EMC38-12
12 PORT ETHERNET MEDIA CONVERTER
USER'S GUIDE

CABLETRON
SYSTEMS

The Complete Networking Solution™

CABLETRON SYSTEMS, P. O. Box 5005, Rochester, NH 03866-5005

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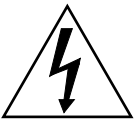
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TABLE OF CONTENTS

APPENDIX B   TWISTED PAIR WIRING TABLES

CHAPTER 1

INTRODUCTION

Welcome to the Cabletron Systems **EMC38-12 User's Guide**. This manual explains installation instructions and provides specifications for the twelve port Ethernet Media Converter (EMC).

1.1   USING THIS MANUAL

Read through this manual to gain an understanding of the features and capabilities of the EMC38-12. You should have a general working knowledge of ethernet IEEE 802.3 10Base-T, and ethernet IEEE 802.3j 10Base-FL type data communications networks and their physical layer components when installing the EMC38-12.

Chapter 1, **Introduction**, describes EMC38-12 features and specifications.

Chapter 2, **Installation**, describes how to install the EMC38-12 into a 19-inch rack or as a stand-alone device.

Chapter 3, **Connecting to the Network**, explains how to connect network segments to the EMC38-12.

Chapter 4, **Using the LANVIEW LEDS**, describes how to use the EMC38-12 LEDs to monitor link and power status.

Appendix A, **Cable Requirements** lists twisted pair and multimode cable requirements for the EMC38-12.

Appendix B, **Twisted Pair Wiring Tables**, lists pinouts for the 50-pin twisted pair connector.

1.2   GETTING HELP

If you need additional support related to the EMC38-12, or if you have any questions, comments, or suggestions concerning this manual, contact Cabletron Systems Technical Support:

By phone .... (603) 332-9400
                                              Monday-Friday; 8am - 8pm EST
By CompuServe®............. GO CTRON from any! prompt
By Internet mail .... support@ctron.com

1.3   EMC38-12 OVERVIEW

The EMC38-12 converts ethernet IEEE 802.3 10Base-T signals to ethernet IEEE 802.3j 10Base-FL signals. It also converts ethernet 10Base-T signals to ethernet 10Base-FL signals. The rear panel has a 50-pin Champ connector (RJ-71) that supports twelve twisted pair segments. The front panel has twelve 10Base-FL multimode ST ports. Figure 1-1 shows the EMC38-12 ports. The 10Base-FL connectors are backward compatible with FOIRL connectors.

Each of the rear panel twisted pair ports has a corresponding fiber port.

For example: Twisted pair Port 1 converts signals to fiber optic Port 1, twisted pair port 2 converts signals to fiber optic port 2, etc.
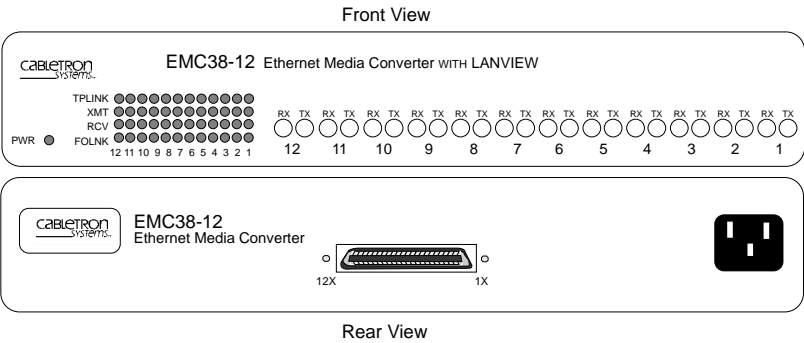

Figure 1-1. The EMC38-12

1.4   EMC38-12 FEATURES

Automatic Transmit Port Disable
The EMC38-12 automatically disables the Transmit port when its corresponding Receive port does not have a link.

Full Duplex Ethernet Support
All of the EMC38-12 ports support Full Duplex Ethernet provided that the device at the other end of the port supports Full Duplex Ethernet also. Full Duplex Ethernet allows the EMC38-12 to transmit and receive signals simultaneously for a 20 Megabit bandwidth through-put.

LANVIEW Diagnostic LEDs
Cabletron equips the EMC38-12 with a visual diagnostic and monitoring system called LANVIEW. LANVIEW LEDs help you quickly identify Power and Link status.

Connectivity
The rear panel of the EMC38-12 has a 50-pin Champ connector (RJ-71) that supports twelve twisted pair segments. The front panel has twelve 10Base-FL multimode ST ports. Each multimode ST port has a Receive connector and a Transmit connector.

