

GuardPLC Release Notes

Firmware Version 6.46 and RSLogix Guard PLUS v4.1 Build 6150

New Software and Firmware Versions

- CPU OS Version 6.46 for *GuardPLC* controllers
- COM OS Version 11.24 for *GuardPLC* controllers
- CPU OS Version 6.46 for GuardPLC DIO modules
- Hardware Management Version 8.54 (Build 6150) for RSLogix Guard PLUS

Firmware Changes

1. Start Up during Undervoltage

Upon being switched on, the GuardPLC devices delay their automatic start up procedure to the RUN state for as long as the 24V input is supplied with too low voltage. This ensures that I/O connection faults caused by under voltage do not prevent the system from automatically starting up.

Should the state of too low voltage persist longer than 5 minutes, the GuardPLC controller will terminate the automatic start up in the STOP state and wait for action by the user. This should prevent the system from unexpectedly starting up if an unstable 24V voltage comes up some time later.

2. Automatic Start Up after Fault Detection

In the rare case that a GuardPLC device detects an internal fault, it will automatically restart. Should an internal fault be detected again within the first minute after start up, the device will remain in the ERROR_STOP state, as was the case in earlier versions of the firmware.

3. No LED Indication in case of Line Break

Using digital inputs with line control (pulse testing), a 0 signal on the input is no longer indicated by the "FAULT" LED. This arises from the revised approach that a 0 signal is a state of the connected contactor rather than a fault.

In line with this new approach, the system no longer prevents start up when a 0 signal is applied to a digital input with line control.

This change is inconsequential for existing application programs.

4. Modbus Option for Function Code 23

The GuardPLC controllers offer a new option for use within an RSLogix Guard PLUS project, allowing users to specify whether the Modbus function code 23 is read from the input or the output area. For more details, refer to the GuardPLC MODBUS .Master/Slave Manual HI 800 003, and to the online help of ELOP II Factory.

5. Handling of Incorrect Modbus Requests

If the GuardPLC controller receives a faulty Modbus request with function code 23, the corresponding write transmission is no longer executed.

6. LED Signaling for Modbus & Profibus

The LED displays for the Modbus RS485 and Profibus-DP have been functionally enhanced. For more details, refer to additional documentation about field busses within the GuardPLC device family: GuardPLC MODBUS Master/Slave Manual HI 800 003
GuardPLC PROFIBUS DP Master Manual HI 800 009.

7. Rejected Application Program

If the code size of an application program for the CPU was exactly 200708 or 431108 bytes, the program was unjustifiably rejected by the GuardPLC controller. This faulty behavior has now been eliminated.

8. Comparison Faults in case of Ethernet Broadcast

In very rare cases, comparison faults occurred in remote I/O modules within the GuardPLC device family. Under certain external circumstances (many Ethernet broadcasts) this was caused by an IC behaving in an erroneous manner. The firmware now handles these conditions without any functional restrictions.

For this reason, replacement of the controller or the IO module is not necessary.

9. Improved Diagnostic Messaging when a Severe Error Occurs

If the supply voltage drops while a severe error is detected, it is possible that the operating system cannot store any information in the diagnostic history. After automatically rebooting the controller, the diagnostic information is entered using the stored signature.

Previously, the operating system could store the same information two times in the diagnostic history (with different time specifications).

10. Triggering of the Watchdog due to Supply Voltage Drop

In the previous versions, if the supply voltage dropped, the following behavior could occur: with specific voltage characteristics, the watchdog could be triggered before the reset due to under voltage was activated. For this reason, the controller had to be restarted manually.

In the new version, the behavior described above has been improved such that triggering of the watchdog is tolerated and the controller can restart automatically.

Software Changes

1. Compatibility with Intel Core 2 Duo Processors

RSLogix Guard PLUS Hardware Management v8.54 is now compatible with Intel Core 2 Duo processors.

2. Loss of HSP Protocol Tags when Upgrading from v4.0 to v4.1

When converting a project from RSLogix Guard PLUS v4.0 to v4.1, all of the HSP protocol tags would be deleted. This has now been corrected and the tags are no longer deleted during the conversion.