Understanding and Identifying UL AWM Styles

Underwriters Laboratories categorizes appliance wiring material (AWM) as a Recognized Component used in Listed or Classified products. The final acceptance of the wire is determined by UL during the investigation of the listed product. AWM wires come in many different styles because there is an infinite variety of products in which AWM wire could possibly be used. The huge number of AWM styles can make understanding, identifying and finding an AWM wire difficult.

How does UL categorize the styles?
There are five sections of AWM wire, numbered 1 through 5. The different categorizations are based on the following criteria:

- Single conductor or multiconductor
- Thermoplastic or thermoset jacket
- Manufacturing method used to apply insulation, jacket or outer covering

The style numbers mean something
UL has published a document that explains the different terminologies and associated numbers that are assigned to the different styles. For convenience, a reproduction of the table that addresses the style numbers and their use is listed below.

<table>
<thead>
<tr>
<th>Style Designations</th>
<th>Section</th>
<th>Type/Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000–1999 and 10000–</td>
<td>1</td>
<td>Single conductor, thermoplastic-insulated wire</td>
</tr>
<tr>
<td>2000–2999 and 20000–</td>
<td>2</td>
<td>Multiconductor, thermoplastic-insulated and -jacketed wire</td>
</tr>
<tr>
<td>3000–3999</td>
<td>3</td>
<td>Single conductor, thermosetting-insulated wire</td>
</tr>
<tr>
<td>4000–4999</td>
<td>4</td>
<td>Multiconductor, thermosetting-insulated and -jacketed wire</td>
</tr>
<tr>
<td>5000–5999</td>
<td>5</td>
<td>Single and multiple conductor specialty items</td>
</tr>
</tbody>
</table>

How do you find a UL style?
UL has a relatively new tool available on its “iQ” Web site. Once a user completes a short registration process, he can access a significant amount of information about AWM wires. The interface, referred to as “UL iQ for Appliance Wiring Materials,” is both user-friendly and searchable from a multitude of starting points. To access the site, type this URL into your browser's address bar:

A parametric search is one of the most helpful features for someone looking for a wire that meets specific application requirements. The search form allows the user to input the temperature, AWG size, material type as well as many other requirements, and it returns a list of styles that meet the input criteria. The site also allows users to search for companies that make a particular style, and it provides visibility to the style page itself. If an existing wire needs replacement, but they style isn’t known, simply entering the manufacturer’s file number gets a list of the styles that the manufacturer is approved to make. The Web site also provides information about any updates that have been made to a UL style, which can be searched by inputting a range of dates.
There are a variety of AWM wires, which can make a product search seem overwhelming. However, there is a clearly defined logic behind the AWM style numbers. For the best information, UL’s Web tool makes your search more productive and informative—a seemingly uncommon occurrence in modern times.

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2 http://my.home1.ul.com/portal/page/portal/ULIQ/UL_iQ_Home_Page