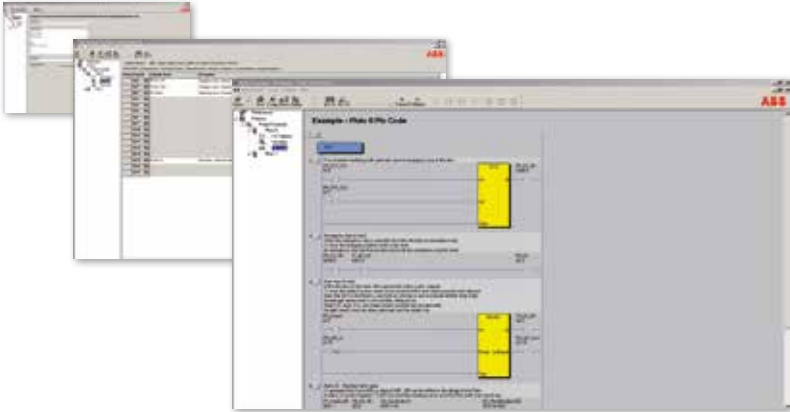


Pluto Manager

Programming tool Pluto Manager



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Use:

- Gates
- Hatches

Features:

- Free software
- Downloaded from www.abb.com/jokabsafety
- Ready to use function blocks for your safety components
- Contains TÜV-approved function blocks
- Provides an overview of the current projects and your Plutos
- Easy programming through ladder language

A programming tool for your safety functions

Pluto Manager is a software tailored for the safety PLC Pluto. Programming is done in ladder and together with the function block creates the structure of your safety functions. The software comes with predefined function blocks approved by TÜV to facilitate the work on designing the safety functions. Pluto Manager offers the possibility to split the program into different program blocks in order to separate various program functions from each other, and it gives you a structured overview of Plutos, gateways and peripheral components in large and small projects. It gives you an overview and control of the sensors and actuators, and the reactions between them. Pluto Manager also contains manuals for the software and hardware that are connected and needs to be handled through the program. The interface gives the option to connect to one of the Plutos in the net, and go online and view the status for Pluto's two bus options, AS-i and Pluto bus. There are also diagnostic functions and the option to export data.

Systematic working method through project management

Step 1 - Configuration of I/O

In every started project, each Pluto is defined individually. Its inputs and outputs are configured as desired and depending on what they connect to. Pluto's IQ ports are also configured here as inputs or outputs, dynamic or static signals.

Step 2 - Naming of variables

After configuration the systems variables are determined. Inputs (I), outputs (Q), remanent memories (M), global auxiliary memories for bus communication (GM) and registers (R) are given names that can be used in place of the actual variable designation in the PLC program.

Step 3 - Ladder programming

The program is built using the named variables connected to inputs and outputs. The programming language has a full range of instructions, similar to standard PLCs on the market, with timers, arithmetic, sequence programming etc.

The project is then downloaded to Pluto via a programming cable. This program is distributed simultaneously through bus communication to the other Plutos in the project. In this way, you need only access a single Pluto where each Pluto gets the right information specified in your project.

Pluto Manager is included when purchasing the safety PLC Pluto. The software is Windows based and can be downloaded free from www.abb.com/jokabsafety.

List of standard and special function blocks for Pluto Manager

The safety designer has complete freedom to program the safety functions or to use TÜV-approved pre-defined safety function blocks.

Standard library “func05”:

- 6 different blocks for two-channel function. (With or without start input, test input, reset input, output for two-channel fault, monitoring of simultaneous operation.)
- 3 different blocks for single-channel function. (With output for reset button indication, with or without start input, test input.)
- 2 different blocks two-channel function with time limitation.
- Block for single-channel preset.
- Block for two-channel preset.
- 4 different blocks for muting (bypass).
- Block for two-hand control.
- 2 Counter blocks (up-count and down-count).
- 4 different blocks for muting lamp. (Pluto A20 only.)
- Block for off-delay function.
- 2 Blocks for light curtains.
- Block for multiplication.

- Block for division.
- Block for monitoring of selector switch.
- 2 blocks for validation of exported register value sent over bus. (For register or for double registers.)

Library “AS-i01”:

- Blocks for Pluto AS-i and B42 AS-i. (Control of, and reading of AS-i slaves, AS-i locks etc.)

Library “Ext01”:

- Blocks for communication with external devices (gateways, HMI etc.)

Library “Analog01”:

- Blocks for reading of analogue inputs. (Pluto D20 and D45 only.)

Library “Counter01”:

- Blocks for speed monitoring via counter inputs. (Pluto D45 only.)

Library “Encoder01”:

- Blocks for absolute encoders.

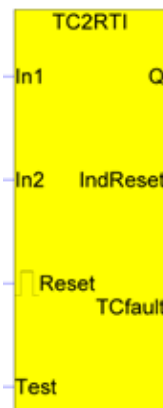
Special function blocks:

- Program library with blocks for eccentric shaft presses.

Example: Function block TC2RTI

Two-channel function with test, reset inputs and reset indication.

- In1 and In2 are safety inputs, to which the safety device outputs are connected.
- Test is an input condition which must be true at the start up moment and can be used for monitoring of external components. Test must switch on before In1 and In2, i.e. the function block cannot be initiated by Test.
- Reset is a monitored reset input which must switch on-off (reset on negative edge) after all other inputs, in order to switch on the output of the function block.
- IndReset is an output for indication which is ON when the function block is switched off and In1, In2 or Test is off, and flashes when the function block is ready for activation with reset.
- TCfault is on at two-channel fault, i.e. when the function block is on, and only one of In1 or In2 switches off and on again.



Description

The function block works as a conventional safety relay with redundant and monitored inputs (In1, In2).

Example: Function block Twohand1

Two-hand control for actuators with NO/NC + NO/NC contacts.

- Right_NO is right hand NO contact
- Right_NC is right hand NC contact, etc.
- Test is an input condition that must be on before any of the other inputs changes from the initial position and can be used for monitoring of external components.

Function:

- In initial position shall:
- Right_NO be off,
- Right_NC be on,
- Left_NO be off and
- Left_NC be on

To start the output (Q), these four inputs must change state in 0.5 seconds and remain in that position. After stop, all inputs must come to the initial position to enable restart.

