



• Application

The AS/NZS 3675 standard specifies that covered conductors must have insulation material but no conductor or insulation screens. These conductors are used similarly to open wire 11 to 33kV bare overhead systems.

• Classification

There are two main types of covered conductors: CC (Covered Conductor), CCT (Covered Conductor with Full Thickness Covering).

• Covered Conductor CC

CC covered conductors are designed with a minimum average covering thickness of 2.0mm, suitable for all working voltages up to and including 19/33kV. These conductors can withstand intermittent contact with conductive materials, such as tree branches, but should not be in permanent contact.

Conductors: Available in aluminium, aluminium alloy, and aluminium clad steel.

Water Blocking: Utilizes a special material that meets all the test requirements of AS/NZS 3675.

Covering: Features a track-resistant UV-stabilised XLPE covering.

• Covered Conductor CCT (Full Thickness Covering)

CCT covered conductors have a specified covering thickness for each nominated working voltage. While they operate under similar principles to bare wire or CC systems, their electrical and mechanical properties allow them to remain in contact with tree limbs for extended periods, depending on the abrasiveness of the tree, wind conditions, and operating temperature. CCT conductors perform better in polluted environments and are suitable for use in spacer cable systems and Insulated Unscreened Conductor (IUC) systems.

• Construction

Conductors: Available in aluminium, aluminium alloy, and aluminium clad steel.

Water Blocking: Utilizes a special material that meets the test requirements of AS/NZS 3675.

Covering: These conductors are covered with a track-resistant UV-stabilised XLPE or with an inner layer of non-UV-stabilised XLPE and an outer layer of UV-stabilised High-Density Polyethylene (HDPE). If the latter is used, the average thickness of HDPE is not more than 40% of the specified minimum average thickness and not less than 1.0mm.

• Specification

-AS/NZS 3675 Standard Covered Conductor

• Eastful Cable Lab



We have CNAS Accredited Facility to assure conformity assessment services with a focus on quality, expertise, and customer satisfaction.

CNAS has international mutual recognition among IAF, ILAC, APLAC and PAC.

• Accreditation

We meet the requirements of ISO9001, ISO14001, ISO45001 and ISO50001 and our cables have certificate of CCC, RoHS, CASC, UL, cUL, TÜV Rheinland and CCS.



• National Green Factory



Our facility has been awarded of National Green Factory by Ministry of Industry and Information Technology of China. We are committed to the development of high-end, intelligent and green manufacturing industry.

*The overall energy consumption level of green factories is better than the energy efficiency benchmark level.

• Technical Parameters

Alloy 6201									
Conductor Size	Conductor D.C. Resistance at 20°C	Conductor A.C. Resistance at 80°C	Reactance at 50 Hz (460 mm spacing)	Continuous Current Carrying Capacity					
				Based on 30°C Ambient			Based on 40°C Ambient		
				Still Air	1.0 m/s Wind	2.0 m/s Wind	Still Air	1.0 m/s Wind	2.0 m/s Wind
No./mm	Ω/km	Ω/km	Ω/km	A	A	A	A	A	A
7/2.75	0.799	0.988	0.331	125	210	235	110	185	210
7/3.75	0.43	0.532	0.312	180	300	345	160	270	310
7/4.75	0.268	0.331	0.297	245	410	465	220	365	415
19/3.50	0.183	0.227	0.281	315	515	595	280	460	530
Fault Current Rating for 1 sec.*		Everday Working Tension		Max. Working Tension (50% MBL)		Min. Breaking Load		Min. Bending Radius	
kA		f kN		kN		kN		mm	
3.5		1.51		5.8		11.6		200	
6.4		2.82		10.9		21.7		245	
10.3		4.52		17.4		34.8		290	
15.2		6.67		25.7		51.3		340	

