SIEMENS

Fire Safety

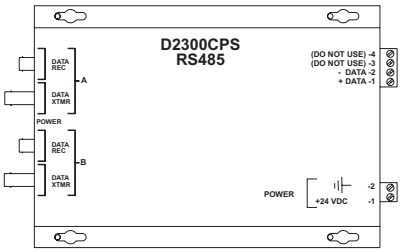
Installation Instructions

Model D2300CPS

Fiber Optic Interface

INTRODUCTION

The Model D2300CPS from Siemens Building Technologies, Inc. (See Figure 1) is a Fiber Optic interface for the MXL's RS-485 network (MNET or XNET) or the FireFinder XLS network (HNET or XNET). It uses a two-fiber (duplex) pair between each device. The D2300CPS can function as either a repeater or an end point unit.



WARNING: This module is NOT backwards compatible with the existing 2300CP. This unit uses +24VDC. Make sure to read the front of the module and connect to the correct voltage. Otherwise, serious damage to the unit will result.

Figure 1
D2300CPS Module

The D2300CPS can operate in either a daisy chain (See Figure 2) or star configuration (See Figure 3). This allows for network configurations that are not possible with the RS-485 network alone.

WARNING:
The D2300CPS module is not listed for use by Factory Mutual. Applications requiring fiber connectivity of voice modules/systems are therefore not Factory Mutual listed.

WARNING:
Do not use the D2300CPS with CXL Systems.

MOUNTING

The D2300CPS has four keyhole slots for #6 screws. Mount the device in the locations listed below using the four #6 screws provided.

A bracket (P/N 500-692880) is available for mounting the D2300CPS in any MXL enclosure that will accept a MOM-4 (See Figure 4). This bracket has the same footprint as the MOM-4 and accommodates two D2300CPS modules. An assembly kit is included with the bracket that contains four nuts and eight screws. Mount the bracket in the enclosure with the four nuts at the positions labeled **X** (See Figure 4). Start four of the 6-32 screws and slip the keyhole slots in the D2300CPS over them. Tighten the four screws.

System 3 style rails that mount on an MBR-2 or MME-3 backbox (P/N MSR-1) are also available and can be used for mounting the D2300CPS with the System 3 MPFO Bracket. Up to three brackets can be installed on a single rail.

A bracket, Model D2300-MP, is available for mounting two D2300CPS modules in any FireFinder XLS CAB enclosure. The D2300-MP fits in the same footprint as a CC-5 and mounts to the CAB-MP. A hardware kit is provided for attaching the D2300-MP to the CAB-MP and mounting two D2300CPS modules onto the D2300-MP. Mount the D2300CPS modules prior to installing the D2300-MP onto the CAB-MP. Note that when using two D2300CPS modules, the center two mounting holes on each D2300CPS share the two center studs on the D2300-MP (See Figure 5).

ELECTRICAL CONNECTIONS

POWER INPUT

The D2300CPS uses filtered or unfiltered 24 VDC. The D2300CPS can only be powered from the sources listed in Table 1 on page 6.

Siemens Building Technologies, Inc.
8 Fernwood Road
Florham Park, New Jersey 07932

Siemens Building Technologies, Ltd.
2 Kenview Boulevard
Brampton, Ontario L6T 5E4 CN

