

XLPE ARMoured CABLE

4 CORE, AL/CU

AS PER IS: 7098 P-1

Technical Detail For 1.1 KV, 4 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 compact shaped as per class-2 IS:8130.

Insulation: Crosslinked Polyethylene (XLPE) (Core colors - Red, Yellow, Blue, Black)

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

Armouring: Single armouring of Galvanized Steel Strip/Wire.

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

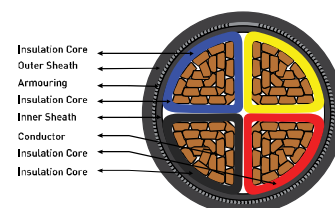
Color Of Outer Sheath: Black (Options: Any other color as per requirement).

A. Cable Design Parameters

Size cross - Sectional Area Sq.mm	Minimum No. Of Strands in conductor		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	540	640
6	1	1/7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	19	590	760
10	1	7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.40	21	655	940
16	6	6	0.7	0.3	0.8	1.4	20	700	1100	1.6	1.40	22	920	1280
25	6	6	0.9	0.3	0.8	1.4	24	900	1500	1.6	1.40	26	1185	1750
35	6	6	0.9	0.3	0.8	1.4	27	1100	2000	1.6	1.40	28	1420	2185
50	6	6	1.0	0.3	0.8	1.56	30	1400	2500	1.6	1.56	32	1730	2830
70	12	12	1.1	0.4	0.8	1.56	34	1800	3400	2.0	1.56	37	2375	3980
95	15	15	1.1	0.4	0.8	1.56	37	2200	4400	2.0	1.72	40	2870	5130
120	15	18	1.2	0.5	0.8	1.72	41	2700	5600	2.0	1.88	44	3475	6285
150	15	18	1.4	0.5	0.8	1.88	46	3200	6800	2.5	2.04	49	4480	7980
185	30	30	1.6	0.5	0.8	2.04	51	3900	8300	2.5	2.20	54	5185	9680
240	30	34	1.7	0.6	0.8	2.2	57	4850	10500	2.5	2.36	65	6385	11985
300	30	34	1.8	0.7	0.8	2.36	63	5850	13000	3.15	2.52	68	8280	15385
400	53	53	2.0	0.7	0.8	2.68	71	7320	17000	3.15	2.84	76	9985	19480
500	53	53	2.2	0.7	0.8	2.84	79	9000	21000	4.0	3.00	86	13480	24985
630	53	53	2.4	0.7	0.8	3	88	11000	27000	4.0	3.00	94	15975	30485

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	1.2	0.727	1.54	0.931	0.08	0.2	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	14.10	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	0.1	0.0601	0.13	0.0778	0.071	0.33	370	305	461	460	390	590	28.20	42.9
400	0.0778	0.047	0.1023	0.0618	0.07	0.33	435	350	542	520	440	670	37.60	57.2
500	0.0605	0.0366	0.0808	0.0489	0.07	0.34	481	405	624	580	480	750	47.00	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 are widely used as power cables for power transmission in cable ducts, power stations, indoor – outdoor installations, as well as in water. They are often used in distribution line voltage rated at 35kV and below. Its simple structure along with stress – resistant and chemical corrosion – resistant makes it a better choice than the PVC insulated power cable.

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