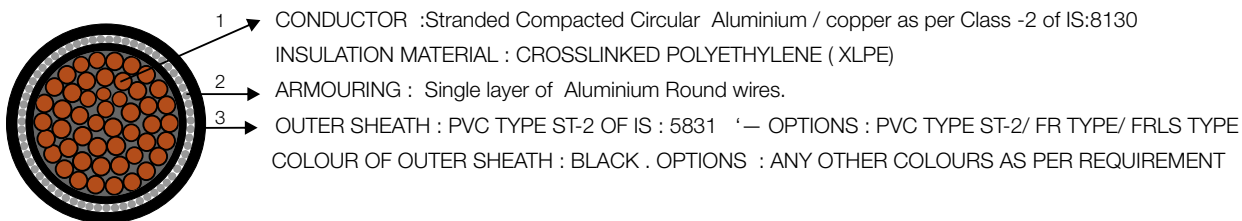


Physical Parameters

SIZE cross- Sectional area(Sqmm)	Nominal Insulation thickness (mm)	Nominal Diameter of Armour Wire (mm)	Minimum Thickness of Outer Sheath (mm)	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)	
					With Al.	With Cu
					Cond.	Cond.
25	2.5	1.40	1.24	18	350	500
35	2.5	1.40	1.24	19	400	600
50	2.5	1.40	1.40	21	500	800
70	2.5	1.60	1.40	23	650	1100
95	2.5	1.60	1.40	25	750	1350
120	2.5	1.60	1.40	26	850	1600
150	2.5	1.60	1.40	28	950	1900
185	2.5	1.60	1.40	29	1100	2250
240	2.5	1.60	1.56	32	1350	2850
300	2.5	1.60	1.56	34	1550	3400
400	2.8	2.00	1.56	39	2000	4500
500	2.8	2.00	1.56	42	2400	5500
630	3.0	2.00	1.72	47	3000	6900
800	3.3	2.00	1.88	52	3650	8600
1000	3.5	2.50	2.04	56	4500	10700

Cross- Sectional View

~ Tabulated approx. net weights of cables are only for guidelines for transportation /loading/ unloading purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at 20°C in Ohm/km		Approx. Cond. A.C. Resistance at 90°C in Ohm/km		Reactance of cable at 50HZ in ohms/km (Approx).	Capecitance of cable in microF/KM (Approx).	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	Al	Cu	Al	Cu			With Aluminium cond.			With Copper cond.			Al	Cu
							Ground	Duct	Air	Ground	Duct	Air		
25	1.20	0.727	1.54	0.931	0.133	0.25	100	91	110	130	115	145	2.35	3.58
35	0.868	0.524	1.11	0.671	0.126	0.29	120	110	135	155	140	175	3.29	5.00
50	0.641	0.387	0.820	0.495	0.122	0.33	140	125	165	185	165	215	4.70	7.15
70	0.443	0.268	0.567	0.343	0.116	0.38	175	155	210	225	200	270	6.58	10.00
95	0.320	0.193	0.410	0.248	0.111	0.44	205	185	255	265	235	330	8.93	13.59
120	0.253	0.153	0.325	0.197	0.106	0.49	235	210	295	300	265	380	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.103	0.53	260	230	335	335	300	430	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.100	0.58	295	260	390	380	335	495	17.39	26.45
240	0.125	0.0754	0.162	0.098	0.097	0.67	340	300	460	435	385	590	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.095	0.73	385	335	530	490	430	670	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.093	0.84	440	380	620	550	480	780	37.60	57.20
500	0.0605	0.0366	0.0808	0.0489	0.091	0.86	495	430	730	610	530	900	47.00	71.50
630	0.0469	0.0283	0.0648	0.0391	0.090	0.88	560	485	840	680	590	1020	59.22	90.10
800	0.0367	0.0221	0.0530	0.0319	0.088	0.94	620	530	960	740	630	1140	75.20	114.40
1000	0.0291	0.0176	0.0444	0.0268	0.086	0.99	670	570	1070	780	660	1250	94.00	143.00

Note : Normal current ratings are given in standard conditions (as given in page no - 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

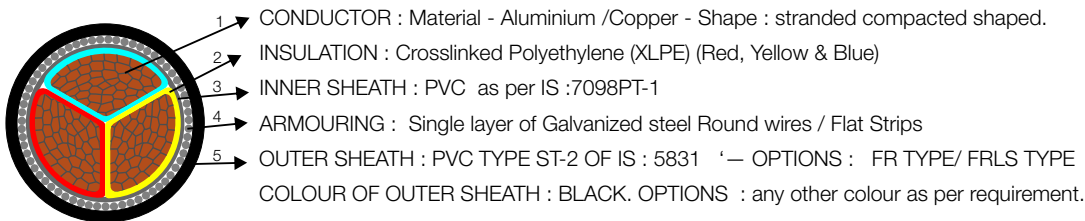
Cable Code : A2XFY/2XFY, A2XWY/2XWY (3.3KV UE/E)

Ref. Spec. : IS :7098PART -2

Physical Parameters

SIZE cross- sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	FLAT STRIP ARMoured					ROUND WIRES ARMoured					
			Nominal Armour strip thickness mm	Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)		Nominal diameter of armour wire (mm)	Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)		
						With Al. Cond.	With Cu Cond.				With Al. Cond.	With Cu Cond.	
25	2.2	0.3	0.8	1.40	28	1100	1550	1.60	1.56	30	1450	1900	
35	2.2	0.3	0.8	1.56	31	1300	1950	1.60	1.56	33	1600	2250	
50	2.2	0.4	0.8	1.56	33	1500	2450	2.00	1.56	35	2100	3050	
70	2.2	0.4	0.8	1.56	36	1800	3100	2.00	1.56	38	2400	3700	
95	2.2	0.4	0.8	1.72	39	2150	3900	2.00	1.72	42	2850	4600	
120	2.2	0.5	0.8	1.72	42	2500	4750	2.00	1.88	45	3300	5550	
150	2.2	0.5	0.8	1.88	44	2850	5650	2.50	2.04	48	4100	6900	
185	2.2	0.5	0.8	2.04	48	3350	6800	2.50	2.04	51	4650	8100	
240	2.2	0.6	0.8	2.20	52	4100	8550	2.50	2.20	56	5450	9900	
300	2.2	0.6	0.8	2.20	56	4750	10350	2.50	2.36	60	6300	11900	
400	2.2	0.7	0.8	2.36	62	5750	13200	3.15	2.68	67	8350	15800	

Cross- Sectional View



~ Tabulated approx. net wt. of cables are only guidelines for transportation, loading & unloading purpose.

~ Please ref page no 43 for normal delivery lengths & packing details.

