

Alarms

This section allows you to specify the alarm inputs and the response to these sensors. To navigate to it, you can head into your *Main Menu > Settings > Config tab > Inputs/Outputs/Sensors > Alarms*.

The screenshot shows the 'Alarms' configuration screen. The left sidebar lists various settings, with 'Alarms' selected. The main area contains a table for configuring sensors. Annotations highlight key features:

- Activation field of the selected sensor:** Points to the checkbox in the 'Sensor name' column.
- Specifying the desired port number:** Points to the 'Input Number' column.
- Select the functionality of the specified port:** Points to the 'Sensor type' column.
- Add a Software PLC to launch if alarm triggered:** Points to the 'Soft PLC Handler' column.
- Mandatory homing flag:** Points to the 'Homing' checkbox.

Sensor name	Input Number	Sensor type	Soft PLC Handler
Emergency Button <input checked="" type="checkbox"/>	15	Normally closed	
Collision Sensor <input type="checkbox"/>	3	Normally opened	
X:Servo driver ready <input type="checkbox"/>	11	Normally closed	
X2:Servo driver ready <input type="checkbox"/>	12	Normally closed	
Y:Servo driver ready <input type="checkbox"/>	13	Normally closed	
Y2:Servo driver ready <input type="checkbox"/>	0	Normally opened	
Z:Servo driver ready <input type="checkbox"/>	0	Normally opened	
A:Servo driver ready <input type="checkbox"/>	0	Normally opened	
B:Servo driver ready <input type="checkbox"/>	0	Normally opened	
C:Servo driver ready <input type="checkbox"/>	0	Normally opened	
Air Pressure <input type="checkbox"/>	0	Normally opened	
Gas Pressure <input type="checkbox"/>	0	Normally opened	
Oxygen Pressure <input type="checkbox"/>	0	Normally opened	
Coolant <input type="checkbox"/>	0	Normally opened	
Safety Switch <input type="checkbox"/>	0	Normally closed	
Motor Short Circuit <input type="checkbox"/>	0	Normally opened	
Spindle Driver Ready <input type="checkbox"/>	0	Normally opened	
Servo driver(s) Alarm <input type="checkbox"/>	0	Normally opened	

Homing ☐

- The selected sensor is activated by setting the “V” symbol in the corresponding field:

This screenshot shows the 'Alarms' configuration screen with the 'Emergency Button' sensor selected. The 'V' symbol is visible in the activation field. The 'Soft PLC Handler' is set to '_HANDLER_TEST_ALARM'. A 'SAVE CFG' button is in the top right corner.

Sensor name	Input Number	Sensor type	Soft PLC Handler
Emergency Button <input checked="" type="checkbox"/>	15	Normally closed	_HANDLER_TEST_ALARM
Collision Sensor <input type="checkbox"/>	3	Normally opened	
X:Servo driver ready <input type="checkbox"/>	11	Normally closed	
X2:Servo driver ready <input type="checkbox"/>	12	Normally closed	
Y:Servo driver ready <input type="checkbox"/>	13	Normally closed	
Y2:Servo driver ready <input type="checkbox"/>	0	Normally opened	

- The input number on the controller board is set in the corresponding field “Inputs Number”. Numbering of inputs can be found in the documentation for the selected window controller:

Sensor name	Input Number	Normally opened	Soft PLC Handler
Emergency Button <input checked="" type="checkbox"/>	15	<input checked="" type="checkbox"/> Normally closed	HANDLER_TEST_ALARM
Collision Sensor <input type="checkbox"/>	3	Normally opened	
X:Servo driver ready <input type="checkbox"/>	11	Normally closed	
X2:Servo driver ready <input type="checkbox"/>	12	Normally closed	
Y:Servo driver ready <input type="checkbox"/>	13	Normally closed	
Y2:Servo driver ready <input type="checkbox"/>	0	Normally opened	

SAVE CFG

Saving changes

- The type of the sensor is specified in the corresponding field “”. There are two types of input sensors. Normally open - the sensor in the rest position has open contacts and in the course of operation the sensor contacts are closed. Normally closed - the sensor in the rest position has closed contacts and during the operation, the sensor contacts are opened. This “normal” behaviour can be reversed in Settings > Config > Hardware > Common Hardware Settings > Input Bits Inversion:

