



Standardise static verification of control code and improve program quality management

EcoStruxure Control Engineering - Verification

With systems becoming increasingly software intensive, control programs for PACs and PLCs are consequently becoming more complex. We are therefore required today to perform a mix of both code review and functional testing in order to:

- Manage program quality for greater reliability and maintainability
- Ensure that the right program is built and that it is built right.

However, given the increasing complexity of these programs and the need to respect time limits and budgets, manual code review is no longer suitable.

EcoStruxure Control Engineering - Verification is a static analysis tool for control programs that automates code verification allowing for improved quality management. The tool helps identify potential problems and measure complexity, providing you with useful information to help improve your code quality and maintainability.

Benefits

Improve the efficiency of program development

Help ensure the longevity of your control systems by **improving maintainability** from the start.

Automatically verify conformity with your chosen company, segment or standard guidelines.

Collaborative tool providing different levels of information for different users, from an overview of project quality to detailed results.

How it works?

EcoStruxure Control Engineering - Verification is a cloud-based application accessible through a web browser, with no installation required. It is an agnostic tool compatible with all major PLC vendors.

The tool is designed to help you find anomalies and complexity issues in your control code so that this can be improved to increase reliability and maintainability.

It works by analysing your code against a chosen set of programming rules, without executing the program. This method can help find the following types of anomaly before they cause a problem, or even downtime, during operations or maintenance:

- Inadequate code constructions
- Violations of programming guidelines
- Complexity issues
- Potential deficiencies.

Verification Rules File

EcoStruxure Control Engineering - Verification comes with a choice of sets of pre-defined rules for analysing your control programs, including generic rules, segment specific and standard specific. These sets of rules are all based on good programming practices regarding naming, comments, writing, structure, and complexity.

The rules file is configurable, meaning that it can be enriched and customised according to your needs.

Typical use cases

End Users

Verify that the control programs **respect your specification** upon reception from your system integrators.

Monitor quality of control program development to **support a certification process**.

System Integrators

Prove quality and conformity of your developed control programs to your end user.

Develop a new **third-party code audit offering** for your customers.

Machine Builders

Manage the **quality of your intellectual property** in the long term and **master the technical debt** of your software.

Quick and easy code review with EcoStruxure Control Engineering - Verification

Step 1

Upload your control program export



Step 2

Choose Verification rules file



Step 3

Run Verification analysis (cloud or server based)



Step 4

Access your Verification analysis results



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