An Algorithm for Combined Control of Temperature and Humidity in Climate Test Chamber with Small Volume

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Abstract— The changing of the outside weather conditions on the operation of electrical and electronic equipment should influence as little possible of their technical and functional characteristics. This influence can be determined by laboratory tests before the operation of equipment on site. Various types of equipment can be checked: load limiters for cranes, automatic electronic balances, electronic active energy meters, electronic instrument transformers, fiber optic links and others equipment. These may includes sensors, memory, reference voltage sources, liquid crystal display, analog-to-digital converters and processors. Throughout the temperature range of operation the equipment must performs his functions (measurement, monitoring, limiting or protection) without leaving the limits of accuracy class. The paper presents the system for combined control of temperature and humidity in small climate test chamber.