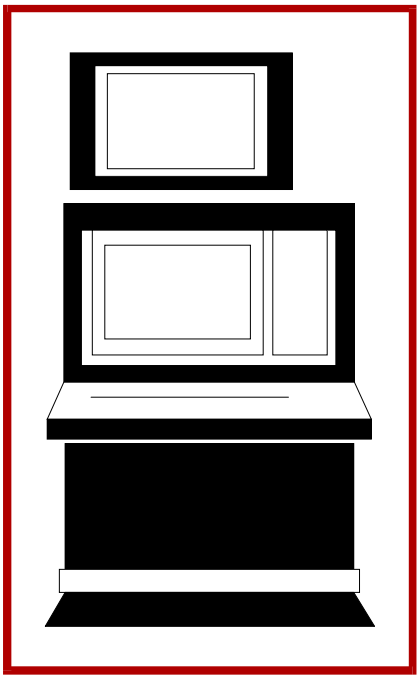
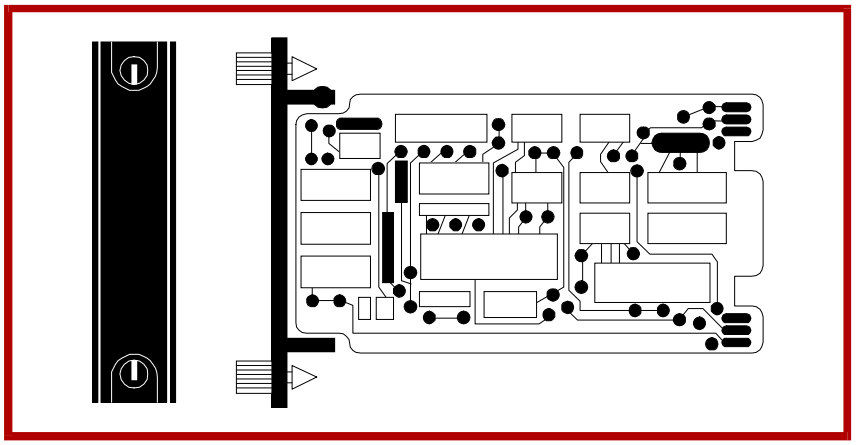
Bailey® infi 90®

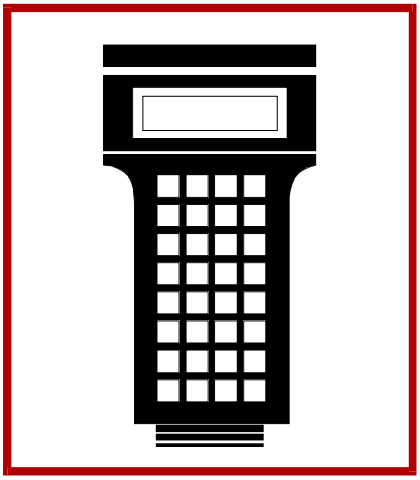
E96-411

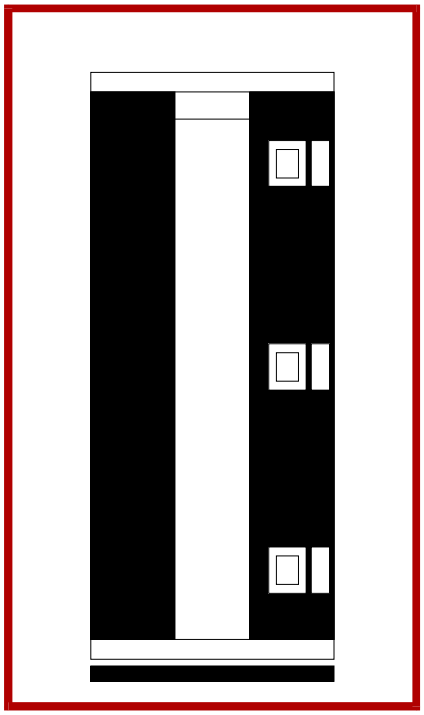
Instruction

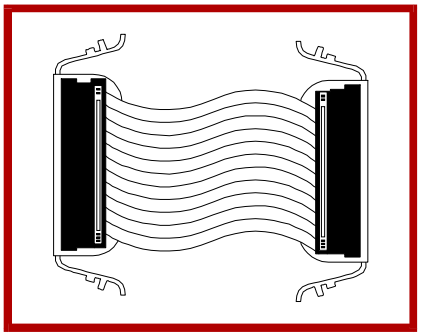
Digital Output Termination Module
(NIDO01)

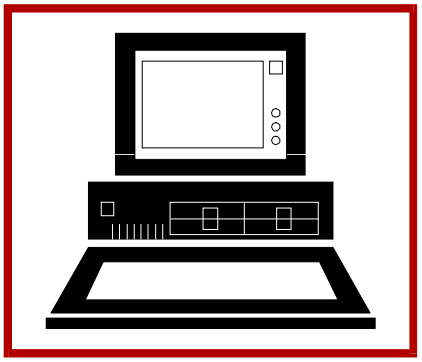












Bailey Process Control and Automation Solutions from Elsag Bailey Group

WARNING notices as used in this instruction apply to hazards or unsafe practices that could result in personal injury or death.

CAUTION notices apply to hazards or unsafe practices that could result in property damage.

NOTES highlight procedures and contain information that assists the operator in understanding the information contained in this instruction.

WARNING

INSTRUCTION MANUALS

DO NOT INSTALL, MAINTAIN, OR OPERATE THIS EQUIPMENT WITHOUT READING, UNDERSTANDING, AND FOLLOWING THE PROPER **Elsag Bailey** INSTRUCTIONS AND MANUALS; OTHERWISE, INJURY OR DAMAGE MAY RESULT.