Electrical Parameters

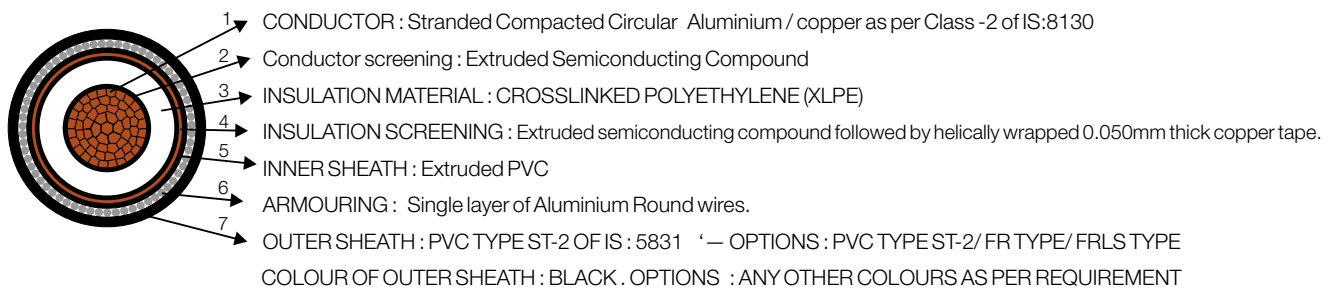
SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at		Approx. Cond. A.C. Resistance at		pp.. Reactance at 50HZ in ohms/km (APPROX.)	App. Capacitance of cable in microF/KM (APPROX.)	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	20°C in		90°C in				With Aluminium cond.			With Copper cond.				
	Al	Ohm/km Cu	Al	Ohm/km Cu			Ground	Duct	Air	Ground	Duct	Air	Al	Cu
25	1.20	0.727	1.54	0.931	0.098	0.25	94	80	99	120	100	125	2.35	3.58
35	0.868	0.524	1.11	0.671	0.094	0.29	115	95	120	145	120	155	3.29	5.00
50	0.641	0.387	0.820	0.495	0.086	0.33	135	110	145	170	145	190	4.70	7.15
70	0.443	0.268	0.567	0.343	0.084	0.38	165	140	185	210	175	235	6.58	10.01
95	0.320	0.193	0.410	0.248	0.081	0.44	195	165	225	250	210	290	8.93	13.59
120	0.253	0.153	0.325	0.197	0.078	0.49	220	185	255	285	240	330	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.076	0.53	245	210	295	315	270	375	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.075	0.58	280	235	340	355	300	435	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.073	0.67	320	270	400	410	350	510	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.072	0.73	360	305	460	460	390	590	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.071	0.84	410	350	535	520	440	670	37.60	57.20

Note : Normal current ratings are given in standard conditions (as given in page no - 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

Physical Parameters

SIZE cross-Sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	Nominal Diameter of Armour Wire (mm)	Minimum Thickness of Outer Sheath (mm)	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)	
						With Al.	With Cu
						Cond.	Cond.
25	2.8	0.3	1.60	1.40	23	600	750
35	2.8	0.3	1.60	1.40	24	650	850
50	2.8	0.3	1.60	1.40	25	700	1000
70	2.8	0.3	1.60	1.40	27	800	1250
95	2.8	0.3	1.60	1.40	28	950	1550
120	2.8	0.3	1.60	1.40	30	1050	1800
150	2.8	0.3	1.60	1.56	32	1200	2100
185	2.8	0.3	1.60	1.56	34	1400	2550
240	2.8	0.4	2.00	1.56	37	1700	3200
300	3.0	0.4	2.00	1.56	39	2000	3850
400	3.3	0.4	2.00	1.72	44	2450	4900
500	3.5	0.5	2.00	1.72	47	2800	5900
630	3.5	0.5	2.00	1.88	51	3400	7300
800	3.5	0.5	2.50	2.04	57	4300	9200
1000	3.6	0.5	2.50	2.20	61	5100	11300

Cross- Sectional View



- Tabulated approx. net weights of cables are only for guidelines for transportation / Loading/ Unloading Purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at 20°C in Ohm/km		Approx. Cond. A.C. Resistance at 90°C in Ohm/km		Reactance of cable at 50HZ in ohms/km (Approx).	App. Capacitance of cable in microF/KM (Approx).	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	Al	Cu	Al	Cu			With Aluminium cond.			With Copper cond.			Al	Cu
							Ground	Duct	Air	Ground	Duct	Air		
25	1.20	0.727	1.54	0.931	0.149	0.21	100	90	120	130	115	155	2.35	3.58
35	0.868	0.524	1.11	0.671	0.142	0.24	120	105	145	155	140	185	3.29	5.00
50	0.641	0.387	0.820	0.495	0.133	0.27	140	125	170	185	160	220	4.70	7.15
70	0.443	0.268	0.567	0.343	0.127	0.31	175	155	215	225	195	275	6.58	10.01
95	0.320	0.193	0.410	0.248	0.121	0.36	205	180	260	265	235	340	8.93	13.59
120	0.253	0.153	0.325	0.197	0.116	0.39	235	205	305	300	265	390	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.113	0.43	260	230	345	335	295	440	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.109	0.47	295	260	395	380	330	510	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.105	0.53	340	300	470	435	380	600	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.104	0.54	385	335	540	490	425	680	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.102	0.57	440	380	630	550	480	790	37.60	57.20
500	0.0605	0.0366	0.0808	0.0489	0.100	0.60	495	430	730	610	530	910	47.00	71.50
630	0.0469	0.0283	0.0648	0.0391	0.096	0.67	560	480	840	680	580	1030	59.22	90.10
800	0.0367	0.0221	0.0530	0.0319	0.094	0.76	620	530	960	740	630	1140	75.20	114.40
1000	0.0291	0.0176	0.0444	0.0268	0.092	0.82	680	580	1070	790	670	1250	94.00	143.00

Note : Normal current ratings are given in standard conditions (as given in page no - 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no.. 42

Table -26 TECHNICAL DETAIL FOR HAVELLS 3.8/6.6 KV THREE CORES, AL/COPPER COND., XLPE INSULATED, ARMoured CABLES

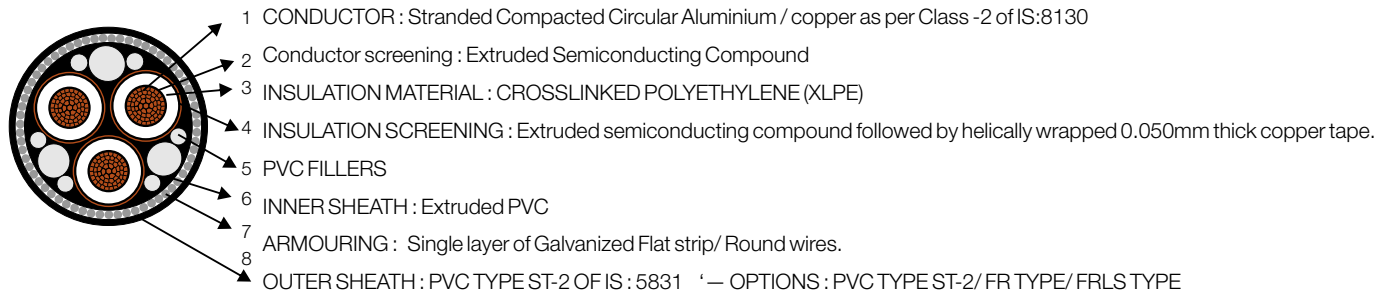
Cable Code : A2XFY/2XFY, A2XWY/2XWY (6.6KVE)