1.5   EMC38-12 SPECIFICATIONS

This section describes operating specifications for the EMC38-12. Cabletron Systems reserves the right to change these specifications at any time without notice.

Physical Specifications
Dimensions: 17" L x 9.4" W x 1.7" H

Weight: 4 lbs.

Power Requirements
Input: 100 to 125 Volts AC, 1.0A
                                    200 to 240 Volts AC, 0.5A
                                    50 to 60 Hz

Environmental Requirements

Operating Temperature: +5° to +40° C (41° to 104° F)

Non-operating Temperature: -30° to +90° C (-22° to 194° F)

Operating Humidity: 5 to 95% (non-condensing)

Safety and Approvals
This unit meets the safety requirements of UL 1950, CSA C22.2 NO 950,
and EN 60950; the EMI requirements of FCC Class A and EN 55022
Class A, VCCI Class I; and the EMC requirements of EN 50082-1.

CHAPTER 2

INSTALLATION

This chapter explains how to install the EMC38-12 in a 19-inch rack and also provides requirements for installing the EMC38-12 on a tabletop or shelf.

2.1   UNPACKING THE EMC38-12

Unpack the EMC38-12 as follows:

1.   Remove the shipping box material covering the EMC38-12.

2.   Carefully remove the EMC38-12 from the shipping box.

3.   Remove the EMC38-12 from its non-conductive bag. If you notice any signs of damage, contact Cabletron Systems Technical Support immediately.

2.2   INSTALLING THE EMC38-12

You can install the EMC38-12 in a 19-inch rack or place it on any horizontal surface (e.g. a table or shelf). Cabletron provides an accessory kit with the EMC38-12 that includes Rack Mount Brackets and Mounting Screws.

The following sections provide instructions for installing the EMC38-12. Select one of the following subsections and perform the steps that are applicable to your installation needs.

2.2.1   Rack Mounting the EMC38-12

Before installing the EMC38-12, care must be taken to ensure that the
rack used will support the unit and that the rack remains stable with the
EMC38-12 installed. In order to allow for proper cooling within the rack,
there must be a two inch clearance on either side of the unit. Refer to
Chapter 1 for power and enviromental requirements.

The following procedure explain how to install the EMC38-12 in a
19-Inch rack.

1.   Remove four cover screws (two from each side) located along the
     front edges of each side of the EMC38-12. Figure 2-1 shows the
     location of the screws.
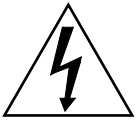
     Do not remove the cover from the EMC38-12.

2.   Using the four cover screws removed in step 1, attach the rack
     mounting brackets to each end of the EMC38-12.
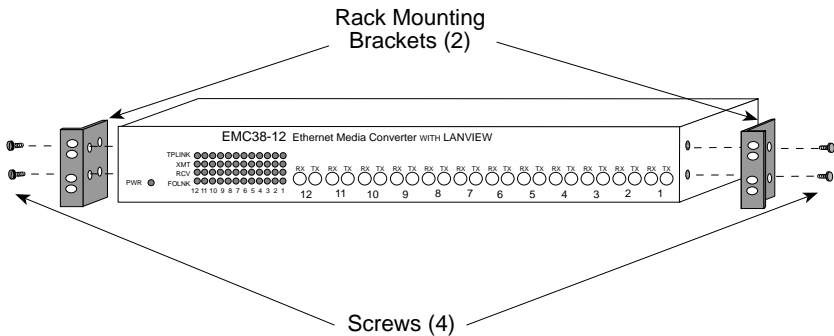
Figure 2-1.   Installing the Rack Mount Brackets

3. With the rack mounting brackets installed, position the EMC38-12 between the vertical frame members of the 19-inch rack and fasten it securely with the mounting screws as shown in Figure 2-2.
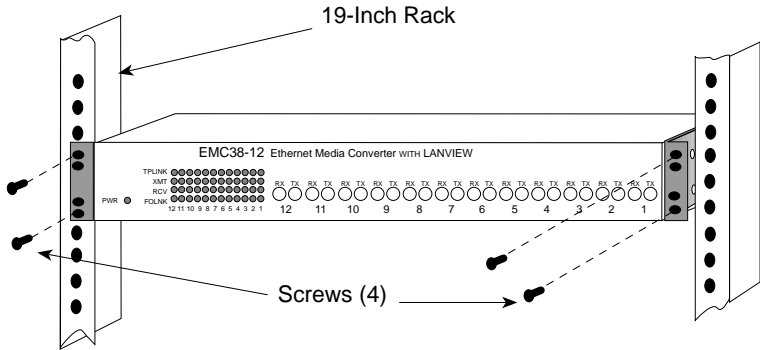
Figure 2-2. Installing the EMC38-12 in a 19-Inch Rack