RADIO FREQUENCY INTERFERENCE

MOST ELECTRONIC EQUIPMENT IS INFLUENCED BY RADIO FREQUENCY INTERFERENCE (RFI). CAUTION SHOULD BE EXERCISED WITH REGARD TO THE USE OF PORTABLE COMMUNICATIONS EQUIPMENT IN THE AREA AROUND SUCH EQUIPMENT. PRUDENT PRACTICE DICTATES THAT SIGNS SHOULD BE POSTED IN THE VICINITY OF THE EQUIPMENT CAUTIONING AGAINST THE USE OF PORTABLE COMMUNICATIONS EQUIPMENT.

POSSIBLE PROCESS UPSETS

MAINTENANCE MUST BE PERFORMED ONLY BY QUALIFIED PERSONNEL AND ONLY AFTER SECURING EQUIPMENT CONTROLLED BY THIS PRODUCT. ADJUSTING OR REMOVING THIS PRODUCT WHILE IT IS IN THE SYSTEM MAY UPSET THE PROCESS BEING CONTROLLED. SOME PROCESS UPSETS MAY CAUSE INJURY OR DAMAGE.

AVERTISSEMENT

MANUELS D'OPÉRATION

NE PAS METTRE EN PLACE, RÉPARER OU FAIRE FONCTIONNER L'ÉQUIPEMENT SANS AVOIR LU, COMPRIS ET SUIVI LES INSTRUCTIONS RÉGLEMENTAIRES DE **Elsag Bailey**. TOUTE NÉGLIGENCE À CET ÉGARD POURRAIT ÊTRE UNE CAUSE D'ACCIDENT OU DE DÉFAILLANCE DU MATÉRIEL.

PERTURBATIONS PAR FRÉQUENCE RADIO

LA PLUPART DES ÉQUIPEMENTS ÉLECTRONIQUES SONT SENSIBLES AUX PERTURBATIONS PAR FRÉQUENCE RADIO. DES PRÉCAUTIONS DEVRONT ÊTRE PRISES LORS DE L'UTILISATION DU MATÉRIEL DE COMMUNICATION PORTATIF. LA PRUDENCE EXIGE QUE LES PRÉCAUTIONS À PRENDRE DANS CE CAS SOIENT SIGNALÉES AUX ENDROITS VOULUS DANS VOTRE USINE.

PERTURBATIONS DU PROCÉDÉ

L'ENTRETIEN DOIT ÊTRE ASSURÉ PAR UNE PERSONNE QUALIFIÉE EN CONSIDÉRANT L'ASPECT SÉCURITAIRE DES ÉQUIPEMENTS CONTRÔLÉS PAR CE PRODUIT. L'AJUSTEMENT ET/OU L'EXTRACTION DE CE PRODUIT PEUT OCCASIONNER DES À-COUPS AU PROCÉDÉ CONTRÔLE LORSQU'IL EST INSÉRÉ DANS UNE SYSTÈME ACTIF. CES À-COUPS PEUVENT ÉGALEMENT OCCASIONNER DES BLESSURES OU DES DOMMAGES MATÉREILS.

NOTICE

The information contained in this document is subject to change without notice.

Elsag Bailey, its affiliates, employees, and agents, and the authors and contributors to this publication specifically disclaim all liabilities and warranties, express and implied (including warranties of merchantability and fitness for a particular purpose), for the accuracy, currency, completeness, and/or reliability of the information contained herein and/or for the fitness for any particular use and/or for the performance of any material and/or equipment selected in whole or part with the user of/or in reliance upon information contained herein. Selection of materials and/or equipment is at the sole risk of the user of this publication.

Preface

Termination modules provide an input connection from the plant equipment to the INFI 90® process modules. The NIDO01 Digital Output Termination Module terminates digital field wiring to:

- IMLMM02 Logic Master Module.
- IMDSM05 Digital I/O Slave Module.

This product instruction explains how to install and configure the NIDO01 termination module.

® INFI 90 is a registered trademark of Elsag Bailey Process Automation.

List of Effective Pages

Total number of pages in this manual is 27, consisting of the following:

Page No.	Change Date
Preface	Original
List of Effective Pages	Original
iii through vi	Original
1-1 through 1-4	Original
2-1 through 2-7	Original
3-1	Original
4-1 through 4-2	Original
5-1	Original
A-1 through A-3	Original
B-1 through B-2	Original
Index-1	Original

NOTE: On an updated page, the changed text or table is indicated by a vertical bar in the outer margin of the page at the changed area. A changed figure is indicated by a vertical bar in the outer margin next to the figure caption. The date the update was prepared will appear beside the page number.

Safety Summary

GENERAL WARNINGS	**Equipment Environment** All components, whether in transportation, operation or storage, must be in a noncorrosive environment. **Electrical Shock Hazard During Maintenance** Disconnect power or take precautions to insure that contact with energized parts is avoided when servicing.
SPECIFIC WARNINGS	If input or output circuits are a shock hazard after disconnecting system power at the power entry panel, then the door of the cabinet containing these externally powered circuits must be marked with a warning stating that multiple power sources exist. (p. 2-6)
SPECIFIC CAUTIONS	Remove modules (slave, master, or termination) from their assigned slot before installing a cable to that slot. Also, remove stations from their housings before installing a cable to that housing. Failure to do so could result in damage to the module or station. (p. 2-4) It is strongly recommended that all power (cabinet, I/O, etc.) be turned off before doing any termination module wiring. Failure to do so could result in equipment damage. Do not apply power until all connections are verified. (p. 2-6, 4-1, 4-2)

