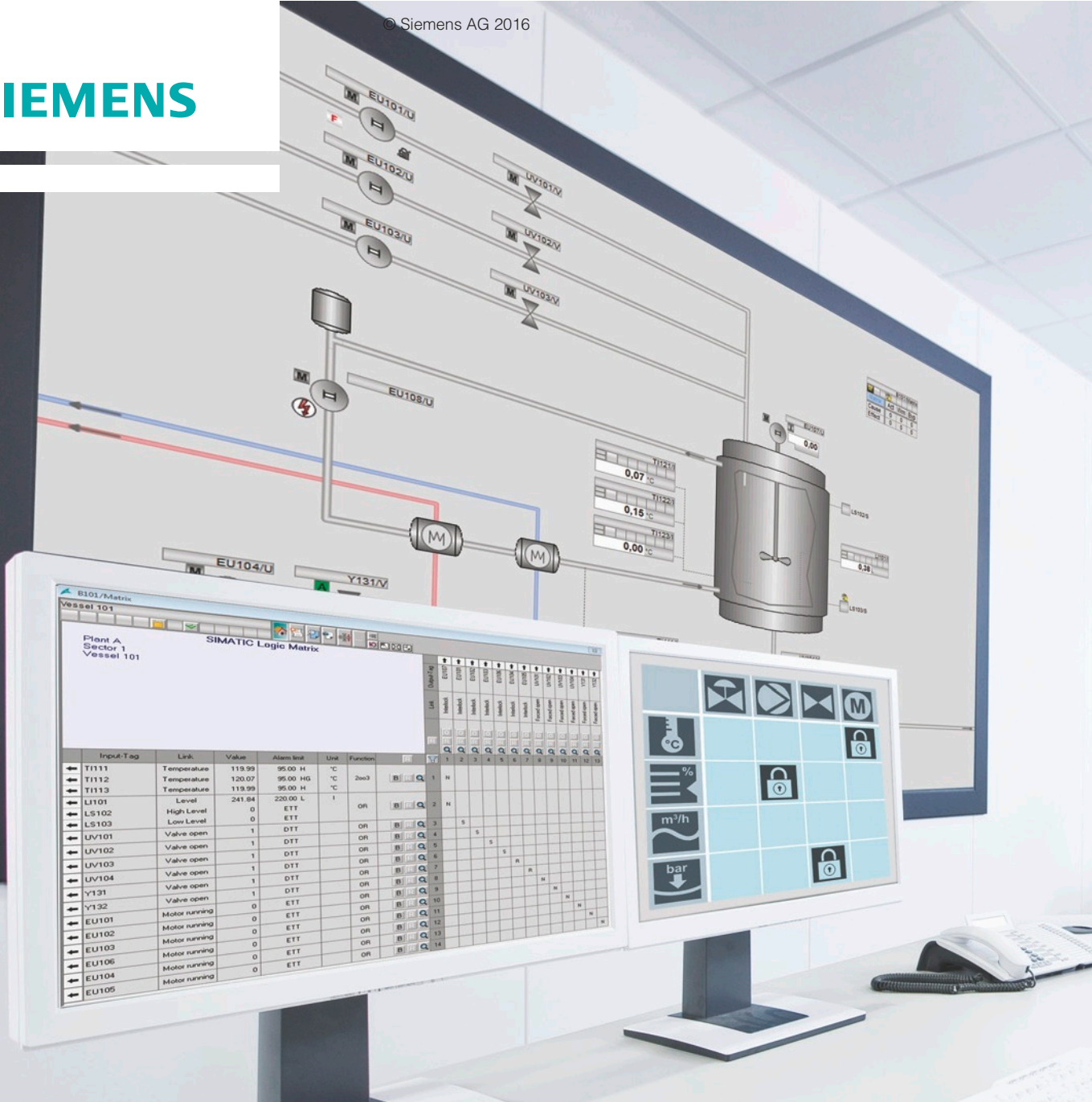


SIEMENS



SIMATIC Logic Matrix

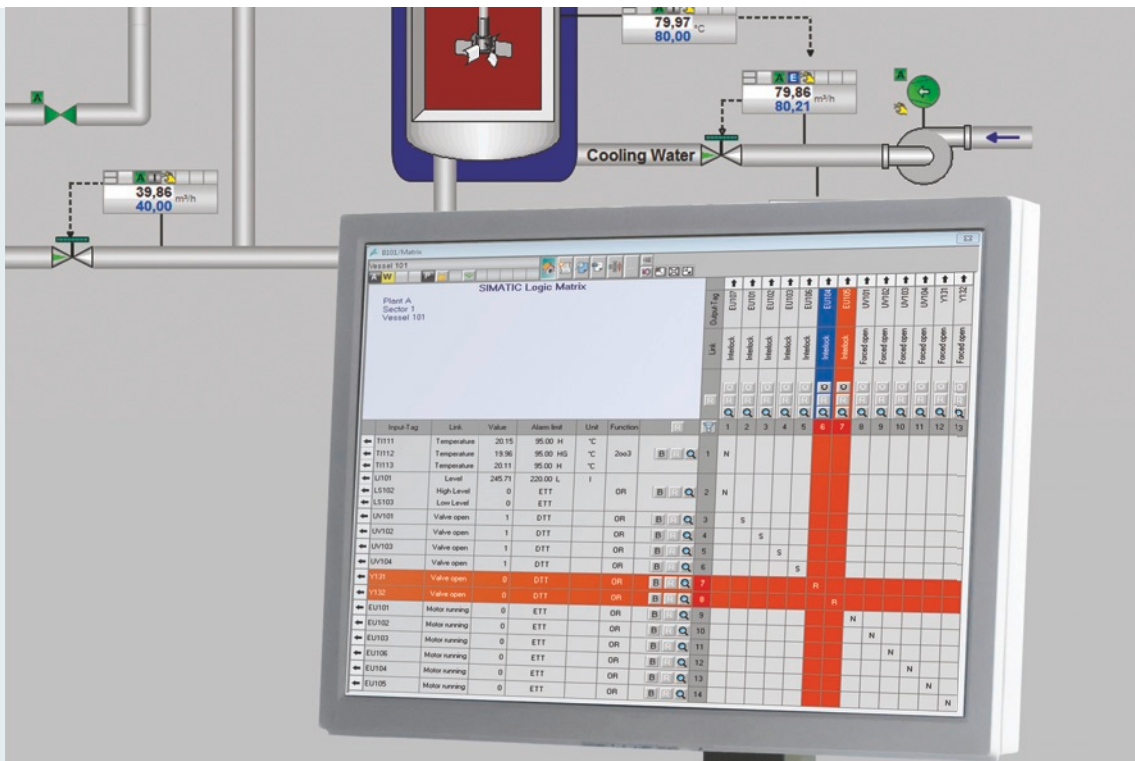
Using transparency to increase plant availability

SIMATIC PCS 7

Brochure

April
2016

Production request



Example: Logic Matrix with triggered protection function

