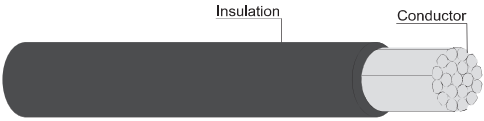
THWA-C

750V 70°C COMPACTED ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 293-2541



CABLE STRUCTURE

Conductor : Compact stranded hard drawn aluminium wires
Sizes 10 mm² up to 500 mm²

Insulation : Black Polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70 °C
: Circuit voltage not exceeding 750 Volts

Testing voltage : 2,500 Volts
Reference standard : TIS 293-2541, Table 2

APPLICATION

For low voltage overhead distribution line

Nominal cross sectional area (mm²)	Actual cross sectional area (mm²)	Minimum number of wires (No.)	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
10	9.64	6	3.72	1.1	6.3	3.08	0.0084	1,768	52	50	500/C
16	15.55	6	4.69	1.1	7.2	1.91	0.0068	2,734	69	75	500/C
25	24.75	6	5.90	1.3	8.8	1.20	0.0064	4,120	93	110	300/C
35	34.21	6	6.95	1.3	9.9	0.868	0.0056	5,591	115	150	300/C
50	46.32	6	8.01	1.5	11.5	0.641	0.0059	7,313	141	200	200/C
70	67.03	12	9.73	1.5	13.5	0.443	0.0050	10,420	178	270	100/C
95	92.79	15	11.40	1.7	15.5	0.320	0.0047	14,098	220	370	100/C
120	117.37	15	12.95	1.7	17.0	0.253	0.0042	18,518	258	450	100/C
150	144.15	15	14.27	1.9	18.5	0.206	0.0042	22,457	294	550	500/D
185	181.06	30	15.98	2.1	21.0	0.164	0.0042	28,974	342	700	500/D
240	237.55	30	18.47	2.3	24.0	0.125	0.0040	37,506	410	900	500/D
300	296.94	30	20.68	2.5	26.0	0.100	0.0038	45,642	475	1,100	500/D
400	381.67	53	23.39	2.7	30.0	0.0778	0.0036	56,992	560	1,400	500/D
500	490.81	53	26.67	3.1	34.0	0.0605	0.0037	72,195	659	1,800	500/D

C : Packing in Coil
D : Packing in Drum

Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
10	3.7006	0.4930	0.1549	3.7039
16	2.2949	0.4734	0.1487	2.2997
25	1.4419	0.4676	0.1469	1.4493
35	1.0430	0.4584	0.1440	1.0529
50	0.7703	0.4617	0.1451	0.7838
70	0.5325	0.4414	0.1387	0.5502
95	0.3847	0.4377	0.1375	0.4086
120	0.3043	0.4321	0.1358	0.3332
150	0.2479	0.4319	0.1357	0.2826
185	0.1976	0.4290	0.1348	0.2392
240	0.1509	0.4261	0.1339	0.2017
300	0.1210	0.4244	0.1333	0.1801
400	0.0946	0.4206	0.1321	0.1625
500	0.0741	0.4217	0.1325	0.1518