2.2.2 Free-Standing Shelf or Tabletop Installation

Figure 2-3 shows the surface requirements for installing the EMC38-12 on a shelf or tabletop. Shelving units must support 30 pounds of static weight. Before you install the EMC38-12, ensure the power source and enviromental conditions meet the requirements specified in **Chapter 1**.
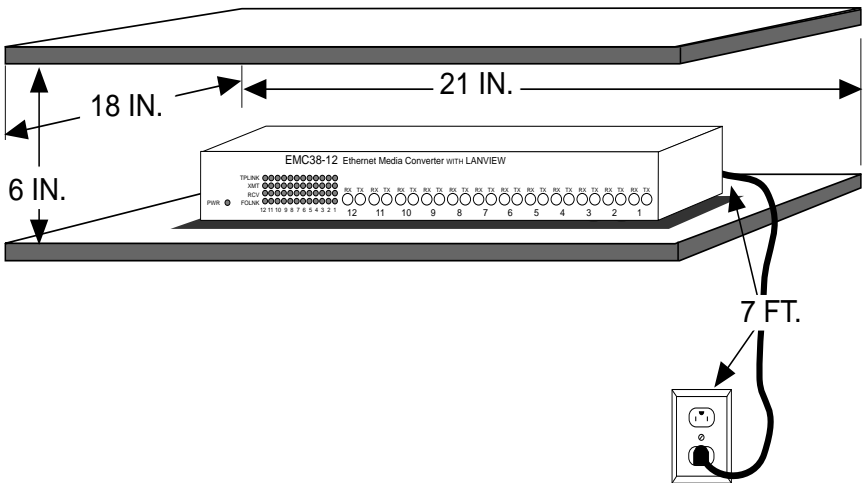
Figure 2-3. Shelf or Table-top Installation

2.3   CONNECTING THE EMC38-12 TO THE POWER SOURCE

Note: The EMC38-12 has a universal power supply. This allows you to connect the EMC38-12 to power sources from 100 Vac to 125 Vac, 50-60 Hz. or 200 Vac to 240 Vac, 50-60 Hz.

To connect the EMC38-12 to the power source:

1. Plug the power cord into the back panel of the EMC38-12.

2. Plug the other end of the power cord into a grounded wall outlet.

3. Verify that the **PWR** LED is on, this indicates that the EMC38-12 is receiving power.

CHAPTER   3

CONNECTING TO THE NETWORK

This chapter outlines the procedure for connecting the EMC38-12 to your network.

3.1   CONNECTING A TWISTED PAIR SEGMENT TO THE EMC38-12

The rear panel of the EMC38-12 has a 50-pin Champ connector. The configuration outlined in this section explains how to attach a twisted pair cable to the EMC38-12 and to a 10Base-T compliant ethernet device that has a 50-pin Champ connector (e.g. Cabletron's ELM or TPRMIM).

You can also run a 50-pin feeder cable from the EMC38-12 to a punch down block. The Champ connector supports twelve 10Base-T, twisted pair segments.

*Note: Refer to **Appendix B** for information about wiring the EMC38-12 to a punch down block.*

To connect the EMC38-12 to a 10Base-T compliant ethernet device:

1.   Attach a 50-pin feeder cable to the Champ connector on the EMC38-12 as shown in Figure 3-1.
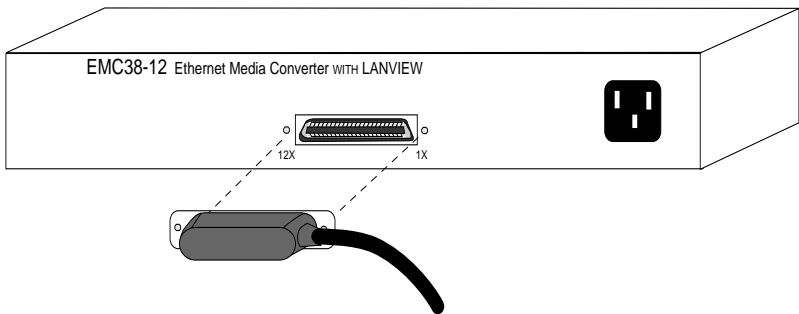
Figure 3-1. EMC38-12

2. Attach the other end of the 50-pin feeder cable to the Champ connector on the 10Base-T compliant ethernet device.

3. Check that the link LED on the 10Base-T ethernet device and the applicable **TPLNK** LED on the EMC38-12 are on. If the LEDs are not on, perform each of the following steps until the LEDs are on:

    a. Check that the 10Base-T device and the EMC38-12 have power.

    b. Verify the cabling between the EMC38-12 and the 10Base-T device.

    c. Check the cable for continuity.

