Configuration Dialog Box (D2000/Alarms - Controlling Exceptions in Logged Process/Object of Alarm Type)

Alarms - configuration dialog box

Editing of all objects in the process D2000 CNF is being performed in the configuration dialog box, a specific part of which is common for all editable objects and another part depends on the type of edited object.

Configuration dialog box of alarms consists of several tabs, which contain the similar parameters.

General properties
Groups
Presentation
Conditions

General properties

Description

A text string describing the alarm. Maximum: 128 characters.
Possibility to use the Dictionary (to open press **CTRL+L**).

Value type

Selection of an object value type. For an alarm, the value type is **AI-Alarm**.

Presentation

Acknowledgement-required alarm

If the alarm is defined as an acknowledgement-required alarm, it does not change its status into the status **Normal** after meeting the condition to finish the alarm (if the condition is not defined, then after finishing the alarm start condition), but it changes its status into the status **Unacknowledged**. To return to the status **Normal**, an acknowledgement from an operator is required.

Blocked alarm

Blocking up the alarm - the alarm is in the status **Blocked**.

Graphic presentation of Alarm

An object might be opened on the desktop of process D2000 HI during occurrence or acknowledgement of an alarm. A case, when defined object will be opened in process D2000 HI, is defined in one of the options **On alarm condition** or **On acknowledgement**. A graphic object, that will be opened on the HI's desktop, is defined by typing its name into the input edit box, or selecting from the object list (the button right to the input field).
The parameter **Instance** defines the instance number of the opened graphic object. When the value is 0, the graphic object will be opened with no instance.

Alarm output

If the option **RaiseSIGNAL** is checked, a signal on alarm occurrence will be generated - an impulse of the value TRUE will be generated on the system tag *Signal_Trigger*. The parameter **Critical alarm** defines, which group the alarm will be assigned to (on the presentation level, D2000 HI, Log database). The parameter **Ignore invalid** is not implemented.

Condition

Condition to start Alarm

Definition of a condition, which causes starting the alarm, i.e. changes the state of the object of Alarm type into the status **Alarm**.

An object representing the condition to start the alarm can be defined in several ways:

- by an entry of the object's name into the input edit box
- by selecting from the object list - the list is opened by clicking the button on the right from the input field
- by creating a new object - the button **Create new object**

Furthermore, it is necessary to define a status, for which the condition is valid. The list bellow the input edit field for object entry contains possible object value states. The list can be different for individual types of objects. Condition to start the alarm is valid, when the status of the alarm changes into selected status. If the option **Inverse function** is checked, the condition to start alarm is valid, when the objects is in a state other than the selected status.

Condition to end Alarm

Definition of a condition, which causes finishing the alarm, i.e. changes the status of the object of Alarms type into the status **Normal** or **Unacknowledged**. The alarm changes its status into the status **Unacknowledged**, if it was defined as acknowledgement-required alarm - the check box **Acknowledgement-required alarm** in the tab Presentation). Condition to raise alarm does not need to be defined. If it is not defined, the alarm is terminated as soon as the condition to start the alarm is no longer valid.

An object representing the condition to end the alarm can be defined in several ways:

- entry the name of an object into the input edit box
- selecting from the object list - the list is opened by clicking the button right from the input field
- creating a new object - the button **Create new object**

Furthermore it is necessary to define a status, for which the condition is valid. The list bellow the input edit field for object entry contains possible object value states. The list can differ for individual types of objects. Condition to start the alarm is valid, when the alarm status is changed into selected status. If the option **Inverse function** is checked, the condition to end alarm is valid, when the objects is in a state other than the selected status.

A condition to start/end of a system alarm can be an object group defined in D2000 CNF, logical group or structured variable eventually part of structured variable (row or column). Next to the group/structured variable there is a configurable value attribute, that is to be evaluated. Condition will be evaluated as a logical operation "OR" of given attribute through all of the group members or all of the items of the structured variable (or the configured row/column). An incremental method is used during the evaluation of such an alarm. That means that if the value status of any member of the group/item of structured variable is changed so that it matches configured condition status after the alarm acknowledgement, the alarm will be triggered again.

A rule for the setting of the attribute Weak above an object group:

Alarm+Weak occurs when all the objects, which meet the alarm condition, are Weak.

Normal + Weak occurs, when some of the conditions defining the status Normal is Weak.

Forms of use of a structured variable as a condition to start/end alarm:

Name[2]^Col - a specific item defining the alarm condition (it is not a 'group' alarm)

Name - all the items of the structured variable are evaluated as a group alarm

Name[0]^Col - all the items of the column 'Col' of the structured variable are evaluated as a group alarm

Name[3] - all the items of the third row of the structured variable are evaluated as a group alarm

Attention: "Name^Col" is the same as "Meno[1]^Col" - it is a particular item, not a column !

Time filter

Value of the time filter defines, how long the condition to start alarm must be met to start the alarm (change into the state **Alarm**). The time filter is defined in the form **Hours:Minutes:Seconds**.

ⓘ **Related pages:**

Alarms
Alarm states