



MEDIUM VOLTAGE ARMoured CABLES: IEC 60502-2

Application

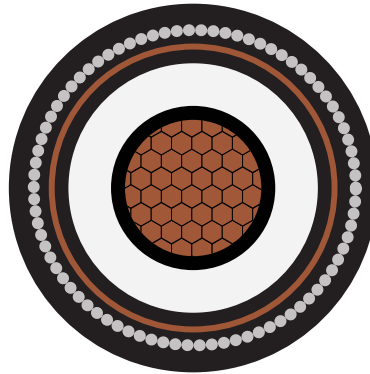
These Medium Voltage Single Core & Three Core Cables are Designed for Electricity Power Distribution, Suitable for Installation in Power Supply Stations, Commercial, Industrial and Urban Residential Networks, Indoors and in Cable Ducts, Outdoors, Undergrounds and as well as for Installation on Cable Trays for industries, Switchboards and the power Stations with Nominal Voltage U_0/U Ranging from 3.6/6 kV to 18/30 kV.

Construction

- Conductor** : Annealed Plain Copper or Aluminium Compacted Round Stranded Conductors to carry Current and withstand Pulling Stresses During Cable Laying.
Conductors Complying with IEC 60228
- Inner Semi-Conducting Screen** : Extruded Layer of Semi-Conducting Screen over Conductor to Smooth the Electric Field at the Conductor and Firmly Bonded to the Insulation to exclude all air voids and Prevent Concentration of electric field of the interface between the Insulation and the Inner Semi-Conductor. Semi-Conducting Compound Complying with IEC 60502-2
- Insulation** : The Insulation of XLPE (Cross-Linked Polyethylene) Rated Voltage, Lightning Overoltage, Switching Overvoltage and Withstand the Various Voltage Field Stress During the Cable Service Life as per IEC 60502-2
- Core Semi-Conducting Screen** : Extruded Layer of Semi-Conducting Screen over the Insulation. The Screen is Tightly Fitted to the Insulation to Exclude all air Voids, Prevent Concentration of electric field of the interface between the Insulation and the Semi-Conductor. Semi-Conducting Compound Complying with IEC 60502-2
- Metallic Screen** : The Metallic Screen Shall Consist of Copper Tape. The Metallic Layer may be applied over the Individual Cores. Metallic Screen Provide no Electric Field outer side of the Cable.
- Filler (Optional)** : Non Hygroscopic filler
- Inner Sheath** : The Inner-sheath Comprises a layer of Extruded as per Requirement PVC or LSZH, Applied Under the Armour, Inner-sheath Compound Complying with IEC 60502-2
- Armour** : The Armour Consists of Round Aluminium Wire for Single Core Cable, And Round Galvanized Steel Wire Armour. Applied over the Inner-sheath. Armour Material Complying with IEC 60502-2
- Outer Sheath** : The Outer-sheath Comprises a layer of Extruded as per Requirement PVC or LSZH, Applied Over the Armour to Insulate the Metallic Screen From the Surrounding Medium, to Protect the Metallic Screen From Corrosion, to Reduce the contribution of cables to Fire Propagation and Contribute to Mechanical Protection. Outer sheath Compound Complying with IEC 60502-2
- Temperature Range** : Minimum Conductor Operating Temperature : -15°C (XLPE INSULATION)
Maximum Conductor Operating Temperature: 90°C (XLPE INSULATION)
Short Circuit Temperature: 250°C (5 Seconds Maximum Duration)(XLPE INSULATION)
- Bending Radius** : Single Core Armoured: 20D
Three Core Armoured: 12D
D = Outer Diameter of Cable

Note:

As per customer requirement cables can be manufacture as per BS 6622 (PVC sheathed) & BS 7835 (LSZH sheathed).