P/N 315-050018-0

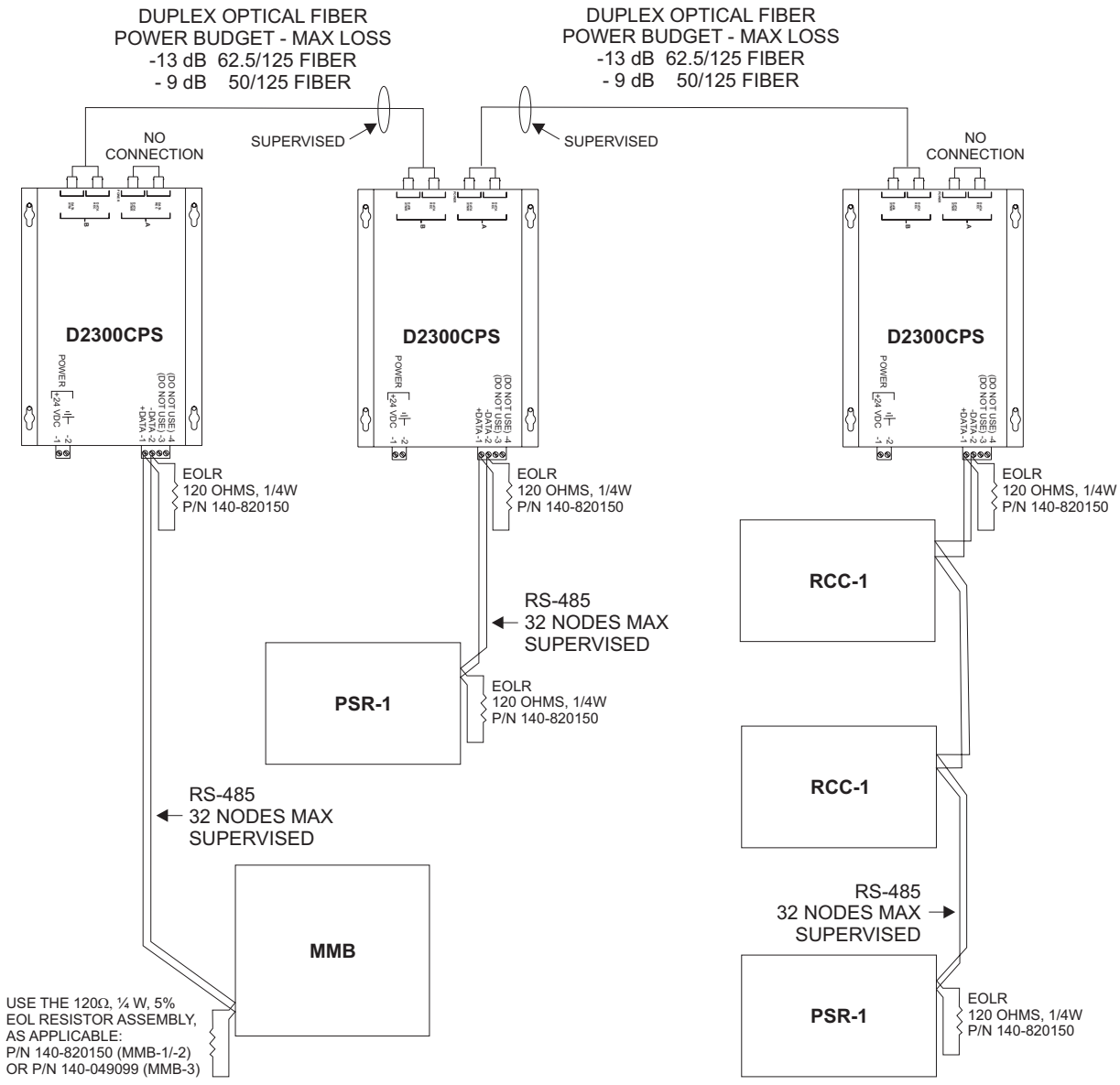


Figure 2
Daisy Chain Configuration (MNET Shown)