Ref. Spec. : IS :7098PART -2

Physical Parameters

SIZE cross-sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	FLAT STRIP ARMoured					Nominal diameter of armour wire (mm)	ROUND WIRES ARMoured				
			Nominal Armour strip thickness mm	Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)			Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)		
						With Al. Cond.	With Cu Cond.				With Al. Cond.	With Cu Cond.	
25	2.8	0.4	0.8	1.56	37	1800	2250	2.00	1.72	40	2500	2950	
35	2.8	0.4	0.8	1.72	39	2000	2650	2.00	1.72	42	2800	3450	
50	2.8	0.5	0.8	1.72	42	2300	3250	2.00	1.88	45	3200	4150	
70	2.8	0.5	0.8	1.88	46	2800	4100	2.00	1.88	49	3700	5000	
95	2.8	0.5	0.8	1.88	50	3300	5050	2.50	2.04	54	4700	6450	
120	2.8	0.6	0.8	2.04	54	3800	6050	2.50	2.20	58	5400	7650	
150	2.8	0.6	0.8	2.20	58	4300	7100	2.50	2.20	61	5900	8700	
185	2.8	0.6	0.8	2.20	61	4800	8250	2.50	2.36	65	6600	10050	
240	2.8	0.7	0.8	2.36	67	5900	10350	3.15	2.52	72	8400	12850	
300	3.0	0.7	0.8	2.52	72	6800	12400	3.15	2.68	77	9700	15300	
400	3.3	0.7	0.8	2.84	82	8500	15950	4.00	3.00	88	13000	20450	

Cross- Sectional View



COLOUR OF OUTER SHEATH : BLACK . OPTIONS : ANY OTHER COLOURS AS PER REQUIREMENT
 ~ Tabulated approx. net weights of cables are only for guidelines for transportation / Loading/ Unloading Purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at		Approx. Cond. A.C. Resistance at		Reactance of cable at 50HZ in ohms/km (APPROX.)	Capacitance of cable in microF/KM (APPROX.)	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	20°C in Ohm/km		90°C in Ohm/km				With Aluminium cond.			With Copper cond.				
	Al	Cu	Al	Cu			Ground	Duct	Air	Ground	Duct	Air	Al	Cu
25	1.20	0.727	1.54	0.931	0.126	0.21	95	82	105	120	105	135	2.35	3.58
35	0.868	0.524	1.11	0.671	0.120	0.24	115	97	125	145	125	165	3.29	5.01
50	0.641	0.387	0.820	0.495	0.114	0.27	130	115	150	170	150	195	4.70	7.15
70	0.443	0.268	0.567	0.343	0.107	0.31	160	140	190	210	180	240	6.58	10.01
95	0.320	0.193	0.410	0.248	0.102	0.36	190	165	230	250	215	295	8.93	13.59
120	0.253	0.153	0.325	0.197	0.098	0.39	220	190	260	280	240	335	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.095	0.43	245	210	295	310	270	380	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.093	0.47	275	240	335	350	305	430	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.090	0.53	315	275	395	400	350	500	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.090	0.54	355	310	450	445	390	570	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.087	0.57	400	350	520	500	440	650	37.60	57.20

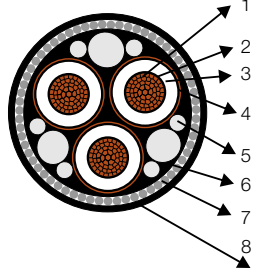
Note : Normal current ratings are given in standard conditions (as given in page no - 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

Cable Code : A2XWaY/2XWaY (6.6KV -UNEARTHED OR 11KV EARTHED GRADE)

Ref. Spec. : IS :7098PART -2

Physical Parameters

SIZE cross-Sectional area (Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	Nominal Diameter of Armour Wire (mm)	Minimum Thickness of Outer Sheath (mm)	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)	
						With Al.	With Cu
						Cond.	Cond.
25	3.6	0.3	1.60	1.40	24	650	800
35	3.6	0.3	1.60	1.40	25	700	900
50	3.6	0.3	1.60	1.40	26	800	1100
70	3.6	0.3	1.60	1.40	28	900	1300
95	3.6	0.3	1.60	1.40	30	1050	1650
120	3.6	0.3	1.60	1.56	32	1200	1950
150	3.6	0.3	1.60	1.56	33	1300	2200
185	3.6	0.4	2.00	1.56	36	1600	2750
240	3.6	0.4	2.00	1.56	39	1850	3350
300	3.6	0.4	2.00	1.56	41	2050	3900
400	3.6	0.5	2.00	1.72	44	2500	5000
500	3.6	0.5	2.00	1.72	47	2900	6000
630	3.6	0.5	2.00	1.88	51	3450	7350
800	3.6	0.5	2.50	2.04	57	4300	9250
1000	3.6	0.5	2.50	2.20	61	5100	11300

Cross- Sectional View

- 1 CONDUCTOR : Stranded Compacted Circular Aluminium / copper as per Class -2 of IS:8130
- 2 Conductor screening : Extruded Semiconducting Compound
- 3 INSULATION MATERIAL : CROSSLINKED POLYETHYLENE (XLPE)
- 4 INSULATION SCREENING : Extruded semiconducting compound followed by helically wrapped 0.050mm thick copper tape.
- 5 PVC FILLERS
- 6 INNER SHEATH : Extruded PVC
- 7 ARMOURING : Single layer of Galvanized Flat strip/ Round wires.
- 8 OUTER SHEATH : PVC TYPE ST-2 OF IS : 5831 ' — OPTIONS : PVC TYPE ST-2/ FR TYPE/ FRLS TYPE

COLOUR OF OUTER SHEATH : BLACK . OPTIONS : ANY OTHER COLOURS AS PER REQUIREMENT

~ Tabulated approx. net weights of cables are only for guidelines for transportation / Loading/ Unloading Purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at 20°C in Ohm/km		Approx. Cond. A.C. Resistance at 90°C in Ohm/km		Reactance of cable at 50HZ in ohms/km (Approx)	Capacitance of cable in microF/KM (Approx)	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
							With Aluminium cond.			With Copper cond.				
	Al	Cu	Al	Cu			Ground	Duct	Air	Ground	Duct	Air	Al	Cu
25	1.20	0.727	1.54	0.931	0.164	0.18	100	90	120	130	115	155	2.35	3.58
35	0.868	0.524	1.11	0.671	0.156	0.20	120	105	145	155	140	185	3.29	5.00
50	0.641	0.387	0.820	0.495	0.147	0.22	140	125	170	185	160	220	4.70	7.15
70	0.443	0.268	0.567	0.343	0.139	0.26	175	155	215	225	195	275	6.58	10.01
95	0.320	0.193	0.410	0.248	0.133	0.29	205	180	260	265	235	340	8.93	13.59
120	0.253	0.153	0.325	0.197	0.127	0.32	235	205	305	300	265	390	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.124	0.35	260	230	345	335	295	440	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.120	0.38	295	260	395	380	330	510	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.117	0.43	340	300	470	435	380	600	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.113	0.46	385	335	540	490	425	680	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.110	0.53	440	380	630	550	480	790	37.60	57.20
500	0.0605	0.0366	0.0808	0.0489	0.107	0.59	495	430	730	610	530	910	47.00	71.50
630	0.0469	0.0283	0.0648	0.0391	0.104	0.66	560	480	840	680	580	1030	59.22	90.10
800	0.0367	0.0221	0.0530	0.0319	0.100	0.74	620	530	960	740	630	1140	75.20	114.40
1000	0.0291	0.0176	0.0444	0.0268	0.098	0.82	680	580	1070	790	670	1250	94.00	143.00

