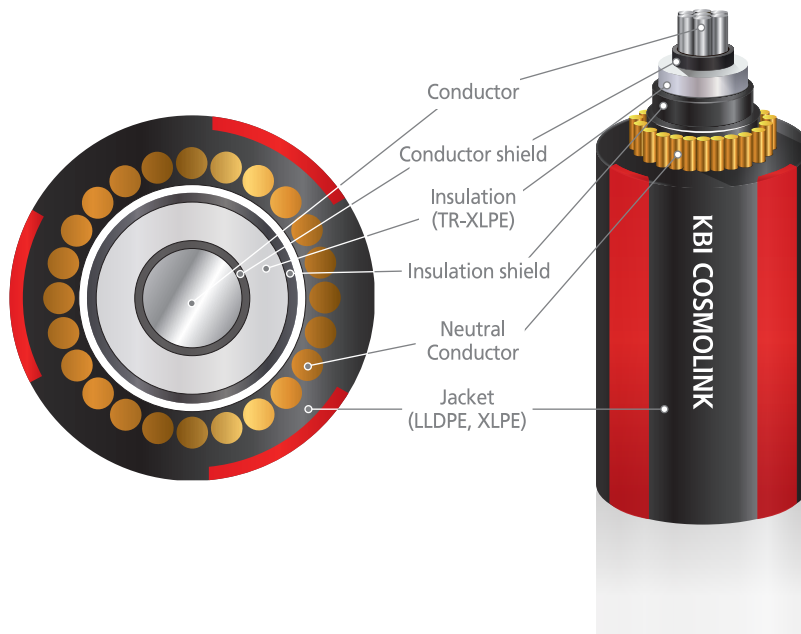


MV UD Cables -

15kV to 35kV

- **SCOPE**

These cables are used in dry or wet locations for primary underground distribution systems of single or three phase medium voltage power.
- **APPLICATION STANDARDS**
 - ICEA S-94-649** Standard for concentric neutral cables rated 5 through 46kV
 - UL 1072** Medium-Voltage power cables
- **MATERIALS & CONSTRUCTION**
 - Conductor** Compacted or compressed concentric lay stranded 1350 aluminum or annealed copper wires with swelling tape or powder for impediment to longitudinal water penetration
 - Conductor shield** Extruded thermosetting semi-conducting shield which is free stripping from conductor and bonded to the insulation
 - Insulation** Triple extruded Extruded thermosetting tree retardant cross linked polyethylene (TR XLPE), assuring resistance to treeing
 - Insulation shield** Extruded thermosetting semi-conducting shield, clean and free stripping from insulation
 - Concentric neutral** Helically applied, annealed, solid bare copper wires neutral water-blocking agents applied over the insulation shield and around the neutral wires to resist longitudinal water penetration
 - Jacket (Encapsulating type)** Black with longitudinal 3 red stripes, non-conducting, sunlight-resistant, cross-linked polyethylene (XLPE) extruded to fill spaces between neutral wires
- **OPTION**
 - Conductor** Annealed copper wires (compressed concentric lay stranded)
 - Different concentric neutral conductor size**
 - Jacket** Linear low-density polyethylene (LLDPE)
- **Certificate**
 - UL(File No. E522162)** Type MV-105 & MV-90 Cable, rated 5 to 35kV