If a link has not been established, contact Cabletron Systems Technical Support.

3.2   CONNECTING A FIBER OPTIC LINK SEGMENT

When connecting a fiber optic link segment the EMC38-12 keep the following in mind:

-   ST connectors attach to ST ports much like BNC connectors attach to BNC ports. Insert the connector into the port with the alignment key on the connector inserted into the alignment slot on the port. The connector is then turned to lock it down.

-   The physical communication link consists of two strands of fiber optic cabling: the Transmit (TX) and the Receive (RX). The Transmit strand from the applicable port on the module will be connected to the Receive port of a fiber optic ethernet device at the other end of the segment. For example, TX of the applicable port on the module will go to RX of the other fiber optic device. The Receive strand of the applicable port on the module will be connected to the Transmit port of the fiber optic ethernet device. For example, RX of the applicable port on the module will go to TX of the other fiber optic device.

We recommend that you label the fiber optic cable to indicate which fiber is Receive and which is Transmit. When you buy fiber optic cable from Cabletron Systems, it is labeled so that: at one end of the cable, one fiber is labeled 1, and the other fiber is labeled 2. This pattern is repeated at the other end of the cable. If you did not purchase your cable from Cabletron Systems, be sure you label your cable as described above.

Caution: Do not touch the ends of the fiber optic strands, and do not let the ends come in contact with dust, dirt, or other contaminants. Contamination of the ends can cause problems in data transmissions. If the ends become contaminated, clean them with alcohol using a soft, clean, lint free cloth.

To connect a fiber optic link segment to the EMC38-12:

1. Remove the protective plastic covers from the fiber optic ports on the applicable port on the module and from the ends of the connectors on each fiber strand.

2. Attach the fiber labeled 1 to the applicable receive port, labeled **RX**, on the module. See Figure 3-2.
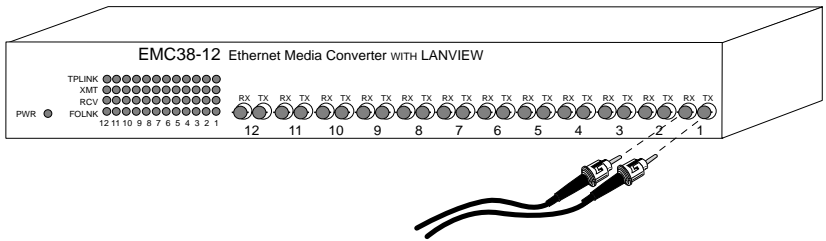
Figure 3-2. Connecting a Fiber Link to the EMC38-12

3. Attach the fiber labeled 2 to the applicable transmit port labeled **TX**, on the module.

4. At the other end of the fiber optic cable, attach the fiber labeled 1 to the transmit port of the device.

5.   Attach the fiber labeled 2 to the receive port.

6.   Check that the **FOLNK** LED on the ECM38-12 is on. If the LED is not on, perform the following steps until it is:

   a.   Check that the power is turned on for the device at the other end of the link.

   b.   Verify proper "receive to transmit" connection of fiber strands between the applicable port on the module and the fiber optic device at the other end of the fiber optic link segment.

   c.   Verify that the fiber connection meets the dB loss specifications outlined in Appendix A.

If a link still has not been established, contact Cabletron Systems Technical Support.

3.3   FINISHING THE INSTALLATION

The EMC38-12 is now ready for operation. Before placing the network into service, test the installation thoroughly, making sure that you can address all stations and that the EMC38-12 and all stations are indicating normal operation. Ensure that the networking software is configured properly to match the installed network. If you encounter errors or abnormal operation, contact Cabletron Systems Technical Support.

