

Armoured Cables



600 Volts 90°C

AC90 (-40°C) XLPE Insulation

Copper and ACM Aluminum Conductors

Description

Two, three or four copper or compact ACM aluminum conductors with low temperature EXELENE* cross-linked polyethylene insulation (RW90 XLPE) and bare copper or aluminum bonding wire. Conductor assembly paper wrapped and covered with bare interlocked aluminum armour. Rated 600 volts. Lead Free.

CSA Spec C22.2 No. 51-95 (R2004)

CSA File #LL23462 Class 5811 01

Application

For open and concealed wiring in dry locations only.

For use in cabletroughs and ventilated flexible cableways in dry locations only.

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

Maximum conductor temperature 90°C. Approved for use with ceiling fixtures.

Size ** AWG or kcmil		Insulation Thickness mm in		Bonding Wire*** Size AWG Copper Aluminum		Approximate Diameter				Approximate Net Cable Weight				Ampacity (30°C Ambient)	
						Copper		Aluminum		Copper		Aluminum		(amps)	
Copper	Aluminum	mm	in	mm	in	kg/km	lbs/kft	kg/km	lbs/kft	Copper	Aluminum				
TWO CONDUCTORS (plus bonding wire)															
14	(1)	0.76	.030	14	—	12.0	.47	—	—	145	98	—	—	15	—
12	(1)	0.76	.030	14	12	12.8	.51	12.8	.51	176	115	114	76	20	15
10	(1)	0.76	.030	12	10	13.9	.55	13.9	.55	233	156	137	92	30	25
THREE CONDUCTORS (plus bonding wire)															
14	(1)	0.76	.030	14	—	12.5	.49	—	—	170	115	—	—	15	—
12	(1)	0.76	.030	14	12	13.4	.53	13.4	.53	215	145	140	95	20	15
10	(1)	0.76	.030	12	10	14.6	.57	14.6	.57	290	195	175	115	30	25
8	(7)	1.14	.045	10	10	19.1	.75	19.1	.75	505	340	300	200	45	30
6	(7)	1.14	.045	8	8	21.3	.84	20.6	.81	705	475	380	255	65	55#
4	(7)	1.14	.045	8	6	24.1	.95	23.1	.91	965	650	490	330	85	65
3	(7)	1.14	.045	6	6	25.4	1.00	24.4	.96	1195	800	560	375	105	75
2	(7)	1.14	.045	6	6	26.9	1.06	25.9	1.02	1410	950	640	430	120	95#
1	(19)	1.40	.055	6	4	30.5	1.20	28.9	1.14	1720	1155	785	530	140	105
1/0	(19)	1.40	.055	6	4	32.5	1.28	31.0	1.22	2055	1380	905	605	155	120
2/0	(19)	1.40	.055	6	4	34.9	1.38	33.0	1.30	2485	1670	1055	710	185#	145
3/0	(19)	1.40	.055	4	4	37.7	1.49	35.8	1.41	3090	2075	1230	825	210	165
4/0	(19)	1.40	.055	4	4	40.8	1.61	38.6	1.52	3755	2520	1450	975	235	185#
250	(37)	1.65	.065	4	2	44.5	1.75	42.2	1.66	4375	2940	1840	1235	265	215
300	(37)	1.65	.065	4	2	48.5	1.91	45.7	1.80	5315	3570	2295	1540	295	240
350	(37)	1.65	.065	3	2	51.2	2.02	48.3	1.90	6120	4115	2560	1715	325	260
400	(37)	1.65	.065	3	2	53.7	2.12	50.3	1.98	6870	4615	2800	1880	345	290
500	(37)	1.65	.065	3	1	58.3	2.30	54.9	2.16	8370	5625	3365	2260	395	330
600	(61)	2.03	.080	2	1	64.1	2.53	60.4	2.38	10045	6750	4000	2685	455	370
750	(61)	2.03	.080	2	1/0	69.7	2.75	65.7	2.59	12260	8240	4790	3210	500	405
1000	(61)	2.03	.080	1	—	78.0	3.07	—	—	16015	10760	—	—	585	480

