# Bronze and Alloy, Grooved Contact Wire, 30% SouthWear®

CuMg 0.2 (Alloy80)/CuMg 0.5 (Alloy 55) Contact CuMg0.2 and CuSn0.2/ Trolley Wire




Image not to scale. See Table 1 for dimensions.

## 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:

SouthWear® Contact Wire is commonly used as an overhead power source on streetcars, trolleys, electric trolley buses, light rail, commuter rail and high speed railway mass transit systems. Features a 30% wear mark on the side of the wire to provide visual identification when the percentage of wear has met or exceeded the industries allowable safe tolerance for wear. Southwire 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 – Weights and Measurements

| Stock Number | Cond. Shape | Cond. Metal | Alloy | Cond. Size | Cond. Area | Approx. OD | Approx. Weight | DC Resistance @ 20°C | Rated Strength |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AWG/kcmil | cmil | inch | lb/1000ft | Ω/1000ft | lb |
| TBA | GROOVED | CuMg0.5 | 55 | 2/0 | 137900 | 0.392 | 417 | 0.137 | 7906 |
| TBA | GROOVED | CuMg0.2 | 80 | 2/0 | 137900 | 0.392 | 417 | 0.094 | 7473 |
| TBA | GROOVED | CuMg0.5 | 55 | 4/0 | 211600 | 0.482 | 641 | 0.089 | 11490 |
| TBA | GROOVED | CuMg0.2 | 80 | 4/0 | 211600 | 0.482 | 641 | 0.061 | 10820 |
| TBA | GROOVED | CuMg0.5 | 55 | 300 | 300000 | 0.574 | 907 | 0.063 | 15260 |
| TBA | GROOVED | CuMg0.2 | 80 | 300 | 300000 | 0.574 | 907 | 0.043 | 14480 |
| TBA | FIG-9 | CuMg0.5 | 55 | 335 | 336400 | 0.680x0.482 | 1020 | 0.056 | 16285 |
| TBA | FIG-9 | CuMg0.2 | 80 | 335 | 336400 | 0.680x0.482 | 1020 | 0.039 | 15040 |
| TBA | GROOVED | CuMg0.5 | 55 | 350 | 351200 | 0.62 | 1063 | 0.054 | 17240 |
| TBA | GROOVED | CuMg0.2 | 80 | 350 | 351200 | 0.62 | 1063 | 0.037 | 16410 |
| TBA* | GROOVED | CuAg | | 107 | 211600 | 0.482 | 641 | 0.052 | 8408 |
| TBA* | GROOVED | CuMg | 85 | 107 | 211600 | 0.482 | 641 | 0.061 | 10800 |
| TBA* | GROOVED | CuMg | 85 | 120 | 236820 | 0.518 | 734 | 0.056 | 11400 |
| TBA* | GROOVED | CuMg0.2 | 80 | 120 | 236820 | 0.518 | 734 | 0.056 | 11400 |
| TBA* | GROOVED | CuMg0.2 | | 150 | 296025 | 0.518 | 897 | 0.047 | 11263 |
| TBA* | GROOVED | CuSn0.2 | | 150 | 296025 | 0.518 | 897 | 0.05 | 10993 |

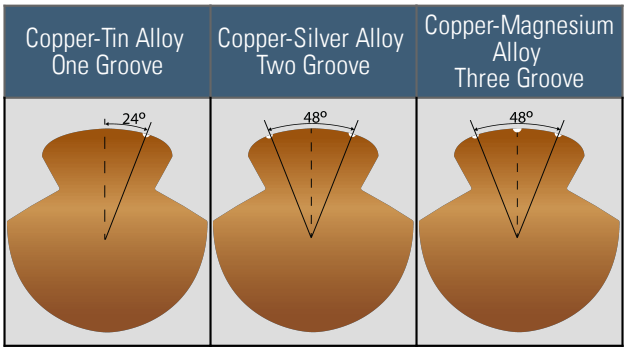
All dimensions are nominal and subject to normal manufacturing tolerances

**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

* units in mm²

## Contact Wire





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