Bronze and Alloy, Grooved Contact Wire

CuMg 0.2 (Alloy80)/CuMg 0.5 (Alloy 55) Contact CuAg0.1 and CuSn0.2/ Trolley Wire



Image not to scale. See Table 1 for dimensions.

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CONSTRUCTION:

This product combines excellent wear characteristics, and high-tensile strength properties. Contact/ Trolley wire is available in a choice of two alloys to provide the best match of electrical and mechanical wear properties for each application - 55 percent and 80 percent conductivity IACS (CA165 and A162), and is offered in both ASTM and EN/IEC configurations: round (upon request), grooved, figure 8, or figure 9.

APPLICATIONS AND FEATURES:

For use as overhead power source on streetcars, trolleys, electric trolley buses, light rail and heavy mass transit systems. Also used on electrically powered mine train, and industrial cranes. High-tensile strength properties allow for reduced clearance maintenance in tunnel applications. Southwire's bronze contact/trolley wire is ideal for transportation systems with increased line speeds just over 200 mph (322 km/h).

- High Tensile Strength and Breaking Load
- Highest Half-Hard Value of any Materials in Present Day Use.
- Durable and Reliable Support.
- Allows for Increase in Max Line Speeds
- Mechanically Rugged
- RoHS/Proposition 65 Compliant
- Ships on N-42 wooden reels (S-77 steel reels available per SW reel policy)
- Available with top lobe identification marking per IEEE 1896-2016
- Buy America Compliant

SPECIFICATIONS:

- ASTM B9 Bronze Trolley Wire
- EN 50149 Railway Applications. Fixed Installations. Electric Traction. Copper and Copper Alloy Grooved Contact Wires.

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Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Cmil	Alloy	Approx. OD	Approx. Weight	DC Resistance @ 25°C	Rated Strength
	AWG/kcmil	cmil		inch	lb/1000ft	Ω/1000ft	lb
596440	2/0	137900	CuMg0.2	0.392	417	0.094	7473
592466	4/0	211600	CuMg0.2	0.482	642	0.061	10820
649153	107*	211600	CuAg	0.482	642	0.052	8408
669028	107*†	211600	CuMg	0.482	642	0.061	10800
641231	120*†	236820	CuMg	0.518	734	0.056	11400
TBA	120*	236820	CuMg0.2	0.518	734	0.056	11400
TBA	150*	296025	CuSn0.2	0.518	897	0.05	10993
456333	300	300000	CuAg	0.574	908	0.037	11778
647193	335 (FIG. 9)	336400	CuMg0.2	0.680x0.482	1020	0.039	15040
646818	350	351200	CuMg0.2	0.62	1063	0.037	16410

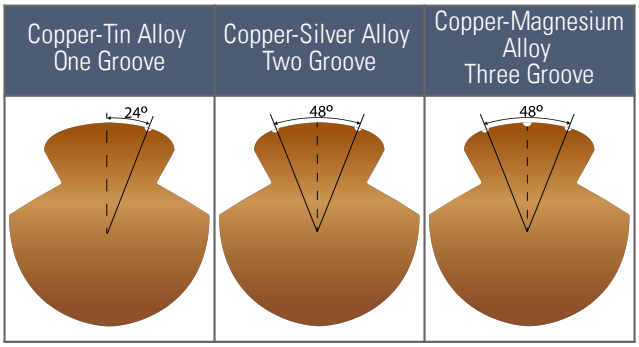
All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* units in mm²
† Alloy 85

Notes:

1. These numbers represent the minimum percent IACS conductivity of the alloys. Other alloys are available subject to special inquiry.
2. Bronze trolley wire is normally manufactured from alloys 55 or 80.
3. Figure 9 wire, dimensions given are nominal height of entire section and width of lower lobe.
4. Tolerances: The above data are approximately and subject to normal manufacturing tolerances Weights, breaking strengths and resistance are base on nominal dimensions

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.

Contact Wire



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