KEI

Wires & Cables

MEDIUM VOLTAGE CABLES

UL 1072

TABLE OF CONTENTS

Sr.No.	Content	Page.No
01	ABOUT US	01
02	MV-105 5kV-35kV,TR-XLPE (100%), Copper tape shielded	02
03	MV-105 35kV, TR-XLPE (100%), Concetric neutral shield	06
04	MV-105 5kV-35kV, EPR (133%), Copper tape shielded	08

KEI
Wires & Cables

About Us

KEI has been at the forefront of India's wire and cable industry for the last 5 decades. We manufacture a range of specialized cables and are a crucial player in the domestic and retail segment. Since inception, we have firmly believed in the philosophy of constant growth and innovation. Customer satisfaction has always been our priority. A highly qualified, committed and experienced group of professionals strive to meet international standards and cater to the needs of a changing market. Our unblemished track record has earned us the patronage of leading industrial houses, project consultants and architects. In order to provide reliable and expedient services to our customers, we have created manufacturing facilities at Silvassa, Chopanki, Bhiwadi, Pathredi & Chinchpada. We employ state-of-the-art equipment and adhere to international safety and environmental norms. KEI was established in 1968 as a partnership company in the domestic wire segment. In the early seventies we started manufacturing switchboard cables and control, instrumentation and thermocouple extension cables including special application cables like fire retardant and low halogen cables. In 1993 we added power cables with PVC & XLPE insulation in our product line.
Today KEI is a one-stop-shop when it comes to meeting cabling requirements for the domestic, power and industrial sectors.

MV-105
5kV-35kV,TR-XLPE (100%), Copper tape shielded

Application :

è Suitable for installed in open air, duct or direct buired in the ground, in wet or dry locations

è For chemical plants, refineries, steel mills, industrail plants, commercial buildings, substations

è Suitable for temperature rating as below:

- **Normal operations** : 105 °C
- **Emergency overload condition** : 140 °C
- **Short Circuit condition** : 250 °C

è Suitable for voltage rating from 5 kV to 35 kV grade

è Excellence sunlight resistance, FT4 , CT use, Oil resistant-I

Standards :

è UL 1072 - Medium Voltage Power Cables.

Constructional details :

- **Conductor** : Stranded soft annealed plain copper or stranded hard drawn aluminum
- **Conductor shield** : Extruded semi conducting layer over conductor
- **Insulation** : Tree retardant cross-linked polyethylene (TR-XLPE)
- **Insulation shield** : Extruded semi conducting layer over insulation
  (Conductor shield, insulation & insulation shield shall be provided in triple extrusion process)
- **Metallic shield** : Metallic screen of copper tape
  (on request option - concetric neutral of solid soft annealed plain copper wires)
- **Jacket** : XLPE jacket (Sun light resistant , low temperture (-40 degc), Direct burial)
  PVC jacket (FT-4, Oil resistant-I, CT use, low temperture (-40 degc), Direct burial)
  FRPE jacket (Sun light resistant, oil resistant-I, low temperture(-40 degc), Direct burial)
  LLDPE jacket (Sun light resistant, low temperture (-40 degc), Direct burial)

*Suitable tape can be provided at any layer if required.

MV-105
5kV-35kV,TR-XLPE (100%), Copper tape shielded

Voltage grade - 5 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max.(Mils)	Min. (Mils)	inches	lb/kft	
6	7	0.169	85	120	55	0.63	227	172
4	7	0.213	85	120	55	0.67	290	203
2	7	0.268	85	120	55	0.72	383	245
1	19	0.299	85	120	55	0.76	447	272
1/0	19	0.336	85	120	55	0.79	526	305
2/0	19	0.376	85	120	70	0.86	639	361
3/0	19	0.423	85	120	70	0.91	761	411
4/0	19	0.475	85	120	70	0.96	911	471
250	37	0.520	85	120	70	1.01	1047	525
350	37	0.616	85	120	70	1.10	1379	651
500	37	0.736	85	120	70	1.22	1875	833
750	61	0.908	85	120	70	1.39	2692	1128
1000	61	1.060	85	120	70	1.54	3501	1414