CHAPTER 4

USING THE LANVIEW LEDS

This chapter describes how to use the LANVIEW Diagnostic LEDs to monitor EMC38-12 status and diagnose problems.
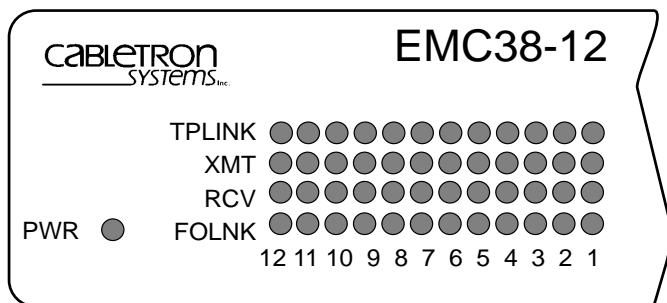
Figure 4-1. LANVIEW LEDS

4.1   **PWR** (Power)

- **On** (Green) - Indicates that the EMC38-12 is receiving power.
- **Off** - Indicates that the unit is not receiving power. Check the input power source (circuit breakers, fuse, power cord, etc.). If the proper source is present, the problem could be with the unit.

4.2   **XMT** (Transmit)

- **On** (Flashing Green) - Indicates that the unit is transmitting data packets from the twisted pair port to the fiber optic port. The flash of the LED is pulse stretched for viewing effect. The LED could be on solid because of this viewing effect.
- **Off** - No activity.

4.3   **RCV** (Receive)

- **On** (Flashing Yellow) - Indicates that the unit is receiving data packets from the associated fiber otic port and transmitting them to the twisted pair port. The flash of the LED is pulse stretched for viewing effect. The LED may be on, but appear not to flash because of the pulse stretched viewing effect.
- **Off** - No activity.

4.4   **TPLNK** (Twisted Pair Link)

- **On** (Green) - Indicates an established link between the associated twisted pair segment and the 10Base-T device at the other end of the segment. The LED will remain on as long as there is a link between the devices and power is supplied to each linked device.
- **Off** - No link.

4.5   **FOLNK** (Fiber Optic Link)

- **On** (Green) - Indicates an established link between the associated fiber segment and the 10Base-FL device at the other end of the segment. The LED will remain on as long as there is a link between the devices and power is supplied to each linked device.
- **Off** - No link.

APPENDIX A

CABLE REQUIREMENTS

This appendix provides cable requirements for each of the EMC38-12 ports.

A.1   10Base-T TWISTED PAIR REQUIREMENTS

When you connect a 10Base-T twisted pair segment to the EMC38-12, the device at the other end of the twisted pair segment must meet IEEE 802.3 10Base-T specifications. Your 10Base-T twisted pair segment must meet the following requirements.

Segment Length
The IEEE 802.3 10Base-T standard requires that 10Base-T devices must be able to transmit from 0 to at least 100 meters (328 feet) per segment of 24-gauge unshielded twisted pair (UTP) cable.

Insertion Loss
The maximum insertion loss allowed for a 10Base-T segment is 11.5 db at all frequencies between 5.0 and 10.0 MHz. This includes the attenuation of the cable, connectors, and patch panel.

Impedance
10Base-T specifies cable impedance between 85 and 110 ohms.

A.2 10Base-FL MULTIMODE FIBER REQUIREMENTS

When you connect a 10Base-FL Multimode Fiber segment to the EMC38-12, the device at the other end of the fiber segment must meet IEEE 802.3j 10Base-FL specifications. Your 10Base-FL Multimode Fiber segment must meet the following requirements.

Segment Length
The IEEE 10Base-FL standard requires that devices be able to transmit from 0 to at least 2000 meters (6561 feet) per segment of fiber optic cable.

Optical Connector Insertion Loss
The 10Base-FL standard was developed on the basis of a maximum insertion loss of 1 db.

Segment Insertion Loss
The optical insertion loss of 10Base-FL segments shall be less than 12.5 db, measured using an optical signal source with a center wavelength of 850 nm and a spectral width of 75 nm.

Attenuation
The 10Base-FL standard was developed on the basis of attenuation values of less than or equal to 3.75 dB/km, when measured at a wavelength of 850 nm with 62.5/125 μm fiber.