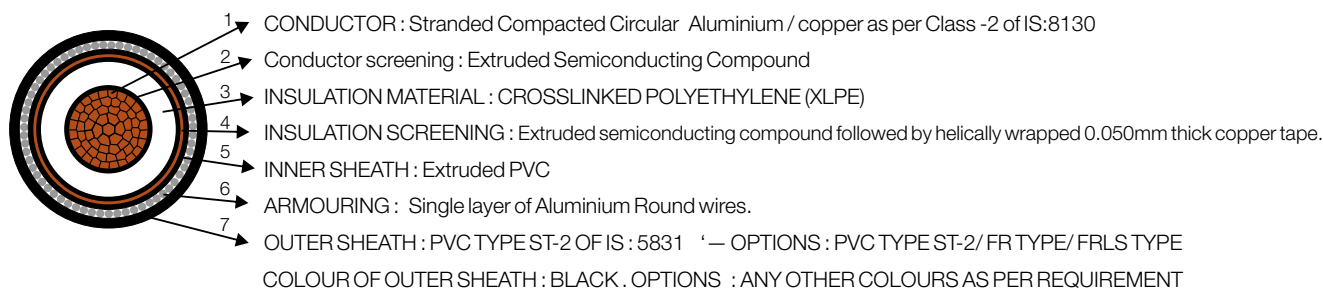
Note : Normal current ratings are given in standard conditions (as given in page no -40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

Cable Code : A2XFY/2XFY, A2XWY/2XWY (6.6KV UE / 11KVE)

Ref. Spec. : IS :7098PART-2

Physical Parameters

SIZE cross- sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	FLAT STRIP ARMoured					ROUND WIRES ARMoured					
			Nominal Armour strip thickness mm	Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)		Nominal diameter of armour wire (mm)	Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)		
						With Al. Cond.	With Cu Cond.				With Al. Cond.	With Cu Cond.	
25	3.6	0.4	0.8	1.72	41	2100	2550	2.00	1.72	43	2800	3250	
35	3.6	0.5	0.8	1.72	43	2350	2950	2.00	1.88	46	3200	3850	
50	3.6	0.5	0.8	1.88	46	2700	3650	2.50	2.04	50	4000	4950	
70	3.6	0.5	0.8	1.88	50	3100	4400	2.50	2.04	54	4500	5800	
95	3.6	0.6	0.8	2.04	54	3700	5450	2.50	2.20	58	5200	6950	
120	3.6	0.6	0.8	2.20	58	4200	6450	2.50	2.20	62	5800	8050	
150	3.6	0.6	0.8	2.20	61	4700	7500	2.50	2.36	65	6400	9200	
185	3.6	0.7	0.8	2.36	65	5300	8750	3.15	2.52	70	7900	11350	
240	3.6	0.7	0.8	2.52	71	6300	10750	3.15	2.68	76	9000	13500	
300	3.6	0.7	0.8	2.68	75	7200	12800	3.15	2.84	80	10000	15600	
400	3.6	0.7	0.8	2.84	83	8700	16150	4.00	3.00	90	13500	20500	

Cross- Sectional View

~ Tabulated approx. net weights of cables are only for guidelines for transportation / Loading/ Unloading Purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at 20°C in Ohm/km		Approx. Cond. A.C. Resistance at 90°C in Ohm/km		Reactance at 50HZ in ohms/km (APPROX.)	App. Capacitance of cable in microF/KM (APPROX.)	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	Al	Cu	Al	Cu			With Aluminium cond.			With Copper cond.			Al	Cu
							Ground	Duct	Air	Ground	Duct	Air		
25	1.20	0.727	1.54	0.931	0.133	0.18	95	82	105	120	105	135	2.35	3.58
35	0.868	0.524	1.11	0.671	0.126	0.20	115	97	125	145	125	165	3.29	5.01
50	0.641	0.387	0.820	0.495	0.118	0.22	130	115	150	170	150	195	4.70	7.15
70	0.443	0.268	0.567	0.343	0.116	0.26	160	140	190	210	180	240	6.58	10.01
95	0.320	0.193	0.410	0.248	0.107	0.29	190	165	230	250	215	295	8.93	13.59
120	0.253	0.153	0.325	0.197	0.102	0.32	220	190	260	280	240	335	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.099	0.35	245	210	295	310	270	380	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.097	0.38	275	240	335	350	305	430	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.084	0.43	315	275	395	400	350	500	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.093	0.46	355	310	450	445	390	570	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.089	0.53	400	350	520	500	440	650	37.60	57.20

Note : Normal current ratings are given in standard conditions (as given in page no -40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

Table -29 TECHNICAL DETAIL FOR HAVELLS 11/11 KV SINGLE CORE, AL/COPPER COND., XLPE INSULATED, ARMoured CABLES

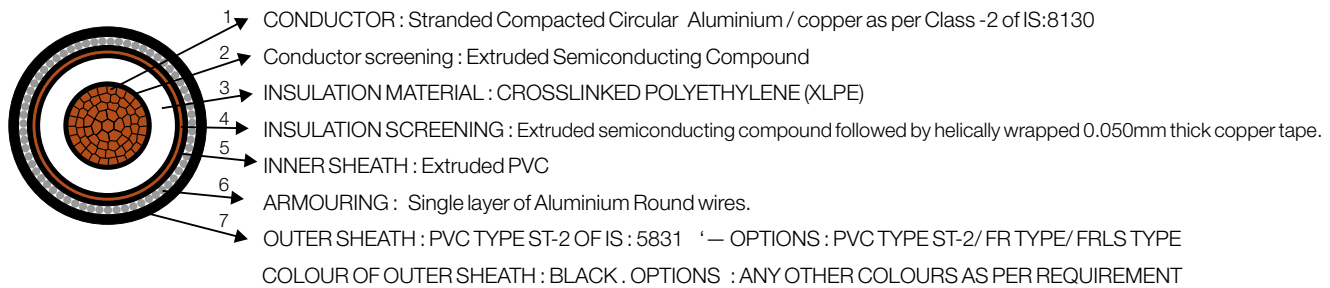
Cable Code : A2XWaY/2XWaY (11KV - UN-EARTHED GRADE)

Ref. Spec. : IS :7098PART-2

Physical Parameters

SIZE cross- Sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	Nominal Diameter of Armour Wire (mm)	Minimum Thickness of Outer Sheath (mm)	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)	
						With Al. Cond.	With Cu Cond.
25	5.5	0.3	1.60	1.40	28	900	1050
35	5.5	0.3	1.60	1.40	29	950	1150
50	5.5	0.3	1.60	1.56	31	1100	1400
70	5.5	0.3	1.60	1.56	33	1200	1650
95	5.5	0.3	1.60	1.56	34	1400	2000
120	5.5	0.4	2.00	1.56	37	1600	2350
150	5.5	0.4	2.00	1.56	38	1700	2600
185	5.5	0.4	2.00	1.56	40	1900	3050
240	5.5	0.4	2.00	1.72	43	2200	3700
300	5.5	0.4	2.00	1.72	44	2500	4350
400	5.5	0.5	2.00	1.88	48	2900	5400
500	5.5	0.5	2.50	1.88	53	3500	6600
630	5.5	0.5	2.50	2.04	56	4100	8000
800	5.5	0.6	2.50	2.20	61	4900	9900
1000	5.5	0.6	2.50	2.20	65	5700	11900