Voltage grade - 8 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max.(Mils)	Min. (Mils)	inches	lb/kft	
6	7	0.169	110	145	55	0.68	251	196
4	7	0.213	110	145	55	0.72	315	228
2	7	0.268	110	145	55	0.77	411	272
1	19	0.299	110	145	55	0.81	475	300
1/0	19	0.336	110	145	70	0.87	572	352
2/0	19	0.376	110	145	70	0.91	671	393
3/0	19	0.423	110	145	70	0.96	794	444
4/0	19	0.475	110	145	70	1.01	947	506
250	37	0.520	110	145	70	1.06	1083	561
350	37	0.616	110	145	70	1.15	1419	690
500	37	0.736	110	145	70	1.27	1919	878
750	61	0.908	110	145	70	1.44	2742	1177
1000	61	1.060	110	145	70	1.59	3556	1469

MV-105
5kV-35kV,TR-XLPE (100%), Copper tape shielded

Voltage grade - 15 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max.(Mils)	Min. (Mils)	inches	lb/kft	
2	7	0.268	165	205	70	0.92	497	358
1	19	0.299	165	205	70	0.95	566	391
1/0	19	0.336	165	205	70	0.99	648	428
2/0	19	0.376	165	205	70	1.03	750	472
3/0	19	0.423	165	205	70	1.07	878	528
4/0	19	0.475	165	205	70	1.13	1033	593
250	37	0.520	165	205	70	1.17	1173	651
350	37	0.616	165	205	70	1.27	1516	787
500	37	0.736	165	205	70	1.39	2024	983
750	61	0.908	165	205	70	1.56	2860	1296
1000	61	1.060	165	205	100	1.77	3754	1667

Voltage grade - 25 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max.(Mils)	Min. (Mils)	inches	lb/kft	
1	19	0.299	245	290	70	1.11	686	511
1/0	19	0.336	245	290	70	1.15	773	553
2/0	19	0.376	245	290	70	1.19	879	602
3/0	19	0.423	245	290	70	1.24	1011	661
4/0	19	0.475	245	290	70	1.29	1173	732
250	37	0.520	245	290	70	1.34	1318	795
350	37	0.616	245	290	70	1.43	1671	943
500	37	0.736	245	290	70	1.55	2192	1151
750	61	0.908	245	290	100	1.78	3114	1550
1000	61	1.060	245	290	100	1.93	3962	1875

MV-105
5kV-35kV,TR-XLPE (100%), Copper tape shielded

Voltage grade - 35 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max.(Mils)	Min. (Mils)	inches	lb/kft	
1/0	19	0.336	330	375	70	1.32	920	699
2/0	19	0.376	330	375	70	1.36	1030	752
3/0	19	0.423	330	375	70	1.41	1167	817
4/0	19	0.475	330	375	70	1.46	1336	895
250	37	0.520	330	375	70	1.50	1485	962
350	37	0.616	330	375	70	1.60	1848	1119
500	37	0.736	330	375	100	1.78	2451	1410
750	61	0.908	330	375	100	1.95	3331	1766
1000	61	1.060	330	375	100	2.10	4196	2109

MV-105
35kV, TR-XLPE (100%), Concetric neutral shield

Application :

è Suitable for installed in open air, duct or direct buired in the ground, in wet or dry locations

è For chemical plants, refineries, steel mills, industrail plants, commercial buildings, substations

è Suitable for temperature rating as below :

- **Normal operations** : 105 °C
- **Emergency overload condition** : 140 °C
- **Short Circuit condition** : 250 °C

Standards :

è ICEA S-94-639 - Concentric neutral cables rated 5 through 46 Kv

Constructional details :

- **Conductor** : Stranded & compacted hard drawn aluminum
- **Conductor shield** : Extruded semi conducting layer over conductor
- **Insulation** : Tree retardant cross-linked polyethylene (TR-XLPE)
- **Insulation shield** : Extruded semi conducting layer over insulation
  (Conductor shield, insulation & insulation shield shall be provided in triple extrusion process)
- **Bedding tape** : Semi conducting tape below shield
- **Metallic shield** : Concetric neutral of solid soft annealed plain copper wires
- **Jacket** : Extruded XLPE jacket
  (Sun light resistant , low temperture (-40 degc), Direct burial)

*Suitable tape can be provided at any layer if required.