Sommaire de Sécurité

AVERTISSEMENTS D'ORDRE GÉNÉRAL	**Environnement de l'équipement** Ne pas soumettre les composants à une atmosphère corrosive lors du transport, de l'entreposage ou l'utilisation. **Possibilité de chocs électriques durant l'entretien** Débrancher l'alimentation ou prendre les précautions pour éviter tout contact avec des composants sous tension durant l'entretien.
AVERTISSEMENTS D'ORDRE SPÉCIFIQUE	Si des circuits d'entree ou de sortie sont alimentes a partir de sources extrenes, ils presentent un risque de choc electrique meme lorsque l'alimentation du systeme est debranchee du panneau d'entree l'alimentation. Le cas echeant, un avertissement signalant la presence de sources d'alimentation multiples doit entre appose sur la porte de l'armoire. (p. 2-6)
ATTENTIONS D'ORDRE SPÉCIFIQUE	Retirer les modules (asservi, maître ou carte de raccordement) de leur position assignèe avant d'installer un câble à cette position. Egalement, retirer les postes de commande de leur boîtier avant d'installer un câble dans ce boîtier. Des dommages au module ou au poste pourraient rèsulter d'un manquement à cette procèdure. (p. 2-4) Il est fortement recommandque toutes les alimentations (armoire, E/S, etc.) soient coupèes avant d'effectuer quelque raccord que ce soit sur un carte de raccordement. Un manquement à ces instructions pourrait causer des dommage à l'equipement. Ne pas rebrancher les alimentations avant d'avoir vèrifiè tous les raccordements. (p. 2-6, 4-1, 4-2)

Table of Contents

List of Figures

List of Tables

SECTION 1 - INTRODUCTION

OVERVIEW

The NIDO01 Digital Output Termination Module (IDO) terminates digital I/O signals and interfaces it to the IMDSM05 Digital I/O Slave Module and IMLMM02 Logic Master Module. Figure 1-1 shows an example NIDO01 application.

INTENDED USER

System engineers and technicians should read this manual before installing and placing the NIDO01 termination module into operation. ***Do not*** put the IDO termination module into operation until this instruction is read and understood.

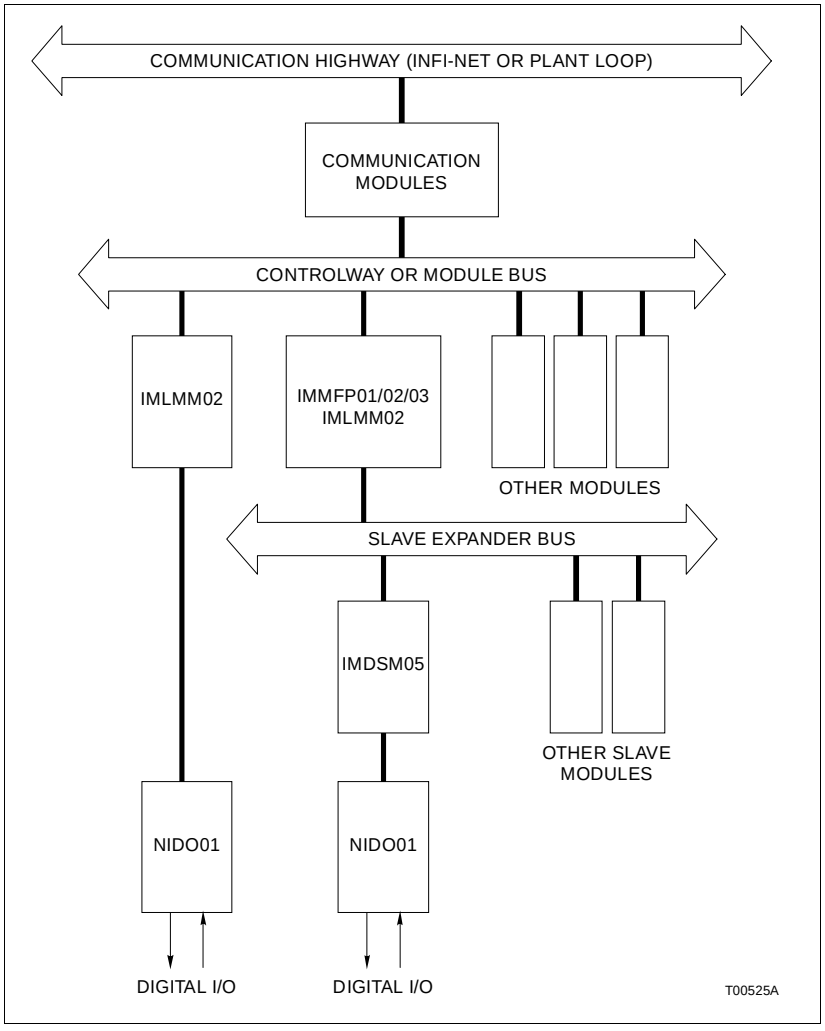


Figure 1-1. Example NIDO01 Termination Module Application

INSTRUCTION CONTENT

This manual contains five sections and two appendices:

Introduction This section contains an overview of the features, specifications and a description of the IDO termination module.

Installation This section describes precautions to observe when handling modules and setup procedures required before module operation. This section also discusses jumper settings and installation procedures.

Maintenance This section provides a maintenance schedule.

Repair/Replacement Procedures This section details how to replace an IDO termination module.

Support Services This section describes the support services (spare parts, training, documentation, etc.) available from Bailey Controls Company.

Appendices A and B These appendices list the quick reference information necessary to configure the IMDSM05 and IMLMM02 modules.

HOW TO USE THIS MANUAL

Read this manual through in sequence. Read the installation section thoroughly. Do the steps in order. Complete all steps in the installation section before operating the IDO module. Refer to the table of contents or index to find specific information after the module is operating.

NOMENCLATURE

Table 1-1 is a list of related hardware.

Table 1-1. Nomenclature

Nomenclature	Hardware/Description
NIDO01	Digital output termination module.
NKTU02	Termination module cable (PVC).
NKTU12	Termination module cable (non-PVC).
NKTM01	Termination module cable (ribbon).
NTMU01	Termination mounting unit, rear mounting.
NTMU02	Termination mounting unit, front mounting.
258436A1	Cable retaining kit used when at least oneround cable is connected to the terminationmounting unit.

GLOSSARY OF TERMS AND ABBREVIATIONS

Table 1-2 lists definitions of the terms and abbreviations used in this instruction.