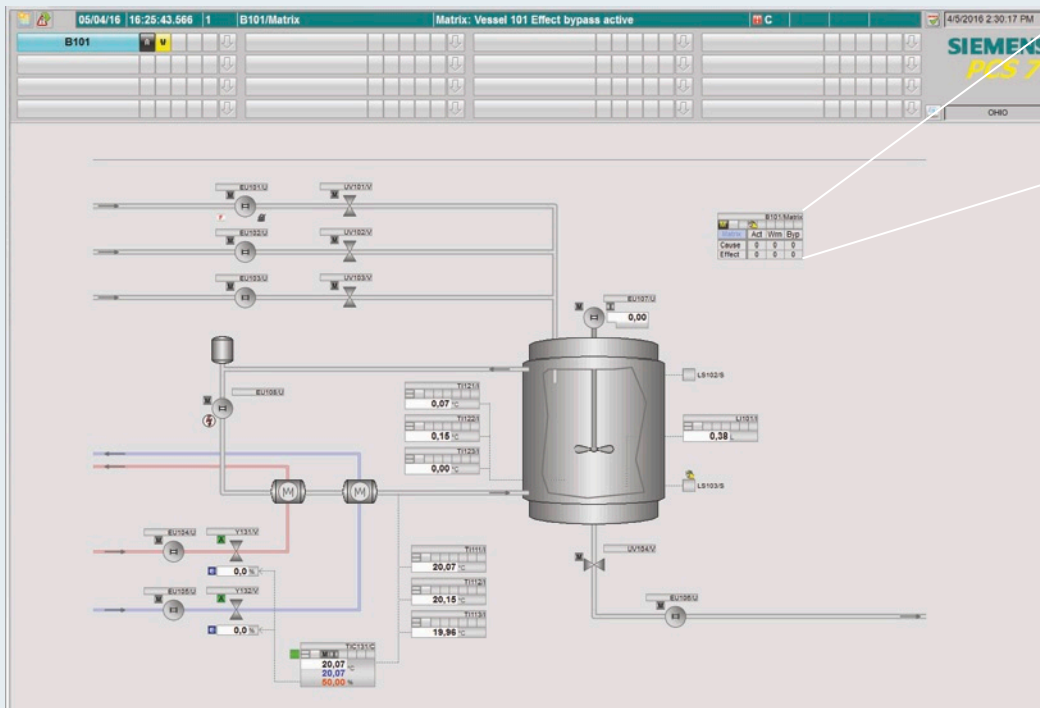
The simple and transparent display of complex states in your plant is one of the most important aspects for production. The automation program has to provide a simple display for your personnel, from the actual cause of the event up to the effects on your plant.

