

ACWU90 (-40°C) XLPE 600 Volts 90°C

Description

CSA File #LL23462 Class 5811 01 - Cable
CSA File #LL19376 Class 5818 01 - Hazardous Location Cable

One to four compact ACM aluminum conductors with low temperature, sunlight resistant (black and colours) EXELENE® cross-linked polyethylene insulation (RW90 XLPE) and bare aluminum bonding wire in multi-conductor cables. Single conductor cables have aluminum concentric bonding wire. Conductor assembly is wrapped and enclosed in an interlocked aluminum armour with an overall low acid gas and low flame spread, sunlight resistant PVC jacket (LAG/LFS) with FT4 and AG14 rating. LEAD FREE and RoHS compliant.

#8 and larger are HL rated for Class I Div 1 & 2 Groups A, B, C & D, Class II Div 1 & 2 Groups E, F & G and Class III Hazardous Locations.



Standards

National CSA C22.2 N° 51

Application

For exposed and concealed wiring in dry or wet locations and where exposed to the weather. Nexans cables are marked "SUN RES" for sunlight resistant.

For use in ventilated, non-ventilated and ladder type cable trays in wet and dry locations.

For direct earth burial (with protection as required by Inspection Authority).

For service entrance above or below ground.

For use in hazardous locations with approved connectors.

Minimum recommended installation temperature minus 40°C (with suitable handling procedures).

Maximum conductor temperature 90°C.

Rated 600 volts.

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Characteristics

Construction characteristics

Conductor material Aluminum

Electrical characteristics

Maximum operating voltage 600 V

Usage characteristics

Maximum operating temperature 90 °C

ACWU Single Stranded Conductor (plus bonding wire)

Size ** AWG or kcmil	Insulation Thickness		Bonding Wire Size AWG or kcmil	Approximate Diameter				Approximate Net Cable Weight		Ampacity*** (amps) 30°C Ambient
	mm	in		Armour		PVC Jacket				
				mm	in	mm	in	kg/km	lbs/kft	
4/0	1.40	0.055	2	24.99	0.984	27.59	1.086	779	538	300
250	1.65	0.065	1	26.82	1.056	29.57	1.164	941	650	330
300	1.65	0.065	1	28.14	1.108	28.60	1.216	1043	720	375
350	1.65	0.065	1/0	29.21	1.150	31.45	1.238	1115	770	415
400	1.65	0.065	1/0	30.42	1.198	31.40	1.306	1227	847	450
500	1.65	0.065	2/0	31.30	1.263	34.80	1.370	1422	982	515
600	2.03	0.080	2/0	35.05	1.380	36.70	1.488	1645	1136	585
750	2.03	0.080	3/0	36.80	1.490	40.59	1.598	1961	1354	670
1000	2.03	0.080	3/0	40.70	1.638	44.32	1.745	2392	1652	800
#1250	2.41	0.095	4/0	47.50	1.870	50.60	1.990	3735	2507	905
#1500	2.41	0.095	250	51.31	2.020	54.70	2.160	4355	2925	1020

Insulation Colour Code: Black (sunlight resistant)

** Compact aluminum conductors are AA-8000 series aluminum alloy (ACM)

***Ampacity in accordance with Table #3 of the Canadian Electrical Code Part #1.

#Conductors are compressed stranding not compact.

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ACWU Three Stranded Conductor (plus bonding wire)

