Micro Control Systems

APPLICATION NOTE

APP-082

How to Set up MCS Current Transformers to read High Voltage

Revision History

Date	Author	Description
02/13/13	Jeff Thelen	Created application note

Step 1: Determine the step down for the existing current transformers. This should be stamped on the existing current transformer. For example 100:5, 200:5, etc. This is detailing the turn down ratio for the current transformer. IE: 100A sensed = an output of 5A, or 200A sensed = an output of 5A.

Step 2: Wrap one leg from the existing current transformer around the MCS current transformer 10 times. This will take the 5A maximum output to 50A, allowing the MCS current transformer to accurately read it.

Step 3: Name the sensor input where the MCS current transformer will be wired to "AMPS A/X", X= the ratio of the existing current transformer.

Step 4: Create a "User Logic" sensor input named to indicate that this value is the "True Amps" for that leg, IE: "TrueAmps A". This will take the value of the "AMPS A/X" sensor input, and multiply it by the ratio of the existing current transformer. IE: 200:50 (200:5, becomes 200:50 when you wrap the output wire 10 times on the MCS current transformer) this ratio delivers a reading to the actual wired sensor input that is X times less than the true unit amps. The "True Amps" sensor input will take the value of the "AMPS A/X" sensor input, and multiply it by X (you can fine tune the multiplier to match the actual amps read with an amp meter).

Step 5: Point to the user logic sensor inputs ("True Amps A") in the "Amps" cells in the "Circuit SI" screen of MCS Config.

Compressor Leg

WHITE

SI

GND

BLACK & SHIELD

High Voltage CT
200A : 5A

Note: The output of this CT is the true amps divided by 4. This value is then multiplied by 4 in a user logic input.

Wrap 10 Times
200A : 50A