

Table of Contents

Chapter 1: Introduction

Manual Overview	1-2
The Purpose of this Manual	1-2
Other Reference Materials	1-2
Who Should Read this Manual	1-2
Quality Technical Manuals and Technical Support	1-2
Chapters	1-3
Appendices	1-3
Ethernet Remote Master (ERM)	1-4
Ethernet Remote Slaves	1-4
Configuring the Ethernet Remote I/O Network	1-5
Running the Ethernet Remote I/O Network	1-5
ERM / ECOM Systems	1-6
How the PLC CPU Updates Remote I/O Points	1-7
Frequently Asked Questions	1-8

Chapter 2: ERM / Slave Network Addressing Modes

ERM / Remote Slave Network Identifiers	2-2
ERM / Slave Configuration Tools	2-2
ERM / Slave Module ID	2-3
IP Address	2-4
Ethernet Address	2-4
Using Multiple Network Identifiers	2-4

Chapter 3: Installation and Network Layouts

Inserting the ERM Module in the I/O Base	3-2
DL205 Slot Choices	3-2
H2-ERM (-F) Module Installation	3-2
DL405 Slot Choices	3-3
H4-ERM (-F) Module Installation	3-4
Which Modules are Supported in the Ethernet Slaves	3-4
ERM Network Layouts	3-5
Configuring the Ethernet Remote I/O Network	3-5
Running the Ethernet Remote I/O Network	3-5
ERM / ECOM Systems	3-6
Network Cabling	3-7
ERM Supports Two Standards	3-7
10BaseT Networks	3-7
10BaseT Connections	3-8
UTP Cable	3-8
10BaseFL Connections	3-8
Fiber Optic Cable	3-8
Fiber Optic Module ST Connector	3-8
Maximum Cable Length	3-9

Chapter 4: Configuring the ERM and Slave Modules with ERM Workbench

ERM Workbench Software	4-2
Installing ERM Workbench	4-2
Launching ERM Workbench	4-3
Adding Network Protocol Support to the ERM Workbench PC	4-3
Running ERM Workbench PLC Wizard	4-4
Step 1: Choosing the ERM Network Configuration	4-4
Step 2: Connecting the ERM Workbench PC to the ERM Network	4-4
Establishing Communication with the ERM	4-5
Step 3: Select and Configure the Slaves	4-5
Step 4: Map I/O to PLC Memory	4-6
Step 5: Download Configuration to ERM	4-6
ERM Workbench Main Configuration Window	4-7
Running ERM Workbench	4-8
Connecting the ERM Workbench PC to the Network Modules	4-8
Configure the ERM	4-9
Configuring the ERM	4-9
Selecting PLC as Interface	4-9
Advanced ERM Configuration	4-10
Select the Slaves	4-11
Selecting the Slaves	4-11
Configure the Slaves	4-12
Setting the Slave's Parameters	4-12
Write Configuration to ERM	4-14
Analog I/O Data Registers	4-15
Reserved PLC Memory for ERM	4-16
ERM Status Word / Reset Slave Code	4-16
Printing/Exporting the ERM Configuration	4-17

Chapter 5: Using NetEdit

Using NetEdit	5-2
The NetEdit Window	5-2
Ethernet Communication Protocol	5-2
Adding Network Protocol Support to Your PC	5-3
Ethernet Address	5-3
Module Information	5-4
Module ID / IP Address	5-4
Using NetEdit to Configure the H4-EBC Base	5-5
Advanced Settings	5-5
Configuring Analog Modules	5-6
Configuring the High Speed Counter Module	5-6

Chapter 6: Maintenance and Troubleshooting

Isolating a Communication Problem	6-2
Diagnostic Tools and Techniques	6-2
Troubleshooting Chart	6-2
ERM Module Diagnostic LEDs	6-4
ERM LEDs	6-4
Slave Module Diagnostic LEDs	6-4
Using ERM Workbench for Troubleshooting	6-5
Read from ERM	6-5
Reserved PLC Memory for ERM	6-6
Detailed ERM Statistics	6-6
Select Slaves Window	6-7
Using NetEdit for Troubleshooting	6-8
Select a Module	6-8
Module Information	6-8
Change Protocol	6-9
Ethernet Stats	6-9
Replacing the ERM / Slave Module	6-9
Diagnosing Network Cable Problems	6-10

Appendix A: General Specifications

General Specifications	A-2
Ethernet Standards	A-3

Appendix B: ERM / Slave Diagnostics and Error Codes

ERM Diagnostics	B-2
Reserved PLC Memory for ERM	B-2
ERM Status Word / Resetting the Slave	B-2
ERM Status Word Error Codes	B-3
Reading ERM Statistics	B-4
Reading ERM Statistics using Ladder Logic	B-4
Reading Error Codes from Slaves	B-5
Reading Error Codes from Slaves using Ladder Logic	B-5
Slave Diagnostic Word Memory	B-7
Current / Last State Slave Error Codes	B-8
Extended Slave Error Codes	B-9

Appendix C: ERM and ERM Workbench Default Settings

ERM and ERM Workbench Factory Default Settings	C-2
---	------------

Appendix D: Mapping ERM Slave I/O in a Think & Do WinPLC System

Mapping ERM Slave I/O Points	D-2
---	------------

Appendix E: Configuring Terminator Analog Output Modules