Size** AWG or kcmil	Insulation Thickness		Bonding Wire Size AWG	Approximate Diameter				Approximate Net Cable Weight		Ampacity*** (amps) 30°C Ambient
				Armour		PVC Jacket				
	mm	in		mm	in	mm	in	kg/km	lbs/kft	
6	1.14	0.045	8	20.6	0.81	23.6	0.93	500	335	55#
4	1.14	0.045	6	23.1	0.91	25.9	1.02	618	415	65
3	1.14	0.045	6	24.4	0.96	27.2	1.07	673	452	75
2	1.14	0.045	6	25.9	1.02	28.7	1.13	771	518	95#
1	1.40	0.055	4	28.9	1.14	31.7	1.25	941	632	105
1/0	1.40	0.055	4	31.0	1.22	33.5	1.32	1074	722	120
2/0	1.40	0.055	4	33.0	1.30	35.8	1.41	1235	830	145
3/0	1.40	0.055	4	35.8	1.41	38.3	1.51	1444	970	165
4/0	1.40	0.055	4	38.6	1.52	41.9	1.65	1746	1173	185#
250	1.65	0.065	2	42.2	1.66	45.5	1.79	2165	1455	215
300	1.65	0.065	2	45.7	1.80	48.8	1.92	2661	1788	240
350	1.65	0.065	2	48.3	1.90	51.6	2.03	2958	1989	260
400	1.65	0.065	2	50.3	1.98	53.6	2.11	3234	2173	290
500	1.65	0.065	1	54.9	2.16	58.2	2.29	3767	2531	330
600	2.03	0.080	1	60.4	2.38	64.5	2.54	4561	3065	370
750	2.03	0.080	1/0	65.7	2.59	70.0	2.74	5423	3644	405

Insulation Colour Code: Black, Red, White (all sunlight resistant)

**Compact aluminum ACM conductors are aluminum alloy #8030

***Ampacity in accordance with Table #4 of the Canadian Electrical Code Part #1.

For 3-wire 120/240 V and 120/208 V service conductors for single dwellings, or for feeder conductors supplying single dwelling units of row housing, of apartments and similar buildings, and sized in accordance with Rules 8-200(1), 8-200(2) and 8-202(1), the allowable ampacity for sizes No. 6, No. 2 and No. 4/0 AWG shall be 60 A, 100 A and 200 A respectively. In this case the 5% adjustment Rule 8-106(1) cannot be applied.

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ACWU Four Stranded Conductor (plus bonding wire)

Size** AWG or kcmil	Insulation Thickness		Bonding Wire Size AWG	Approximate Diameter				Approximate Net Cable Weight		Ampacity*** (amps) 30°C Ambient
				Armour		PVC Jacket				
	mm	in		mm	in	mm	in	kg/km	lbs/kft	
6	1.14	0.045	8	22.6	0.89	25.6	1.01	583	392	55#
4	1.14	0.045	6	25.4	1.00	28.7	1.13	774	520	65
3	1.14	0.045	6	26.9	1.06	29.4	1.16	818	550	75
2	1.14	0.045	6	28.7	1.13	31.2	1.23	932	626	95#
1	1.40	0.055	4	32.0	1.26	34.8	1.37	1143	768	105
1/0	1.40	0.055	4	34.3	1.35	36.8	1.45	1323	889	120
2/0	1.40	0.055	4	36.6	1.44	39.1	1.54	1533	1030	145
3/0	1.40	0.055	4	39.4	1.55	42.4	1.67	1839	1236	165
4/0	1.40	0.055	4	42.4	1.67	45.7	1.80	2168	1457	185#
250	1.65	0.065	2	47.2	1.86	50.5	1.99	2897	1947	215
300	1.65	0.065	2	50.2	1.98	53.5	2.11	3289	2210	240
350	1.65	0.065	2	53.0	2.09	56.3	2.22	3612	2427	260
400	1.65	0.065	2	55.6	2.19	58.9	2.32	3966	2665	290
500	1.65	0.065	1	60.4	2.38	64.5	2.54	4834	3248	330
600	2.03	0.080	1	67.0	2.64	70.9	2.79	5725	3847	370
750	2.03	0.080	1/0	72.9	2.87	76.7	3.02	6860	4610	405

Insulation Colour Code: Black, Red, Blue, White (all sunlight resistant)

**Compact aluminum ACM conductors are aluminum alloy #8030

***Ampacity in accordance with Table #4 of the Canadian Electrical Code Part #1 and assuming the fourth conductor is the neutral of a balanced 3 phase, 4 wire system.

For 3-wire 120/240 V and 120/208 V service conductors for single dwellings, or for feeder conductors supplying single dwelling units of row housing, of apartments and similar buildings, and sized in accordance with Rules 8-200(1), 8-200(2) and 8-202(1), the allowable ampacity for sizes No. 6, No. 2 and No. 4/0 AWG shall be 60 A, 100 A and 200 A respectively. In this case the 5% adjustment Rule 8-106(1) cannot be applied.