**1 Core Cables - 6/10 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen:
Copper Tape, AL. Wire Armoured, PVC Sheathed**

DIMENSIONAL DATA

Catalogue Number	Nominal Cross Section Area	Nominal Insulation Thickness	Inner Sheath Thickness	Armour Wire Size	Nominal Overall Sheath Thickness	Approx Overall Dia
	SQ.MM	MM	MM	MM	MM	MM
NMV10CT*2XAWYSC0250	25	3.4	1.2	1.6	1.8	25
NMV10CT*2XAWYSC0350	35	3.4	1.2	1.6	1.8	26
NMV10CT*2XAWYSC0500	50	3.4	1.2	1.6	1.8	28
NMV10CT*2XAWYSC0700	70	3.4	1.2	1.6	1.8	29
NMV10CT*2XAWYSC0950	95	3.4	1.2	1.6	1.9	31
NMV10CT*2XAWYSC1200	120	3.4	1.2	1.6	1.9	34
NMV10CT*2XAWYSC1500	150	3.4	1.2	1.6	2.0	35
NMV10CT*2XAWYSC1850	185	3.4	1.2	2.0	2.0	37
NMV10CT*2XAWYSC2400	240	3.4	1.2	2.0	2.1	40
NMV10CT*2XAWYSC3000	300	3.4	1.2	2.0	2.2	42
NMV10CT*2XAWYSC4000	400	3.4	1.2	2.0	2.3	47
NMV10CT*2XAWYSC5000	500	3.4	1.3	2.5	2.5	51
NMV10CT*2XAWYSC6300	630	3.4	1.4	2.5	2.6	54

Notes: *V(*) ADD "A" for Aluminium cable & "C" for Copper cable

The above data is indicative & may be changed without prior information.

ELECTRICAL DATA																			
Nominal Cross Section Area	D.C Resistance				Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance					
	CU		AL		CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced			
	Ω/km	Ω/km	kA	kA	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$				nH/m	nH/m	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$		
Sqmm	CU	AL	CU	AL	kA	kA	pF/m	mA/m	kA	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$	nH/m	nH/m	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$	$\mu\Omega/\text{m}$
25	0.727	1.20	3.6	2.36	0.42	0.5	208	0.42	0.5	144	210	460	660	936	1544	952	1554	952	1554
35	0.524	0.868	5.0	3.30	0.46	0.6	229	0.46	0.6	136	200	440	640	679	1121	695	1131	695	1131
50	0.387	0.641	7.15	4.72	0.5	0.6	252	0.5	0.6	131	195	420	620	511	834	527	844	527	844
70	0.268	0.443	10.01	6.61	0.58	0.7	288	0.58	0.7	122	188	390	600	364	583	386	597	386	597
95	0.193	0.32	13.58	8.97	0.65	0.7	323	0.65	0.7	122	182	390	580	272	427	300	446	300	446
120	0.153	0.253	17.16	11.33	0.71	0.8	353	0.71	0.8	116	172	370	550	225	345	257	367	257	367
150	0.124	0.206	21.45	14.16	0.76	0.8	380	0.76	0.8	110	166	350	530	193	287	229	313	229	313
185	0.0991	0.164	26.45	17.46	0.83	0.9	416	0.83	0.9	107	166	340	530	165	237	206	267	206	267
240	0.0754	0.125	34.32	22.66	0.92	0.9	460	0.92	0.9	104	163	330	520	140	191	185	226	185	226
300	0.0601	0.100	42.9	28.32	1.01	1	506	1.01	1	100	157	320	500	126	163	174	203	174	203
400	0.0470	0.0778	57.2	37.76	1.12	1.1	561	1.12	1.1	94	154	300	490	113	141	164	184	164	184
500	0.0366	0.0605	71.5	47.2	1.24	1.2	619	1.24	1.2	91	151	290	480	105	124	158	171	158	171
630	0.0283	0.0469	90.09	59.47	1.37	1.3	698	1.37	1.3	91	146	290	470	97	110	151	160	151	160