User Manual for
5KVP
Medium Voltage Probe

Read this First

Summit Technology manufactures voltage probes for the direct measurement of medium voltage (generally voltages above 1000 Vrms and below 35K Vrms).
The 5 KVP is rated for use with voltages as high as 5,000 Vrms and as low as 600 Vrms.

⚠ The danger of working with medium voltage cannot be overstated. Power supplied at this these voltages is ready at every opportunity to kill or injure personnel due to direct electrical shock or due to the effects of an arc flash.

Always wear the required PPE (personal protective equipment) appropriate to the present arc flash hazard until you are certain that no power is present and a lockout mechanism will prevent it from being re-energized. **Note: arc flash hazard labels should be affixed to every electrical panel. Refer to the label for the required level of PPE before opening the panel. If the panel does not have an arc flash hazard label or if the connections are not within a panel, refer to NFPA 70E for guidance for the appropriate PPE.**

⚠ There are no user serviceable parts. Opening the 5KVP or modifying its cables voids your warranty and may result in present or future danger to users and equipment. Only authorized Summit Technology technical service personnel are authorized to repair the product.

⚠ Cleaning is to be done by use of a dry or damp piece of cloth. Grease may be removed by light application of isopropyl (rubbing) alcohol. Avoid the use of solvents. Do not use water or other conductive liquids since they may pose a safety risk.

⚠ Follow industry standard maintenance procedures with this equipment. This includes checking the probe for potential cracks or conductive films each time before use. A yearly safety test and calibration are recommended. The danger to personnel and equipment resulting from arc flash cannot be overstated.

⚠ Use of this equipment in a manner not specified by Summit Technology can result in injury and voiding of the warranty.

Setting up the Meter

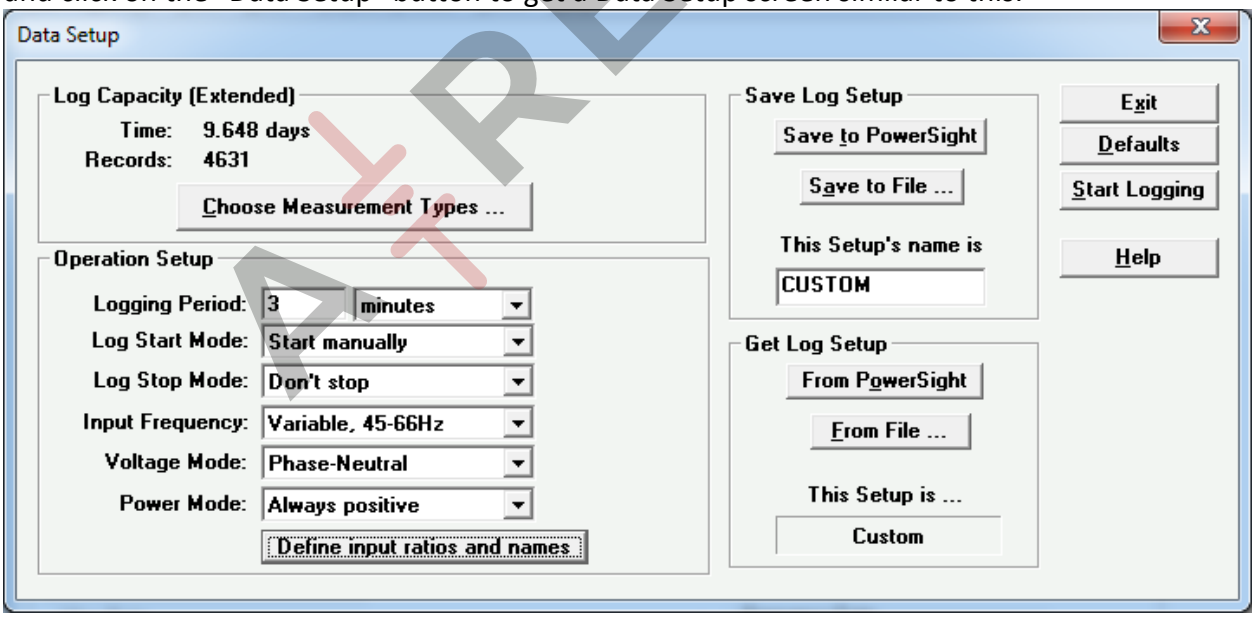
The 5KVP scales the medium voltage down so safer levels of voltage are plugged into your PowerSight meter. This means that the PowerSight meter sees just a fraction of what the actual voltage that the 5KVP is attached to. To report and record the actual voltage that the 5KVP is attached to, you need to program an "input ratio" into the meter.

The required input ratio is 100:1. Each voltage input that will have a 5 KVP plugged into it must have the 100:1 input ratio programmed into it for the measurements to be correct. Typically, a set of 3 5KVPs are attached, so input ratios for V1, V2, and V3 need to be entered.