Alloy 1120									
Conductor Size	Conductor D.C. Resistance at 20°C	Conductor A.C. Resistance at 80°C	Reactance at 50 Hz (460 mm spacing)	Continuous Current Carrying Capacity					
				Based on 30°C Ambient			Based on 40°C Ambient		
				Still Air	1.0 m/s Wind	2.0 m/s Wind	Still Air	1.0 m/s Wind	2.0 m/s Wind
No./mm	Ω/km	Ω/km	Ω/km	A	A	A	A	A	A
7/2.75	0.713	0.881	0.331	130	220	250	115	195	225
7/3.75	0.383	0.474	0.312	190	320	365	170	285	325
7/4.75	0.239	0.296	0.297	260	430	485	230	385	435
19/3.50	0.163	0.202	0.281	330	545	625	295	485	560
Fault Current Rating kA for 1 sec.*		Everday Working Tension		Max. Working Tension (50% MBL)		Min. Breaking Loa		Min. Bending Radius	
		f kN		kN		kN		mm	
3.7		1.49		4.96		9.91		200	
6.8		2.64		8.8		17.6		245	
11		4.07		13.6		27.1		290	
16.2		6.26		20.9		41.7		340	

11 kv Covered Conductor Alloy 6201									
Conductor Size	Conductor D.C. Resistance at 20°C	Conductor A.C. Resistance at 80°C	Reactance at 50 Hz (460 mm spacing)	Continuous Current Carrying Capacity					
				Based on 30°C Ambient			Based on 40°C Ambient		
				Still Air	1.0 m/s Wind	2.0 m/s Wind	Still Air	1.0 m/s Wind	2.0 m/s Wind
No./mm	Ω/km	Ω/km	Ω/km	A	A	A	A	A	A
7/3.75	0.43	0.532	0.312	185	295	330	165	265	295
7/4.75	0.268	0.331	0.297	245	390	440	220	350	395
19/3.50	0.183	0.227	0.281	315	500	560	280	445	500
Fault Current Rating kA for 1 sec.*	Everday Working Tension		Max. Working Tension (50% MBL)		Min. Breaking Loa		Min. Bending Radius		
	f kN		kN		kN		mm		
6.4	2.82		10.9		21.7		285		
10.3	4.52		17.4		34.8		330		
15.2	6.67		25.7		51.3		380		

22 kv Covered Conductor Alloy 6201									
Conductor Size	Conductor D.C. Resistance at 20°C	Conductor A.C. Resistance at 80°C	Reactance at 50 Hz (460 mm spacing)	Continuous Current Carrying Capacity					
				Based on 30°C Ambient			Based on 40°C Ambient		
				Still Air	1.0 m/s Wind	2.0 m/s Wind	Still Air	1.0 m/s Wind	2.0 m/s Wind
No./mm	Ω/km	Ω/km	Ω/km	A	A	A	A	A	A
7/3.75	0.43	0.532	0.312	185	285	315	165	255	280
7/4.75	0.268	0.331	0.297	245	375	420	220	335	375
19/3.50	0.183	0.227	0.281	315	475	530	280	425	475
Fault Current Rating kA for 1 sec.*	Everday Working Tension		Max. Working Tension (50% MBL)		Min. Breaking Loa		Min. Bending Radius		
	f kN		kN		kN		mm		
6.4	2.82		10.9		21.7		350		
10.3	4.52		17.4		34.8		395		
15.2	6.67		25.7		51.3		445		

33 kv Covered Conductor Alloy 6201									
Conductor Size	Conductor D.C. Resistance at 20°C	Conductor A.C. Resistance at 80°C	Reactance at 50 Hz (460 mm spacing)	Continuous Current Carrying Capacity					
				Based on 30°C Ambient			Based on 40°C Ambient		
				Still Air	1.0 m/s Wind	2.0 m/s Wind	Still Air	1.0 m/s Wind	2.0 m/s Wind
No./mm	Ω/km	Ω/km	Ω/km	A	A	A	A	A	A
7/3.75	0.43	0.532	0.312	185	270	295	165	240	265
7/4.75	0.268	0.331	0.297	245	360	400	220	320	355
19/3.50	0.183	0.227	0.281	315	455	505	280	405	450
Fault Current Rating kA for 1 sec.*	Everday Working Tension		Max. Working Tension (50% MBL)		Min. Breaking Loa		Min. Bending Radius		
	f kN		kN		kN		mm		
6.4	2.82		10.9		21.7		425		
10.3	4.52		17.4		34.8		470		
15.2	6.67		25.7		51.3		520		

