

# EcoStruxure Control Engineering - Documentation

Control systems are well known for their long lifespan, with many systems in use for 20 to 30 years. This is positive for the ROI of the initial installation, however it can create some complications for understanding and managing the system over time since:

- System expertise may be lost as teams change and senior engineers retire.
- Documentation may no longer be coherent with the current system as it was not kept up-to-date.

EcoStruxure Control Engineering - Documentation is a reverseengineering tool for control programs that analyses and reconstructs program information from an existing source code. The tool generates an abstract representation of the program that is coherent with its current state, making it easier for you to understand even when unfamiliar with the system.

## **Benefits**

Improve the understanding of your control programs

**Abstract process information** from the architecture and system specificities to facilitate understanding, even of **unfamiliar systems**.

Always have access to **up-to-date program information** to support testing, debugging, and commissioning, as well as change management.





#### How it works?

EcoStruxure Control Engineering - Documentation 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.

Using only the source code, the tool automatically generates two dynamic representations of the control program in the form of flow diagrams - a control flow for the procedures, and a data flow for the variables.

These representations, unique regardless of the PLC format or brand of the source code, help serve two purposes:

- Redocumentation Create a new representation of the structure of the control code so that it is easier to understand.
- Design recovery Support the understanding of the functionality of the control code.

# Typical use cases

#### Obsolete installed base

Regenerate the program information of a **legacy application** to support understanding and **help prevent loss of intellectual property.** 

### Meeting regulations

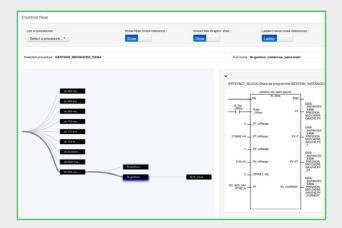
### Maintain a good synchronisation

between the application and the technical documentation.

## Change management

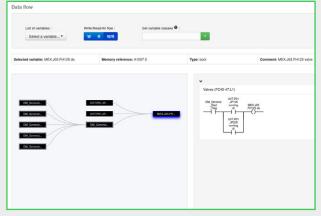
Use the abstract application information to help **understand**, **audit**, **and perform impact analysis** before making modifications.

## Two ways to visualise your control application



#### **Control Flow**

See the calls between the procedures of the code, to understand the structure of the application and the architecture of its FBs, POUs, functions and more.



#### **Data Flow**

See the relationships between input and output variables, including mnemonics, comments, and the corresponding equations, to understand the information flow.

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