

DETERMINING BURDEN FOR CURRENT TRANSFORMERS

CT SECONDARY WIRE SIZING EXAMPLE

A Watt Transducer (0.75 VA burden) is to be used with three 1200:5 current transformers. The CT secondary is 30 ft. one way. To maintain the maximum CT accuracy (0.6%), the total burden must be kept below 2.5 VA as seen on the current transformer specification sheet.

If 2.5 VA total is available then $2.5 - 0.75 = 1.75$ VA is available for the wire. Assuming the maximum 5 amp secondary current, on Nomogram No. 1, align a straightedge on 5 amps (left hand column) and 1.75 VA (center column). Read the impedance in ohms (right hand column). This should read 0.07 ohms.

Now go to Nomogram No. 2. Place a straightedge on 0.07 ohms (center column) and 30 ft. cable length one way (right hand column). Read the cable size (left hand column), which should read #10 AWG copper cable or larger.

With the above conditions, #10 wire or larger will keep the current transformer within its best accuracy limit.