APPENDIX B

TWISTED PAIR WIRING TABLES

This appendix contains twisted pair wiring tables which will assist you if you are using a Punch Down Block (see Figure B-1) to wire your twisted pair segments. The following tables are included in this appendix:

- Table B-1 Twisted Pair Wiring from an EMC38-12 to a Punch Down Block

- Table B-2 Twisted Pair Wiring from a Punch Down Block to a 10Base-T Device

B.1 TWISTED PAIR WIRING FROM AN EMC38-12 TO A PUNCH DOWN BLOCK

Note: *Pins 25 and 50 on the Champ connector are not used.*

Table B-1. EMC38-12 to a Punch Down Block

From EMC38-12		Into and Out of 50 Pin Feeder Cable			Into Punch Down Block		
Port 12							
	Pin	Pin			Pin		
TX+	48	48	Violet/Green	TX+	A45	Violet/Green	TX+
TX-	23	23	Green/Violet	TX-	A46	Green/Violet	TX-
RX+	49	49	Violet/Brown	RX+	A47	Violet/Brown	RX+
RX-	24	24	Brown/Violet	RX-	A48	Brown/Violet	RX-
Port 11							
	Pin	Pin			Pin		
TX+	46	46	Violet/Blue	TX+	A41	Violet/Blue	TX+
TX-	21	21	Blue/Violet	TX-	A42	Blue/Violet	TX-
RX+	47	47	Violet/Orange	RX+	A43	Violet/Orange	RX+
RX-	22	22	Orange/Violet	RX-	A44	Orange/Violet	RX-
Port 10							
	Pin	Pin			Pin		
TX+	44	44	Yellow/Brown	TX+	A37	Yellow/Brown	TX+
TX-	19	19	Brown/Yellow	TX-	A38	Brown/Yellow	TX-
RX+	45	45	Yellow/Gray	RX+	A39	Yellow/Gray	RX+
RX-	20	20	Gray/Yellow	RX-	A40	Gray/Yellow	RX-
Port 9							
	Pin	Pin			Pin		
TX+	42	42	Yellow/Orange	TX+	A33	Yellow/Orange	TX+
TX-	17	17	Orange/Yellow	TX-	A34	Orange/Yellow	TX-
RX+	43	43	Yellow/Green	RX+	A35	Yellow/Green	RX+
RX-	18	18	Green/Yellow	RX-	A36	Green/Yellow	RX-

Table B-1. EMC38-12 to a Punch Down Block (Continued)

From EMC38-12		Into and Out of 50 Pin Feeder Cable			Into Punch Down Block		
Port 8							
	Pin	Pin			Pin		
TX+	40	40	Black/Gray	TX+	A29	Black/Gray	TX+
TX-	15	15	Gray/Black	TX-	A30	Gray/Black	TX-
RX+	41	41	Yellow/Blue	RX+	A31	Yellow/Blue	RX+
RX-	16	16	Blue/Yellow	RX-	A32	Blue/Yellow	RX-
Port 7							
	Pin	Pin			Pin		
TX+	38	38	Black/Green	TX+	A25	Black/Green	TX+
TX-	13	13	Green/Black	TX-	A26	Green/Black	TX-
RX+	39	39	Black/Brown	RX+	A27	Black/Brown	RX+
RX-	14	14	Brown/Black	RX-	A28	Brown/Black	RX-
Port 6							
	Pin	Pin			Pin		
TX+	36	36	Black/Blue	TX+	A21	Black/Blue	TX+
TX-	11	11	Blue/Black	TX-	A22	Blue/Black	TX-
RX+	37	37	Black/Orange	RX+	A23	Black/Orange	RX+
RX-	12	12	Orange/Black	RX-	A24	Orange/Black	RX-
Port 5							
	Pin	Pin			Pin		
TX+	34	34	Red/Brown	TX+	A17	Red/Brown	TX+
TX-	9	9	Brown/Red	TX-	A18	Brown/Red	TX-
RX+	35	35	Red/Gray	RX+	A19	Red/Gray	RX+
RX-	10	10	Gray/Red	RX-	A20	Gray/Red	RX-

Table B-1. EMC38-12 to a Punch Down Block (Continued)

From EMC38-12		Into and Out of 50 Pin Feeder Cable			Into Punch Down Block		
Port 4							
	Pin	Pin			Pin		
TX+	32	32	Red/Orange	TX+	A13	Red/Orange	TX+
TX-	7	7	Orange/Red	TX-	A14	Orange/Red	TX-
RX+	33	33	Red/Green	RX+	A15	Red/Green	RX+
RX-	8	8	Green/Red	RX-	A16	Green/Red	RX
Port 3							
	Pin	Pin			Pin		
TX+	30	30	White/Gray	TX+	A9	White/Gray	TX+
TX-	5	5	Gray/White	TX-	A10	Gray/White	TX-
RX+	31	31	Red/Blue	RX+	A11	Red/Blue	RX+
RX-	6	6	Blue/Red	RX-	A12	Blue/Red	RX-
Port 2							
	Pin	Pin			Pin		
TX+	28	28	White/Green	TX+	A5	White/Green	TX+
TX-	3	3	Green/White	TX-	A6	Green/White	TX-
RX+	29	29	White/Brown	RX+	A7	White/Brown	RX+
RX-	4	4	Brown/White	RX-	A8	Brown/White	RX-
Port 1							
	Pin	Pin			Pin		
TX+	26	26	White/Blue	TX+	A1	White/Blue	TX+
TX-	1	1	Blue/White	TX-	A2	Blue/White	TX-
RX+	27	27	White/Orange	RX+	A3	White/Orange	RX+
RX-	2	2	Orange/White	RX-	A4	Orange/White	RX-