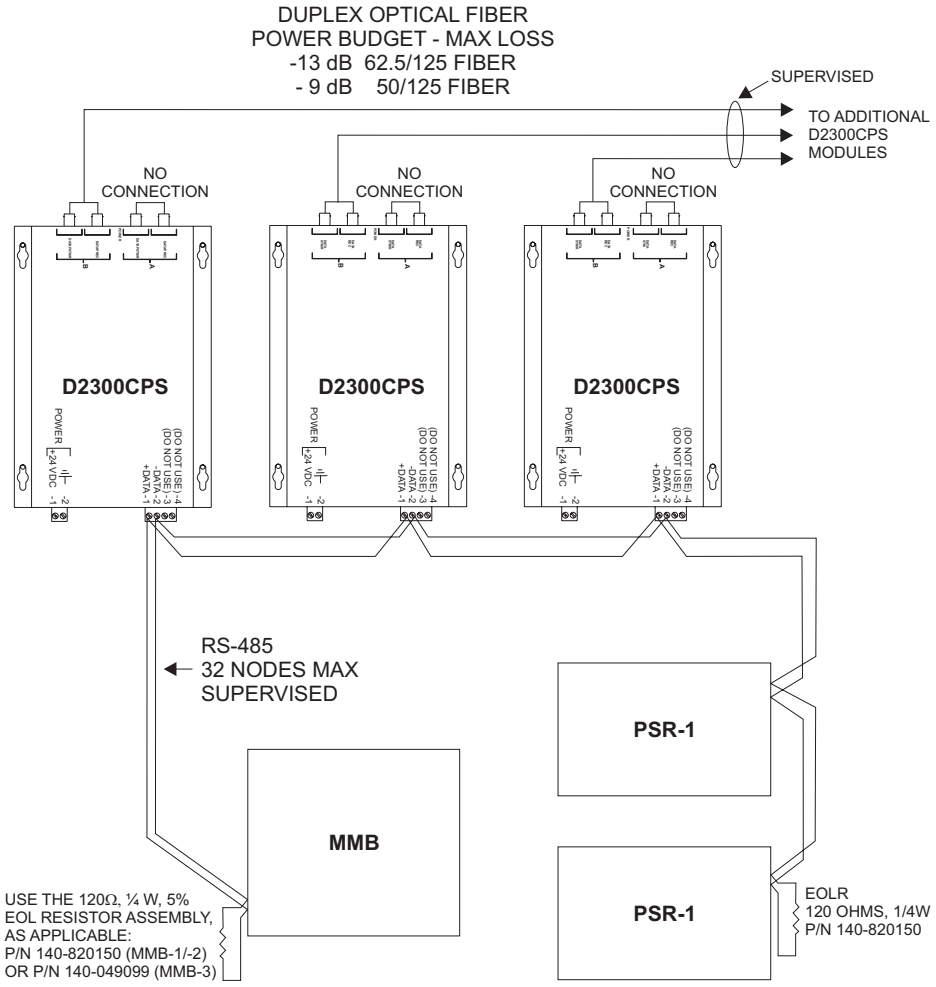


Figure 3
Star Configuration (MNET Shown)

