XLPE ARMOURED CABLE

3 CORE, AL/CU

AS PER IS: 7098 P-1

Technical Detail For 1.1 KV, 3 Cores AL/CU Conductor, XLPE Insulated, Galvanized Steel Strip/Wire Armoured Cables Type / Code Of Cable: A2XFY/2XFY, A2XWY/2XWY. As per IS: 7098 (P-1)

Conductor : AL upto 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded compact shaped as per class-2 IS:8130. In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm conductor is stranded class-2, round as per IS:8130. Above 10 sq.mm conductor are stranded compacted shaped as per class-2 IS:8130

Insulation: Crosslinked Polyethylene (XLPE) (Phase core colors - Red, Yellow, Blue).

Inner Sheath : PVC / PVC tape as per IS: 7098 (P-1)

Armouring: Single armouring of Galvenized Steel Strip/Wire.

Outer Sheath: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)

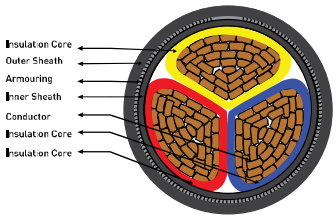
Color Of Outer Sheath: Black (Options: Any other color as per requirement).

A. Cable Design Parameters

Size Cross Sectional Area Sq.mm	Minimum No. of Strands in conuctor		Nominal Thickness of Insu. mm	Minimum Thickness of Inn. Sth. mm	Armouring with flat strip (A2XFY/2XFY)					Armouring with round wire (A2XWY/2XWY)				
					Nominal Thick. of Arm. Strip mm	Minimum Thick. of Out. Sth. mm	Approx. Overall Dia. mm	Approx Net Wt Of Cable (Kg/Km)		Nominal Diameter Of Wire mm	Minimum Thick.of Out. Sth. mm	Approx. Overall Dia. mm	Approx Net Wt Of Cable (Kg/Km)	
	AL	CU						Al Cable. A2XFY	Cu Cable. 2XFY				Al Cable. A2XWY	Cu Cable. 2XWY
4	-	1/7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	18	430	510
6	1	1/7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	19	470	600
10	1	7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	20	520	750
16	6	6	0.7	0.3	0.8	1.24	19	590	890	1.6	1.40	20	730	1020
25	6	6	0.9	0.3	0.8	1.40	21	790	1190	1.6	1.40	23	940	1400
35	6	6	0.9	0.3	0.8	1.40	23	940	1490	1.6	1.40	25	1130	1750
50	6	6	1.0	0.3	0.8	1.40	26	1090	1990	1.6	1.56	29	1330	2180
70	12	12	1.1	0.4	0.8	1.56	29	1450	2690	2.0	1.56	32	1820	3070
95	15	15	1.1	0.4	0.8	1.56	32	1740	3490	2.0	1.56	35	2210	3950
120	15	18	1.2	0.4	0.8	1.56	35	2100	4190	2.0	1.72	39	2670	4840
150	15	18	1.4	0.5	0.8	1.72	42	2520	5200	2.0	1.88	43	3450	6150
185	30	30	1.6	0.5	0.8	1.88	44	2990	6300	2.5	2.04	48	3830	7160
240	30	34	1.7	0.6	0.8	2.04	49	3740	8190	2.5	2.20	53	4720	8870
300	30	34	1.8	0.6	0.8	2.20	54	4490	10000	2.5	2.36	58	6130	11380
400	53	53	2.0	0.7	0.8	2.52	60	5590	12990	3.2	2.68	65	7390	14410
500	53	53	2.2	0.7	0.8	2.68	66	6890	15990	3.2	2.84	72	9980	18490
630	53	53	2.4	0.7	0.8	2.84	74	8540	19990	4.0	3.00	81	11820	22560

B. Electrical Parameters

Size Cross Sectional Area Sq.mm	Max. Cond. D.C. Resistance at 20° C in Ω/km		Max. Cond. A.C. Resistance at 90° C in Ω/km		App. Resistance at 50 hz in Ω/km	App. capacitance of cable in microf/KM	Normal* Current Rating In Amps						Short Circuit Current Rating for 1sec. Duration in K.Amps	
							With AL Cond.			With CU Cond.				
	AL	CU	AL	CU			Ground	Duct	Air	Ground	Duct	Air	AL	CU
4	-	4.61	-	5.9	0.098	0.11	34	28	30	44	37	39	0.376	0.572
6	4.61	3.08	5.9	3.94	0.09	0.13	43	37	40	55	47	50	0.564	0.858
10	3.08	1.83	3.94	2.34	0.084	0.16	57	48	53	74	61	67	0.94	1.43
16	1.91	1.15	2.44	1.47	0.08	0.18	78	61	70	94	78	85	1.50	2.29
25	1.20	0.727	1.54	0.931	0.08	0.20	95	80	99	120	100	125	2.35	3.58
35	0.868	0.524	1.11	0.671	0.08	0.23	116	94	117	145	120	155	3.29	5.01
50	0.641	0.387	0.82	0.495	0.078	0.24	140	110	140	170	145	190	4.70	7.15
70	0.443	0.268	0.567	0.343	0.077	0.26	170	140	176	210	175	235	6.58	10.01
95	0.32	0.193	0.411	0.248	0.074	0.29	200	165	221	250	210	290	8.93	13.59
120	0.253	0.153	0.325	0.197	0.072	0.29	225	185	258	285	240	330	11.28	17.16
150	0.206	0.124	0.265	0.159	0.072	0.29	255	210	294	315	270	375	14.1	21.45
185	0.164	0.0991	0.211	0.127	0.072	0.29	285	235	339	355	300	435	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.072	0.31	325	270	402	410	350	510	22.56	34.32
300	0.10	0.0601	0.13	0.0778	0.071	0.33	370	305	461	460	390	590	28.2	42.9
400	0.0778	0.047	0.1023	0.0618	0.07	0.33	435	350	542	520	440	670	37.6	57.2
500	0.0605	0.0366	0.0808	0.0489	0.07	0.34	481	405	624	580	480	750	47.0	71.5
630	0.0469	0.0283	0.0648	0.0391	0.069	0.36	537	470	723	680	575	875	59.22	90.09



Cross Sectional View

XLPE Armoured Cable:

XLPE Armoured cables has many advantages over paper insulated and PVC insulated cable. They have high electric as well as mechanical strength. These cables are commonly used in railways, lift cables and ship wiring. They are also used in ducts and direct burial in ground as they are subjected to immerse in water all the time.

* The above data is indicative and may be revised without prior information.