

Abstract

Programmable controller

Whenever operating tasks by means of which control functions are implemented, for example, are no longer called by a central task, that is to say the scheduler of a real-time operating system, for example, but instead are called by the respective user-adaptable tasks in which the measured values supplied by the operating tasks are processed, the software producer is relieved of complex organizational work during the production of software. Since the sampling time of, for example, a control algorithm is no longer constant for the resultant calls (which are not equidistant) to the operating tasks, the currently valid sampling time has to be transferred as a parameter to the respective algorithms of the operating tasks. However, the sampling time can be determined in a particularly simple manner if the operating tasks determine a time value with each call and themselves determine the sampling time from the difference between the current and the preceding time value. In turn, it is possible to determine a time value in a particularly simple manner if a time index register is polled for this purpose and is incremented with each call by a time index task which is called periodically by the central task.

FIG 3