15kV Al Conductor, 100%(175mils) Insulation level

Nominal Cross Sectional Area	Conductor		Thickness					Diameter					Cable net weight (Approx.)
	Shape	Overall diameter (nom.)	Conductor shield thickness (min.)	Insulation thickness (min./ max.)	Insulation shield thickness (min./max.)	Concentric neutral conductor	Jacket thickness (min./ max.)	Insulation overall diameter		Insulation shield overall diameter		Completed cable diameter (Approx.)	
								min.	max.	min.	max.		
AWG or kcmil	-	inches	mils	mils	mils	No./AWG	mils	inches		inches		inches	lb/ft
Full neutral concentric conductor													
1/0	Compressed	0.362	12	165/205	30/60	16/14	45/80	0.709	0.842	0.769	0.962	1.100	0.748
2/0	Compressed	0.405	12	165/205	30/60	20/14	45/80	0.750	0.885	0.810	1.005	1.144	0.847
3/0	Compressed	0.456	12	165/205	30/60	25/14	45/80	0.800	0.937	0.860	1.057	1.195	0.974
4/0	Compressed	0.512	12	165/205	30/60	32/14	45/80	0.856	0.993	0.915	1.113	1.250	1.136
250	Compressed	0.558	16	165/205	30/60	25/12	45/80	0.909	1.062	0.969	1.181	1.343	1.362
350	Compressed	0.661	16	165/205	40/75	32/12	45/80	1.010	1.284	1.091	1.434	1.455	1.665
One-third neutral concentric conductor													
1/0	Compressed	0.362	12	165/205	30/60	6/14	45/80	0.709	0.842	0.769	0.962	1.100	0.550
2/0	Compressed	0.405	12	165/205	30/60	7/14	45/80	0.750	0.885	0.810	1.005	1.144	0.614
3/0	Compressed	0.456	12	165/205	30/60	9/14	45/80	0.800	0.937	0.860	1.057	1.195	0.699
4/0	Compressed	0.512	12	165/205	30/60	11/14	45/80	0.856	0.993	0.915	1.113	1.250	0.797
250	Compressed	0.558	16	165/205	30/60	8/12	45/80	0.909	1.062	0.969	1.181	1.343	0.910
350	Compressed	0.661	16	165/205	40/75	11/12	45/80	1.010	1.284	1.091	1.434	1.455	1.157
500	Compressed	0.789	16	165/205	40/75	16/12	45/80	1.135	1.294	1.215	1.445	1.581	1.475
750	Compressed	0.968	20	165/205	40/75	24/12	70/120	1.319	1.483	1.399	1.633	1.801	2.053
1000	Compressed	1.117	20	165/205	55/90	31/12	70/120	1.465	1.633	1.575	1.813	1.980	2.575
1250	Compressed	1.250	24	210/250	55/90	25/10	70/120	1.693	1.872	1.803	2.052	2.254	3.288

25kV Al Conductor, 100%(260mils) Insulation level

Nominal Cross Sectional Area	Conductor		Thickness					Diameter					Cable net weight (Approx.)
	Shape	Overall diameter (nom.)	Conductor shield thickness (min.)	Insulation thickness (min./ max.)	Insulation shield thickness (min./max.)	Concentric neutral conductor	Jacket thickness (min./ max.)	Insulation overall diameter		Insulation shield overall diameter		Completed cable diameter (Approx.)	
								min.	max.	min.	max.		
AWG or kcmil	-	inches	mils	mils	mils	No./AWG	mils	inches		inches		inches	lb/ft
Full neutral concentric conductor													
1/0	Compressed	0.362	12	245/290	30/60	16/14	45/80	0.869	1.012	0.928	1.132	1.260	0.804
2/0	Compressed	0.405	12	245/290	30/60	20/14	45/80	0.910	1.055	0.970	1.175	1.340	0.910
3/0	Compressed	0.456	12	245/290	40/75	25/14	45/80	0.960	1.107	1.041	1.258	1.365	1.065
4/0	Compressed	0.512	12	245/290	40/75	32/14	45/80	1.015	1.163	1.096	1.314	1.420	1.235
250	Compressed	0.558	16	245/290	40/75	25/12	45/80	1.069	1.232	1.149	1.382	1.513	1.432
350	Compressed	0.661	16	245/290	40/75	32/12	70/120	1.170	1.454	1.250	1.604	1.650	1.709
One-third neutral concentric conductor													
1/0	Compressed	0.362	12	245/290	30/60	6/14	45/80	0.869	1.012	0.928	1.132	1.260	0.677
2/0	Compressed	0.405	12	245/290	30/60	7/14	45/80	0.910	1.055	0.970	1.175	1.304	0.748
3/0	Compressed	0.456	12	245/290	40/75	9/14	45/80	0.960	1.107	1.041	1.258	1.365	0.868
4/0	Compressed	0.512	12	245/290	40/75	11/14	45/80	1.015	1.163	1.096	1.314	1.420	0.967
250	Compressed	0.558	16	245/290	40/75	8/12	45/80	1.069	1.232	1.149	1.382	1.513	1.094
350	Compressed	0.661	16	245/290	40/75	11/12	70/120	1.170	1.454	1.250	1.604	1.650	1.383
500	Compressed	0.789	16	245/290	40/75	16/12	70/120	1.295	1.465	1.375	1.615	1.776	1.722
750	Compressed	0.968	20	245/290	55/90	24/12	70/120	1.479	1.653	1.589	1.833	1.991	2.307
1000	Compressed	1.117	20	245/290	55/90	31/12	70/120	1.625	1.803	1.735	1.983	2.140	2.794
1250	Compressed	1.250	24	245/290	55/90	25/10	70/120	1.763	1.952	1.873	2.133	2.324	3.394

