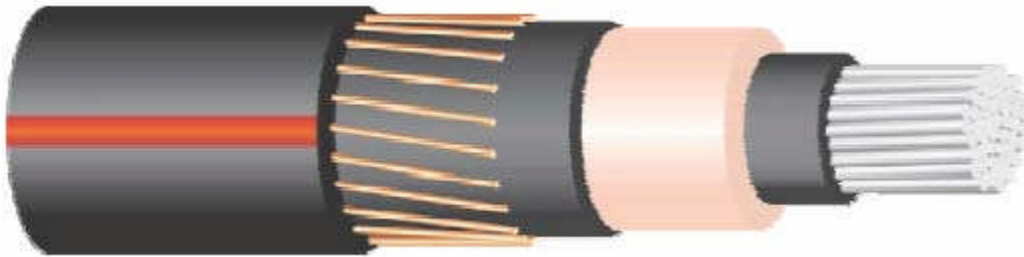




UD (Underground Distribution) Primary Power cables EPR Insulated 15kv to 35kv



APPLICATIONS

EPR 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 105 degrees C. for normal operation.

SPECIFICATIONS

EPR 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 CS-8, 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:	EPR (Ethylene Propylene Rubber), 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 @ 105 degrees C, overload @ 140 degrees C, and Short circuit @ 250 degrees C.

FEATURES & BENEFITS, OPTIONS

- Triple extruded construction by dry curing process guarantees excellent quality of cables.
- EPR insulation offers proven superior life span, more flexible and easy bending insulation than conventional TRXLP 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 EPR 175 Mils (100% Insulation Level)

ALUMINUM 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	10	14	20	175	40	50	0.283	0.695	1.003	455	518	170	115	100
1	19	13	14	20	175	40	50	0.322	0.730	1.038	536	600	195	140	123
1/0	19	16	14	20	175	40	50	0.362	0.770	1.078	615	680	230	155	135
2/0	19	13	12	20	175	40	50	0.405	0.815	1.157	732	810	270	185	162
3/0	19	16	12	20	175	40	50	0.456	0.865	1.207	848	927	295	210	184
4/0	19	20	12	20	175	40	50	0.512	0.920	1.262	1009	1090	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	482	547	230	165	145
2/0	19	7	14	20	175	40	50	0.405	0.815	1.123	552	630	250	190	167
3/0	19	9	14	20	175	40	50	0.456	0.865	1.173	630	709	280	215	189
4/0	19	11	14	20	175	40	50	0.512	0.920	1.228	737	818	320	245	215
250	37	13	14	25	175	40	50	0.558	0.980	1.288	849	959	345	270	237
350	37	11	12	25	175	60	50	0.660	1.080	1.462	1112	1253	405	325	285
500	37	16	12	25	175	60	50	0.789	1.210	1.562	1442	1590	460	385	338
750	61	15	10	30	175	60	80	0.968	1.400	1.884	1959	2149	515	475	417
1000	61	20	10	30	175	80	80	1.117	1.545	2.069	2524	2727	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	677	740	225	160	140
1	19	13	12	20	175	40	50	0.322	0.730	1.072	811	875	260	185	162
1/0	19	16	12	20	175	40	50	0.362	0.770	1.112	960	1025	295	210	185
2/0	19	20	12	20	175	40	50	0.405	0.815	1.157	1166	1244	330	240	210
3/0	19	25	12	20	175	40	50	0.456	0.865	1.207	1398	1477	375	270	237
4/0	19	32	12	20	175	40	50	0.512	0.920	1.262	1703	1784	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	749	814	290	210	185
2/0	19	11	14	20	175	40	50	0.405	0.815	1.123	891	969	320	240	210
3/0	19	14	14	20	175	40	50	0.456	0.865	1.173	1056	1135	350	275	241
4/0	19	11	12	20	175	40	50	0.512	0.920	1.262	1267	1348	390	315	276
250	37	13	12	25	175	40	50	0.558	0.980	1.322	1487	1597	415	340	298
350	37	12	10	25	175	60	50	0.660	1.080	1.504	2022	2164	475	415	364
500	37	17	10	25	175	60	50	0.789	1.210	1.694	2712	2860	525	480	420
750	61	25	10	30	175	60	80	0.968	1.400	1.884	3873	4063	560	530	465
1000	61	32	10	30	175	80	80	1.117	1.545	2.090	5028	5180	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 EPR 220 Mils (133% Insulation Level)

