

lamaPLC: TIA Diagnose generator

The diagnosis function is one of the most complex and labor-intensive functions of PLCs (and SCADAs). The PLC must respond to incoming signals and register almost every such signal. The states and errors of the running program must also be recorded through the diagnoses so that any event can be analyzed later.

The diagnosis records several levels of symptoms and matches them with different treatment. There are events that must be acknowledged by the operator, other signals are acknowledged without intervention. The following table is the classification of the events of the system defined by me and the method of acknowledgment:

Sign	Diagnosis class definition	Acknowledgment method
S	<p>Status: The signal is only registered in the diagnosis system, it has no effect on the operation of the technology through the diagnosis. It will not be summarized. Together with other events, sorted by time stamp, it can help you analyze certain events and find their causes.</p>	The event has no acknowledgment procedure, the change in the signal state is recorded automatically (coming - going).
W	<p>Warning: The signal warns of the occurrence of an event with more serious consequences, but does not directly affect the operation of the technology through diagnosis. It will not be summarized. Together with other events, sorted by time stamp, it can help you analyze certain events and find their causes.</p>	The event has no acknowledgment procedure, the change in the signal state is recorded automatically (coming - going).
I	<p>Warning inhibit: A group of signals that do not affect the already working technology, but in the case of a restart, their presence blocks the new start. The signals are summed up per block, and the run-up of the given block is prevented.</p>	The event has no acknowledgment procedure, the change in the signal state is recorded automatically (coming - going).
E	<p>Error: This event is referred to as a "trip" in several systems. These events result in the immediate shutdown of the technology block. If several other blocks are dependent on the given block, their failure - or the shutdown of the entire equipment - will also occur in a domino effect. The signals are summed up per block and can only directly result in the shutdown of the given block.</p>	The event must be acknowledged, in addition to the arrival and output of the signal (coming - going), the time of the acknowledgment must also be recorded.

From:

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Last update: 2026/04/21 20:46



