AL ARMOR CSA AC90 600V

Copper Conductors 600 Volts RW90 Type AC90

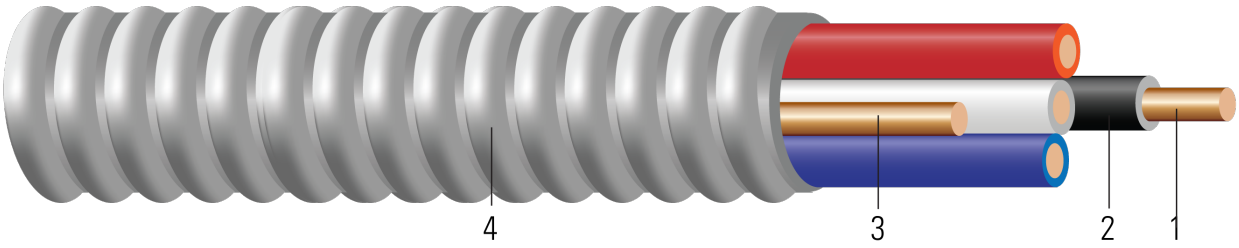

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Solid copper per ASTM B3
2. **Insulation:** All phases are insulated with Cross-Linked Polyethene (XLPE) RW90
3. **Bond Wire:** Solid copper
4. **Armor:** Aluminum Interlocked Armor

APPLICATIONS AND FEATURES:

Southwire's AC90 Cable are designed for exposed and concealed wiring such as ventilated cable trays and other dry locations, where the maximum conductor temperature will not exceed 90°C. Minimum recommended installation temperature: -10°C (with suitable handling procedures).

- Reduces installation costs when compared to pulling separate power and control/signal/data cables
- All cables under one armor decreases the likelihood of damage - eliminating costly callbacks for troubleshooting and repair
- Yellow Stripe Identification - for easy identification when installed with other cables
- CSA 90°C Max. Insulation Temperature rating
- CSA -25°C Cold Temperature Rating
- CSA -10°C Minimum recommended cold Installation Temperature
- Class - C572101 - Control Cables
- CSA Certification File: LL90458 - Certified as ACIC for Control and Instrumentation

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- CSA C22.2 No. 239 Control and instrumentation cables

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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Conductor Number	Color	Diameter Over Conductor	Conductor Stranding	Insulation Thickness	Ground Size	Approx. OD	Copper Weight	Overall Weight
	AWG/ Kcmil			inch		mils	No. x AWG	inch	lbs/1000ft	lbs/1000ft
14 AWG | SOLID Strands										
552226	14	2	BK,WE	0.064	SOLID	30	1x14.0	0.452	37	91
557730	14	3	BK,WE,GN	0.064	SOLID	30	1x14.0	0.472	50	111
552227	14	3	BK,RD,WE	0.064	SOLID	30	1x14.0	0.475	50	110
557885	14	4	BK,RD,BE,WE	0.064	SOLID	30	1x14.0	0.52	62	131
12 AWG | SOLID Strands										
552228	12	2	BK,WE	0.081	SOLID	30	1x14.0	0.486	52	110
557775	12	2	BK,RD	0.081	SOLID	30	1x14.0	0.486	52	111
552229	12	3	BK,RD,WE	0.081	SOLID	30	1x14.0	0.508	72	138
557539	12	3	BK,WE,GN	0.081	SOLID	30	1x14.0	0.524	72	139
557472	12	4	BK,RD,BE,WE	0.081	SOLID	30	1x14.0	0.544	91	167
10 AWG | SOLID Strands										
552230	10	2	BK,WE	0.102	SOLID	30	1x12.0	0.536	83	150
552231	10	3	BK,RD,WE	0.102	SOLID	30	1x12.0	0.562	114	191
557541	10	4	BK,BE,RD,WE	0.102	SOLID	30	1x12.0	0.604	145	233
552233	8	3	BK,RD,WE	0.142	7	45	1x10.0	0.705	184	315
552234	6	3	BK,RD,WE	0.178	7	60	1x8.0	0.848	294	481
643549	3	3	BK,RD,WE	0.252	7	45	1x8.0	1.038	568	814

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

* Ampacities based upon 2021 Canadian Electrical Code, Part I (CEC) Table 2 and do not take into account the overcurrent protection limitations in CEC Rule 14-104(2) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding). Also, see CEC Rules 4-004 and 4-006 for additional requirements."

* Inductive impedance is based on non-ferrous conduit with one diameter spacing.

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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Table 2 – Electrical and Engineering Data

Cond. Size	Conductor Number	Min. Bend Radius	DC Resistance at 25°C	AC Resistance at 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity Raceway 75°C	Allowable Ampacity Raceway 90°C
AWG/ Kcmil		Inches	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
14 AWG | SOLID Strands							
14	2	1.8	2.631	3.265	0.058	20	25
14	3	1.9	2.631	3.265	0.058	20	25
14	3	1.9	2.631	3.265	0.058	20	25
14	4	2.1	2.631	3.265	0.058	16	20
12 AWG | SOLID Strands							
12	2	1.9	1.662	2.063	0.054	25	30
12	2	1.9	1.662	2.063	0.054	25	30
12	3	2	1.662	2.063	0.054	25	30
12	3	2.1	1.662	2.063	0.054	25	30
12	4	2.2	1.662	2.063	0.054	20	24
10 AWG | SOLID Strands							
10	2	2.1	1.04	1.291	0.05	35	40
10	3	2.2	1.04	1.291	0.05	35	40
10	4	2.4	1.04	1.291	0.05	28	32
8	3	2.8	0.653	0.81	0.052	50	55
6	3	3.4	0.411	0.51	0.051	65	75
3	3	5.2	0.205	0.254	0.047	100	115

* Ampacities based upon 2021 Canadian Electrical Code, Part I (CEC) Table 2 and do not take into account the overcurrent protection limitations in CEC Rule 14-104(2) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding). Also, see CEC Rules 4-004 and 4-006 for additional requirements."
* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

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