Table 1-2. Glossary of Terms and Abbreviations

Term	Definition
Bus	A channel or path for transferring data, electrical signals and power.
Digital	A discretely variable signal usually having only two states, ***on*** or ***off***.
MFC	Multi-function controller. A multiple loop controller with data acquisition and information processing capabilities.
MFP	Multi-function processor. A multiple loop controller with data acquisition and information processing capabilities.
MMU	Module mounting unit. A card cage that provides electrical and communication support for INFI 90/Network 90® modules.
Termination Module	Provides input/output connection between plant equipment and INFI 90/Network 90 modules.
TMU	Termination mounting unit. A card cage that provides housing for INFI 90/Network 90 termination modules.

SPECIFICATIONS

Refer to Table 1-3 for the specifications of the NIDO01 termination module.

Table 1-3. Specifications

Property	Characteristic/Value
Inputs and Outputs IMDSM05 modules IMLMM02 modules	 Digital outputs (16 at 24 VDC). Digital inputs (8 at 24 VDC, and 125 VDC) Digital outputs (8 at 24 VDC)
Surge Protection	Meets IEEE-472-1974 Surge Withstand Capability Test.[1]
Mounting	Occupies one slot in a standard INFI 90 termination mounting unit.
Ambient Temperature	0° to 70°C (32° to 158°F).
Relative Humidity	0% to 95% up to 55°C(131°F)(noncondensing) 0% to 45% up to 70°C (158°F)(noncondensing)
Air Quality	Noncorrosive
Certification	CSA certified for use as process control equipment in an ordinary (non-hazardous) location.

NOTE: 1. Do not use the NKTM01 cable when compliance with IEEE-472-1974 is necessary.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

® Network 90 is a registered trademark of Elsag Bailey Process Automation.

REFERENCE DOCUMENTS

Table 1-4 is a list of related hardware.

Table 1-4. Reference Documents

Number	Document
I-E96-209	IMLMM02 Logic Master Module
I-E96-309	IMDSM05 Digital I/O Slave Module

SECTION 2 - INSTALLATION

INTRODUCTION

This section explains how to configure and install the NIDO01 Digital Output Termination Module. Read, understand, and complete the steps in the order they appear before operating the IDO module.

SPECIAL HANDLING

Observe these steps when handling electronic circuitry:

> **NOTE:** Always use Bailey's Field Static Kit (P/N 1948385A1 - consisting of two wrist straps, ground cord assembly, alligator clip, and static dissipating work surface) when working with the modules. The kit is designed to connect the technician and the static dissipating work surface to the same ground point to prevent damage to the modules by electrostatic discharge.
> Use the static grounding wrist strap when installing and removing modules. Static discharge may damage CMOS devices on modules in the cabinet. Use grounded equipment and static safe practices when working with modules.

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 packaging for future use.

2. ***Ground Bags before Opening***. Before opening a bag containing an assembly with CMOS devices, 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 CMOS Device***. Verify that all devices connected to the module are properly grounded before using them.

5. ***Ground Test Equipment***.

6. ***Use 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 cabinet chassis ground.

8. ***Do Not Use Lead Pencils to Set Dipswitches***. To avoid contamination of switch contacts that can result in unnecessary circuit board malfunction, do not use a lead pencil to set a dipswitch.

UNPACKING AND INSPECTION

1. Examine the hardware immediately for shipping damage.

2. Notify the nearest Bailey Controls sales office of any such damage.

3. File a claim for any damage with the transportation company that handled the shipment.

4. Use the original packing material and container to store the hardware.

5. Store the hardware in an environment of good air quality, free from temperature and moisture extremes.

SETUP/PHYSICAL INSTALLATION

This section explains how to configure and install the IDO termination module. The required procedures are verification of proper fuse installation, installing the termination module itself, cable connections, and termination wiring.

Fuse Installation

A 6 amp/250 volt fuse (Bailey part number 194776A16001) should be installed in fuse clip F1 of every IDO module. Remove the front cover and verify the fuse is installed. If the fuse is not installed, insert the fuses into fuse clip F1. See Figure 2-1 for fuse clip location.

Jumper Configuration

Configure the termination module for the type of master or slave module used. Cut or break the 12 jumpers located below the ***REMOVE FOR LMM02*** mark to configure the IDO module for use with an IMLMM02 module. This configuration ties all positive terminals on the IDO module, through the fuse, to the +24 VDC terminal. The COM terminal provides a common reference for each group A digital output circuit. This configuration also enables field powered input circuits to be connected to the group B terminals. Cut or break the six jumpers located below the ***REMOVE FOR DSM05*** mark to configure the IDO module for use with an IMDSM05 module. This configuration ties the positive terminals of all outputs, through the fuse, to the +24 VDC terminal. The COM terminal provides a common reference for each digital output circuit. See Figure 2-2 for

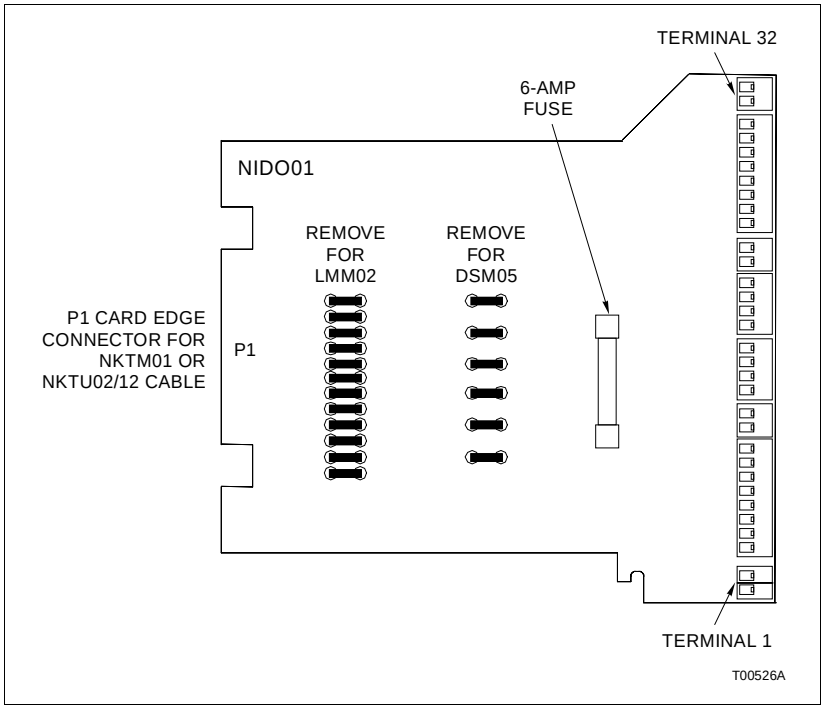


Figure 2-1. NIDO01 Termination Module Layout

example input and output circuits. To completely remove a jumper, cut at both ends.