B.2   TWISTED PAIR WIRING FROM A PUNCH DOWN BLOCK TO A 10Base-T DEVICE

Table B-2. Punch Down Block to a 10Base-T Device

From Punch Down Block			To RJ-45 Wallplate	Into Office Drop	Into 10Base-T Device
Port 12			Pin	Pin	Pin
B45	Violet/Green	RX+	3 RX+	3 RX+	3 RX+
B46	Green/Violet	RX-	6 RX-	6 RX-	6 RX-
B47	Violet/Brown	TX+	1 TX+	1 TX+	1 TX+
B48	Brown/Violet	TX-	2 TX-	2 TX-	2 TX-
Port 11			Pin	Pin	Pin
B41	Violet/Blue	RX+	3 RX+	3 RX+	3 RX+
B42	Blue/Violet	RX-	6 RX-	6 RX-	6 RX-
B43	Violet/Orange	TX+	1 TX+	1 TX+	1 TX+
B44	Orange/Violet	TX-	2 TX-	2 TX-	2 TX-
Port 10			Pin	Pin	Pin
B37	Yellow/Brown	RX+	3 RX+	3 RX+	3 RX+
B38	Brown/Yellow	RX-	6 RX-	6 RX-	6 RX-
B39	Yellow/Gray	TX+	1 TX+	1 TX+	1 TX+
B40	Gray/Yellow	TX-	2 TX-	2 TX-	2 TX-
Port 9			Pin	Pin	Pin
B33	Yellow/Orange	RX+	3 RX+	3 RX+	3 RX+
B34	Orange/Yellow	RX-	6 RX-	6 RX-	6 RX-
B35	Yellow/Green	TX+	1 TX+	1 TX+	1 TX+
B36	Green/Yellow	TX-	2 TX-	2 TX-	2 TX-

Table B-2. Punch Down Block to a 10Base-T Device (Continued)

From Punch Down Block		To RJ-45 Wallplate	Into Office Drop	Into 10Base-T Device
Port 8		Pin	Pin	Pin
B29 Black/Gray	RX+	3 RX+	3 RX+	3 RX+
B30 Gray/Black	RX-	6 RX-	6 RX-	6 RX-
B31 Yellow/Blue	TX+	1 TX+	1 TX+	1 TX+
B32 Blue/Yellow	TX-	2 TX-	2 TX-	2 TX-
Port 7		Pin	Pin	Pin
B25 Black/Green	RX+	3 RX+	3 RX+	3 RX+
B26 Green/Black	RX-	6 RX-	6 RX-	6 RX-
B27 Black/Brown	TX+	1 TX+	1 TX+	1 TX+
B28 Brown/Black	TX-	2 TX-	2 TX-	2 TX-
Port 6		Pin	Pin	Pin
B21 Black/Blue	RX+	3 RX+	3 RX+	3 RX+
B22 Blue/Black	RX-	6 RX-	6 RX-	6 RX-
B23 Black/Orange	TX+	1 TX+	1 TX+	1 TX+
B24 Orange/Black	TX-	2 TX-	2 TX-	2 TX-
Port 5		Pin	Pin	Pin
B17 Red/Brown	RX+	3 RX+	3 RX+	3 RX+
B18 Brown/Red	RX-	6 RX-	6 RX-	6 RX-
B19 Red/Gray	TX+	1 TX+	1 TX+	1 TX+
B20 Gray/Red	TX-	2 TX-	2 TX-	2 TX-

