

What is a Cam-lok?

Actually “cam-lok” is a registered trademark (currently owned by Cooper Industries) for a style of single pole connector originally developed by Empire Products in the 1960s.

Today, there are many companies who build similar connectors which mate with the original “cam-lok” style connectors and all of the brands of this style of connector are often referred to as “cam-loks.” Actually, the generic term should be cam or cam style connector, because, as mentioned, “cam-lok” is a trademarked name.

There are three series of the single pole cam connectors, with progressive increases in the current carrying capacity, physical size and cost.

150 Amp Style

The popular term for these connectors is a “mini-cam.” In the Cooper line these are called the E1015 series, in the Leviton line they are called the L15 series and in the Marincos line they are called the CLM series. The connectors are rated for 150 amps but usually the cable ends only allow installation on wire sized AWG #4 or smaller so that the actual current carrying ability is limited by the wire rating. Here the Marincos CLM series has a decided advantage as it can be installed on #2 AWG cable and thus you are able to build a full 150 amp rated system. Note: all of the mini cams are interchangeable, an E-1015 will plug into an L15 or a Marincos CLM.

400 Amp Style

This is the most popular style and is often what is meant when the term “cam-lok” is used generically. Again, since “cam-lok” is a trademark, they should be called just cams or cam connectors. The Cooper version is known as the E-1016 series, the Leviton version is the L16 and the Marincos version is called the CLS series. There are other companies which make a compatible product (Hubbell and SMS for example) but Marincos, Leviton and Cooper have the lion’s share of the market. These cams are rated for 400 amps and will take up to a 4/0 wire size. As with the mini-cams, all of

the standard sized cams are intermateable, an E-1016 will plug into an L16 or a Marinco CLS.

690 Amp Style

This is the largest of the cam styles connector and is generally only found in industrial service with large cables (greater than 350 MCM.) Here there are only two major suppliers: Cooper and Leviton. The Cooper version is called the E-1017 series and the Leviton is known as the L17 series. While the two versions can be intermated, there is a significant difference between them. The Cooper E-1017 is normally installed with the female being the power source, since this is the normal convention with the 400 amps cams. The Leviton has a dead front tip design on the male which will prevent accidental contact with a live connector if the male is installed as the power source. This critical difference tends to dissuade intermixing of the two manufactures' 690 amp connectors. On a new installation, the safer choice is to use the Leviton style and wire the male contacts as the source and the female contacts on the load side. On an exiting installation, for either additions or maintenance replacements, the best choice is to match which ever style was originally installed.