Cable Connections

The NIDO01 Digital Output Termination Module terminates digital I/O signals, and ties them directly to a master or slave module. Figure 2-3 shows the cables to use and the cable connections for two different NIDO01 module applications. Table 2-1 lists each cable and its application.

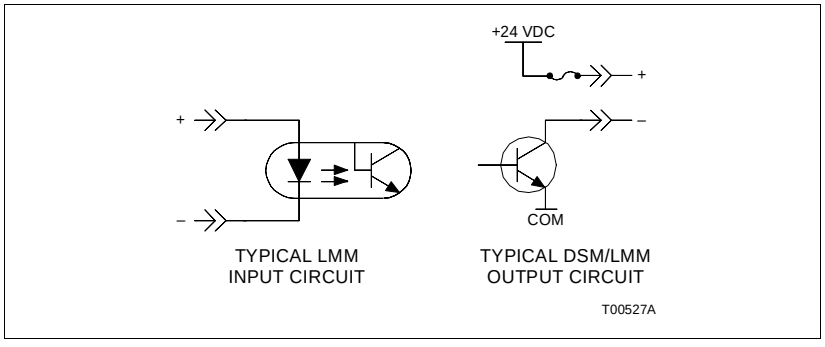


Figure 2-2. Example Input and Output Circuits

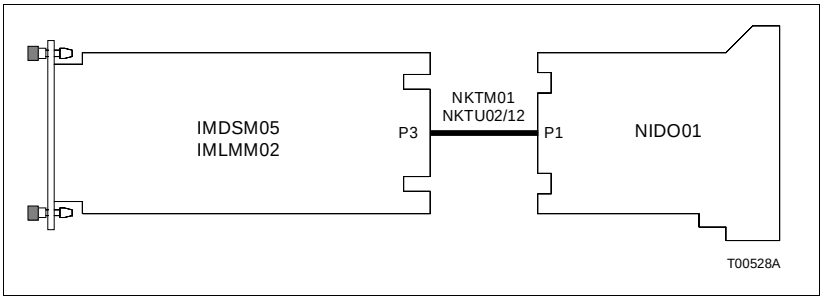


Figure 2-3. NIDO01 Cable Connections

Table 2-1. NIDO01 Cable Applications

Nomenclature/ Description	Application	Connections	Maximum Length m (ft.)
NKTU02 PVC termination cable	Connects the IDO module to the master or slave module.	P1 of the IDO module to P3 of the master or slave module.	61 (200)
NKTU12 non-PVC termination cable	Connects the IDO module to the master or slave module.	P1 of the IDO module to P3 of the master or slave module.	61 (200)
NKTM01 ribbon communication cable	Connects the IDO module to the master or slave module.	P1 of the IDO module to P3 of the master or slave module.	30 (100)
Standard 14 to 22 AWG wire	Connects field and power (18 AWG) wiring to the IDO module.	Field or power source to the IDO terminal strip.	N/A

Cable Installation

CAUTION

Remove modules (slave, master, or termination) from their assigned slots before installing a cable to that slot. Also, remove stations from their housing before installing a cable to that housing. Failure to do so could result in damage to the module or station.

ATTENTION

Retirer les modules (asservi, maître ou carte de raccordement) de leur position assignèe avant d'installer un câble à cette position. Egalement, retirer les postes de commande de leur boîtier avant d'installer un câble dans ce boîtier. Des dommages au module ou au poste pourraient rèsulter d'un manquement à cette procèdure.

Remove (pull off) the front cover of the termination module before trying to install cables. Use the following procedures when installing cables.

NKTU02, NKTU12 AND NKTM01 CABLES

This cable connects the IDO termination module to a master or slave module. To install the cable:

1. Pull the master or slave module out several inches from the MMU backplane.

2. If round type cables are already installed in the termination mounting unit, remove the cable retaining bracket.

3. Insert the J2 end (use either end of the NKTM01 cable) of the NKTU02 or NKTU12 cable into the MMU backplane slot assigned to the master or slave module. The cable should latch securely into place. Card edge connector P3 of the master or slave module connects to this end of the cable.

4. Connect the shield wire extending from the J2 end of the NKTU02 or NKTU12 cable to the shield bus bar.

5. Insert the J1 end (use the remaining end of the NKTM01 cable) of the NKTU01 or NKTU12 cable into the termination mounting unit backplane slot assigned to the IDO module. The cable should latch securely into place. Card edge connector P1 of the IDO module connects to this end of the cable.

6. Insert the master or slave module into the MMU until it locks into place.

7. Replace or add the cable retaining bracket if round type cables are installed in the termination mounting unit.

Installing the Termination Module

The IDO module inserts into the termination mounting unit and occupies one slot. To install:

NOTE: Ensure all jumpers are configured prior to installation.

