Time Channels (Time Programs)

Time channels

Time channels are objects of the D2000 System, whose values change in dependence on the day type and time. Values of time channels and times, when the values are valid, are to be set by a system configurator. Time channels allow predefining an automatic execution of changes of objects' values in dependence on time and day type, independently from an operator.

Use of time channels in the D2000 System:

- controlling output I/O tags in the AUTO mode,
- operands in logical and arithmetical expressions,
- operands in conditions of raising and finishing alarms,
- displaying in pictures,
- displaying in graphs.

Warning for application administrators
Even though the calendar definition is changed, the plan of individual time channels for the current day will remain the same as it was before!!!

The time channel for the current day behaves according to the day type definition as specified at the beginning of the day (the new definition is going to be applied from the next day). This is an important feature that prevents a real-time change of behaviour, that might be caused indirectly by the new calendar configuration. If it is necessary for the time channels, controlled by the reconfigured calendar, to adopt the calendar's new settings immediately, the corresponding time channel must be reconfigured too – it only needs to be opened and saved again. Since then, the time channel is going to operate according to the specification in the changed calendar.

Each time channel can get the value of only one of these types:

- Boolean
- Integer
- Real

Day types

Each time channel can follow its own calendar. In a calendar, individual day types are defined, when the time channel activity can differ from the others (e. g. workday, holiday, Christmas etc.). The system automatically generates three basic day types, which cannot be deleted. There are three basic day types in D2000 System:

- **WORKDAY**
- **SATURDAY**
- **SUNDAY**

If these day types are not sufficient, you can define other day types (e.g. holiday, Christmas etc.). Each day type has its own value, which is automatically assigned by the System. Besides defining calendars, the day types can be used in the system as independent objects, which have the value (e.g. in expressions of eval tags). Up to 255 objects of **Day** type can be defined in the D2000 system.

Calendars

The calendar is the object with definitions of day types for each day of a year. The calendars are used to define time channels, but they can also be used as independent objects (e.g. in expressions of eval tags). The value of the object of **Calendar** type is the value of the current day type.

Related pages:

Time channels - configuration dialog box
Values of time channels
Graphic representation of the time channel data flow