ALUMINUM 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	10	14	20	220	40	50	0.283	0.785	1.093	534	603	170	115	100
1	19	13	14	20	220	40	50	0.322	0.820	1.128	607	676	195	140	123
1/0	19	16	14	20	220	40	50	0.362	0.860	1.168	691	764	230	155	135
2/0	19	13	12	20	220	40	50	0.405	0.905	1.247	808	895	270	185	162
3/0	19	16	12	20	220	40	50	0.456	0.955	1.297	926	1015	295	210	184
4/0	19	20	12	20	220	60	50	0.512	1.010	1.352	1135	1228	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	558	631	230	165	145
2/0	19	7	14	20	220	40	50	0.405	0.905	1.213	628	715	250	190	167
3/0	19	9	14	20	220	40	50	0.456	0.955	1.263	708	797	280	215	189
4/0	19	11	14	20	220	60	50	0.512	1.010	1.318	863	956	320	245	215
250	37	13	14	25	220	60	50	0.558	1.070	1.418	978	1092	345	270	237
350	37	11	12	25	220	60	50	0.660	1.170	1.612	1219	1369	405	325	285
500	37	16	12	25	220	60	50	0.789	1.300	1.742	1555	1715	460	385	338
750	61	15	10	30	220	60	80	0.968	1.490	1.974	2144	2349	515	475	417
1000	61	20	10	30	220	80	80	1.117	1.635	2.159	2667	2882	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	220	40	50	0.283	0.785	1.093	756	825	225	160	140
1	19	13	12	20	220	40	50	0.322	0.820	1.162	881	951	260	185	162
1/0	19	16	12	20	220	40	50	0.362	0.860	1.202	1036	1109	295	210	185
2/0	19	20	12	20	220	40	50	0.405	0.905	1.247	1242	1329	330	240	210
3/0	19	25	12	20	220	40	50	0.456	0.955	1.293	1476	1565	375	270	237
4/0	19	32	12	20	220	60	50	0.512	1.010	1.394	1829	1922	430	305	268
500	37	44	10	25	220	60	50	0.789	1.300	1.784	3689	3849	525	480	420
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	825	898	290	210	185
2/0	19	11	14	20	220	40	50	0.405	0.905	1.213	967	1054	320	240	210
3/0	19	14	14	20	220	40	50	0.456	0.955	1.263	1134	1223	350	275	241
4/0	19	11	12	20	220	60	50	0.512	1.010	1.394	1393	1486	390	315	276
250	37	13	12	25	220	60	50	0.558	1.070	1.452	1617	1731	415	340	298
350	37	12	10	25	220	60	50	0.660	1.170	1.654	2130	2280	475	415	364
500	37	17	10	25	220	60	50	0.789	1.300	1.784	2825	2985	525	480	420
750	61	25	10	30	220	60	80	0.968	1.490	1.974	4058	4263	560	530	465
1000	61	32	10	30	220	80	80	1.117	1.635	2.159	5171	5386	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.

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UD (Underground Distribution) Primary Power cables

25kV EPR 260 Mils (100% Insulation Level)

ALUMINUM 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															
1	19	13	14	20	260	40	50	0.322	0.900	1.208	676	757	195	145	127
1/0	19	16	14	20	260	40	50	0.362	0.940	1.250	762	845	220	165	145
2/0	19	13	12	20	260	40	50	0.405	0.985	1.327	886	986	250	190	167
3/0	19	16	12	20	260	60	50	0.456	1.035	1.417	1038	1141	290	210	185
4/0	19	20	12	20	260	60	50	0.512	1.090	1.472	1233	1340	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	629	712	225	165	145
2/0	19	7	14	20	260	40	50	0.405	0.985	1.293	706	806	250	180	158
3/0	19	9	14	20	260	60	50	0.456	1.035	1.383	820	923	275	205	180
4/0	19	11	14	20	260	60	50	0.512	1.090	1.438	961	1068	310	240	210
250	37	13	14	25	260	60	50	0.558	1.160	1.508	1086	1229	335	260	228
350	37	11	12	25	260	60	80	0.660	1.260	1.702	1328	1500	395	325	285
500	37	16	12	25	260	60	80	0.789	1.390	1.832	1681	1865	445	390	342
750	61	15	10	30	260	80	80	0.968	1.580	2.104	2294	2528	515	475	417
1000	61	20	10	30	260	80	80	1.117	1.725	2.249	2828	3072	560	525	460