MV-105
35kV, TR-XLPE (100%), Concetric neutral shield

UG Distribution cable - 35 kV- Concentric neutral										
Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Copper neutral design	Concentric neutral		Jacket thickness	Cable Diameter (approx.)	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max. (Mils)		Number	AWG	Min. (Mils)	inches	lb/kft
1/0	19	0.336	330	375	Full	19	16	70	1.42	805
1/0					2/3	13	16	70	1.42	812
1/0					1/2	10	16	70	1.42	788
1/0					1/3	7	16	70	1.42	765
3/0	19	0.423	330	375	Full	18	14	70	1.54	1056
3/0					2/3	20	16	70	1.51	984
3/0					1/2	15	16	70	1.51	945
3/0					1/3	10	16	70	1.51	906
4/0	19	0.475	330	375	Full	23	14	70	1.59	1195
4/0					2/3	16	14	70	1.59	1108
4/0					1/2	19	16	70	1.56	1054
4/0					1/3	13	16	70	1.56	1007
350	37	0.616	330	375	2/3	26	14	100	1.79	1526
350					1/2	19	14	100	1.79	1438
350					1/3	20	16	100	1.76	1354
350					1/6	10	16	100	1.76	1275
500	37	0.736	330	375	2/3	23	12	100	1.94	1887
500					1/2	17	12	100	1.94	1768
500					1/3	18	14	100	1.91	1653
500					1/6	15	16	100	1.88	1541
750	61	0.908	330	375	1/2	26	12	100	2.11	2303
750					1/3	17	12	100	2.11	2125
750					1/6	22	16	100	2.05	1953
1000	61	1.060	330	375	1/2	22	10	100	2.31	2831
1000					1/3	23	12	100	2.26	2586
1000					1/6	18	14	100	2.23	2351

MV-105
5kV-35kV, EPR (133%), Copper tape shielded

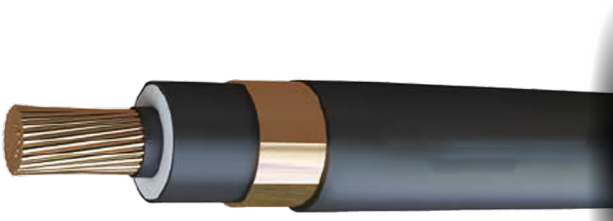
Application :

è Suitable for installed in open air, duct or direct buired in the ground, in wet or dry locations

è Excellence sunlight resistance, FT4 , CT use, Oil resistant-I & Low temperature (-40 degc)

è Suitable for temperature rating as below:

- **Normal operations** : 105 °C
- **Emergency overload condition** : 140 °C
- **Short Circuit condition** : 250 °C



è Suitable for voltage rating from 5 kV to 35 kV grade

è Suitable for insulation level of 100% & 133%

Standards :

è UL 1072 - Medium Voltage Power Cables.

Constructional details :

- **Conductor** : Stranded soft annealed plain copper or stranded hard drawn aluminum
- **Conductor shield** : Extruded semi conducting layer over conductor
- **Insulation** : Ethlene propylene rubber (EPR) insulation
- **Insulation shield** : Extruded semi conducting layer over insulation

  (Conductor shield, insulation & insulation shield shall be provided in triple extrusion process)
- **Metallic shield** : Metallic screen of copper tape
- **Jacket** : Chlorinated Polyethylene (CPE) jacket

  (Sun light resistant , low temperture (-40 degc), Oil resistant I, FT-4, direct burial)

  Polyvinyl Chloride (PVC) jacket

  (Sun light resistant , low temperture (-40 degc) , direct burial)

*Suitable tape can be provided at any layer if required.

MV-105
5kV-35kV, EPR (133%), Copper tape shielded

Voltage grade - 5 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max.(Mils)	Min. (Mils)	inches	lb/kft	
6	7	0.169	85	120	55	0.63	252	198
4	7	0.213	85	120	55	0.67	318	231
2	7	0.268	85	120	55	0.72	416	278
1	19	0.299	85	120	55	0.76	482	308
1/0	19	0.336	85	120	55	0.79	565	344
2/0	19	0.376	85	120	70	0.86	681	404
3/0	19	0.423	85	120	70	0.91	807	457
4/0	19	0.475	85	120	70	0.96	961	521
250	37	0.520	85	120	70	1.01	1100	578
350	37	0.616	85	120	70	1.10	1441	713
500	37	0.736	85	120	70	1.22	1945	904
750	61	0.908	85	120	70	1.39	2776	1212
1000	61	1.060	85	120	70	1.54	3598	1511

