



B90 Bus Differential Relay Revision 4.90 Release Notes

GE Publication Number: GER-4068

Copyright © 2005 GE Multilin

Overview

Summary

- Affected products: B90 Bus Differential Relay
- Date of release: November 1, 2005
- Firmware revision: 4.90
- Boot code revision: 1.13

Release summary

This document contains the release notes for the 4.90 release of the B90 Bus Differential Relay firmware.

New features and modifications to existing features listed in the following section with corresponding revision categories and reference numbers.

This document uses the following categories to classify the changes.

Table 1: Revision categories

Code	Category	Comments
N	New feature	A separate feature added to the relay. Changes to existing features even if they significantly expand the functionality are not in this category
G	Change	A neutral change that does not bring any new value and is not correcting any known problem
E	Enhancement	Modification of an existing feature bringing extra value to the application
D	Changed, incomplete or false faceplate indications	Changes to, or problems with text messages, LEDs and user pushbuttons
R	Changed, incomplete or false relay records	Changes to, or problems with relay records (oscillography, demand, fault reports, etc.)
C	Protocols and communications	Changes to, or problems with protocols or communication features
M	Metering	Metering out of specification or other metering problems
P	Protection out of specification	Protection operates correctly but does not meet published specifications (example: delayed trip)
U	Unavailability of protection	Protection not available in a self-demonstrating way so that corrective actions could be taken immediately
H	Hidden failure to trip	Protection may not operate when it should
F	False trip	Protection may operate when it should not
B	Unexpected restart	Relay restarts unexpectedly

The code letter is placed to the left of the description. An internal GE reference number is placed to the right of the description. This number may be used to reference the modification when contacting GE Multilin.

GE Multilin technical support

GE Multilin contact information and call center for product support is shown below:

GE Multilin
215 Anderson Avenue
Markham, Ontario
Canada L6E 1B3

Telephone: 905-294-6222 or 1-800-547-8629 (North America), +34 94 485 88 00 (Europe)
Fax: 905-201-2098 (North America), +34 94 485 88 45 (Europe)

E-mail: multilin.tech@ge.com

Home Page: <http://www.GEmultilin.com>

Release details

Existing features modified

- C** **Communications: DNP functionality now available via UDP** 19095
- In earlier revisions, DNP functionality was not available via UDP. The 4.90 release corrects this issue.
- G** **Communications: 100Mb Ethernet support added** 19122
- With the 4.90 release, the B90 relay supports 100Mb Ethernet communications.
- C** **Communications: modifications to logical nodes for IEC61850 Support** 18504
- The following additions and changes have been made to the IEC 61850 protocol implementation:
- “MMXN” logical nodes have been added. One MMXN node is instantiated for each voltage terminal, one for each current terminal, and one for frequency.
 - “PDF” logical nodes have been added for bus elements.
 - “PIOC” logical nodes have been added for B90 instantaneous overcurrent, earth fault protection, and breaker supervision elements.
 - “PTOC” logical nodes have been added for B90 time overcurrent elements.
 - “PTUV” logical nodes have been added for B90 undervoltage elements.
 - “RBRF” logical nodes have been added for B90 breaker failure elements.
 - The number of “Ind” indications in GGIO1 is now configurable through a relay setting.
 - Change logical device name setting from 16 to 32 characters to match the standard.
 - Change the range of GGIO2 control configuration types (ctlModel) to “0 to 2”. We now support “status-only”. In this mode, the point is not controllable.
 - Add a setting to disable IEC 61850 server scanning. This saves CPU time for customers who do not use IEC 61850 server services.
 - LLNO controls are now operational.
 - Increase the number of control points in GGIO2 from 32 to 64 to match the increase in virtual inputs.
 - Increase the client connection limit from 4 to 5.
- C** **Communications: internal modifications to Modbus communications** 17642
- Internal modifications have been made to data processing within the Modbus protocol on the B90 relays. These changes marginally improve response times to communications interaction between the B90 relay and a master device and are virtually transparent to the user.
- D** **Communications: network settings visible only when Ethernet port is available** 15750
- In previous revisions, various Ethernet-dependent communications settings were visible in the front panel interface when there was no Ethernet port installed. These settings had no effect on the operation of the relay. With the 4.90 release, Ethernet-dependent settings are now only visible when Ethernet support is available.
- G** **Internal enhancement: number of available protection elements increased** 19068
- Internal modifications have been made to the B90 relays to allow for an increased number of available protection elements as new features are implemented. These changes are transparent to the user.

F Phase time overcurrent: system initialization sequence modifications

18742

In earlier revisions, the phase time overcurrent protection element could falsely trip in the event of a B90 system initialization while the source current inputs for the element were energized. The 4.90 release corrects this issue.