# Alarm Manager

This sample project describes how to access alarm objects by means of a program. With the `AlarmManager` object, it is possible to access active and stored alarms. It is also possible to register a client to receive alarm events.

## Product description

This sample project demonstrates how to access an alarm object by means of a program. With the `AlarmManager` object, it is possible to access active and stored alarms. It is also possible to register a client to receive alarm events.

The sample project contains two alarm tables. The first one (type `Alarmtable`) shows the active and stored events. New alarms can be created by means of the buttons below the table. The second table simulates an alarm table and shows the stored alarms.

## More information

A client has to implement the `IAlarmManagerClient` interface to get access to the alarm objects by means of a program.

The `IAlarmManagerClient` interface includes the following methods:

- `GetFilterCriteria`: A filter criteria for active and stored alarms
- `ActiveAlarmChanged`: Notification when an active alarm has changed (for example, if a new alarm is active or the status has changed). The list of active alarms can be read by the `IAlarmHandler2.GetActiveAlarms` method.
- `AlarmStorageModified`: Notification when a stored alarm has changed. The list of the stored alarms can be read by the `IAlarmHandler2.GetAlarmsFromStorage` method.

A filter can be set via the `IAlarmFilterCriteria` interface. The `AlarmFilterCriteria` function block implements the `IAlarmFilterCriteria` interface. In the example, the `IAlarmManagerClient` interface is implemented by the `AlarmManagerClient` function block. The client is registered at the `AlarmManager` in the `PLC_PRG` program. The `ProcessAlarms` function writes the alarms to the console of the controller.

### Screenshots

# Alarm Manager Example

| | | Timestamp ▼ | Message | Timestamp active | Timestamp acknowledge | State |
|---|---|---|---|---|---|---|
| 97 | | 04.06.2019 12:37:35 | Alarm 17 aktiv | 04.06.2019 12:37:02 | | Normal |
| 98 | ⚠ | 04.06.2019 12:37:02 | Alarm 11 aktiv | 04.06.2019 12:37:02 | | Active |
| 99 | ⚠ | 04.06.2019 12:37:02 | Alarm 12 aktiv | 04.06.2019 12:37:02 | | Active |
| 100 | ⚠ | 04.06.2019 12:37:02 | Alarm 13 aktiv | 04.06.2019 12:37:02 | | Active |
| 101 | ⚠ | 04.06.2019 12:37:02 | Alarm 14 aktiv | 04.06.2019 12:37:02 | | Active |
| 102 | ⚠ | 04.06.2019 12:37:02 | Alarm 15 aktiv | 04.06.2019 12:37:02 | | Active |
| 103 | ⚠ | 04.06.2019 12:37:02 | Alarm 16 aktiv | 04.06.2019 12:37:02 | | Active |

Alarm 11 · Alarm 16 · Alarm 21 · Alarm 31 · All on · History
Alarm 12 · Alarm 17 · Alarm 22 · Alarm 32 · All off
Alarm 13 · Alarm 18 · Alarm 23 · Alarm 33 · Aktive Alarme (alle) = 15
Alarm 14 · Alarm 19 · Alarm 24 · Alarm 34 · Aktive Alarme (1+2) = 11
Alarm 15 · Alarm 25 · Alarm 35 · Aktive Alarme (1+3) = 11
Aktive Alarme (2+3) = 8

## Simulated Alarmtable: Alarms from alarm storage

| Row | Timestamp Last | Message | ID | internal ID | Alarmgroup | Alarmclass | Priority | LatchVar1 | LatchVar2 | State |
|---|---|---|---|---|---|---|---|---|---|---|
| 104 | 04.06.2019 13:01:43 | Alarm 14 aktiv | 3 | 0 | Alarme1zeilig | ??? | ??? | | | Normal |
| 105 | 04.06.2019 13:00:00 | Alarm 34 aktiv mit 3 Zeilen | 3 | 0 | Alarme3zeilig | ??? | ??? | | | Normal |
| 106 | 04.06.2019 12:59:58 | Alarm 22 aktiv | 1 | 0 | Alarme2zeilig | ??? | ??? | | | Normal |
| 107 | 04.06.2019 12:59:57 | Alarm 18 aktiv | 7 | 0 | Alarme1zeilig | ??? | ??? | | | Normal |
| 108 | 04.06.2019 12:59:55 | Alarm 11 aktiv | 0 | 0 | Alarme1zeilig | ??? | ??? | | | Active |
| 109 | 04.06.2019 12:59:55 | Alarm 12 aktiv | 1 | 0 | Alarme1zeilig | ??? | ??? | | | Active |
| 110 | 04.06.2019 12:59:55 | Alarm 13 aktiv | 2 | 0 | Alarme1zeilig | ??? | ??? | | | Active |

Read history

Total count rows in history: 197

## General information

**Manufacturer:**

3S-Smart Software Solutions GmbH

Memminger Strasse 151

87439 Kempten

Germany

**Support:**

https://support.codesys.com

**Item:**
Alarm Manager
**Item number:**
000045
**Sales:**

CODESYS Store
https://store.codesys.com

**Included in delivery:**
- CODESYS Package with sample project

## System requirements and restrictions

| Programming System | CODESYS Development System V3.5.10.0 |
|---|---|
| Runtime System | CODESYS Control V3.5.10.0 |
| Supported Platforms/ Devices | All<br><br>Note: Use the "Device Reader" project to find out about the supported features of your device. "Device Reader" is available free-of-charge in the CODESYS Store. |
| Additional Requirements | - |
| Restrictions | - |
| Licensing | No license required |
| Required Accessories | - |

*Note: Not all CODESYS features are available in all territories. For more information on geographic restrictions, please contact sales@codesys.com.*

*Note: Technical specifications are subject to change. Errors and omissions excepted. The content of the current online version of this document applies.*