Cross- Sectional View



-- Tabulated approx. net weights of cables are only for guidelines for transportation / Loading/ Unloading Purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at 20°C in Ohm/km		Approx. Cond. A.C. Resistance at 90°C in Ohm/km		Reactance of cable at 50HZ in ohms/km (Approx).	Capecitance of cable in microF/KM (Approx).	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	Al	Cu	Al	Cu			With Aluminium cond.			With Copper cond.			Al	Cu
							Ground	Duct	Air	Ground	Duct	Air		
25	1.20	0.727	1.54	0.931	0.164	0.14	100	90	120	130	115	155	2.35	3.58
35	0.868	0.524	1.11	0.671	0.156	0.16	120	105	145	155	140	185	3.29	5.00
50	0.641	0.387	0.820	0.495	0.147	0.17	140	125	170	185	160	220	4.70	7.15
70	0.443	0.268	0.567	0.343	0.139	0.20	175	155	215	225	195	275	6.58	10.01
95	0.320	0.193	0.410	0.248	0.132	0.21	205	180	260	265	235	340	8.93	13.59
120	0.253	0.153	0.325	0.197	0.126	0.23	235	205	305	300	265	390	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.124	0.25	260	230	345	335	295	440	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.120	0.26	295	260	395	380	330	510	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.116	0.29	340	300	470	435	380	600	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.112	0.32	385	335	540	490	425	680	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.109	0.35	440	380	630	550	480	790	37.60	57.20
500	0.0605	0.0366	0.0808	0.0489	0.105	0.39	495	430	730	610	530	910	47.00	71.50
630	0.0469	0.0283	0.0648	0.0391	0.102	0.43	560	480	840	680	580	1030	59.22	90.10
800	0.0367	0.0221	0.0530	0.0319	0.097	0.50	620	530	960	740	630	1140	75.20	114.40
1000	0.0291	0.0176	0.0444	0.0268	0.096	0.56	680	580	1070	790	670	1250	94.00	143.00

Note : Normal current ratings are given in standard conditions (as given in page no - 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

Table -30 TECHNICAL DETAIL FOR HAVELLS 11/11KV THREE CORES, AL/COPPER COND., XLPE INSULATED, ARMoured CABLES

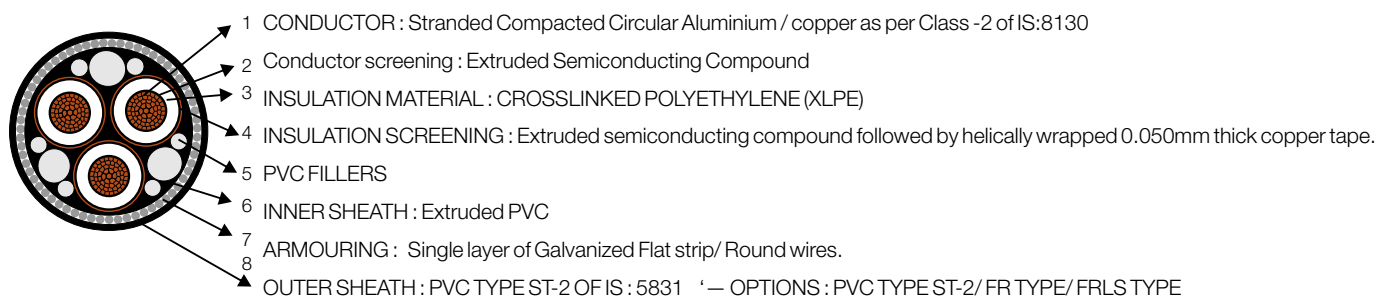
Cable Code : A2XFY/2XFY, A2XWY/2XWY (11KVUE)

Ref. Spec. : IS :7098PART -2

Physical Parameters

SIZE cross-sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	FLAT STRIP ARMoured					Nominal diameter of armour wire (mm)	ROUND WIRES ARMoured				
			Nominal Armour strip thickness mm	Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)			Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)		
						With Al. Cond.	With Cu Cond.				With Al. Cond.	With Cu Cond.	
													Cond.
25	5.5	0.5	0.8	1.88	50	3000	3500	2.50	2.04	54	4300	4750	
35	5.5	0.5	0.8	2.04	53	3200	3850	2.50	2.20	57	4700	5350	
50	5.5	0.6	0.8	2.20	56	3700	4600	2.50	2.20	60	5100	6050	
70	5.5	0.6	0.8	2.20	60	4100	5400	2.50	2.36	64	5800	7100	
95	5.5	0.6	0.8	2.36	64	4800	6567	3.15	2.52	69	7300	9100	
120	5.5	0.7	0.8	2.52	68	5400	7632	3.15	2.52	73	8000	10250	
150	5.5	0.7	0.8	2.52	71	5900	8690	3.15	2.68	76	8600	11400	
185	5.5	0.7	0.8	2.68	75	6500	9950	3.15	2.84	80	9400	12850	
240	5.5	0.7	0.8	2.84	81	7600	12050	3.15	3.00	85	11000	15500	
300	5.5	0.7	0.8	3.00	85	8600	14200	4.00	3.00	91	13000	18600	
400	5.5	0.7	0.8	3.00	93	10000	17500	4.00	3.00	98	15000	22450	

Cross- Sectional View



Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at		Approx. Cond. A.C. Resistance at		Reactance of cable at 50HZ in ohms/km (APPROX.)	App. Capacitance of cable in microF/KM (APPROX.)	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	20°C in Ohm/km		90°C in Ohm/km				With Aluminium cond.			With Copper cond.				
	Al	Cu	Al	Cu			Ground	Duct	Air	Ground	Duct	Air		
													Al	Cu
25	1.20	0.727	1.54	0.931	0.145	0.14	95	82	105	120	105	135	2.35	3.58
35	0.868	0.524	1.11	0.671	0.138	0.16	115	97	125	145	125	165	3.29	5.01
50	0.641	0.387	0.820	0.495	0.129	0.17	130	115	150	170	150	195	4.70	7.15
70	0.443	0.268	0.567	0.343	0.124	0.20	160	140	190	210	180	240	6.58	10.01
95	0.320	0.193	0.410	0.248	0.116	0.21	190	165	230	250	215	295	8.93	13.59
120	0.253	0.153	0.325	0.197	0.112	0.23	220	190	260	280	240	335	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.108	0.25	245	210	295	310	270	380	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.105	0.26	275	240	335	350	305	430	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.102	0.29	315	275	395	400	350	500	22.56	34.32
300	0.100	0.0601	0.130	0.0778	0.0999	0.32	355	310	450	445	390	570	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.0954	0.35	400	350	520	500	440	650	37.60	57.20

Note : Normal current ratings are given in standard conditions (as given in page no - 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

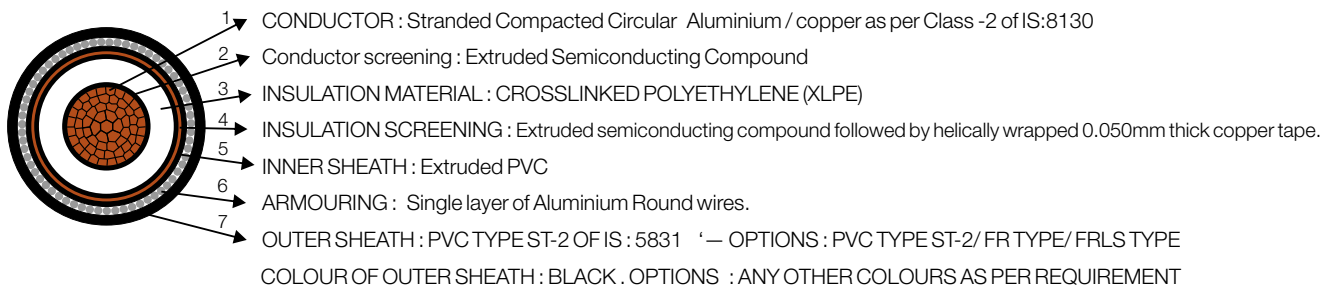
Cable Code : A2XWaY/2XWaY (22KV - EARTHED GRADE)

