

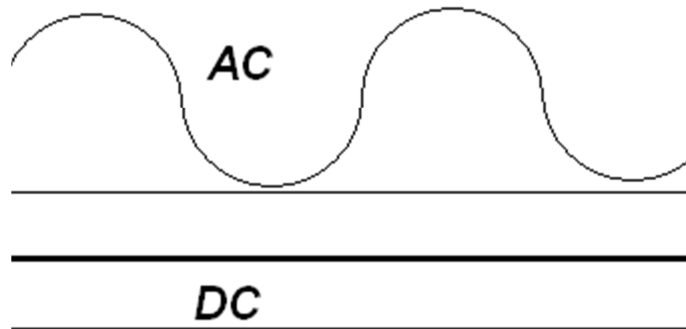
## Technote 25 - AcquiSuite Analog Input with a CT

**Q: Could I use a raw 0-1 volt output CT with the analog inputs of the AcquiSuite (or Flex I/O Module)?**

**A: No, that is not recommended. This is why:**

The output from a raw CT is an AC (Alternating Current) sine wave. That raw measurement must be converted to RMS for meaningful data. When measuring voltage, the AcquiSuite and Flex I/O Module inputs measure DC (Direct Current) voltage only.

One way to view the situation is to consider that the AcquiSuite has a DC input similar to the DC setting on a typical hand-held multimeter. To measure volts on a CT, the hand-held multimeter needs its switch moved to the AC setting. The AcquiSuite has no similar setting.



Also, the inputs on these devices cannot handle negative voltages (where the voltage seen on the input terminal is below the voltage of the ground terminal). If you attach an AC device to the input, 50% of the time it will be negative and beyond the range of the input.

Manufacturers typically also make CTs that provide useful output of 4-20mA, usable by the AcquiSuite or Flex I/O Module. These types of CTs have some circuitry in them that measure the RMS value from a CT, and convert it to a 4-20mA signal.

Additionally some CTs also output Modbus, which is usable by the AcquiSuite EMB or AcquiSuite. These types of CTs have some circuitry in them that measure the RMS value from a CT, and convert it to Modbus device register values.