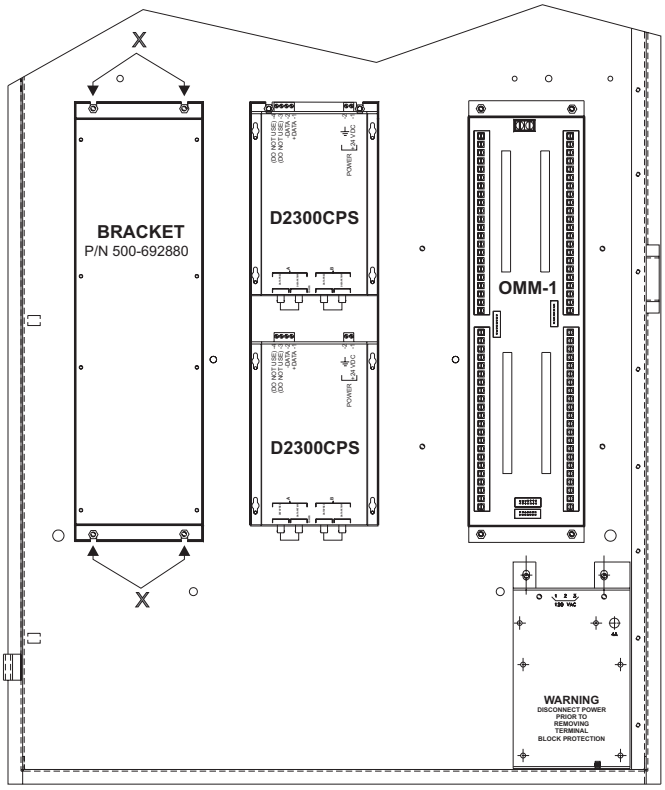


Figure 4
Mounting the D2300CPS in an MBR-2 or MME-3 Backbox

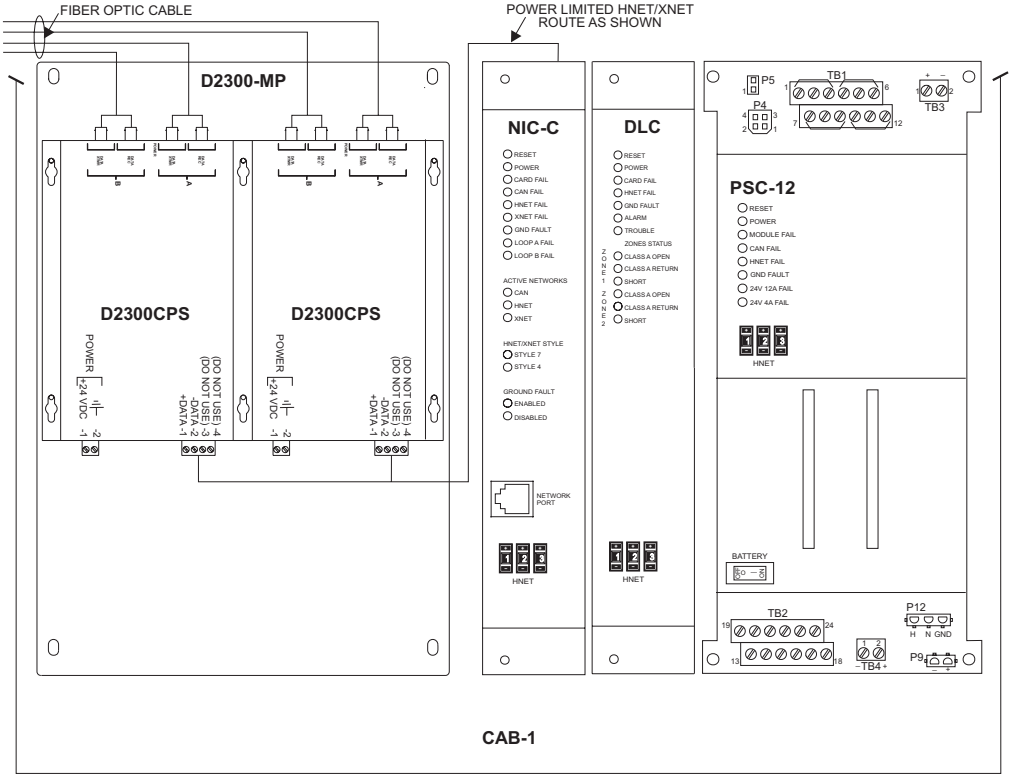


Figure 5
Mounting the D2300CPS in a CAB-1 Backbox

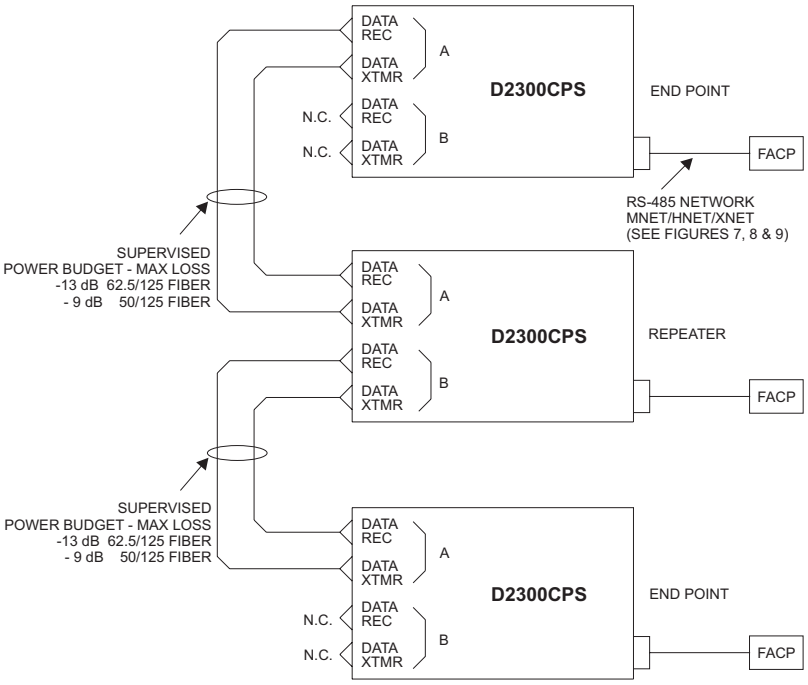


Figure 6
Wiring the D2300CPS as both a Repeater and End Point Unit

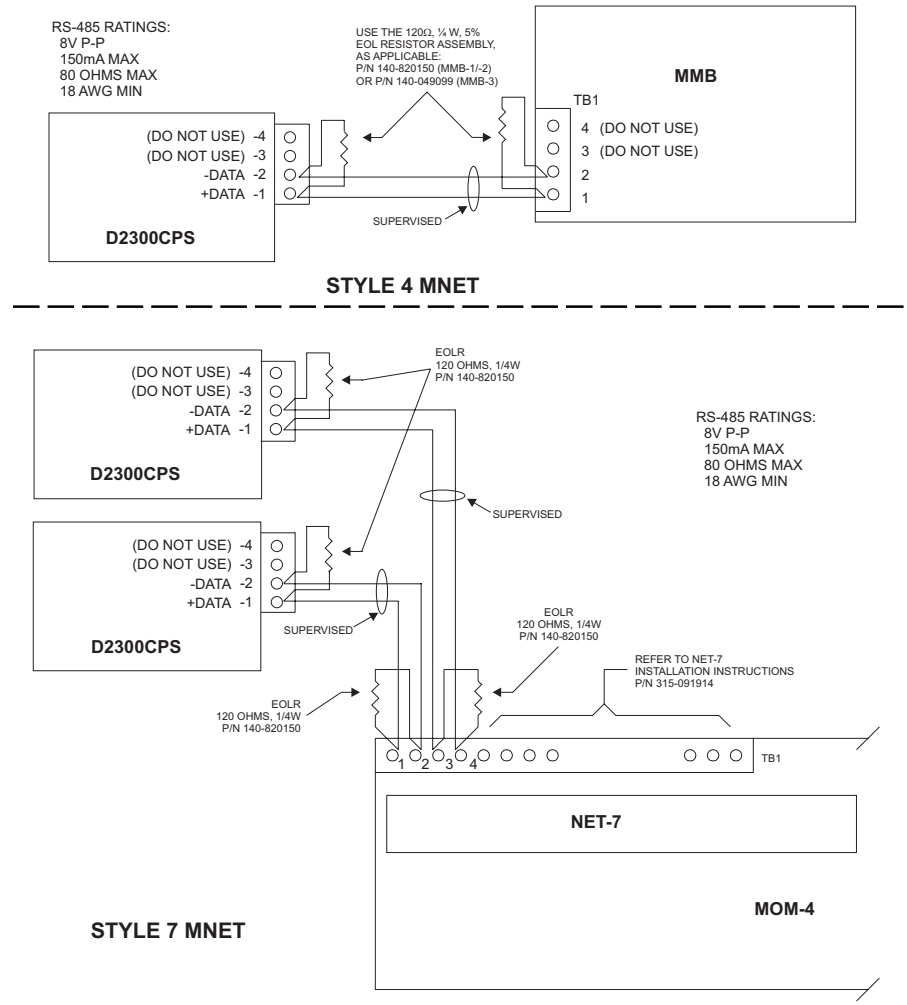


Figure 7
Wiring the RS-485 MNET Network in Style 4 and Style 7

Table 1

SYSTEM	POWER SOURCE
MXL	MMB-2: TB1 4-5; TB5 9-12 MMB-3: TB9 +,-; TB5 9-12 PSR-1: TB3 1-2; 3-6
FireFinder XLS	PSC-12: TB4 +,- PSX-12: TB4 +,-

POWER SOURCE	
PAD-3	AUX +,-
PS-35	TB1 5-6

For non-power limited wiring, the PLM-35 (Installation Instructions P/N 315-093495) must be used to comply with NFPA 70 per NEC 760. All wiring must be in accordance with Article 760 of NEC or local building codes.

For additional information on the MXL/MXLV System, refer to the *MXL/MXLV Manual, P/N 315-092036.*