Table B-2. Punch Down Block to a 10Base-T Device (Continued)

| From Punch Down Block			To RJ-45 Wallplate	Into Office Drop	Into 10Base-T Device
Port 4			Pin	Pin	Pin
B13	Red/Orange	RX+	3 RX+	3 RX+	3 RX+
B14	Orange/Red	RX-	6 RX-	6 RX-	6 RX-
B15	Red/Green	TX+	1 TX+	1 TX+	1 TX-
B16	Green/Red	TX-	2 TX-	2 TX-	2 TX-
Port 3			Pin	Pin	Pin
B9	White/Gray	RX+	3 RX+	3 RX+	3 RX+
B10	Gray/White	RX-	6 RX-	6 RX-	6 RX-
B11	Red/Blue	TX+	11 TX+	1 TX+	1 TX+
B12	Blue/Red	TX-	2 TX-	2 TX-	2 TX-
Port 2			Pin	Pin	Pin
B5	White/Green	RX+	3 RX+	3 RX+	3 RX+
B6	Green/White	RX-	6 RX-	6 RX-	6 RX-
B7	White/Brown	TX+	1 TX+	1 TX+	1 TX+
B8	Brown/White	TX-	2 TX-	2 TX-	2 TX-
Port 1			Pin	Pin	Pin
B1	White/Blue	RX+	3 RX+	3 RX+	3 RX+
B2	Blue/White	RX-	6 RX-	6 RX-	6 RX-
B3	White/Orange	TX+	1 TX+	1 TX+	1 TX+
B4	Orange/White	TX-	2 TX-	2 TX-	2 TX-
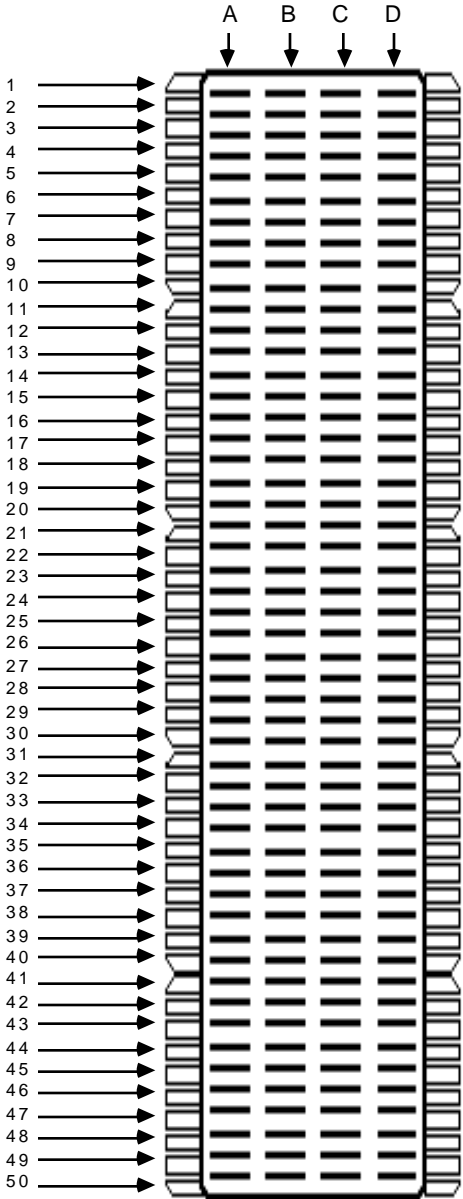
Figure B-1. Punch Down Block Pins

POWER SUPPLY CORD

The mains cord used with this equipment must be a 2 conductor plus ground type with minimum 0.75 mm square conductors and must incorporate a standard IEC appliance coupler on one end and a mains plug on the other end which is suitable for the use and application of the product and that is approved for use in the country of application.

GERMAN:

Die Netzleitung, die mit diesem Geraet benuetzt wird, soll einen zwei Leiter mit Erdleiter haben, wobei die Leiter mindestens 0.75 mm sind, mit einer normalen IEC Geraetesteckdose an einem Ende und einem Geraetestecker am anderen Ende versehen sind, der fuer den Gebrauch und die Anwendung des Geraetes geeignet und der zum Benuetzen im Lande der Anwendung anerkannt ist.

SPANISH:

El cable principal de la red eléctrica utilizado con este equipo debe tener 2 conductores y 1 toma de tierra con un mínimo de 0.75 mm2 cada uno y necesita tener un aparato de acoplamiento standard IEC en un extremo y un enchufe para el cable principal de la red eléctrica en el otro extremo, lo cual sea adecuado para el uso y
applicación del producto y lo cual sea aprobado para uso en el pais de applicación.

FRENCH:

Le cordon d' alimentation reliant cet appareil au secteur doit obligatoirement avoir deux fils conducteurs de 0.75 mm2 minimum et un fil de terre. It doit également être équipé du côté appareil d'une fiche agrée IEC et du côte secteur, d'une prise adaptée à l'usage du produit et aux normes du pays où l'appareil est utilisé.