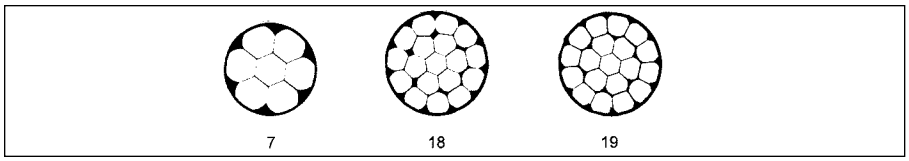
TransPowr® Compact (Smooth Body) ASC Bare Overhead Conductor

All-Aluminum Compact Stranded Conductor



Product Construction:

Complete Conductor:

Smooth Body bare all-aluminum 1350 (A1 or ASC) are compact concentric-lay-stranded conductors consisting of one or more layers of wire wrapped helically around a straight round central wire. Smooth Body conductors are manufactured in accordance with the requirements of the latest applicable issue of CSA C49.5.

A1 or ASC (Aluminum Stranded Conductor) are CSA reference terms. The Canadian constructions are similar in design (strand component size and configuration) to the ASTM B400 specification. Differences lie in the methods used to calculate the rated strength and dc resistance values.

The commonly used strandings are 7, 18, and 19. The sizes and strandings listed on the following pages are common examples used in overhead lines. Metric (mm^2) sizes are also available.

Complete Conductor (cont'd.):

Class AA strandings are used for bare overhead lines. The direction of lay of the outer layer is right-hand and is reversed in successive layers. The temper is full hard drawn (H19).

Class A strandings are used primarily for overhead conductors which are to be covered with weather-resistant materials. Greater flexibility is provided than Class AA. The direction of lay of the outer layers is right-hand and is reversed in successive layers. The temper is full hard drawn (H19).

Features and Benefits:

The conductors are smaller in diameter and offer lower ice load/wind resistance profile factors.

The conductors are lighter in weight than ACSR, which translates into lower unit length costs, easier handling in installation and less complex fittings.

All-aluminum conductors have an inherent high corrosion resistance due to their homogeneous construction.

Applications:

Stranded bare A1 or ASC 1350 all-aluminum conductors are used for overhead line installations where design parameters do not require the higher strength or temperature ratings provided by ACSR, ACSS or other type of bare conductor.

Options:

- High-Conductivity aluminum (/HC) (62.2% IACS)
- Non-Specular surface finish (/NS)
- E3X® surface coating (/E3X)

For more information, contact your General Cable sales representative or e-mail infoca@generalcable.com.

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A1 (ASC), ALUMINUM CONDUCTOR, COMPACT-LAY-STRANDED (MECHANICAL PROPERTIES)								
CODE WORD	CSA DESIGNATION	CONDUCTOR SIZE		STRANDING NO. X DIA. (mm)	CLASS	O.D. (mm)	NOMINAL MASS KG/KM	RATED STRENGTH kN
		AWG OR kcmil	mm²					
Toad	13-A1F-7-4.3	#6	13.3	7x1.56	A	4.28	36.58	2.61
Dragon	21-A1F-7-5.4	#4	21.2	7x1.96	A	5.41	57.74	4.12
Moloch	34-A1F-7-6.8	#2	33.6	7x2.47	AA	6.81	91.70	6.21
Monitor	42-A1F-7-7.6	#1	42.4	7x2.78	AA	7.59	116.2	7.44
Newt	42-A1F-18-7.6	#1	42.4	18x1.73	A	7.59	116.6	8.25
Tuatara	54-A1F-7-8.5	1/0	53.5	7x3.12	AA	8.53	146.3	9.10
Skink	54-A1F-18-8.6	1/0	53.5	18x1.95	A	8.55	148.2	10.5
Alligator	67-A1F-7-9.6	2/0	67.4	7x3.50	AA	9.55	184.1	11.4
Gecko	67-A1F-18-9.6	2/0	67.4	18x2.18	A	9.55	185.2	12.8
Crocodile	85-A1F-7-10.7	3/0	85.0	7x3.93	AA	10.7	232.2	14.0
Anoli	85-A1F-18-10.7	3/0	85.0	18x2.45	A	10.7	233.9	15.7
Salamander	107-A1F-7-12.1	4/0	107.0	7x4.41	AA	12.1	292.3	17.6
Clayman	107-A1F-18-12.1	4/0	107.0	18x2.75	A	12.1	294.7	19.2
Komodo	135-A1F-18-13.6	266.5	135.0	18x3.09	A	13.6	372.1	22.9

Dimensions and weights not designated as mininum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

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ASC, ALUMINUM CONDUCTOR, COMPACT-LAY-STRANDED (ELECTRICAL PROPERTIES)										
CODE WORD	CONDUCTOR SIZE		RESISTANCE (1) OHMS/KM			AMPACITY @75°C (2)		GEOMETRIC MEAN RADIUS CM	INDUCTIVE REACTANCE OHM/KM (3)	CAPACITIVE REACTANCE MEGAOHM-KM (3)
	AWG OR kcmil	mm²	DC @20°C	AC @25°C	AC @75°C	STANDARD	E3X®			
Toad	#6	13.3	2.148	2.191	2.625	93	99	0.162	0.3950	0.2368
Dragon	#4	21.2	1.348	1.375	1.647	125	134	0.201	0.3786	0.2255
Moloch	#2	33.6	0.8502	0.8675	1.039	166	180	0.256	0.3603	0.2146
Monitor	#1	42.4	0.6738	0.6875	0.8236	192	209	0.283	0.3527	0.2094
Newt	#1	42.4	0.6791	0.6930	0.8302	191	208	0.293	0.3504	0.2094
Tuatara	1/0	53.5	0.5340	0.5449	0.6528	222	243	0.320	0.3435	0.2038
Skink	1/0	53.5	0.5384	0.5494	0.6581	221	242	0.329	0.3416	0.2037
Alligator	2/0	67.4	0.4239	0.4326	0.5182	256	282	0.360	0.3347	0.1984
Gecko	2/0	67.4	0.4273	0.4362	0.5225	255	280	0.369	0.3330	0.1984
Crocodile	3/0	85.0	0.3361	0.3431	0.4109	297	327	0.402	0.3265	0.1928
Anoli	3/0	85.0	0.3389	0.3460	0.4144	295	326	0.411	0.3245	0.1929
Salamander	4/0	107.0	0.2670	0.2726	0.3265	343	380	0.454	0.3173	0.1872
Clayman	4/0	107.0	0.2692	0.2749	0.3293	341	379	0.463	0.3156	0.1873
Komodo	266.5	135.0	0.2133	0.2181	0.2611	395	441	0.524	0.3064	0.1814

(1) Based on a conductivity of 61.0% IACS at 20°C for aluminum.
(2) Based on a conductor temperature of 75°C at 60 Hz and the following conditions, 32°C ambient temperature, 1.98 ft/sec (0.6 m/sec) crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 42° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 95.0 W/ft² of solar and sky radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
(3) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius (30.48 cm).