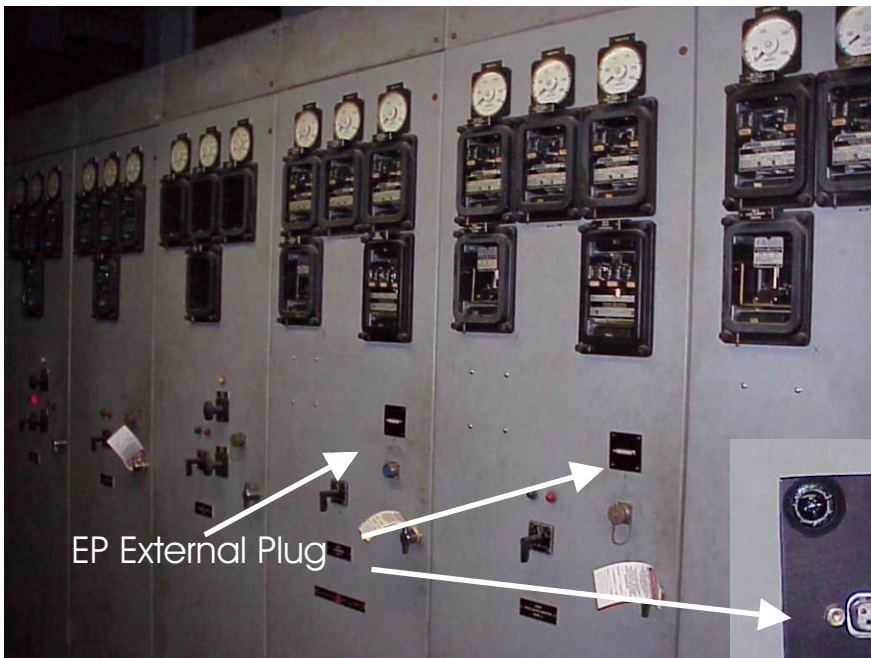


EP-1: Connections and Installation

The newest external data port offers the greatest flexibility, safety, speed and accuracy to testing and data collection.



EP External Plug

Figure 1: Row of MCC's with Installed EP-1's.

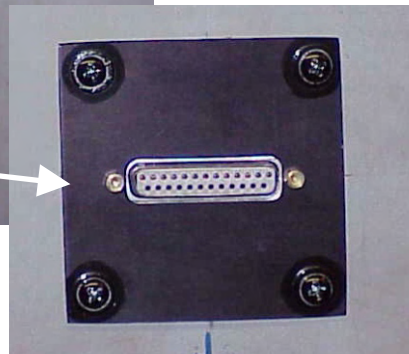


Figure 2: External Connection of EP-1

User Comments:

"I have to say that Baker has the EP installation down pat. It is really a very simple install."

"Installing the first 100 or so EP-1's we averaged 2 hours per install, and that includes bringing the voltage leads over from the PT cabinet to the MCC."

"Testing with EP-1's: that is the only way to go!"

While low voltage motors are connected directly, medium and high voltage motors need at least two PT's per voltage bus and 2 CT's per motor. The external connection of the EP-1 is a low voltage connection, with less than 5 volts reaching the DB25-type plug that is installed on the outer door of the MCC.

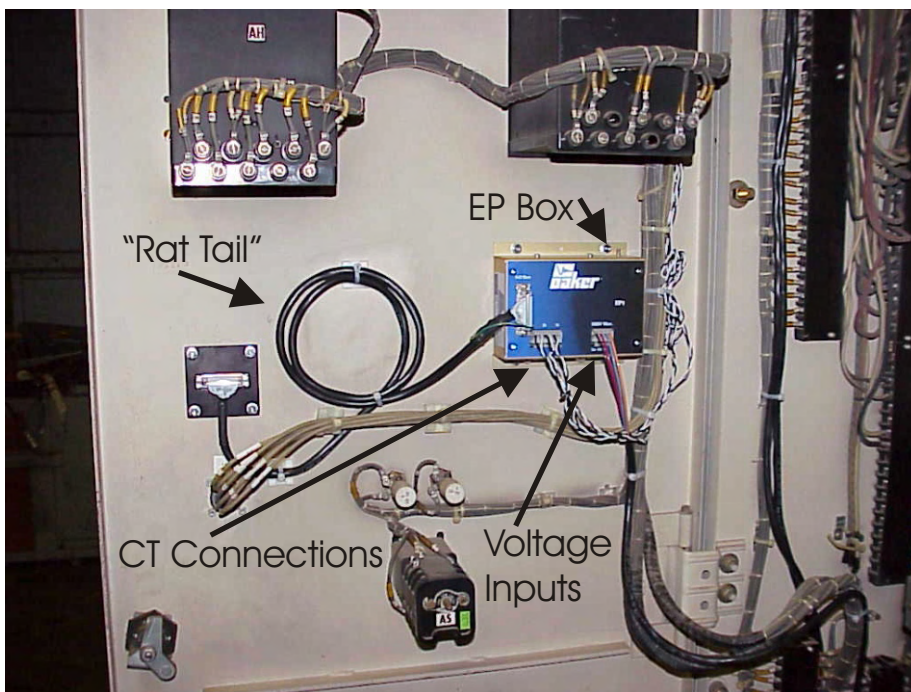
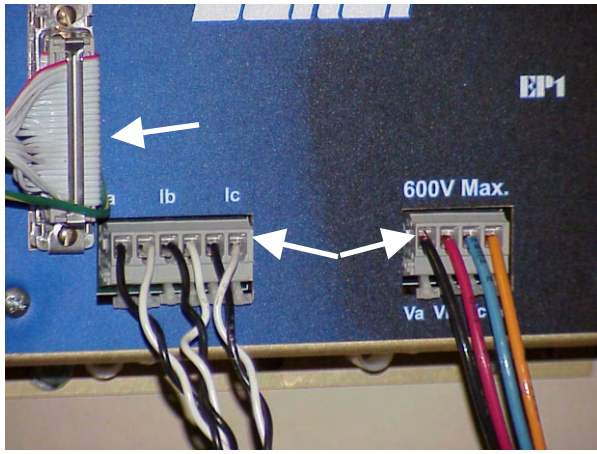


Figure 3: Complete connection of EP in MCC Door.

