MEDIUM VOLTAGE ARMOURED CABLES: IEC 60502-2

Application

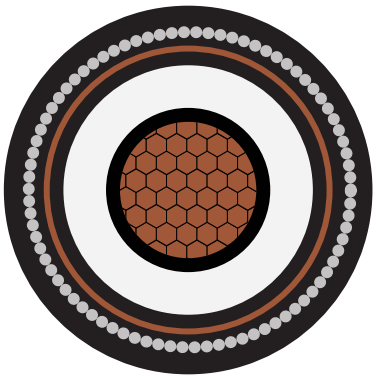
These Medium Voltage Single Core & Three Core Cables are Designed for Electricity Power Distributation, Suitable for Installation in Power Supply Stations, Commercial, Industrial and Urban Residential Networks, Indoors and in Cable Ducts, Outdoors, Undergrounds and as well as for Installation on Cable Trays for industries, Switchboards and the power Stations with Nominal Voltage Uo/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 - 8.7/15 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, AL. Wire Armoured, PVC Sheathed

DIMENSIONAL DATA

Catalouge 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**
NMV15CT*2XAWYSC0250	25	4.5	1.2	1.6	1.8	28
NMV15CT*2XAWYSC0350	35	4.5	1.2	1.6	1.9	29
NMV15CT*2XAWYSC0500	50	4.5	1.2	1.6	1.9	30
NMV15CT*2XAWYSC0700	70	4.5	1.2	1.6	2.0	32
NMV15CT*2XAWYSC0950	95	4.5	1.2	2.0	2.0	35
NMV15CT*2XAWYSC1200	120	4.5	1.2	2.0	2.1	36
NMV15CT*2XAWYSC1500	150	4.5	1.2	2.0	2.2	38
NMV15CT*2XAWYSC1850	185	4.5	1.2	2.0	2.2	39
NMV15CT*2XAWYSC2400	240	4.5	1.2	2.0	2.3	42
NMV15CT*2XAWYSC3000	300	4.5	1.2	2.0	2.3	45
NMV15CT*2XAWYSC4000	400	4.5	1.3	2.5	2.5	49
NMV15CT*2XAWYSC5000	500	4.5	1.3	2.5	2.6	52
NMV15CT*2XAWYSC6300	630	4.5	1.4	2.5	2.7	57

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			
								Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
	CU	AL	CU	AL								CU	AL	CU	AL
Sq.mm	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
25	0.727	1.20	3.6	2.36	171	0.47	0.6	150	210	480	680	936	1544	952	1554
35	0.524	0.868	5.0	3.30	187	0.51	0.6	141	207	460	660	679	1121	695	1131
50	0.387	0.641	7.15	4.72	204	0.57	0.7	138	195	440	640	511	834	527	844
70	0.268	0.443	10.01	6.61	232	0.63	0.7	132	188	420	600	364	583	386	597
95	0.193	0.32	13.58	8.97	258	0.71	0.8	126	182	400	580	272	427	300	446
120	0.153	0.253	17.16	11.33	281	0.74	0.8	119	179	380	570	225	345	257	367
150	0.124	0.206	21.45	14.16	301	0.79	0.9	113	176	360	560	193	287	229	313
185	0.0991	0.164	26.45	17.46	329	0.87	0.9	110	170	350	540	165	237	206	267
240	0.0754	0.125	34.32	22.66	363	0.96	1	107	166	340	530	140	191	185	226
300	0.0601	0.100	42.9	28.32	398	1.03	1.1	104	160	330	510	126	163	174	203
400	0.0470	0.0778	57.2	37.76	439	1.17	1.2	97	157	310	500	113	141	164	184
500	0.0366	0.0605	71.5	47.2	483	1.28	1.3	94	154	300	490	105	124	158	171
630	0.0283	0.0469	90.09	59.47	534	1.42	1.4	91	151	290	480	97	110	151	160