SECTION 1 - INTRODUCTION

OVERVIEW

The Digital Slave Module (IMDSM05) interfaces process field inputs/outputs with the Multi-Function Processor and Logic Master Module in the Infi 90 Process Management System. There are sixteen I/O circuits on the DSM. These circuits may be input or outputs. The DSM brings in sixteen separate digital signals through the DSM I/O circuits to the master modules for processing and monitoring. The DSM sends sixteen separate digital signals through the DSM I/O circuits to process control devices in the field. Digital control devices may be relays, lamps, etc. A contact closure, switch or solenoid is an example of a device that supplies a digital signal. Master modules provide the control functions; slave modules provide I/O to the master modules. The DSM also works with the Multi-Function Controller (MFC) master module.

This manual explains the purpose, operation and maintenance of the Digital Slave Module (DSM). It addresses handling precautions and installation procedures. Figure 1-1 illustrates the Infi 90 communication levels and the position of the DSM within these levels.

INTENDED USER

System engineers and technicians should read this manual before installing and operating the DSM. A module SHOULD NOT be put into operation until this instruction is read and understood. You can refer to the Table of Contents to find specific information after the module is operating.

MODULE DESCRIPTION

The DSM consists of a single printed circuit board that occupies one slot in a Module Mounting Unit (MMU). It monitors eight digital inputs and eight digital outputs. Twelve I/O circuits are isolated from each other; the remaining two pairs share common positive input lines.

Two captive screws on the module faceplate secure it to the MMU. Sixteen front panel LED status indicators (group A and group B) display the input and output status.

The slave module has three card edge connectors for external signals and power (P1, P2 and P3). P1 connects to common (ground) and +5 VDC power (refer to Table 5-1). P2 connects the module to the slave expander bus to communicate with an MFP/LMM master module (refer to Table 5-2). Connector P3

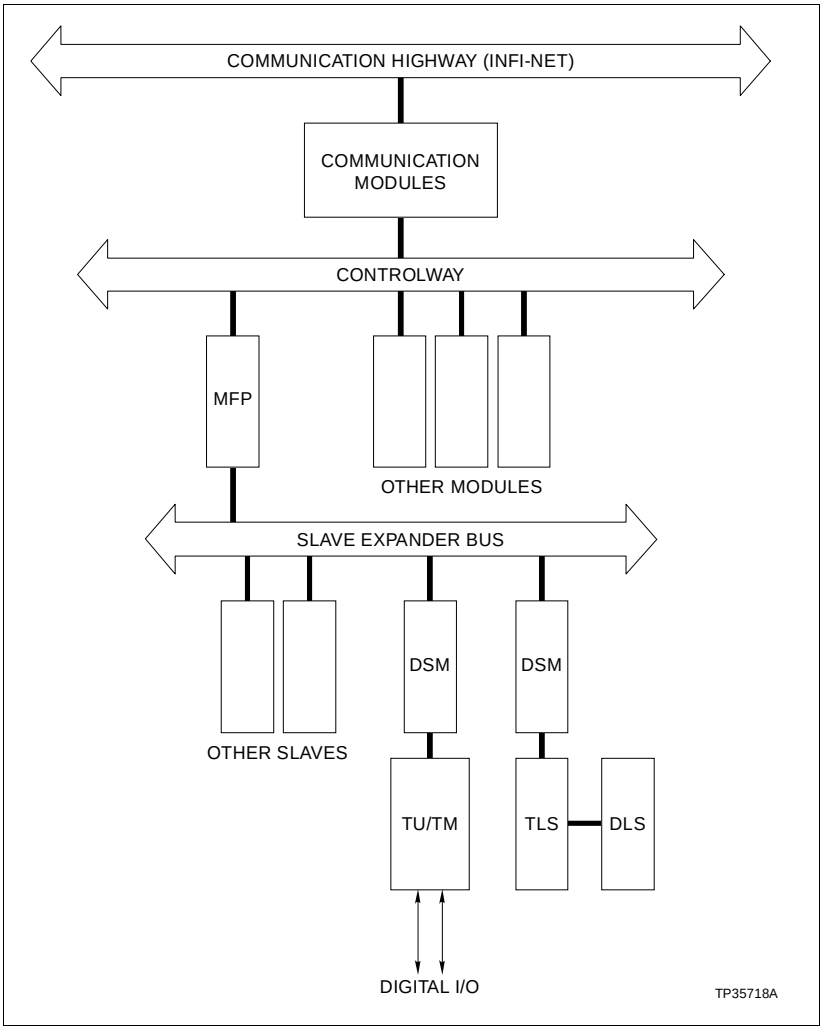

Figure 1-1. Infi 90 Communication Levels

carries digital signals to a Termination Unit (TU) (refer to Table 5-3). The terminal blocks (physical connection points) for field wiring are on the TU.

FEATURES

The modular design of the DSM, as with all Infi 90 modules, allows for flexibility when you are creating a process management system strategy. It is capable of bringing sixteen separate digital signals (24 VDC) into/out of the system.

Multi-Function Processor and Logic Master Module interface to the IMDSM05 on the slave expander bus. The DSM is a high power slave. You can use up to 20 high power slaves on any master (MFP/LMM) slave expander bus.

Individual jumpers on the DSM module configure each of the I/O circuits as inputs/outputs for non-isolated operation with

read-back capabilities, or two-wire isolated outputs without read-back capabilities.

The front panel LED status indicators provide a visual indication of the input states to aid in system test and diagnosis. A DSM can be removed or installed without powering the system down.

INSTRUCTION CONTENT

This manual consists of eight sections.

Introduction Is an overview of the DSM: Features, description and specifications.

Description and Operation Explains the module operation and describes the input circuitry.

Installation Describes precautions to observe when handling DSMs and setup procedures required before module operation. This section also discusses switch and jumper settings, and installation procedures.

Operating Procedures Explains the front panel indicators and start-up of the slave module.

Troubleshooting Describes the error indications and corrective actions to take.

Maintenance Has a maintenance schedule for the slave module.

Repair/Replacement Procedures Explains how to replace the slave module.

Support Services Provides replacement part ordering information. It explains other areas of support that Bailey Controls provides.

HOW TO USE THIS MANUAL

Read this manual before handling the DSM module. Refer to the sections in this list as needed for more information.

1. Read Section 4 before you connect the IMDSM05.

2. Read and do the steps in Section 3.

3. Refer to Section 5 for what to do if a problem occurs.

4. Refer to Section 6n for the scheduled steps needed to maintain the DSM.

5. Refer to Section 7 for how to replace a module.

6. Use Section 8 for how to order parts. This section also tells you some services Bailey offers.