Ref. Spec. : IS :7098PART-2

Physical Parameters

SIZE cross- Sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	Nominal Diameter of Armour Wire (mm)	Minimum Thickness of Outer Sheath (mm)	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)	
						With Al. Cond.	With Cu Cond.
						25	6.0
35	6.0	0.3	1.60	1.40	31	1050	1250
50	6.0	0.3	1.60	1.56	32	1150	1500
70	6.0	0.3	1.60	1.56	34	1300	1750
95	6.0	0.4	2.00	1.56	36	1600	2200
120	6.0	0.4	2.00	1.56	38	1700	2450
150	6.0	0.4	2.00	1.56	39	1800	2750
185	6.0	0.4	2.00	1.56	41	2000	3150
240	6.0	0.4	2.00	1.72	44	2300	3800
300	6.0	0.4	2.00	1.72	46	2600	4500
400	6.0	0.5	2.00	1.88	50	3000	5500
500	6.0	0.5	2.50	1.88	53	3600	6700
630	6.0	0.5	2.50	2.04	57	4300	8200
800	6.0	0.6	2.50	2.20	62	5000	9950
1000	6.0	0.6	2.50	2.36	66	5800	12000

Cross- Sectional View



~ Tabulated approx. net weights of cables are only for guidelines for transportation / Loading/ Unloading Purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at 20°C in Ohm/km		Approx. Cond. A.C. Resistance at 90°C in Ohm/km		Reactance of cable at 50HZ in ohms/km (APPROX.)	App. Capacitance of cable in microF/KM (APPROX).	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	Al	Cu	Al	Cu			With Aluminium cond.			With Copper cond.			Al	Cu
							Ground	Duct	Air	Ground	Duct	Air		
	25	1.20	0.727	1.54			0.931	0.166	0.13	100	90	120	130	115
35	0.868	0.524	1.11	0.671	0.158	0.15	120	105	145	155	135	185	3.29	5.00
50	0.641	0.387	0.820	0.495	0.149	0.16	140	120	175	180	155	225	4.70	7.15
70	0.443	0.268	0.567	0.343	0.140	0.18	170	150	220	215	190	280	6.58	10.01
95	0.320	0.193	0.410	0.248	0.134	0.20	200	175	265	255	220	335	8.93	13.59
120	0.253	0.153	0.325	0.197	0.130	0.22	225	195	300	285	245	380	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.126	0.23	250	215	340	310	270	430	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.122	0.25	280	240	385	345	300	485	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.118	0.27	315	275	450	390	335	560	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.113	0.30	345	300	500	420	360	620	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.110	0.32	385	330	570	455	395	690	37.60	57.20
500	0.0605	0.0366	0.0808	0.0489	0.107	0.36	415	360	640	480	415	750	47.00	71.50
630	0.0469	0.0283	0.0648	0.0391	0.103	0.40	450	385	720	510	440	820	59.22	90.10
800	0.0367	0.0221	0.0530	0.0319	0.0997	0.46	485	415	790	540	460	840	75.20	114.40
1000	0.0291	0.0176	0.0444	0.0268	0.097	0.52	510	435	850	550	475	940	94.00	143.00

Note : Normal current ratings are given in standard conditions (as given in page no- 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

Table -32 TECHNICAL DETAIL FOR HAVELLS 12.7/22 KV THREE CORES, AL/COPPER COND., XLPE INSULATED, ARMoured CABLES

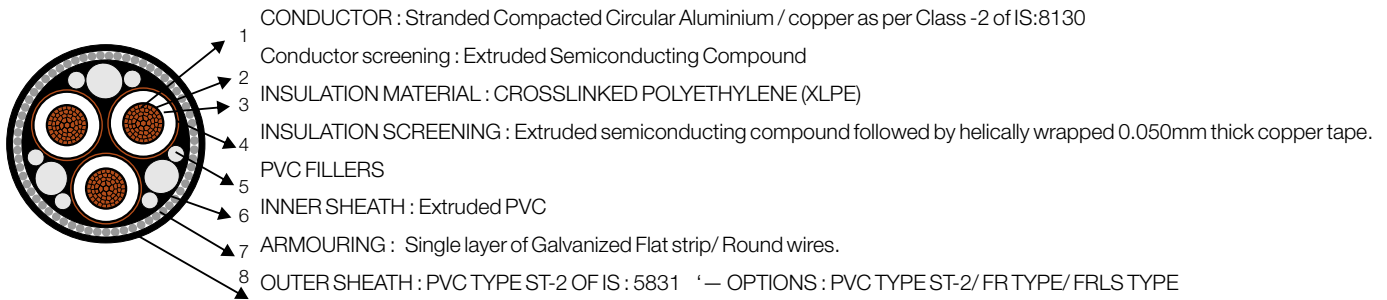
Cable Code : A2XFY/2XFY, A2XWY/2XWY (22KV- E)

Ref. Spec. : IS :7098PART -2

Physical Parameters

SIZE cross-sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	FLAT STRIP ARMoured					Nominal diameter of armour wire (mm)	ROUND WIRES ARMoured				
			Nominal Armour strip thickness mm	Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt kg /km)			Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)		
						With Al. Cond.	With Cu Cond.				With Al. Cond.	With Cu Cond.	
25	6.0	0.5	0.8	2.04	53	3200	3650	2.50	2.20	56	4600	5050	
35	6.0	0.6	0.8	2.04	56	3500	4150	2.50	2.20	59	5000	5650	
50	6.0	0.6	0.8	2.20	59	3900	4850	2.50	2.36	61	5400	6350	
70	6.0	0.6	0.8	2.36	63	4400	5700	2.50	2.36	65	6100	7400	
95	6.0	0.7	0.8	2.36	67	5000	6800	3.15	2.52	72	7600	9350	
120	6.0	0.7	0.8	2.52	70	5700	7950	3.15	2.68	75	8300	10550	
150	6.0	0.7	0.8	2.68	74	6200	9000	3.15	2.68	78	9000	11800	
185	6.0	0.7	0.8	2.68	77	6800	10250	3.15	2.84	83	9800	13250	
240	6.0	0.7	0.8	2.84	83	7900	12350	4.00	3.00	90	12500	16950	
300	6.0	0.7	0.8	3.00	88	8900	14500	4.00	3.00	93	13500	19100	
400	6.0	0.7	0.8	3.00	95	10500	17950	4.00	3.00	102	15500	22950	