35kV Al Conductor, 100%(345mils) Insulation level

Nominal Cross Sectional Area	Conductor		Thickness					Diameter					Cable net weight (Approx.)
	Shape	Overall diameter (nom.)	Conductor shield thickness (min.)	Insulation thickness (min./ max.)	Insulation shield thickness (min./max.)	Concentric neutral conductor	Jacket thickness (min./ max.)	Insulation overall diameter		Insulation shield overall diameter		Completed cable diameter (Approx.)	
								min.	max.	min.	max.		
AWG or kcmil	-	inches	mils	mils	mils	No./AWG	mils	inches		inches		inches	lb/ft
Full neutral concentric conductor													
1/0	Compressed	0.362	12	330/375	40/75	16/14	45/80	1.039	1.183	1.119	1.333	1.440	0.988
2/0	Compressed	0.405	12	330/375	40/75	20/14	45/80	1.080	1.225	1.161	1.376	1.483	1.101
3/0	Compressed	0.456	12	330/375	40/75	25/14	45/80	1.130	1.227	1.211	1.428	1.535	1.228
4/0	Compressed	0.512	12	330/375	40/75	32/14	45/80	1.185	1.333	1.266	1.484	1.625	1.602
250	Compressed	0.558	16	330/375	40/75	25/12	45/80	1.239	1.402	1.319	1.552	1.718	1.679
350	Compressed	0.661	16	330/375	40/75	32/12	45/80	1.340	1.624	1.420	1.774	1.820	1.997
One-third neutral concentric conductor													
1/0	Compressed	0.362	12	330/375	40/75	6/14	45/80	1.039	1.183	1.119	1.333	1.440	0.861
2/0	Compressed	0.405	12	330/375	40/75	7/14	45/80	1.080	1.225	1.161	1.376	1.483	0.931
3/0	Compressed	0.456	12	330/375	40/75	9/14	45/80	1.130	1.227	1.211	1.428	1.535	1.030
4/0	Compressed	0.512	12	330/375	40/75	11/14	45/80	1.185	1.333	1.266	1.484	1.625	1.136
250	Compressed	0.558	16	330/375	40/75	8/12	70/120	1.239	1.402	1.319	1.552	1.718	1.341
350	Compressed	0.661	16	330/375	40/75	11/12	70/120	1.340	1.624	1.420	1.774	1.820	1.580
500	Compressed	0.789	16	330/375	55/90	16/12	70/120	1.465	1.635	1.575	1.815	1.976	1.976
750	Compressed	0.968	20	330/375	55/90	24/12	70/120	1.649	1.823	1.759	2.003	2.161	2.540
1000	Compressed	1.117	20	330/375	55/90	31/12	70/120	1.795	1.973	1.905	2.153	2.310	3.048
1250	Compressed	1.250	24	330/375	55/90	25/10	70/120	1.933	2.052	2.043	2.233	2.494	3.669