The overall installation of the EP-1 can be seen in Figure 3 below. The "rat tail" wire is connected to the EP-1 box and exits through a punched hole in the outer door of the MCC. Additionally pictured here are the black and white wires, which come from the CT low voltage signals, and low voltages connected to the EP-1 (in this case blue, yellow and red) and a ground

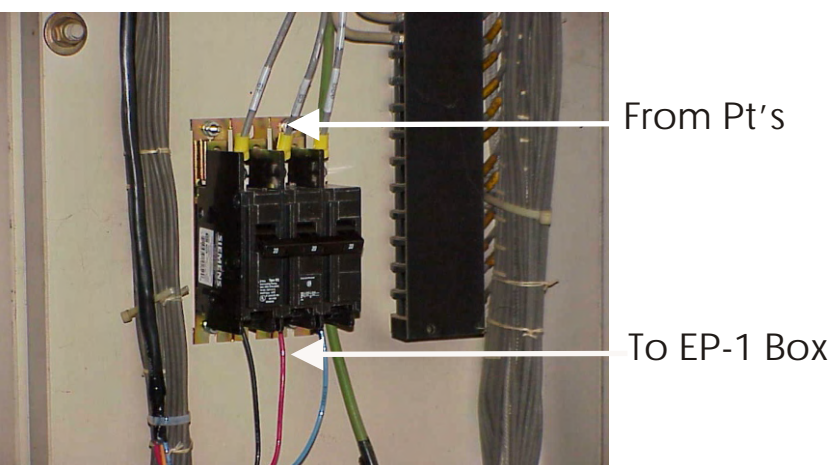
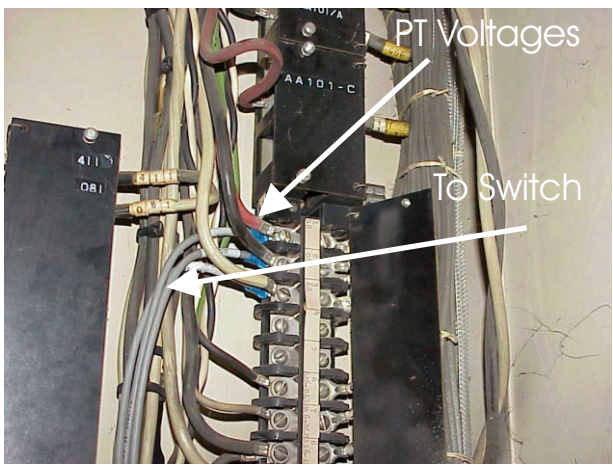
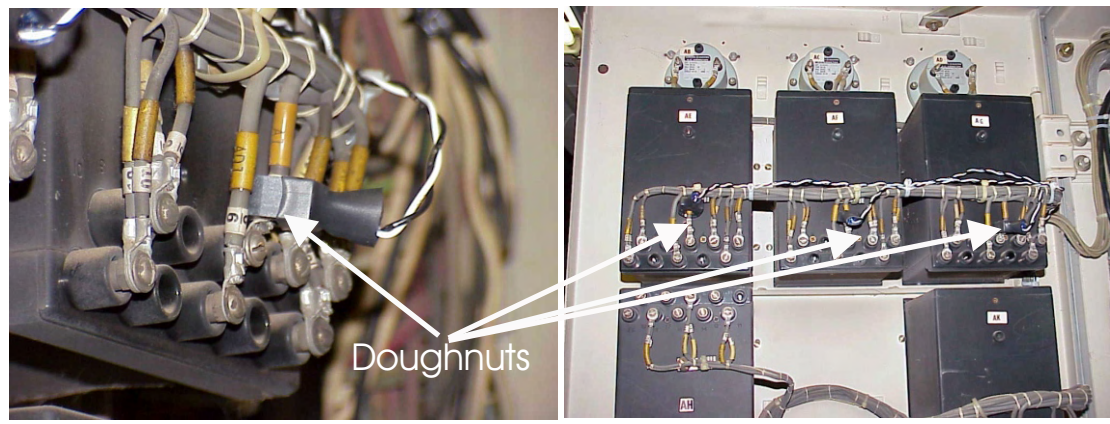
The connections to the EP-1 are the following: a Db25 connector (parallel printer port type) and fast, secure quick release connections for the current and voltage signals. Figure 4 shows the connected EP-1 box in detail. All connections to the EP-1 are low voltage (less or equal to 600 Volts).



requirement for the EP-1. The additional external fuses or switches allow for trip-free safe and easy disconnection during operation of the system. Figures 7 and 8 show the hookup to the PT signals and an external switch.

Connecting to medium or high voltage motors, as in this case, is achieved by connecting the sensing signals to the secondaries of the PT's and CT's that are hooked to the motor and typically used for protection.

The current signals are obtained via "doughnut" CT's that are hooked around the conductors of the protection circuitry (typical 5 amp rated). Figures 5 and 6 show such an installation.



To obtain all necessary signals, the EP-1 box also needs to be hooked up to the voltage signals. For medium or high voltage motors it is necessary to connect to the secondaries of installed PT's so that the maximum voltage level to the EP-1 box of 600 volts is not exceeded. An installation with either an additional external fuse block or an external three-phase switch is frequently preferred, even though it is not a