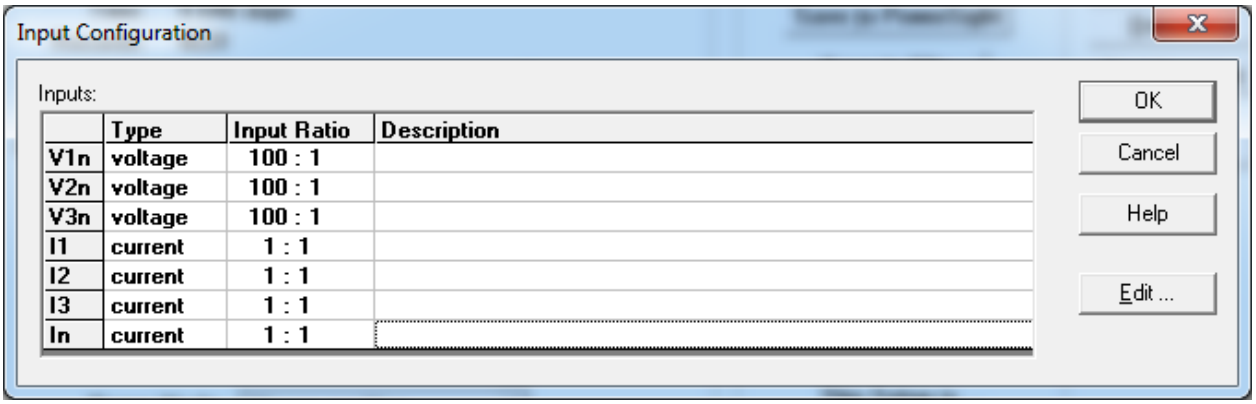
The input ratio is easily programmed into the meter in one of three ways.

1. Enter the input ratio directly into the meter using the "Input Ratios" key and following the directions.
2. Use our PSM (PowerSight Manager) software to connect to the meter and enter Remote Control mode. At that point, enter into the virtual meter using the "Input Ratios" key and following directions.
3. Enter the input ratio into the data setup for the meter, using PSM.

When entering the input ratios into the data setup using PSM, start at the main menu and click on the "Data Setup" button to get a Data Setup screen similar to this:



Then click on the "Define input ratios and names" button to get the screen for entering the ratios:



Double click on the input ratio for each voltage input that has a 5KVP attached and enter the input ratio. When done, click on "OK".

Next, the data setup must be loaded into the meter via Bluetooth, Wi-Fi, or SD memory card. Refer to your PowerSight manual.

Attaching the 5KVP

1. Only qualified electrical personnel should attempt to connect the 5KVP to medium voltage circuits.
2. Before attaching a 5KVP, inspect its surface for cracks and clean the outside surface of any dirt, oil, liquid, et cetera. Be certain that the inside of the probe is not damp or wet. Do not use a 5KVP that is cracked, that is missing its ground lead, or is less than safe in any way. Medium voltage is unforgiving.
3. Whenever possible, power off the system before installing the 5KVP. After powering down the system, install a "lockout" mechanism that prevents power from being re-energized while you are within the arc flash blast zone.
4. If power cannot be guaranteed to be off, then wear the correct PPE (personal protection equipment) for the arc flash potential while in the arc flash blast region (refer to NFPA 70E).
5. The 5KVP has three cables coming out of it. **The black ground lead must be connected first.** Attach it securely to a good ground point.
6. The blue cable ends with a stackable black safety plug and a red safety plug.
7. Plug the black plug into the PowerSight meter's Vn input. If attaching three 5KVPs, you will plug all three into each other and into the Vn input.
8. Plug the red plug into the appropriate phase input of the meter. If connecting three 5KVPs, red plugs will be plugged into the V1, V2, and V3 inputs to the meter.
9. The 5KVP has a "shepherd's hook" attached to its end. This can be a convenient termination for hanging the probe on exposed cables or protrusions.
10. Attach the probe, using its shepherd's hook. If you cannot guarantee that it will be secure for the entire monitoring session, affix it to the conductor with tape or straps that are appropriate for the job. If the probe comes loose, you will lose data and it may possibly cause an arc.

Disconnecting the 5KVP

1. If possible, de-energize the circuit before disconnecting the 5KVP. After de-energizing, insure a "lockout" mechanism is in place to prevent the circuit from being re-energized.
2. If the circuit is energized or until you are certain that the circuit is de-energized and an effective lockout mechanism is in place you must wear the appropriate PPE while disconnecting the 5KVP.
3. Remove the hooked end of the 5KVP from its connection. Remove any securing tape or strap too at this time, as appropriate. Be careful to avoid being shocked or arcing between phases.
4. Remove the safety plugs from the voltage inputs to the PowerSight meter.
5. Finally, disconnect the ground leads from their connections.