



SILworX®

Automated Tests and External Access

The SILworX API (Application Programming Interface) enables you to control SILworX functions from outside the system. The flexible, open interface is independent of fixed, defined programming languages. As a result, you can make decisions based on your requirements and preferences. SSL encryption, configured timeouts, and user management integrated directly within the SILworX project ensure maximum security.

Highlights

- **External access:** SILworX functions can be accessed from external programs via the interface.
- **Read system information:** The API enables force information and other system data to be read and stored at any time for inventory purposes.
- **Security:** External access is SSL encrypted and provides additional protection thanks to timeouts and user management integrated within the SILworX project.
- **Automated tests:** The API enables automated tests on the target system without changing the application (CRC stability).
- **Faster diagnosis:** Diagnostics information can be read and saved automatically to initiate manual or automatic analyses.
- **Version management:** You can use your own version management tools as well as archiving and sharing parts of a project automatically.

A screenshot of the Visual Studio code editor showing a C# code snippet. The code is for a console application and includes comments and function calls for system login, starting global forcing, and reading global force data. The code is as follows:

```
82  
83  
84 //System Login  
85 var resultSystemLogin = online.SystemLogin("/O  
86 Console.WriteLine(resultSystemLogin.ToJson());  
87  
88  
89 //Start Global Forcing  
90 bool forceResetStart = false;  
91 int forceDuration = 0; //Unlimited force durat  
92 var resultStartGlobalForcing = online.StartGlo  
93 Console.WriteLine(resultStartGlobalForcing.ToJ  
94  
95 //Read global force data  
96 List<string> groups = new List<string>();  
97 List<string> vars = new List<string>();  
98 var resultGlobalForceData = online.ReadGlobalF  
99 Console.WriteLine(resultGlobalForceData.ToJson  
100 //Write "Read global force data" results in JS  
101 System.IO.File.WriteAllText(Path.Combine(projD  
102
```

Example: Programming code in visual studio for accessing functions

TECHNICAL FACTS

SILworX API

The new API enables you to use the SILworX engineering software in existing, heterogeneous tool landscapes. Additionally, you can create your own applications to extend our solutions to meet custom requirements, such as simplifying troubleshooting.

Integrating SILworX into existing test and documentation infrastructures is becoming increasingly important. The software supports simple and cost-effective use of HIMA systems. The functions for automated testing help reduce personnel challenges and costs.

Scope of Delivery

- Documentation of the basic functionality as a PDF
- Documentation of the API commands as a HTML file
- YAML file for generating function libraries in different programming languages via OpenAPI

Cybersecurity

- **Secure access:**
Access to the SILworX API is only possible via SSL (TLS 1.2).
- **Permission management:**
Project access requires the same user rights as manual editing.
- **Configurable timeouts:**
SILworX projects are automatically closed according to their own timeouts if no further API requests are received.
- **Monitoring:**
SILworX API activity can be checked at any time via the status bar.
- **Documentation:**
Remote access allows you to record the same actions in the logbook that are documented when working locally.

Smart Safety Platform

SILworX is the programming tool for HIMax, HIQuad X, and HIMatrix systems as well as the HIJunctionBox. Combined with the SafeEthernet protocol, they form the core of the HIMA Smart Safety Platform.