1. Verify the slot assignment of the IDO module.

2. Align the IDO module with the guide rails in the termination mounting unit and partially insert the module.

Terminal Wiring

WARNING	**If input or output circuits are a shock hazard after disconnecting system power at the power entry panel, then the door of the cabinet containing these externally powered circuits must be marked with a warning stating that multiple power sources exist.**
AVERTISSEMENT	**Si des circuits d'entree ou de sortie sont alimentes a partir de sources extrenes, ils presentent un risque de choc electrique meme lorsque l'alimentation du systeme est debranchee du panneau d'entree l'alimentation. Le cas echeant, un avertissement signalant la presence de sources d'alimentation multiples doit entre appose sur la porte de l'armoire.**

CAUTION	**It is strongly recommended that all power (cabinet, I/O, etc.) be turned off before doing any termination module wiring. Failure to do so could result in equipment damage. Do not apply power until all connections are verified.**
ATTENTION	**Il est fortement recommandque toutes les alimentations (armoire, E/S, etc.) soient coupèes avant d'effectuer quelque raccord que ce soit sur un carte de raccordement. Un manquement à ces instructions pourrait causer des dommage à l'equipement. Ne pas rebrancher les alimentations avant d'avoir vèrifiè tous les raccordements.**

Field and power wiring must be connected to the IDO terminal strip. See Figure 2-4 for IDO termination module terminal strip assignments. To connect field and power wiring:

NOTE: Proper polarity of all signals must be maintained.

1. Ensure the IDO module is pulled out far enough to gain access to the terminal strip.

2. Feed the field wiring into the terminal strip area and connect them to the appropriate terminals.

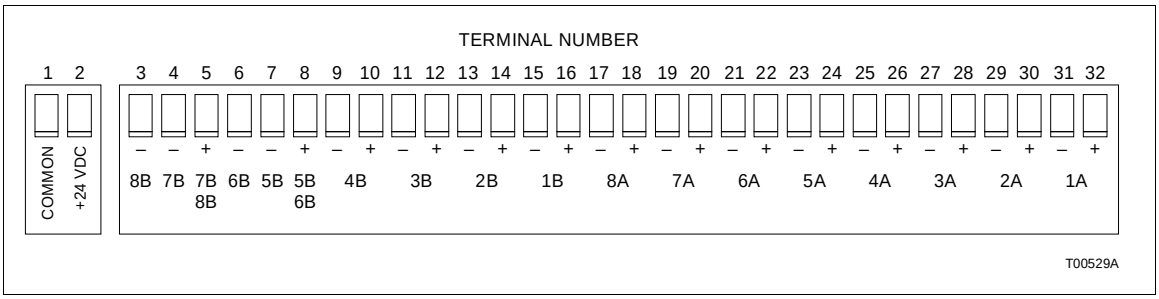


Figure 2-4. NIDO01 Terminal Strip Assignments

3. Connect an 18 AWG wire from the 24 VDC bus of the termination mounting unit to the +24 VDC terminal of the IDO module.

4. Connect an 18 AWG wire from the common bus of the termination mounting unit to the common terminal of the IDO module.

5. Insert the IDO module until it locks securely into place.

6. Replace (snap on) the front cover.

The NIDO01 module is ready for operation if:

1. The fuse is installed.

2. The jumpers are configured for the type of master or slave module used.

3. All required cables are installed and verified.

4. If required, power is connected and applied to the IDO module.

SECTION 3 - MAINTENANCE

INTRODUCTION

The digital output termination module requires limited maintenance. This section contains a maintenance schedule.

MAINTENANCE SCHEDULE

Execute the tasks in Table 3-1 at the specified intervals.

Table 3-1. Maintenance Schedule

Task	Interval
Clean and tighten all power and field wiring connections.	Every 6 months or during plant shutdown, whichever occurs first.
Use a static safe vacuum cleaner to remove dust from: Modules Module mounting unit Termination modules Termination mounting unit	

SECTION 4 - REPAIR/REPLACEMENT PROCEDURES

INTRODUCTION

This section explains how to replace a failed NIDO01 Digital Output Termination Module.

MODULE REPLACEMENT PROCEDURES

If an IDO termination module is faulty, replace it with a new one. To replace an IDO termination module:

CAUTION	**It is strongly recommended that all power (cabinet, I/O, etc.) be turned off before doing any termination module wiring. Failure to do so could result in equipment damage. Do not apply power until all connections are verified.**
ATTENTION	**Il est fortement recommandque toutes les alimentations (armoire, E/S, etc.) soient coupèes avant d'effectuer quelque raccord que ce soit sur un carte de raccordement. Un manquement à ces instructions pourrait causer des dommage à l'equipement. Ne pas rebrancher les alimentations avant d'avoir vèrifiè tous les raccordements.**

1. Turn off power to the cabinet containing the defective IDO module.

2. Remove (pull off) the front cover from the defective IDO module.

3. Label and remove all wiring and cables from the defective IDO module.

4. Remove the defective IDO module from the termination mounting unit.

5. Verify that the 6 A/ 250 V fuse is installed in fuse clip F1 of the replacement IDO module. If not already installed, insert the appropriate fuse into fuse clip F1.

6. Cut the jumpers on the replacement IDO module to match the jumper settings of the defective IDO module.

7. Connect all wiring removed in Step 3 to the replacement IDO module.

8. Verify proper wiring connections to the replacement IDO module.

9. Insert the replacement IDO module until it locks securely into place.

10. Install (snap on) the front cover on the replacement IDO module.

11. Apply power to the cabinet containing the replacement IDO module.

FUSE REPLACEMENT PROCEDURES

If the fuse opens, replace it with a new one. To replace a fuse:

CAUTION	**It is strongly recommended that all power (cabinet, I/O, etc.) be turned off before doing any termination module wiring. Failure to do so could result in equipment damage. Do not apply power until all connections are verified.**
ATTENTION	**Il est fortement recommandque toutes les alimentations (armoire, E/S, etc.) soient coupèes avant d'effectuer quelque raccord que ce soit sur un carte de raccordement. Un manquement à ces instructions pourrait causer des dommage à l'equipement. Ne pas rebrancher les alimentations avant d'avoir vèrifiè tous les raccordements.**

1. Turn off power to the cabinet containing the IDO module.

2. Remove (pull off) the front cover of the IDO module.

3. Pull the IDO module out far enough to gain access to fuse clip F1.

4. Remove the faulty fuse.

5. Install the replacement fuse into fuse clip F1.

6. Insert the IDO module until it locks securely into place.

7. Install (snap on) the front cover of the IDO module.

8. Apply power to the cabinet containing the IDO module.

SECTION 5 - SUPPORT SERVICES

INTRODUCTION

Bailey Controls Company is ready to help in the use, application and repair of its products. Contact the nearest sales office to make requests for sales, applications, installation, repair, overhaul and maintenance contract services.