The benefits of the Logic Matrix at a glance

- No programming knowledge required
- Uniform view and understanding of all involved persons
- Identical display of matrix in configuration, operation, and documentation
- Reduction in planning, implementation, and acceptance times
- Optimum operator prompting
- Reduced downtimes



Efficient engineering



B101/Matrix			
Matrix	Act	Wrn	Byp
Cause	0	0	0
Effect	0	0	0

The process picture supports a special Logic Matrix element, also called a user object, which gives operators a quick overview of the current state of the matrix.

Bypasses, interrupts, warnings, as well as protection functions are immediately visible.

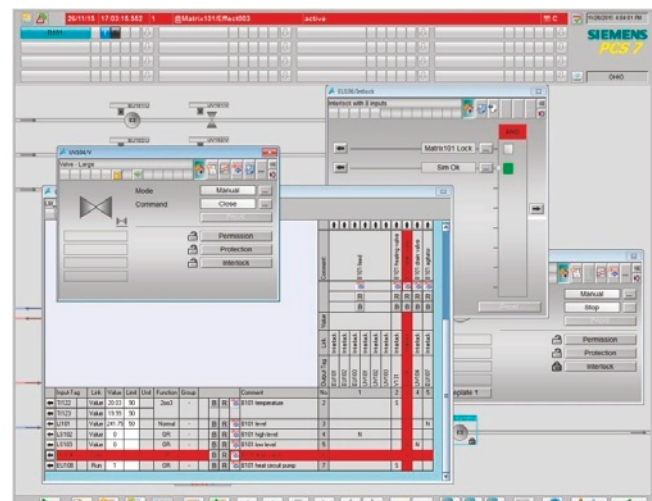
The object is completely integrated in the interrupt and operating philosophy of SIMATIC PCS 7 and makes intuitive operation for plant personnel possible.

The new Logic Matrix for SIMATIC PCS 7 provides you with a optimized overview of interlock states for your production plant based on the "cause-effect principle". This extended functionality integrates seamlessly into the look & feel of the SIMATIC PCS 7 process control system. Process-relevant events and interrupts are transferred to the operator system and integrated into the message system.

Depending on the system concept, the Logic Matrix can be used as an overriding automation level for interlocks and protection functions. Signal states and supplementary information are color-coded and immediately apparent to the operating personnel.

For process engineers, inspectors and planners, the Logic Matrix requires no programming skills because it is technologically configured during production operation.

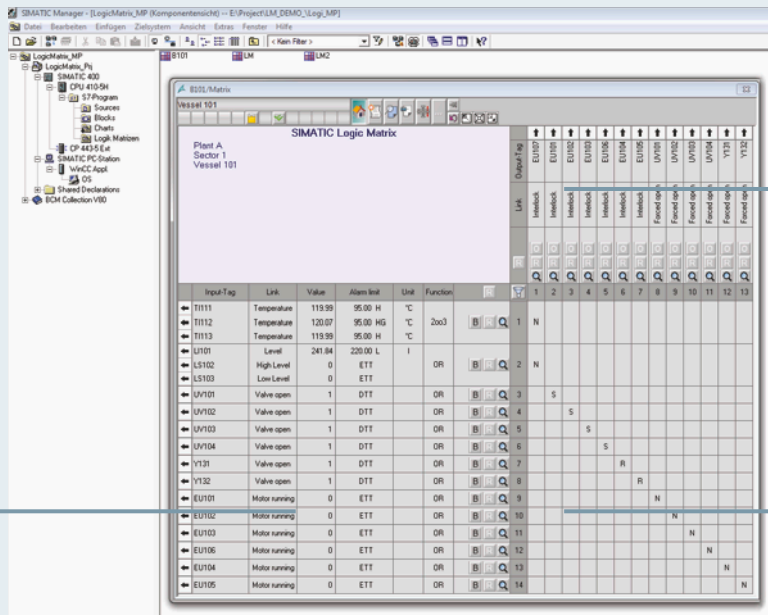
The individual interlock functions are easily configured in an editor with the cause and effect method for achieving an identical and generally understandable view for planners, operators and inspectors.



The faceplate of the Logic Matrix integrates seamlessly in the look & feel of the Advanced Process Library (APL).

Even large configurations and mass data can also be edited, imported, and exported efficiently with Microsoft Excel. All this results in a significant reduction in engineering, test and acceptance times.

Engineering interface



Effects

Causes

Intersection

Logic Matrix Editor Seamless integration in SIMATIC Manager (SIMATIC STEP 7 V5.5)

The causes are defined in the rows of the matrix table. The causes derived from digital and analog signals can result from up to 6 signals. In addition, multiple causes can be summarized in a function. Additional aspects can also be considered, e.g. time delays.

The effects are defined in the columns of the matrix table. A cause can have an effect on different actuators. The linking of several causes and the definition of the response between the causes and effects is carried out at the intersections of the rows and columns. It is also defined here whether an acknowledgment or reset is required. For example, it is possible to implement a 2 out of 6 vote in this manner.

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