Insulation Colour Code:

2 Conductors – Black, White
3 Conductors – Black, White, Red

** In compact ACM conductors (19) is 18 wire, (37) is 35 wire, and (61) is 58 wire strand. ACM aluminum is alloy #8030.

***Copper bonding wire supplied with copper conductors. Aluminum bonding wire supplied with aluminum conductors.

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 aluminum shall be 60 A, 100 A and 200 A respectively. For No. 2/0 AWG copper it shall be 200 A. In these cases the 5% adjustment Rule 8-106(1) cannot be applied.

* Registered Trademark of Nexans Canada Inc.



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600 Volts 90°C

AC90 (-40°C) XLPE Insulation

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Description

Two, three or four copper or compact ACM aluminum conductors with low temperature EXELENE* cross-linked polyethylene insulation (RW90 XLPE) and bare copper or aluminum bonding wire. Conductor assembly paper wrapped and covered with bare interlocked aluminum armour. Rated 600 volts. Lead Free.

CSA Spec C22.2 No. 51-95(2004)
CSA File #LL23462 Class 5811 01

Application

For open and concealed wiring in dry locations only.

For use in cabletroughs and ventilated flexible cableways in dry locations only.

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

Maximum conductor temperature 90°C. Approved for use with ceiling fixtures.

Size ** AWG or kcmil		Insulation Thickness mm in		Bonding Wire*** Size AWG Copper Aluminum		Approximate Diameter				Approximate Net Cable Weight				Ampacity (30°C Ambient)**	
						Copper		Aluminum		Copper		Aluminum		(amps)	
						Copper	Aluminum	mm	in	mm	in	kg/km	lbs/kft	kg/km	lbs/kft
FOUR CONDUCTORS (plus bonding wire)															
14	(1)	0.76	.030	14	—	13.3	.52	—	—	203	137	—	—	15	—
12	(1)	0.76	.030	14	12	14.3	.56	14.3	.56	260	175	150	102	20	15
10	(1)	0.76	.030	12	10	15.6	.62	15.6	.62	355	239	190	128	30	25
8	(7)	1.14	.045	10	10	18.5	.73	18.5	.73	525	355	270	180	45	30
6	(7)	1.14	.045	8	8	23.5	.93	22.6	.89	875	585	450	305	65	55#
4	(7)	1.14	.045	8	6	26.0	1.03	25.4	1.00	1215	815	600	405	85	65
3	(7)	1.14	.045	6	6	28.1	1.11	26.9	1.06	1495	1005	685	460	105	75
2	(7)	1.14	.045	6	6	30.0	1.18	28.7	1.13	1785	1200	790	530	120	95#
1	(19)	1.40	.055	6	4	33.1	1.31	32.0	1.26	2185	1465	965	650	140	105
1/0	(19)	1.40	.055	6	4	35.7	1.41	34.3	1.35	2630	1770	1125	760	155	120
2/0	(19)	1.40	.055	6	4	38.4	1.51	36.6	1.44	3190	2115	1310	880	185#	145
3/0	(19)	1.40	.055	4	4	41.4	1.63	39.4	1.55	3970	2670	1540	1035	210	165
4/0	(19)	1.40	.055	4	4	46.1	1.82	42.4	1.67	5020	3375	1985	1335	235	185#
250	(37)	1.65	.065	4	2	50.2	1.98	47.2	1.86	5865	3940	2515	1690	265	215
300	(37)	1.65	.065	4	2	53.3	2.10	50.2	1.98	6870	4615	2870	1925	295	240
350	(37)	1.65	.065	3	2	56.4	2.22	53.0	2.09	7920	5325	3220	2165	325	260
400	(37)	1.65	.065	3	2	59.2	2.33	55.6	2.19	8920	5995	3540	2380	345	290
500	(37)	1.65	.065	3	1	64.4	2.54	60.4	2.38	10925	7345	4290	2885	395	330
600	(61)	2.03	.080	2	1	71.0	2.80	67.0	2.64	13090	8795	5085	3420	455	370
750	(61)	2.03	.080	2	1/0	77.2	3.04	72.9	2.87	16030	10770	6105	4100	500	405