Cross- Sectional View



COLOUR OF OUTER SHEATH : BLACK . OPTIONS : ANY OTHER COLOURS AS PER REQUIREMENT
 ~ Tabulated approx. net weights of cables are only for guidelines for transportation / Loading/ Unloading Purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at 20°C in Ohm/km		Approx. Cond. A.C. Resistance at 90°C in Ohm/km		Reactance of cable at 50HZ in ohms/km (APPROX.)	Capecitance of cable in microF/KM (APPROX.)	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	Al	Cu	Al	Cu			With Aluminium cond.			With Copper cond.				
							Ground	Duct	Air	Ground	Duct	Air		
													Al	Cu
25	1.20	0.727	1.54	0.931	0.148	0.13	90	85	110	120	100	135	2.35	3.58
35	0.868	0.524	1.11	0.671	0.141	0.15	110	100	130	145	120	165	3.29	5.01
50	0.641	0.387	0.820	0.495	0.132	0.16	130	115	155	170	150	200	4.70	7.15
70	0.443	0.268	0.567	0.343	0.125	0.18	160	140	190	205	180	245	6.58	10.01
95	0.320	0.193	0.410	0.248	0.119	0.20	190	170	230	245	215	300	8.93	13.59
120	0.253	0.153	0.325	0.197	0.114	0.22	215	190	265	275	245	340	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.111	0.23	240	215	300	305	275	385	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.107	0.25	270	240	340	345	305	435	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.104	0.27	310	275	400	395	350	510	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.102	0.30	350	310	455	440	390	580	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.097	0.32	395	355	530	495	440	660	37.60	57.20

Note : Normal current ratings are given in standard conditions (as given in page no - 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

Table -33 TECHNICAL DETAIL FOR HAVELLS 19/33 KV SINGLE CORE, AL/COPPER COND., XLPE INSULATED, ARMOURED CABLES

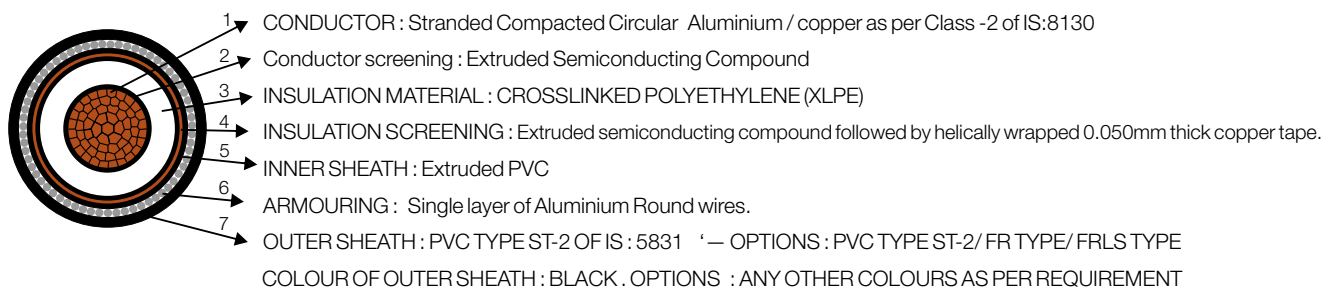
Cable Code : A2XWaY/2XWaY (33KV - EARTHED GRADE)

Ref. Spec. : IS :7098PART -2

Physical Parameters

SIZE cross- Sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	Nominal Diameter of Armour Wire (mm)	Minimum Thickness of Outer Sheath (mm)	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)	
						With Al. Cond.	With Cu Cond.
						25	8.80
35	8.80	0.40	2.00	1.56	38	1500	1600
50	8.80	0.40	2.00	1.56	39	1600	1800
70	8.80	0.40	2.00	1.56	40	1800	2100
95	8.80	0.40	2.00	1.72	43	2000	2500
120	8.80	0.40	2.00	1.72	44	2100	2700
150	8.80	0.40	2.00	1.72	46	2300	3130
185	8.80	0.50	2.00	1.72	47	2500	3550
240	8.80	0.50	2.00	1.88	50	2800	4200
300	8.80	0.50	2.50	2.04	53	3300	5050
400	8.80	0.50	2.50	2.04	57	3800	6200
500	8.80	0.60	2.50	2.20	60	4300	7300
630	8.80	0.60	2.50	2.20	64	4900	8800
800	8.80	0.60	3.15	2.36	70	6000	10500
1000	8.80	0.70	3.15	2.52	74	6900	13000

Cross- Sectional View



~ Tabulated approx. net weights of cables are only for guidelines for transportation / Loading/ Unloading Purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Condt. D.C. Resistance at 20°C in Ohm/km		Approx. Cond. A.C. Resistance at 90°C in Ohm/km		Reactance of cable at 50HZ in ohms/km (Approx).	Capacitance of cable in microF/KM (Approx).	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	Al	Cu	Al	Cu			With Aluminium cond.			With Copper cond.				
							Ground	Duct	Air	Ground	Duct	Air		
25	1.20	0.727	1.54	0.931	0.175	0.10	100	90	120	130	115	155	2.35	3.58
35	0.868	0.524	1.11	0.671	0.169	0.11	120	105	145	155	135	185	3.29	5.00
50	0.641	0.387	0.820	0.495	0.161	0.12	140	120	175	180	155	225	4.70	7.15
70	0.443	0.268	0.567	0.343	0.152	0.14	170	150	220	215	190	280	6.58	10.00
95	0.320	0.193	0.410	0.248	0.145	0.15	200	175	265	255	220	335	8.93	13.59
120	0.253	0.153	0.325	0.197	0.140	0.16	225	195	300	285	245	380	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.135	0.18	250	215	340	310	270	430	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.130	0.19	280	240	385	345	300	485	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.126	0.21	315	275	450	390	335	560	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.122	0.23	345	300	500	420	360	620	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.117	0.25	385	330	570	455	395	690	37.60	57.20
500	0.0605	0.0366	0.0808	0.0489	0.113	0.27	415	360	640	480	415	750	47.00	71.50
630	0.0469	0.0283	0.0648	0.0391	0.111	0.29	450	385	720	510	440	820	59.22	90.10
800	0.0367	0.0221	0.0530	0.0319	0.105	0.34	485	415	790	540	460	840	75.20	114.40
1000	0.0291	0.0176	0.0444	0.0268	0.102	0.37	510	435	850	550	475	940	94.00	143.00

Note : Normal current ratings are given in standard conditions (as given in page no - 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

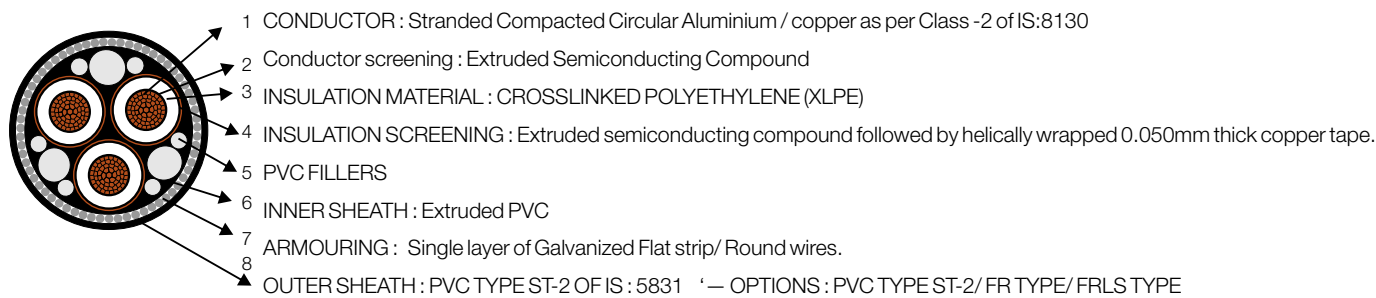
Cable Code : A2XFY/2XFY, A2XWY/2XWY (33KVE)

