

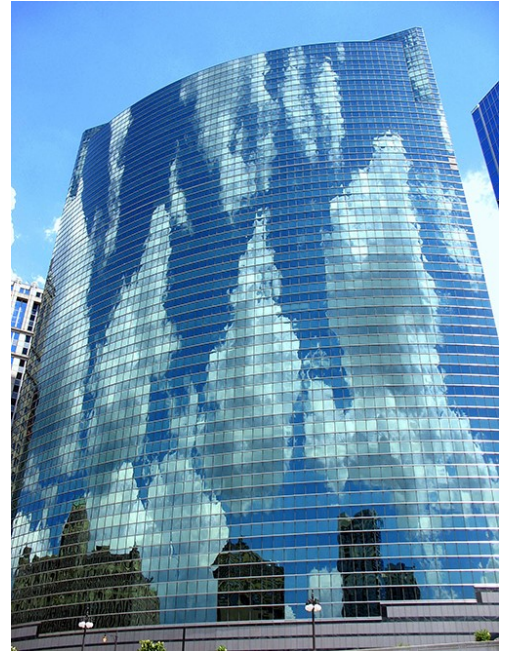
Controlling SCRs for supplemental heat

APPLICATION A107

Type of Company: Building Maintenance Management

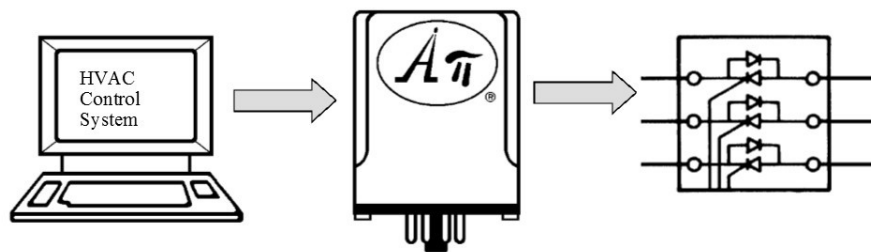
Location: Chicago, Illinois

Commercial buildings use a complex HVAC system to climate control the environment in the building. Many times in cold climates due to building upgrades and changes, SCR electric heaters have to be installed for supplying supplemental heat to certain areas of the building. The SCR electric heaters allow time proportioning the power which provides continuously variable heat output to meet the exact needs of the area. In one case, a Barber Colman HVAC system currently outputs a 6-9 VDC signal, but needs to be able to output a proportional control signal for the supplemental SCR electric heaters.



The Engineering Issue

- The engineer has a requirement to a 0-10 VDC input signal to their Robicon SCR electric heaters for proper operation.
- An override switch function is also required for troubleshooting as well as emergency control of the SCRs.



The engineer used a custom-modified, specially-ranged API 4300 G. As an added feature on the API 4300 G, the functional test pushbutton switch was replaced with a toggle switch. When the functional test toggle switch is in the manual position, the unit will output a 5 VDC signal independent of the input signal, which can be varied for troubleshooting or manual control.

Problem. Solved.