REPLACEMENT PARTS AND ORDERING INFORMATION

When making repairs, order replacement parts from a Bailey Controls Company sales office. Provide this information:

1. Part description, part number and quantity.

2. Model and serial numbers (if applicable).

3. Bailey instruction manual number, page number and reference figure that identifies the part.

Order parts without commercial descriptions from the nearest Bailey Controls Company sales office.

Table 5-1. Spare Parts List

Description	Component	Part Number
Fuse 6.0 A/ 250 V, 0.25 in. x 1.25 in.	F1	194776A16001

TRAINING

Bailey Controls Company has a modern training facility available for training your personnel. On-site training is also available. Contact a Bailey Controls sales office for specific information and scheduling.

TECHNICAL DOCUMENTATION

Additional copies of this manual, or other Bailey Controls Company manuals, can be obtained from the nearest Bailey Controls Company sales office at a reasonable charge.

APPENDIX A - IMDSM05 DIGITAL I/O SLAVE MODULE CONFIGURATION

INTRODUCTION

Figure A-1 shows the location of the dipswitches and jumpers used to configure the IMDSM05 Digital I/O Slave Module (DSM). Tables A-1 through A-7 give the dipswitch and jumper settings to configure the module. This information is provided as a quick reference guide for personnel installing the NIDO01 termination module. Configuration consists of setting the default output values (dipswitches S1 and S2), I/O configuration (dipswitch S3), slave module address (dipswitch S4), enable/disable address switch (dipswitch S5), digital. input

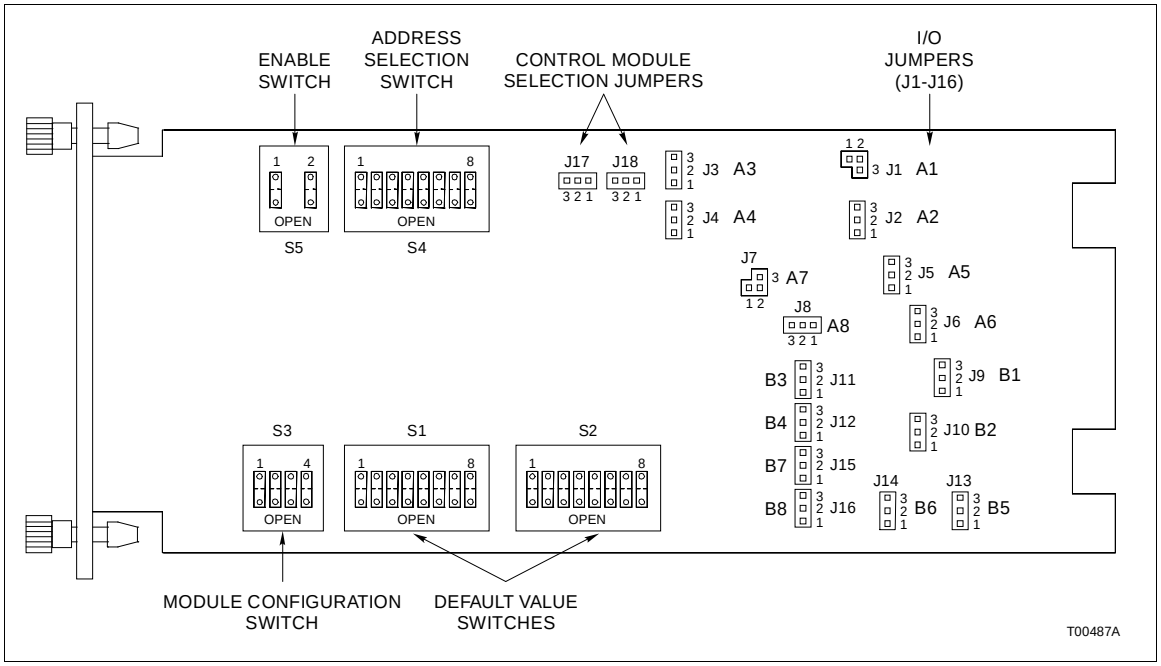


Figure A-1. Digital I/O Module

Table A-1. Switch S1 Settings

Switch Position 1 - 8	Function
1	An output signal will be sent to the Group A output point corresponding to the switch position number during default conditions.
0	No output signal will be sent during default.

NOTE: 0 = closed or ON, 1 = open or OFF.

type (jumpers J1 through J16), and master module type (jumpers J17 and J18). Refer to the ***IMDSM05 Digital I/O Slave Module*** instruction manual for detailed instructions.

Table A-2. Switch S2 Settings

Switch Position 1 - 8	Function
1	An output signal will be sent to the Group B output point corresponding to the switch position number during default conditions.
0	No output signal will be sent during default.

NOTE: 0 = closed or ON, 1 = open or OFF.

Table A-3. Switch S3 Settings

Switch Position				Function^
1	2	3	4	
1				Set group A I/O points to outputs.
0				Set group A I/O points to inputs.
	1			Set group B I/O points to outputs.
	0			Set group B I/O points to inputs.
		1		Module is an interface between a master module and a digital logic station (switch positions 1 and 2 must be set to 1, switch position 4 must be set to 0, switch position 8 of switch S2 must be set to 0).
		0		Module is an I/O interface between a master module and field devices.
			1	All outputs hold on master module failure.
			0	All outputs go to default value on master module failure.