Voltage grade - 8 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max. (Mils)	Min. (Mils)	inches	lb/kft	
6	7	0.169	135	170	55	0.73	318	263
4	7	0.213	135	170	55	0.77	388	301
2	7	0.268	135	170	55	0.82	491	353
1	19	0.299	135	170	70	0.88	577	402
1/0	19	0.336	135	170	70	0.92	664	443
2/0	19	0.376	135	170	70	0.96	768	491
3/0	19	0.423	135	170	70	1.01	898	548
4/0	19	0.475	135	170	70	1.06	1058	618
250	37	0.520	135	170	70	1.11	1201	678
350	37	0.616	135	170	70	1.20	1551	822
500	37	0.736	135	170	70	1.32	2067	1026
750	61	0.908	135	170	70	1.49	2914	1350
1000	61	1.060	135	170	70	1.64	3750	1663

MV-105
5kV-35kV, EPR (133%), Copper tape shielded

Voltage grade - 15 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max.(Mils)	Min. (Mils)	inches	lb/kft	
2	7	0.268	210	250	70	1.01	645	507
1	19	0.299	210	250	70	1.04	719	545
1/0	19	0.336	210	250	70	1.08	811	591
2/0	19	0.376	210	250	70	1.12	921	643
3/0	19	0.423	210	250	70	1.16	1059	709
4/0	19	0.475	210	250	70	1.22	1226	786
250	37	0.520	210	250	70	1.26	1375	853
350	37	0.616	210	250	70	1.36	1740	1011
500	37	0.736	210	250	70	1.48	2273	1232
750	61	0.908	210	250	70	1.65	3146	1582
1000	61	1.060	210	250	100	1.86	4076	1989

Voltage grade - 25 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max.(Mils)	Min. (Mils)	inches	lb/kft	
1	19	0.299	305	350	70	1.23	931	757
1/0	19	0.336	305	350	70	1.27	1029	809
2/0	19	0.376	305	350	70	1.31	1148	870
3/0	19	0.423	305	350	70	1.36	1294	944
4/0	19	0.475	305	350	70	1.41	1471	1030
250	37	0.520	305	350	70	1.45	1628	1106
350	37	0.616	305	350	70	1.55	2011	1282
500	37	0.736	305	350	100	1.73	2632	1590
750	61	0.908	305	350	100	1.90	3544	1980
1000	61	1.060	305	350	100	2.05	4437	2350

MV-105
5kV-35kV, EPR (133%), Copper tape shielded

Voltage grade - 35 kV

Conductor Size	Number of Strands	Conductor Diameter (Nominal)	Insulation thickness		Jacket thickness	Cable Diameter (approx.)	Approx. weight Copper	Approx. weight Aluminum
AWG or kcmil		inches	Min. (Mils)	Max.(Mils)	Min. (Mils)	inches	lb/kft	
1/0	19	0.336	400	450	70	1.47	1285	1065
2/0	19	0.376	400	450	70	1.51	1409	1132
3/0	19	0.423	400	450	70	1.55	1565	1215
4/0	19	0.475	400	450	70	1.60	1750	1310
250	37	0.520	400	450	70	1.65	1918	1395
350	37	0.616	400	450	100	1.81	2385	1657
500	37	0.736	400	450	100	1.93	2969	1927
750	61	0.908	400	450	100	2.10	3913	2349
1000	61	1.060	400	450	100	2.25	4833	2746

KEI
Wires & Cables

BRIDGING THE GAP ACROSS 60 DIFFERENT COUNTRIES

THE POWER BEHIND THE POWER

Scan to reach other offices

KEI/TF/QCL/JAN/2024

KEI Industries Limited

REGISTERED AND CORPORATE OFFICE:
D-90, OKHLA INDUSTRIAL AREA PHASE-I, NEW DELHI-110020, TEL: +91-11-26818840/8642/0242 FAX: 26817225, 26811959
E-MAIL: info@kei-ind.com, ibd@kei-ind.com | WEBSITE: www.kei-ind.com | CIN NO: L74899DL1992PLC051527

/keicables @keicables /keicables