● Technical Parameters

XLPE Covered Aerial Cables Alloy 1120 conductors									
11kv Covered Conductor Alloy 1120									
Conductor Size	Conductor D.C. Resistance at 20°C	Conductor A.C. Resistance at 80°C	Reactance at 50 Hz (460 mm spacing)	Continuous Current Carrying Capacity					
				Based on 30°C Ambient			Based on 40°C Ambient		
				Still Air	1.0 m/s Wind	2.0 m/s Wind	Still Air	1.0 m/s Wind	2.0 m/s Wind
No./mm	Ω/km	Ω/km	Ω/km	A	A	A	A	A	A
7/2.75	0.713	0.881	0.331	130	215	240	115	190	215
7/3.75	0.383	0.474	0.312	190	315	345	170	280	310
7/4.75	0.239	0.296	0.297	260	415	470	230	370	420
19/3.50	0.163	0.202	0.281	330	525	595	295	470	530
Fault Current Rating kA for 1 sec.*		Everday Working Tension		Max. Working Tension (50% MBL)		Min. Breaking Loa		Min. Bending Radius	
		f kN		kN		kN		mm	
3.7		1.49		4.96		9.9		230	
6.8		2.64		8.8		17.6		285	
11		4.07		13.6		27.1		330	
16.2		6.26		20.9		41.7		380	

22 kV Covered Conductor Alloy 1120									
Conductor Size	Conductor D.C. Resistance at 20°C	Conductor A.C. Resistance at 80°C	Reactance at 50 Hz (460 mm spacing)	Continuous Current Carrying Capacity					
				Based on 30°C Ambient			Based on 40°C Ambient		
				Still Air	1.0 m/s Wind	2.0 m/s Wind	Still Air	1.0 m/s Wind	2.0 m/s Wind
No./mm	Ω/km	Ω/km	Ω/km	A	A	A	A	A	A
7/2.75	0.713	0.881	0.331	135	205	225	120	185	200
7/3.75	0.383	0.474	0.312	190	295	330	170	265	295
7/4.75	0.239	0.296	0.297	260	400	440	230	355	395
19/3.50	0.163	0.202	0.281	330	505	560	295	450	500
Fault Current Rating kA for 1 sec.*		Everday Working Tension		Max. Working Tension (50% MBL)		Min. Breaking Loa		Min. Bending Radius	
		f kN		kN		kN		mm	
3.7		1.49		4.96		9.9		300	
6.8		2.64		8.8		17.6		350	
11		4.07		13.6		27.1		395	
16.2		6.26		20.9		41.7		445	

● Technical Parameters

33kv Covered Conductor Alloy 1120									
Conductor Size	Conductor D.C. Resistance at 20°C	Conductor A.C. Resistance at 80°C	Reactance at 50 Hz (460 mm spacing)	Continuous Current Carrying Capacity					
				Based on 30°C Ambient			Based on 40°C Ambient		
				Still Air	1.0 m/s Wind	2.0 m/s Wind	Still Air	1.0 m/s Wind	2.0 m/s Wind
No./mm	Ω/km	Ω/km	Ω/km	A	A	A	A	A	A
7/2.75	0.713	0.881	0.331	135	195	215	120	175	190
7/3.75	0.383	0.474	0.312	195	285	315	175	255	280
7/4.75	0.239	0.296	0.297	260	380	420	230	340	375
19/3.50	0.163	0.202	0.281	330	480	530	295	430	475
Fault Current Rating kA for 1 sec.*		Everyday Working Tension		Max. Working Tension (50% MBL)		Min. Breaking Loa		Min. Bending Radius	
		f kN		kN		kN		mm	
3.7		1.49		4.96		9.9		385	
6.8		2.64		8.8		17.6		425	
11		4.07		13.6		27.1		470	
16.2		6.26		20.9		41.7		520	
* Initial temperature 80°C, final temperature 210°C, constant K = 83.0 for alloy 6201 and 88.4 for alloy 1120. f 13% MBL fbr alloy 6201 and 15% MBL for alloy 1120.									