Ref. Spec. : IS :7098PART -2

Physical Parameters

SIZE cross-sectional area(Sqmm)	Nominal Insulation thickness mm	Minimum Inner Sheath thickness mm	FLAT STRIP ARMURED					Nominal diameter of armour wire (mm)	ROUND WIRES ARMURED				
			Nominal Armour strip thickness mm	Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)			Minimum outer Sheath thickness mm	Approx. Over all Diameter (mm)	Approx. cable wt (kg /km)		
						With Al. Cond.	With Cu Cond.				With Al. Cond.	With Cu Cond.	
25	8.80	0.70	0.8	2.36	67	4700	5150	3.15	2.68	72	7400	7850	
35	8.80	0.70	0.8	2.52	70	5100	5750	3.15	2.68	75	7800	8450	
50	8.80	0.70	0.8	2.52	72	5500	6450	3.15	2.68	77	8200	9150	
70	8.80	0.70	0.8	2.68	76	6100	7400	3.15	2.84	81	9000	10300	
95	8.80	0.70	0.8	2.84	80	6800	8550	3.15	3.00	86	10000	11750	
120	8.80	0.70	0.8	2.84	84	7500	9750	4.00	3.00	90	12000	14250	
150	8.80	0.70	0.8	3.00	87	8100	10900	4.00	3.00	94	12700	15500	
185	8.80	0.70	0.8	3.00	90	8800	12250	4.00	3.00	97	13500	16950	
240	8.80	0.70	0.8	3.00	95	9900	14350	4.00	3.00	103	15000	19450	
300	8.80	0.70	0.8	3.00	100	11000	16600	4.00	3.00	106	16000	21600	
400	8.80	0.70	0.8	3.00	108	12500	19950	4.00	3.00	114	18000	25450	

Cross- Sectional View



COLOUR OF OUTER SHEATH : BLACK . OPTIONS : ANY OTHER COLOURS AS PER REQUIREMENT
 ~ Tabulated approx. net weights of cables are only for guidelines for transportation / Loading/ Unloading Purpose.

Electrical Parameters

SIZE cross-sectional area (Sq MM)	Max. Cond. D.C. Resistance at 20°C in Ohm/km		Approx. Cond. A.C. Resistance at 90°C in Ohm/km		Reactance of cable at 50HZ in ohms/km (APPROX.)	Capecitance of cable in microF/KM (APPROX.)	Normal* Current Rating in Amps						Short Circuit Current Rating for 1Sec.duration in K. Amps	
	Al	Cu	Al	Cu			With Aluminium cond.			With Copper cond.			Al	Cu
							Ground	Duct	Air	Ground	Duct	Air		
25	1.20	0.727	1.54	0.931	0.160	0.10	90	85	110	120	100	135	2.35	3.58
35	0.868	0.524	1.11	0.671	0.153	0.11	110	100	130	145	120	165	3.29	5.01
50	0.641	0.387	0.820	0.495	0.146	0.12	130	115	155	170	150	200	4.70	7.15
70	0.443	0.268	0.567	0.343	0.138	0.14	160	140	190	205	180	245	6.58	10.01
95	0.320	0.193	0.410	0.248	0.130	0.15	190	170	230	245	215	300	8.93	13.59
120	0.253	0.153	0.325	0.197	0.125	0.16	215	190	265	275	245	340	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.122	0.18	240	215	300	305	275	385	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.118	0.19	270	240	340	345	305	435	17.39	26.46
240	0.125	0.0754	0.162	0.098	0.113	0.21	310	275	400	395	350	510	22.56	34.32
300	0.100	0.0601	0.130	0.078	0.111	0.23	350	310	455	440	390	580	28.20	42.90
400	0.0778	0.0470	0.1023	0.0618	0.106	0.25	395	355	530	495	440	660	37.60	57.20

Note : Normal current ratings are given in standard conditions (as given in page no - 40,41), if site conditions are different, current rating should be multiplied by rating factor as given in page no. 42

Basic assumption for current ratings & rating factors

1. SCOPE

The current ratings of cables as indicated in various tables have been calculated on certain assumed conditions.

In actual practice these conditions may be different. Therefore to determine the actual current ratings as per installation conditions, the tabulated ratings shall be multiplied with appropriate factors

a) Basic assumption for current ratings

- i) Maximum permissible temperature - 90°C for XLPE insulation, 70°C for general purpose PVC, 85°C for HR PVC
- ii) Ground/Duct temperature - 30°C
- iii) Ambient temperature - 40°C
- iv) Thermal resistivity of soil - 150°C cm/W
- v) Thermal resistivity of Dielectric 650°C cm/W for PVC, 350°C cm/W for XLPE
- vi) Depth of laying - for 1.1KV cables - 750mm, 3.3KV to 11KV-900MM, Above 11KV-1050mm
- vii) Single core cables installed in one circuit in following arrangement
OR
- viii) Multicore cables installed in single circuit

b) RATING FACTORS

i) Rating factors related to variation in ambient air temperature

Air temperature in Deg. C20		25	30	35	40	45	50	55	
	Normal PVC	1.32	1.25	1.16	1.09	1.00	0.90	0.80	0.80
Rating factors	HRPVC	1.22	1.17	1.12	1.06	1.00	0.94	0.87	0.80
	XLPE	1.20	1.16	1.11	1.06	1.00	0.95	0.88	0.81

ii) Rating factors related to variation in ground temperature

Air temperature in Deg. C15		20	25	30	35	40	45	50	
	Normal PVC	1.17	1.12	1.06	1.00	0.94	0.	0.79	0.71
Rating factors	HRPVC	1.13	1.09	1.04	1.00	0.95	0.90	0.85	0.80
	XLPE	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82

iii) Rating factors related to variation in ground thermal resistivity of soil for 3 single core cables laid direct in ground. (Average value)

Thermal Res. in °C.Cm/W		100	120	150	200	250	300
Rating factors		1.20	1.10	1.00	0.90	0.81	0.74

iv) Rating factors related to variation in ground thermal resistivity of soil for multi core cables laid direct in ground. (Average value)

Thermal Res. in °C.Cm/W		100	120	150	200	250	300
Rating factors		1.16	1.08	1.00	0.90	0.82	0.76

v) Rating factors related to variation in depth of laying for 1.1kv cables

For cross-sectional area of conductor < 25sqmm

Depth of laying (cm) >		75	90	105	120	150	180 & ABOVE
Rating factors		1.00	0.99	0.98	0.97	0.96	0.95

For cross-sectional area of conductor 25 to 300sqmm

Depth of laying (cm) >		75	90	105	120	150	180 & ABOVE
Rating factors		1.00	0.98	0.97	0.96	0.94	0.93

For cross-sectional area of conductor above 300sqmm

Depth of laying (cm) >		75	90	105	120	150	180 & ABOVE
Rating factors		1.00	0.97	0.96	0.95	0.92	0.91

vi) Rating factors related to variation in depth of laying for 3.3kv to 11kv cables

Depth of laying (cm) >		75	90	105	120	150	180 & ABOVE
Rating factors		—	1.00	0.99	0.98	0.96	0.95

vii) Rating factors related to variation in depth of laying for above 11kv cables

Depth of laying (cm) >		75	90	105	120	150	180 & ABOVE
Rating factors		—	—	1.00	0.99	0.98	0.96