



NIMP02

ABB Bailey INFI 90 Multi-Function Processor Termination Module

Product scope

- Terminates serial communications for the compatible multi-function processor installation.
- Allows either dual RS-232-C links or a mixed RS-232-C and RS-485 arrangement.
- Includes the documented control-station serial connection and field terminals.
- Requires panel mounting and a +24 V DC supply sized for the stated current draw.

Manufacturer source

ABB Bailey instruction I-E96-401A

The exact product record precedes any retained manufacturer manual extracts. Only pages relevant to the current product identity and documented functions are included.

Request a fast quote	Product reference	
Email: info@apterpower.com Phone: +86 18106909650 apter.com/inquiry.php	NIMP02	

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NIMP02

ABB Bailey INFI 90 Multi-Function Processor Termination Module

Manufacturer-source product record

This page consolidates only model-specific facts verified in the manufacturer sources listed below. It is included to identify the exact ordering code before the retained manufacturer manual pages.

Module designation	NIMP02 Multi-Function Processor Termination Module
Supply	+24 V DC
Current consumption	210 mA maximum
Communication options	Two RS-232-C links, or one RS-232-C and one RS-485 link
Station link	One control-station serial link
Connectors	Two 16-pin connector sockets and one DB-9 connector for the RS-485 link
Mounting	Screw-mounted on a field termination panel
Ambient temperature	0 to 70 deg C
Relative humidity	5 to 90%, noncondensing
Altitude	Up to 3 km

Official references

- ABB Bailey instruction I-E96-401A, NIMP01/NIMP02 termination modules.

No adjacent ordering option has been treated as part of this configuration. The complete label and installed-system requirements must be checked before replacement.

Function, operation and application

The following model-specific notes are limited to functions and operating relationships documented by the listed manufacturer sources.

Processor termination function

NIMP02 provides the external serial and control-station termination for the compatible INFI 90 multi-function processor. It concentrates the field-facing connectors and terminals on a panel-mounted assembly instead of placing permanent external wiring directly on the processor module.

Selectable serial arrangement

The documented hardware supports either two RS-232-C communication links or one RS-232-C link together with one RS-485 link. The DB-9 connector is assigned to the RS-485 path, while the two 16-pin sockets and terminal blocks complete the processor and station connections shown in I-E96-401A.

How the signal path works

Serial data passes between the external device and the processor through the termination wiring; the NIMP02 supplies the physical interface and indication rather than executing the communications protocol. A front indication provides local status information for maintenance checks.

Installation considerations

The panel location must provide the specified +24 V DC supply, grounding and environmental conditions. Port type, cable pinout and station-link assignment should be verified before replacement because RS-232-C and RS-485 connections are not interchangeable.

SECTION 1 - INTRODUCTION

OVERVIEW

There are two multi-function processor termination modules (IMP). The NIMP01 Multi-Function Processor Termination Module provides a connection to the serial interface for multi-function processors¹ (MFP). The NIMP01 termination module has two isolated RS-232-C ports. One port can be configured as a non-isolated RS-485 port. Multi-function processor modules use the ports to communicate with computers, printers and sequential events recorders. The NIMP01 termination module also provides the connection for a station serial communication link. This link allows the MFP module to communicate with an IISAC01 Analog Control Station or NDCS03 Digital Control Station. Figure 1-1 shows a typical IMP termination module application.

The NIMP01 termination module also interfaces with the INIIT02 INFI-NET to INFI-NET Transfer Module. The INFI-NET to INFI-NET transfer module (IIT) supports bidirectional communication through two RS-232-C ports. Port one passes system data only. Port two passes system data or can be used as a diagnostic port. The central IIT module can use a variety of means to link to the satellite IIT module such as modems, microwave and transceivers. This module communicates directly with a network interface I/O module on the local INFI-NET ring through the I/O expander bus.

The INFI-NET to computer transfer module² (ICT) provides the electronics needed to direct the operation of the INFI-NET to computer interface. It handles all communication with the host computer through the multi-function processor interface (MPI) or RS-232-C serial port. The MPI interface can act as DCE or DTE equipment.

The NIMP02 termination module is used in addition to the NIMP01 termination module when terminating redundant modules.

INTENDED USER

Anyone who installs, uses and maintains the NIMP01 and NIMP02 Multi-Function Processor Termination Modules should read and understand this manual before placing the termination module into service. Installation and troubleshooting require a technician or engineer with electrical experience and a working knowledge of the RS-232-C and RS-485 standards.

1. When using an IMMFP03 Multi-Function Processor Module, the IMP termination module interfaces with the auxiliary I/O card (IMMPI01 or IMPPI02 Multi-Function Processor Interface).
2. When using an INICT03 INFI-NET to Computer Transfer Module, the IMP termination module interfaces with the auxiliary I/O card (IMMPI01 or IMPPI02 Multi-Function Processor Interface).