NOTE: 0 = closed or ON, 1 = open or OFF.

Table A-4. Example Switch S4 Settings

Address Example	Switch Position (Binary Value)							
	1 (128)	2 (64)	3 (32)	4 (16)	5 (8)	6 (4)	7 (2)	8 (2)
0	0	0	0	0	0	0	0	0
16	0	0	0	1	0	0	0	0
32	0	0	1	0	0	0	0	0
48	0	0	1	1	0	0	0	0
63	0	0	1	1	1	1	1	1

NOTE: 0 = closed or ON, 1 = open or OFF.

Table A-5. Switch S5 Settings

Switch Position		Function
1	2	
1		Enable contacts 1 - 4 of the address switch.
0		Disables contacts 1 - 4 of the address switch.
	1	Enable contacts 5 - 8 of the address switch.
	0	Disables contacts 5 - 8 of the address switch.

NOTE: 0 = closed or ON, 1 = open or OFF.

Table A-6. Jumpers J1 through J16 Settings

Jumper Position	Function
1-2	Normal input or output.
2-3	Two wire isolated output.

Table A-7. Jumper J17 and J18 Settings

Jumper	Jumper Position	Function
J17	1-2	DSM module communicating to an NLMM01 module.
J18		
J17	2-3	DSM module communicating to an IMLMM02, MFC, or MFP module.
J18		

APPENDIX B - IMLMM02 LOGIC MASTER MODULE CONFIGURATION

INTRODUCTION

Figure B-1 shows the location of the dipswitch and jumpers used to configure the IMLMM02 Logic Master Module (LMM). Tables B-1, B-2 and B-3 give the dipswitch and jumper settings to configure the module. This information is provided as a quick reference guide for personnel installing the NIDO01 termination module. Configuration consists of setting the module address (dipswitch S2) and digital input type (jumpers J1 through J8). Refer to the ***IMLMM02 Logic Master Module*** instruction manual for detailed instructions.

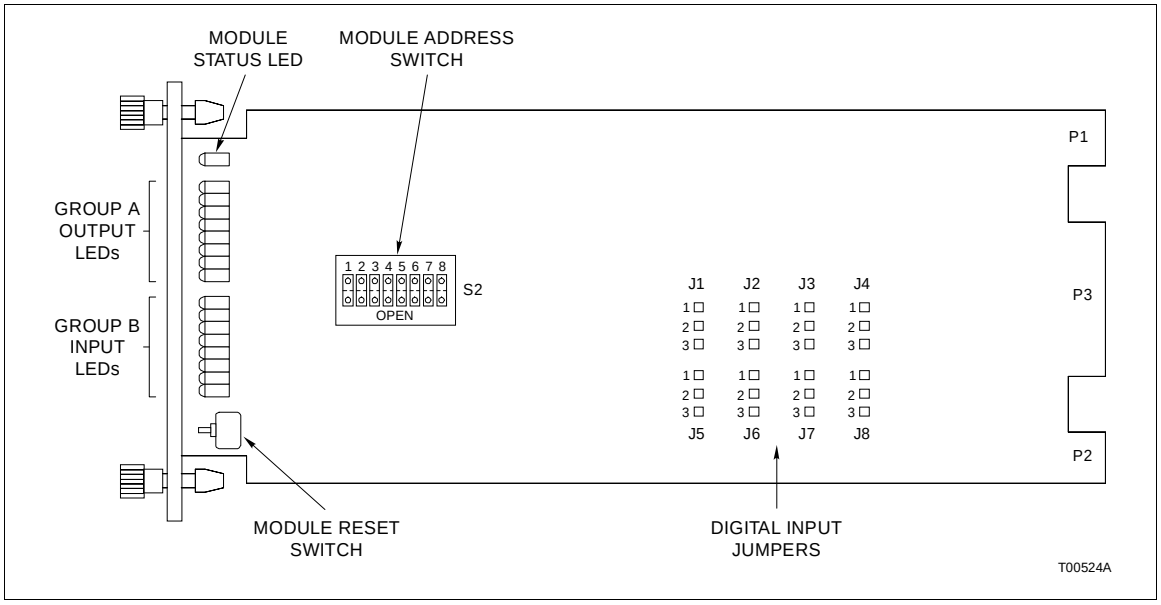


Figure B-1. Logic Master Module

Table B-1. Switch S2 Settings (Run Mode)

Switch Position			Function
1	2	3	
0	0	0	Normal mode, Normal run

NOTE: 0 = closed or ON, 1 = open or OFF.

Table B-2. Switch S2 Settings (Module Address)

Address Example	Switch Position (Binary Value)				
^	4 (16)	5 (8)	6 (4)	7 (2)	8 (1)
0	0	0	0	0	0
8	0	1	0	0	0
16	1	0	0	0	0
24	1	1	0	0	0
31	1	1	1	1	1

NOTE: 0 = closed or ON, 1 = open or OFF.

Table B-3. Jumper J1 through J8 Settings

Jumper Position	Digital Input Type
1-2	125 VDC
2-3	24 VDC

Index

Visit Elsag Bailey on the World Wide Web at http://www.bailey.com

Our worldwide staff of professionals is ready to meet *your* needs for process automation.
For the location nearest you, please contact the appropriate regional office.

AMERICAS
29801 Euclid Avenue
Wickliffe, Ohio USA 44092
Telephone 1-216-585-8500
Telefax 1-216-585-8756

ASIA/PACIFIC
152 Beach Road
Gateway East #20-04
Singapore 189721
Telephone 65-391-0800
Telefax 65-292-9011

EUROPE, AFRICA, MIDDLE EAST
Via Puccini 2
16154 Genoa, Italy
Telephone 39-10-6582-943
Telefax 39-10-6582-941

GERMANY
Graefstrasse 97
D-60487 Frankfurt Main
Germany
Telephone 49-69-799-0
Telefax 49-69-799-2406

Form I-E96-411A Litho in U.S.A. 193