Decoding NEMA plugs and receptacles

If you've ever had trouble figuring out the NEMA (National Electrical Manufacturers Association) pattern and numbering system on a particular device, you aren't alone. Comprised of four major identifiers, the combination of numbers and letters can appear more like alphabet soup than a structured electrical specification.

Rest assured, there is a simple way to decode plug patterns and connections, making proper specification a breeze. The first identifier, which is either a blank space or an "L," indicates whether the plug is a straight or locking blade device (with "L" being locking).

The second identifier, which is a number, assigns the voltage rating; for example, a "5" represents a voltage rating of 125 Vac and a "6" denotes a rating of 250 Vac. The rating given is the highest voltage allowed for the device. Please refer to the accompanying chart to see other voltage ratings.

The third identifier, also a number, identifies the highest amperage rating allowed for use with the device.

Finally, the fourth identifier is a letter that determines whether the device is a plug ("P") or a receptacle/outlet ("R").

For a printable pdf of this chart, please refer to the Sales Tools section of our web site.

Table 1 - NEMA Nomenclature

NEMA x5 - 15P

- **P** indicates plug or receptacle
  - P is plug
  - R is receptacle or socket
- **15** indicates the current rating and standard values are
  - 15 amps
  - 20 amps
  - 30 amps
- **5** indicates the voltage*
  - 2 indicates 115 VAC, ungrounded for Class II connections
  - 5 indicates 125 VAC, grounded for Class I connections
  - 6 indicates 250 VAC, grounded for Class II connections
  - 7 indicates 277 VAC, grounded for Class II connections
  - 8 indicates 480 VAC, grounded for Class I connections
  - 9 indicates 600 VAC, grounded for Class I connections
  - 14 indicates 125/250 VAC, single phase, four wire, three pole
  - 15 indicates 250 VAC, three phase, four wire, three pole
  - 16 indicates 480 VAC, three phase, four wire, three pole
  - 17 indicates 600 VAC, three phase, four wire, three pole
  - 21 indicates 120/208 VAC, three phase, four wire, four pole
  - 22 indicates 277/480 VAC, three phase, five wire, four pole
  - 23 indicates 347/600 VAC, three phase, five wire, four pole
- **x** is the position occupied by L for locking devices. If no tester is present device is nonlocking, straight blade.

*excludes Class II connections