IMPORTANT PRODUCT INFORMATION

READ THIS INFORMATION FIRST

Product: **Profibus Bus Interface Unit**

Catalog Number;	IC670PBI001-CG
Firmware ID:	CORE Version 2.60
	COMM Version 3.50
GSD File:	Version 3.30
Field Update Kit:	44A740056-G06

This version of the Profibus BIU is backward compatible with all previous versions of the PBIU. **This is a required update to all Profibus BIU units.**

GSD Compatibility

GSD file, GEF_0534.GSD (Revision 3.30), is provided with this upgrade. **All previous versions of the GSD file sh**ould be discarded**.**

Operating Notes

Configuration using the GSD

If the configuration tool uses the GSD file for configuration information:

▪ Choose the "Profibus BIU Slot 0" selection first. That will configure the status and control area for the BIU.

▪ Next, enter modules in physical slot order.

▪ When selecting intelligent module configurations from the GSD, be sure to select the "Status/Control" entry first, before selecting the "I/O data" entry. Otherwise, the master may interpret the data incorrectly. The following example shows a configuration with one 16pt Input and one 16 Channel Analog intelligent module.

    Eg: Slot 0 - IC670PBI001, Profibus BIU Slot 0
            Slot 1 - IC670MDL640, 24VDC,In,16pt
            Slot 2 - IC670ALG240, Status/Control
                    IC670ALG240, Current Analog In,16pt

Motorola Data Format is the Default But Intel Format is Available

The Motorola Data Format is the default as required by the Profibus Specification. However, it is possible to configure the BIU to use the Intel Data Format by changing the GSD file parameter User_Prm_Data as shown in the file. In this configuration all data configured as word data has the byte ordering swapped.

Configuration Cannot Include Empty Slots

The Profibus BIU does not support having empty slots between modules in its configuration. When configuring the I/O Station, be sure there are no empty slots between modules (eg: modules in Slots 1, 2 and 4).

Output Default/Hold Last State Operation

The Default/Hold Last State Operation of outputs has changed from previous releases.

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WARNING

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This may require application changes to account for the operational differences described below. Failure to account for this new operation of the DEFAULT/HOLD LAST STATE function of the output modules could cause an unexpected equipment operation possibly resulting in personal injury or property damage.

The new operation is as follows:

▪   For an Output Module Configured to Default

Outputs go to their configured default state when communication is lost with the Profibus master. Outputs **go to zero** when the Profibus master transitions from "Operate" to "Clear" mode. With a PLC Profibus master, the transition from "Operate" to "Clear" mode occurs when the PLC CPU transitions from "Run" to "Stop" mode.

▪   Output Module Configured to Hold Last State

Outputs hold their last state when communication is lost with the Profibus master. Outputs **go to zero** when the Profibus master transitions from "Operate" to "Clear" mode. With a PLC Profibus master, the transition from "Operate" to "Clear" mode occurs when the PLC CPU transitions from "Run" to "Stop" mode.

OK LED Operation

Prior PBIU firmware versions had no indication of fatal internal error conditions. The PBIU stopped operating and the "OK" and "RUN" LEDs remained in the state they were in when the fatal error occurred. (For example, both LEDs remained on if the PBIU was actively scanning I/O when the error occurred.)

This new firmware release indicates fatal internal error conditions with a flash code on the "OK" LED. The PBIU now performs the following operations when a fatal internal error occurs:

1.   Disables I/O. This causes non-intelligent output modules to default to zero. Intelligent modules will default outputs or hold their last state according to their individual module configurations.

2.   Turns the "OK" and "RUN" LEDs off.

3.   Flashes a two-digit error code on the "OK" LED. The valid range for each digit is 1 – 15. The first digit is flashed followed by a pause, followed by the second digit. This cycle repeats itself.

4.   Ceases normal operation and transitions to an internal debug mode. The PBIU will not respond to the Profibus network or to the Handheld Programmer.

If a fatal internal error occurs, the only way to recover the PBIU is by cycling power. Note the LED error code being flashed by the module and the PBIU revision, and call the GE Fanuc Hotline for diagnostic information.

Problems Resolved for this Release

1. When the Profibus BIU lost communication with the Profibus master (a network loss situation) the smart output modules listed below, when configured to Default to Zero, instead held their last state.

   IC670ALG240
   IC670ALG620
   IC670ALG630
   IC670ALG330
   IC670ALG310

2. Profibus Global Control Clear Commands did not consistently zero outputs that were configured to Hold Last State or default to a non-zero value. (Profibus masters send this command when they transition from "Operate" to "Clear" Mode. With a PLC master, this occurred on transition from "Run" to "Stop" Mode.) Refer to the "Output Default/Hold Last State Operation" section earlier in this document, which describes how this now operates.

3. When powering-up a new Profibus BIU and base for the first time, the autoconfiguration did not always match the physical I/O in the backplane.

4. The Profibus BIU occasionally stopped operating and defaulted outputs, although both the "OK" and "RUN" LEDs remained on.

5. The "OK" and "RUN" LEDs sometimes remained on when the PBIU had an internal fatal error.

6. Mixed Discrete I/O Module IC670MDD441 did not operate correctly in the Field Control I/O Station. The following problems related to this module have been resolved:

   ▪ Module IC670MDD441 could only be added to the I/O Station configuration by the process of autoconfiguration. If the module was present but not configured, the HHP could not read its configuration. The HHP also could not configure this module into an empty slot.

   ▪ Module IC670MDD441 could be used in an I/O Station only when configured for Report Faults enabled and default inputs and outputs. If this module was configured for either Report Faults disabled or Hold Last State for I/O, the module prevented the PBIU from scanning the I/O in the station.

Restrictions and Open Problems

There are no known restrictions or open problems associated with this PBIU version.