

Application Note

Meter Lookup Code and Barcoding

As manufacturers of meter test equipment we often hear customers ask how they can streamline their processes. How can they speed up testing meters so the shop is more productive without spending more money on equipment and employees?

One of the most common answers we give is to make use of meter lookup codes and/or barcoding. These two features remove much of the tedious manual data entry involved in testing meters.

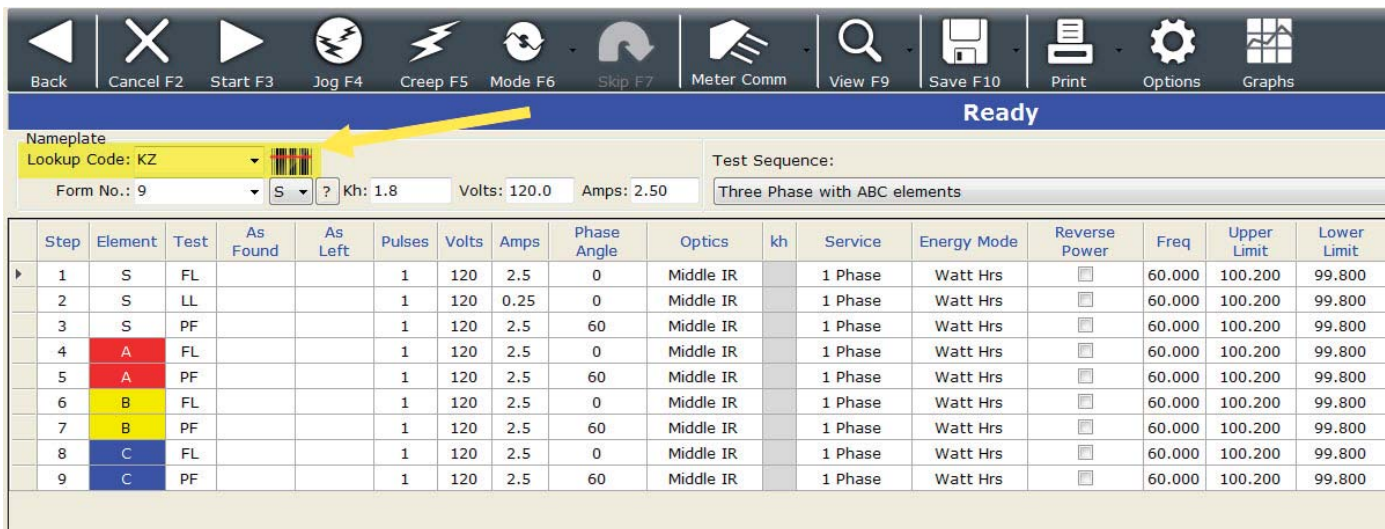
Let's start with the Lookup Code. This is a 2 digit code that is used to define the test parameters of a meter. This code can also be referred to as the meter code or the AEP code. This code was originally created by American Electric Power (AEP). Below is an example of the parameters defined by the original AEP code.

Code	Form	Base	Volts	Amps	Kh	Phase	Wire	Ratio
AC	2	S	240	30	7.2	1	3	13 8/9

Watthour Engineering Co. then added additional parameters to the two digit code to make it more powerful for defining a meter test. Items like test sequence, test pulses, test limits, and test optics were added.

Code	Form	Base	Ratio	Test Sequence	Pulses/Revs	Limits	Optics
AC	2	S	13 8/9	1	1	1	Reflect

This code can be entered into meter testing software either manually or using a barcode reader. Once entered the code sets the test parameters defined for that given meter all the way down to the optics used to pick up the pulse.



Now we can look at another feature which is barcoding. Barcodes have been used for many years by the utility industry to help define and track equipment. Barcoding made its way into meter testing to speed up testing and help prevent data entry mistakes caused by manually typing in data.

A standard meter barcode has 17 characters, although it can be any length. This includes the Lookup code, the manufacturer code, the serial number, and the rest of the digits are user configurable.

Barcode Structure

AB D 123456789 ABCDE

Lookup Code - First 2 Digits

1764 Combinations

Table Lookup for meter test parameters

Manufacturer Code – Digit 3

Single digit code for each meter manufacturer

Meter Number – Digits 4 - 12

Company Number or Manufacturer Serial Number

User Defined – Digits 13 - 17

Typically a company specific meter code or stock number

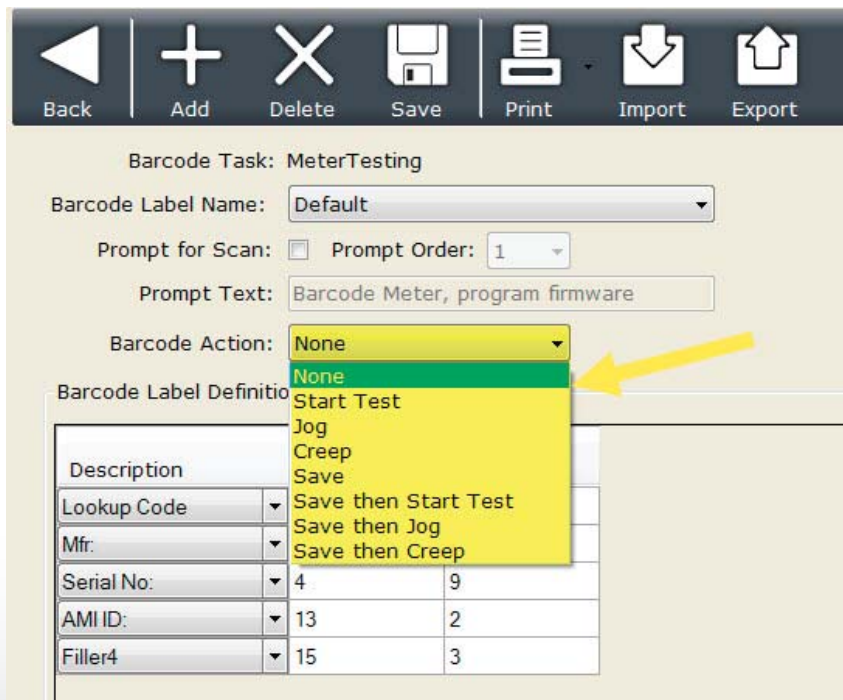
The Meter Label



Some meters have several barcodes that can all be defined in the test board. Each can populate data into your meter testing data window. Some of the uses for a barcode on a meter:

1. Serial number
2. AMR Number
3. Company number
4. LAN ID

The barcode can also initiate other testing features of the test board. We can actually save the previous test result on barcoding a new meter. We can start a new test or put the test board in jog or creep. These features are set up when defining the barcode.



Lookup Code and Barcoding are the most powerful when used together

These two features used together can control the entire meter testing process. The Lookup Code defines all of the meter test parameters. The barcode pulls in the lookup code, serial, and other meter data while also saving data and starting the next test. There are meter shops running now in which the meter tester only interacts with the software through the barcode.

Take advantage of these features to streamline your meter testing process. Using look up codes and barcoding allows you to test more meters with less mistakes.