



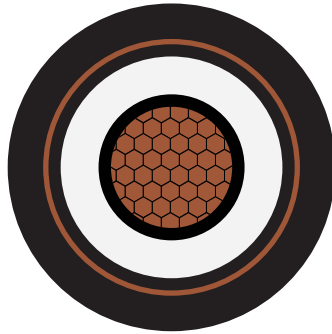
## MEDIUM VOLTAGE UNARMOURED CABLES: IEC 60502-2

### 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 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 Overvoltage, 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
- Outer Sheath** : The Outer-sheath Comprises a layer of Extruded as per Requirement PVC or LSZH. Outer sheath Compound Complying with IEC 60502-2
- Temperature Range** : Minimum Conductor Operating Temperature :  $-15^{\circ}\text{C}$  (XLPE INSULATION)  
Maximum Conductor Operating Temperature:  $90^{\circ}\text{C}$  (XLPE INSULATION)  
Short Circuit Temperature:  $250^{\circ}\text{C}$  (5 Seconds Maximum Duration)(XLPE INSULATION)
- Bending Radius** : Single Core Unarmoured: 20D  
Three Core Unarmoured: 15D  
D is Nominal Diameter of Cable



**1 Core Cables - 18/30 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen:  
Copper Tape, PVC Sheathed**

DIMENSIONAL DATA				
Catalogue Number	Nominal Cross Section Area	Nominal Insulation Thickness	Nominal Overall Sheath Thickness	Approx Overall Dia
	SQ.MM	MM	MM	MM
NMV30CT*2XYSC0500	50	8	1.9	32
NMV30CT*2XYSC0700	70	8	2.0	34
NMV30CT*2XYSC0950	95	8	2.1	36
NMV30CT*2XYSC1200	120	8	2.1	37
NMV30CT*2XYSC1500	150	8	2.1	38
NMV30CT*2XYSC1850	185	8	2.2	40
NMV30CT*2XYSC2400	240	8	2.3	43
NMV30CT*2XYSC3000	300	8	2.3	45
NMV30CT*2XYSC4000	400	8	2.5	49
NMV30CT*2XYSC5000	500	8	2.5	52
NMV30CT*2XYSC6300	630	8	2.7	56

**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	
					CU	AL	CU					AL	CU	AL	
Sqmm	Ω/km	Ω/km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
50	0.387	0.641	7.15	4.72	138	0.83	1.0	151	214	480	680	511	834	527	844
70	0.268	0.443	10.01	6.61	154	0.92	1.0	144	201	460	640	364	583	386	597
95	0.193	0.32	13.58	8.97	169	1.01	1.1	138	195	440	620	272	427	300	446
120	0.153	0.253	17.16	11.33	183	1.1	1.1	132	188	420	600	225	345	257	367
150	0.124	0.206	21.45	14.16	194	1.16	1.2	126	182	400	580	193	287	229	313
185	0.0991	0.164	26.45	17.46	210	1.26	1.2	122	182	390	580	165	237	206	267
240	0.0754	0.125	34.32	22.66	229	1.37	1.3	119	176	380	560	140	191	185	226
300	0.0601	0.100	42.9	28.32	249	1.49	1.4	113	173	360	550	126	163	174	203
400	0.0470	0.0778	57.2	37.76	273	1.64	1.5	107	163	340	520	113	141	164	184
500	0.0366	0.0605	71.5	47.2	298	1.79	1.6	104	163	330	520	105	124	158	171
630	0.0283	0.0469	90.09	59.47	327	1.96	1.7	100	160	320	510	97	110	151	160