sTEm-at-Work Puzzle #6 Electronic Systems Tech

The operational status of a robotic arm that does precision welding for Tampa Armature Works is determined by the relationship between the voltage applied across the arm's control circuit and the current that flows through that control circuit. One of the first operations the Tech does is examine those two signals.

It is also very typical for this signal display to be shown as a two channel recording similar to the cartoon version shown below. It may also be the case, that the signals (one the voltage, the other the current) traced on the screen are not identified on the screen. However, the Tech does know Ohm's relationship between these two signals: The current response signal is equal to the applied voltage signal divided by the circuit impedance, and that impedance value is always greater than one.

The current signal is shown on Channel B? (Yes or No)