OVERVIEW

I-E96-401A

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INTRODUCTION

The NIMP02 also occupies one slot in the TMU unit. It consists of:

- Two 16-pin connector sockets.
- One DB-9 connector for RS-485 link.
- Light emitting diode (LED).
- Terminal blocks.

FEATURES

The NIMP01 termination module has two jumper configurable RS-232-C ports for DCE or DTE operation, one of which can be configured as an RS-485 port. The ports allow the MFP module to talk to a variety of computers and communication equipment. An on-board LED lights when the MFP module connected to the IMP module is the primary module and is on-line. The termination module also provides two serial communication links for control stations through the NICS01 and NIDS01 termination modules. These links allow the MFP module to talk to analog and digital control stations. The NIMP02 module features a single LED that illuminates when the redundant MFP module is active.

INSTRUCTION CONTENT

This manual consists of five sections and five appendices.

Introduction	Contains an overview of the features, specifications and a description of the IMP termination module.
Installation	Describes precautions to observe when handling modules and setup procedures required before module operation. This section discusses dipswitch settings and installation procedures.
Maintenance	Provides a maintenance schedule.
Repair/Replacement Procedures	Details how to replace an IMP termination module.
Support Services	Describes the support services (spare parts, training, documentation, etc.) available from Bailey Controls Company.
Appendices	Briefly discuss the modules that use the IMP termination module and provide a cross reference of dipswitch and jumper settings for those modules.

HOW TO USE THIS MANUAL

Read this manual through in sequence. Read **Section 2** thoroughly. Do the steps in order. Complete all steps in the section before using the IMP termination module. Refer to the Table of



INTRODUCTION

SPECIFICATIONS

Refer to Table 1-4 for the specifications of the NIMP01 and NIMP02 termination modules.

Table 1-4. IMP Termination Module Specifications

Property	Characteristic/Value
Power Requirements	+24 VDC, 210 mA maximum current consumption
Communication	Two RS-232-C serial ports, or one RS-232-C port and one RS-485 port. 1 control station serial link
Cable Insulation Specifications:	
PVC (UL Rating CL2)	80°C (176°F) at 300 V
Non-PVC (UL Rating PLTC)	90°C (194°F) at 300 V
Mounting	Screw mounts on the field termination panel.
Environmental:	
Electromagnetic/Radio Frequency Interference	Values are not available at this time. Keep cabinet doors closed. Do not use communication equipment any closer than 2 meters from the cabinet.
Operating Temperature	0° - 70°C (32° - 158°F)
Relative Humidity	5% - 90% (±5%) up to 70°C (158°F) (noncondensing)
Altitude	Sea level to 3 km (1.86 mi)
Air Quality	Bailey equipment should be operated and stored in a noncorrosive environment.
Cooling Requirements	No cooling necessary when used in Bailey cabinets and operated within environmental limits.
Certification	All termination units are CSA certified as process control equipment for use in an ordinary (nonhazardous) location.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS

SECTION 2 - INSTALLATION

INTRODUCTION

This section lists the steps to properly install the NIMP01 and NIMP02 Multi-Function Processor Termination Modules (IMP). The installation procedure includes physical installation, dip-shunt configuration, cable connection, power wiring and handling. To properly install the IMP termination modules, do the steps in this section in the order they appear.

SPECIAL HANDLING

Observe these steps when handling electronic circuitry:

NOTE: Always use Bailey's field static kit (part number 1948385A1 - consisting of two wrist straps, ground cord assembly, alligator clip and static dissipative work surface) when working with the modules. The kit grounds a technician and the static dissipative work surface to the same ground point to prevent damage to the modules by electrostatic discharge.

1. **Use Static Shielding Bag.** Keep the modules in the static shielding bag until you are ready to install them in the system. Save the bag for future use.
2. **Ground Bag Before Opening.** Before opening a bag containing an assembly with semiconductors, touch it to the equipment housing or a ground to equalize charges.
3. **Avoid Touching Circuitry.** Handle assemblies by the edges; avoid touching the circuitry.
4. **Avoid Partial Connection of Semiconductors.** Verify that all devices connected to the modules are properly grounded before using them.
5. Ground Test Equipment.
6. **Use an Antistatic Field Service Vacuum.** Remove dust from the module if necessary.
7. **Use a Grounded Wrist Strap.** Connect the wrist strap to the appropriate grounding plug on the power entry panel. The grounding plug on the power entry panel is connected to the earth grounding electrode system through the AC safety ground.
8. **Do Not Use Lead Pencils to Set Dipswitches.** To avoid contamination of dipswitch contacts that can result in unnecessary circuit board malfunction, do not use a lead pencil to set a dipswitch.

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