Insulation Colour Code:

Black, Red, Blue, White

**In compact aluminum ACM conductors (19) is 18 wire, (37) is 35 wire and (61) is 58 wire. ACM aluminum is alloy #8030

***Copper bonding wire supplied with copper conductors. Aluminum bonding wire supplied with aluminum conductors.

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 aluminum shall be 60 A, 100 A and 200 A respectively. For No. 2/0 AWG copper it shall be 200 A. In these cases the 5% adjustment Rule 8-106(1) cannot be applied.

##Assuming 4th conductor is the neutral of a balanced 3 phase 4 wire system.

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Armoured Cables

600 Volts 90°C

**AC90 (-40°C)
ISO-BX**

Copper Conductors



Description

Solid copper circuit conductors, with low temperature EXELENE* cross-linked polyethylene insulation (RW90 XLPE) with two additional solid copper bonding conductors (one bare, one covered with green EXELENE* (RW90 XLPE). Twisted assembly wrapped and covered with interlocked aluminum tape armour.

Rated 600 volts. Lead Free.

CSA Spec C22.2 No. 51-95 (R2004)

CSA File #LL23462 Class 5811 01

Application

For open and concealed wiring in dry locations only.

This cable is recommended for installations where an isolated ground is required (i.e. computer and other electronic equipment or special installations).

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

Maximum conductor temperature 90°C.

† ISO-BX cables with #12 phase conductors and a #12 isolated ground conductor; and all ISO-BX cables with #10 phase conductors are for use in patient care areas in accordance with Rules 24-102 and 24-104 of the C.E.C.

Size AWG	Number of Conductors**	Insulation Thickness		Isolated Ground Conductor AWG***	Bare Bonding Conductor AWG	Approximate Diameter		Approximate Net Cable Weight		Ampacity 30°C Ambient (amps)
		mm	in			mm	in	kg/km	lbs/kft	
14 (1)	2	0.76	0.030	14 (1)	14 (1)	12.5	0.491	169	114	15
14 (1)	3	0.76	0.030	14 (1)	14 (1)	13.4	0.528	200	135	15
12 (1)†	2	0.76	0.030	12 (1)	14 (1)	13.4	0.527	205	137	20
12 (1)†	2	0.76	0.030	12 (1)	12 (1)	13.5	0.531	224	150	20
12 (1)	3	0.76	0.030	14 (1)	14 (1)	14.1	0.554	242	162	20
12 (1)†	3	0.76	0.030	12 (1)	12 (1)	14.6	0.573	268	180	20
10 (1)†	2	0.76	0.030	12 (1)	12 (1)	14.1	0.557	267	179	30
10 (1)†	2	0.76	0.030	10 (1)	10 (1)	14.7	0.580	307	207	30
10 (1)†	3	0.76	0.030	12 (1)	12 (1)	15.4	0.606	331	223	30
10 (1)†	3	0.76	0.030	10 (1)	10 (1)	16.0	0.630	372	250	30

**Two-conductor cable contains black and white circuit conductors, green isolated ground conductor, and a bare copper bonding conductor.

Three-conductor cable contains red, black and white circuit conductors, green isolated ground conductor, and a bare copper bonding conductor.

***Isolated Ground Conductor covered with green (RW90) XLPE. Refer to the Canadian Electrical Code Part 1 2006 (Rules 10-906 and 24-100 to 24-114) for rules covering cables and systems containing isolated grounding conductors, etc.

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