Sensor name	Input Number	Normally opened	Soft PLC Handler
Emergency Button <input checked="" type="checkbox"/>	15	<input checked="" type="checkbox"/> Normally closed	HANDLER_TEST_ALARM
Collision Sensor <input type="checkbox"/>	3	Normally opened	
X:Servo driver ready <input type="checkbox"/>	11	Normally closed	
X2:Servo driver ready <input type="checkbox"/>	12	Normally closed	
Y:Servo driver ready <input type="checkbox"/>	13	Normally closed	
Y2:Servo driver ready <input type="checkbox"/>	0	Normally opened	

SAVE CFG

Saving changes

* Additionally, the program can launch a Software PLC command when an alarm is triggered, by specifying a Software PLC handler in this next field:

Sensor name	Input Number	Normally opened	Soft PLC Handler
Emergency Button <input checked="" type="checkbox"/>	15	<input checked="" type="checkbox"/> Normally closed	HANDLER_TEST_ALARM
Collision Sensor <input type="checkbox"/>	3	Normally opened	
X:Servo driver ready <input type="checkbox"/>	11	Normally closed	
X2:Servo driver ready <input type="checkbox"/>	12	Normally closed	
Y:Servo driver ready <input type="checkbox"/>	13	Normally closed	
Y2:Servo driver ready <input type="checkbox"/>	0	Normally opened	

SAVE CFG

Saving changes

You can read up more on Software PLC programming (and PLC programming in general) here: [PLC](#)

Table of alarm sensors

Name of alarm sensor	Functional of sensor
Emergency Button	Emergency shutdown button. When the button is pressed, all machine actions will be stopped.
Shock sensor	Tool holding sensor. Usually, this sensor is installed directly in the place of attachment of the instrument and is designed to protect the tool against damage when the tool hits the obstacle.

Name of alarm sensor	Functional of sensor
X:Servo drive ready	The signal generator of the signal for readiness to move the drive along the X coordinate. As a rule, the source of the signal is directly the drive of the corresponding coordinate.
X2:Servo drive ready	The signal generator of the signal for readiness to move the drive along the Y coordinate. As a rule, the source of the signal is directly the drive of the corresponding coordinate.
Y:Servo drive ready	The signal generator of the signal for readiness to move the drive along the Z coordinate. As a rule, the source of the signal is directly the drive of the corresponding coordinate.
Z:Servo drive ready	The signal generator of the signal for readiness to move the drive along the Z coordinate. As a rule, the source of the signal is directly the drive of the corresponding coordinate.
A:Servo drive ready	The signal generator of the signal for readiness to move the drive along the A coordinate. As a rule, the source of the signal is directly the drive of the corresponding coordinate.
B:Servo drive ready	The signal generator of the signal for readiness to move the drive along the B coordinate. As a rule, the source of the signal is directly the drive of the corresponding coordinate.
C:Servo drive ready	The signal generator of the signal for readiness to move the drive along the C coordinate. As a rule, the source of the signal is directly the drive of the corresponding coordinate.
Air Pressure	A sensor for the availability of sufficient pressure or air flow in the system. Typically, this sensor is installed directly at the entrance to the machine.
Gas Pressure	A sensor for the availability of sufficient pressure or gas flow in the system. Typically, this sensor is installed directly at the entrance to the machine.
Oxygen Pressure	A sensor for the availability of sufficient pressure or oxygen flow in the system. Typically, this sensor is installed directly at the entrance to the machine.
Coolant	A sensor for the availability of sufficient pressure or the flow rate of cooling in the system. Typically, this sensor is installed directly at the entrance to the machine.
Safety switch	A safety switch is a sensor that does not seal the machine casing. As an option - a sensor for opening the door of the electrical cabinet.
Motor Short Circuit	The motor short-circuit sensor is a short-circuit sensor directly in the motor. This sensor is usually presented as an option when ordering an engine. If your engine does not have such a sensor, just do not activate this function.
Spindle Driver Ready	The spindle driver is ready for operation. This sensor is usually installed directly in the spindle drive, but it can also be done on its own.
Servo Driver(s) Alarm	Accident of any of the drives installed on the machine. As a rule, the signal of an accident is directly the drive of the engine.

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