423	340	280	246
4/0	19	11	12	20	345	60	80	0.512	1.260	1.702	1576	1707	380	315	276
250	37	13	12	25	345	60	80	0.558	1.335	1.777	1799	1971	405	340	298
350	37	12	10	25	345	60	80	0.660	1.435	1.919	2269	2474	460	400	350
500	37	17	10	25	345	80	80	0.789	1.565	2.089	3117	3337	520	470	412
750	61	25	10	30	345	80	80	0.968	1.755	2.279	4300	4531	567	550	483
1000	61	32	10	30	345	80	80	1.117	1.900	2.424	5435	5671	625	615	540

+ Ampacities based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor, and 36" depth of burial. Values are based on one-three phase circuit, on conductor per phase, in adjacent configuration with neutral wires bonded at each end.