15kV Al Conductor, 133%(220mils) Insulation level

Nominal Cross Sectional Area	Conductor		Thickness					Diameter					Cable net weight (Approx.)
	Shape	Overall diameter (nom.)	Conductor shield thickness (min.)	Insulation thickness (min./ max.)	Insulation shield thickness (min./max.)	Concentric neutral conductor	Jacket thickness (min./ max.)	Insulation overall diameter		Insulation shield overall diameter		Completed cable diameter (Approx.)	
								min.	max.	min.	max.		
AWG or kcmil	-	inches	mils	mils	mils	No./AWG	mils	inches		inches		inches	lb/ft
Full neutral concentric conductor													
1/0	Compressed	0.362	12	210/250	30/60	16/14	45/80	0.798	0.932	0.858	1.052	1.190	0.677
2/0	Compressed	0.405	12	210/250	30/60	20/14	45/80	0.840	0.975	0.900	1.095	1.234	0.776
3/0	Compressed	0.456	12	210/250	30/60	25/14	45/80	0.890	1.027	0.950	1.147	1.285	0.903
4/0	Compressed	0.512	12	210/250	30/60	32/14	45/80	0.945	1.083	1.005	1.203	1.340	1.058
250	Compressed	0.558	16	210/250	40/75	25/12	45/80	0.999	1.152	1.079	1.302	1.443	1.249
350	Compressed	0.661	16	210/250	40/75	32/12	45/80	1.100	1.374	1.180	1.524	1.545	1.573
One-third neutral concentric conductor													
1/0	Compressed	0.362	12	210/250	30/60	6/14	45/80	0.798	0.932	0.858	1.052	1.190	0.621
2/0	Compressed	0.405	12	210/250	30/60	7/14	45/80	0.840	0.975	0.900	1.095	1.234	0.684
3/0	Compressed	0.456	12	210/250	30/60	9/14	45/80	0.890	1.027	0.950	1.147	1.285	0.769
4/0	Compressed	0.512	12	210/250	30/60	11/14	45/80	0.945	1.083	1.005	1.203	1.340	0.875
250	Compressed	0.558	16	210/250	40/75	8/12	45/80	0.999	1.152	1.079	1.302	1.443	1.023
350	Compressed	0.661	16	210/250	40/75	11/12	45/80	1.100	1.374	1.180	1.524	1.545	1.249
500	Compressed	0.789	16	210/250	40/75	16/12	70/120	1.225	1.384	1.305	1.535	1.706	1.637
750	Compressed	0.968	20	210/250	40/75	24/12	70/120	1.409	1.572	1.489	1.723	1.891	2.166
1000	Compressed	1.117	20	210/250	55/90	31/12	70/120	1.555	1.722	1.665	1.909	2.070	2.695
1250	Compressed	1.250	24	210/250	55/90	25/10	70/120	1.693	1.872	1.803	2.052	2.254	3.288

25kV Al Conductor, 133%(320mils) Insulation level

Nominal Cross Sectional Area	Conductor		Thickness					Diameter					Cable net weight (Approx.)
	Shape	Overall diameter (nom.)	Conductor shield thickness (min.)	Insulation thickness (min./ max.)	Insulation shield thickness (min./max.)	Concentric neutral conductor	Jacket thickness (min./ max.)	Insulation overall diameter		Insulation shield overall diameter		Completed cable diameter (Approx.)	
								min.	max.	min.	max.		
AWG or kcmil	-	inches	mils	mils	mils	No./AWG	mils	inches		inches		inches	lb/ft
Full neutral concentric conductor													
1/0	Compressed	0.362	12	305/350	40/75	16/14	45/80	0.989	1.132	1.069	1.283	1.389	0.938
2/0	Compressed	0.405	12	305/350	40/75	20/14	45/80	1.031	1.175	1.111	1.325	1.433	1.051
3/0	Compressed	0.456	12	305/350	40/75	25/14	45/80	1.081	1.227	1.161	1.377	1.484	1.178
4/0	Compressed	0.512	12	305/350	40/75	32/14	45/80	1.136	1.283	1.216	1.433	1.539	1.348
250	Compressed	0.558	16	305/350	40/75	25/12	70/120	1.189	1.352	1.270	1.502	1.668	1.623
350	Compressed	0.661	16	305/350	40/75	32/12	70/120	1.291	1.574	1.371	1.724	1.770	1.940
One-third neutral concentric conductor													
1/0	Compressed	0.362	12	305/350	40/75	6/14	45/80	0.989	1.132	1.069	1.283	1.389	0.811
2/0	Compressed	0.405	12	305/350	40/75	7/14	45/80	1.031	1.175	1.111	1.325	1.433	0.882
3/0	Compressed	0.456	12	305/350	40/75	9/14	45/80	1.081	1.227	1.161	1.377	1.484	0.981
4/0	Compressed	0.512	12	305/350	40/75	11/14	45/80	1.136	1.283	1.216	1.433	1.539	1.087
250	Compressed	0.558	16	305/350	40/75	8/12	70/120	1.189	1.352	1.270	1.502	1.668	1.284
350	Compressed	0.661	16	305/350	40/75	11/12	70/120	1.291	1.574	1.371	1.724	1.770	1.517
500	Compressed	0.789	16	305/350	40/75	16/12	70/120	1.415	1.584	1.496	1.735	1.896	1.863
750	Compressed	0.968	20	305/350	55/90	24/12	70/120	1.599	1.772	1.709	1.953	2.110	2.469
1000	Compressed	1.117	20	305/350	55/90	31/12	70/120	1.745	1.922	1.856	2.103	2.260	2.970
1250	Compressed	1.250	24	305/350	55/90	25/10	70/120	1.883	2.072	1.994	2.252	2.444	3.584

