APPLICATIONS

Southwire's Motion-Resistant Conductor is designed for overhead distribution and transmission lines. It is a galloping- and vibration-resistant, bare aluminum construction, designed for use in overhead applications subject to aeolian vibration and galloping due to wind and ice. Motion-Resistant conductors can be strung to the maximum allowable tension limits without the need for additional vibration protection.

SPECIFICATIONS

Southwire's Motion-Resistant Conductor meets or exceeds the following ASTM specifications:

- **B-230** Aluminum Wire, 1350-H19 for Electrical Purposes.
- **B-231** Aluminum Conductors, Concentric-Lay-Stranded.
- **B-232** Aluminum Conductors, Concentric-Lay-Stranded, Coated Steel Reinforced (ACSR).
- **B-498** Zinc-Coated Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR).
- **B-500** Zinc-Coated (Galvanized), Zinc-5% Aluminum-Mischmetal Alloy-Coated, and Aluminum-Coated (Aluminum Stranded Steel Core for Aluminum Conductors, Steel Reinforced (ACSR).
- **B-779** Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductors, Steel-Reinforced (ACSR/TW).

CONSTRUCTION

Southwire's Motion-Resistant Conductor is composed of a combination of round and shaped wires of varying diameters and cross-sections. The wires are stranded in such a way to give the cable a spiraling elliptical shape. This spiraling elliptical shape disrupts the forces created by steady cross winds which cause cable vibration, by presenting a continuously changing projected cable diameter to the wind. The spiral shape, together with less torsional stiffness and varying bending stiffness also reduces or eliminates cable galloping due to combined ice and wind loads. High strength steel core and aluminum clad steel core is also available. AAC Motion-Resistant Conductor is available upon request.
<table>
<thead>
<tr>
<th>Code Word</th>
<th>Size (AWG or kcmil)</th>
<th>Type</th>
<th>Area (sq. inches)</th>
<th>Steel Stranding (No. x OD) (inches)</th>
<th>Conductor-Ellipse Dimensions (inches)</th>
<th>Weight per 1000 ft. (lbs.)</th>
<th>Rated Strength (lbs.)</th>
<th>Resistance OHMS/1000 ft.</th>
<th>Allowable Ampacity (Amps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linnet/MR</td>
<td>336.4</td>
<td>16</td>
<td>0.2640</td>
<td>0.3070</td>
<td>7 x 0.0884</td>
<td>0.926 0.528 316.5 145.5 462.0</td>
<td>14,100</td>
<td>0.0504 0.0617</td>
<td>535</td>
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<tr>
<td>Drake/MR</td>
<td>795</td>
<td>16</td>
<td>0.6247</td>
<td>0.7264</td>
<td>7 x 0.1360</td>
<td>1.302 0.879 749 344 1093</td>
<td>31,500</td>
<td>0.0213 0.0263</td>
<td>908</td>
</tr>
<tr>
<td>Rail/MR</td>
<td>954</td>
<td>7</td>
<td>0.7492</td>
<td>0.8010</td>
<td>7 x 0.0971</td>
<td>1.375 0.907 899 176 1075</td>
<td>25,900</td>
<td>0.0180 0.0223</td>
<td>997</td>
</tr>
</tbody>
</table>

Sizes 336.4 through 954 kcmil are available upon request. The above represent the general design and construction of Motion-Resistant Conductors. Southwire Motion-Resistant Conductors are patented by Southwire Company and are exclusively available from Southwire Company.

+ Ampacity is based on 75°C conductor temperature, 20°C ambient temperature, with 2 ft/sec wind in sun.