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															
1	19	13	12	20	260	40	50	0.322	0.900	1.242	951	1032	245	185	162
1/0	19	16	12	20	260	40	50	0.362	0.940	1.284	1107	1190	280	215	189
2/0	19	20	12	20	260	40	50	0.405	0.985	1.327	1320	1420	315	240	210
3/0	19	25	12	20	260	60	50	0.456	1.035	1.417	1589	1692	360	275	241
4/0	19	32	12	20	260	60	50	0.512	1.090	1.472	1927	2035	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	897	997	275	215	189
2/0	19	11	14	20	260	40	50	0.405	0.985	1.293	1045	1148	310	250	220
3/0	19	14	14	20	260	60	50	0.456	1.035	1.383	1246	1353	345	285	250
4/0	19	11	12	20	260	60	50	0.512	1.090	1.471	1490	1633	385	320	280
250	37	13	12	25	260	60	50	0.558	1.160	1.602	1724	1895	410	345	303
350	37	12	10	25	260	60	80	0.660	1.260	1.744	2338	2424	460	405	355
500	37	17	10	25	260	60	80	0.789	1.390	1.874	2952	3185	520	470	412
750	61	25	10	30	260	80	80	0.968	1.580	2.104	4207	4452	567	550	483
1000	61	32	10	30	260	80	80	1.117	1.725	2.249	5330	5545	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.

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UD (Underground Distribution) Primary Power cables

35kV EPR 345 Mils (100% Insulation Level)

ALUMINUM 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															
1/0	19	16	14	20	345	60	50	0.362	1.110	1.458	968	1068	220	165	145
2/0	19	13	12	20	345	60	50	0.405	1.155	1.593	1105	1224	250	195	170
3/0	19	16	12	20	345	60	50	0.456	1.205	1.647	1236	1356	285	220	193
4/0	19	20	12	20	345	60	80	0.512	1.260	1.702	1433	1558	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	835	935	215	165	145
2/0	19	7	14	20	345	60	50	0.405	1.155	1.503	925	1045	245	190	167
3/0	19	9	14	20	345	60	50	0.456	1.205	1.613	1017	1137	275	215	189
4/0	19	11	14	20	345	60	80	0.512	1.260	1.668	1161	1286	305	245	215
250	37	13	14	25	345	60	80	0.558	1.335	1.743	1301	1484	335	270	238
350	37	11	12	25	345	60	80	0.660	1.435	1.877	1558	1752	390	320	280
500	37	16	12	25	345	80	80	0.789	1.565	2.047	2004	2214	440	385	338
750	61	15	10	30	345	80	80	0.968	1.755	2.279	2590	2850	515	475	417
1000	61	20	10	30	345	80	80	1.117	1.900	2.424	3143	3417	570	535	470

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															
1/0	19	16	12	20	345	60	50	0.362	1.110	1.492	1314	1414	280	215	189
2/0	19	20	12	20	345	60	50	0.405	1.155	1.597	1539	1657	310	240	211
3/0	19	25	12	20	345	60	50	0.456	1.205	1.647	1785	1905	355	275	241
4/0	19	32	12	20	345	60	80	0.512	1.260	1.702	2127	2253	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	1103	1222	270	215	189
2/0	19	11	14	20	345	60	50	0.405	1.155	1.503	1265	1385	305	240	211
3/0	19	14	14	20	345	60	50	0.456	1.205	1.613	1445	1570	340	280	246
4/0	19	11	12	20	345	60	80	0.512	1.260	1.702	1690	1875	380	315	276
250	37	13	12	25	345	60	80	0.558	1.335	1.777	1940	2134	405	340	298
350	37	12	10	25	345	60	80	0.660	1.435	1.919	2470	2680	460	400	350
500	37	17	10	25	345	80	80	0.789	1.565	2.089	3273	3534	520	470	412
750	61	25	10	30	345	80	80	0.968	1.755	2.279	4505	4777	567	550	483
1000	61	32	10	30	345	80	80	1.117	1.900	2.424	5647	5883	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.

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