35kV Al Conductor, 133%(420mils) Insulation level

Nominal Cross Sectional Area	Conductor		Thickness					Diameter					Cable net weight (Approx.)
	Shape	Overall diameter (nom.)	Conductor shield thickness (min.)	Insulation thickness (min./ max.)	Insulation shield thickness (min./max.)	Concentric neutral conductor	Jacket thickness (min./ max.)	Insulation overall diameter		Insulation shield overall diameter		Completed cable diameter (Approx.)	
								min.	max.	min.	max.		
AWG or kcmil	-	inches	mils	mils	mils	No./AWG	mils	inches		inches		inches	lb/ft
Full neutral concentric conductor													
1/0	Compressed	0.362	12	400/460	40/75	16/14	45/80	1.182	1.353	1.262	1.504	1.579	1.122
2/0	Compressed	0.405	12	400/460	40/75	20/14	70/120	1.224	1.396	1.304	1.547	1.658	1.305
3/0	Compressed	0.456	12	400/460	40/75	25/14	70/120	1.274	1.448	1.354	1.599	1.709	1.446
4/0	Compressed	0.512	12	400/460	40/75	32/14	70/120	1.329	1.504	1.409	1.655	1.765	1.623
250	Compressed	0.558	16	400/460	40/75	25/12	70/120	1.382	1.573	1.463	1.723	1.857	1.849
350	Compressed	0.661	16	400/460	55/90	32/12	70/120	1.483	1.795	1.594	1.975	1.990	2.223
One-third neutral concentric conductor													
1/0	Compressed	0.362	12	400/460	40/75	6/14	45/80	1.182	1.353	1.262	1.504	1.579	0.995
2/0	Compressed	0.405	12	400/460	40/75	7/14	70/120	1.224	1.396	1.304	1.547	1.658	1.143
3/0	Compressed	0.456	12	400/460	40/75	9/14	70/120	1.274	1.448	1.354	1.599	1.709	1.242
4/0	Compressed	0.512	12	400/460	40/75	11/14	70/120	1.329	1.504	1.409	1.655	1.765	1.291
250	Compressed	0.558	16	400/460	40/75	8/12	70/120	1.382	1.573	1.463	1.723	1.857	1.510
350	Compressed	0.661	16	400/460	55/90	11/12	70/120	1.483	1.795	1.594	1.975	1.990	1.806
500	Compressed	0.789	16	400/460	55/90	16/12	70/120	1.608	1.806	1.719	1.986	2.116	2.173
750	Compressed	0.968	20	400/460	55/90	24/12	70/120	1.792	1.994	1.902	2.174	2.300	2.752
1000	Compressed	1.117	20	400/460	55/90	31/12	70/120	1.938	2.144	2.048	2.324	2.450	3.274
1250	Compressed	1.250	24	400/460	55/90	25/10	70/120	2.076	2.293	2.187	2.474	2.634	3.909