24 VDC CURRENT CALCULATION (MXL ONLY)

The 24 VDC output ratings for the MMB/SMB and PSR-1 are:

MMB-2/-3 6A at 24 VDC (MPS-6); 12A at 24 VDC (MPS-12)
SMB-2 6A at 24 VDC (MPS-6); 12A at 24 VDC (MPS-12)
PSR-1 6A at 24 VDC (MPS-6); 12A at 24 VDC (MPS-12)

The following modules all draw current from the 24 VDC supply. Add the value for each module that is installed in the enclosure where the D2300CPS is to be installed. Be sure to include the D2300CPS in this calculation.

MODULE	ACTIVE 24 VDC MODULE CURRENT	QUANTITY	TOTAL
ACM-1	85mA		
ASC-1	41mA		
ASC-2	61mA		
CMI-300	0mA		
CRM-4	75mA		
CSM-4	34mA + 1.5A max per circuit		
CZM-4	720mA 4 zones in alarm		
D2300CPS	57mA		
MKB-2/-4	0mA		
NET-4	0mA		
NET-7	0mA		
NET-7M	0mA		
MOI-7	120mA		
MOD-16	850mA max		
MID-16	32mA max		
PIM-1	0mA		
BTC-1	44mA		
RCM-1	130mA		
ZAC-30	3A at 30W		
OCC-1	17mA		
ZC1-8B	170mA		
ZC2-8B	342mA		
ZC2-4AB	167mA		
ZC3-4AB	168mA		
ZCT-8B	78mA		
		TOTAL	

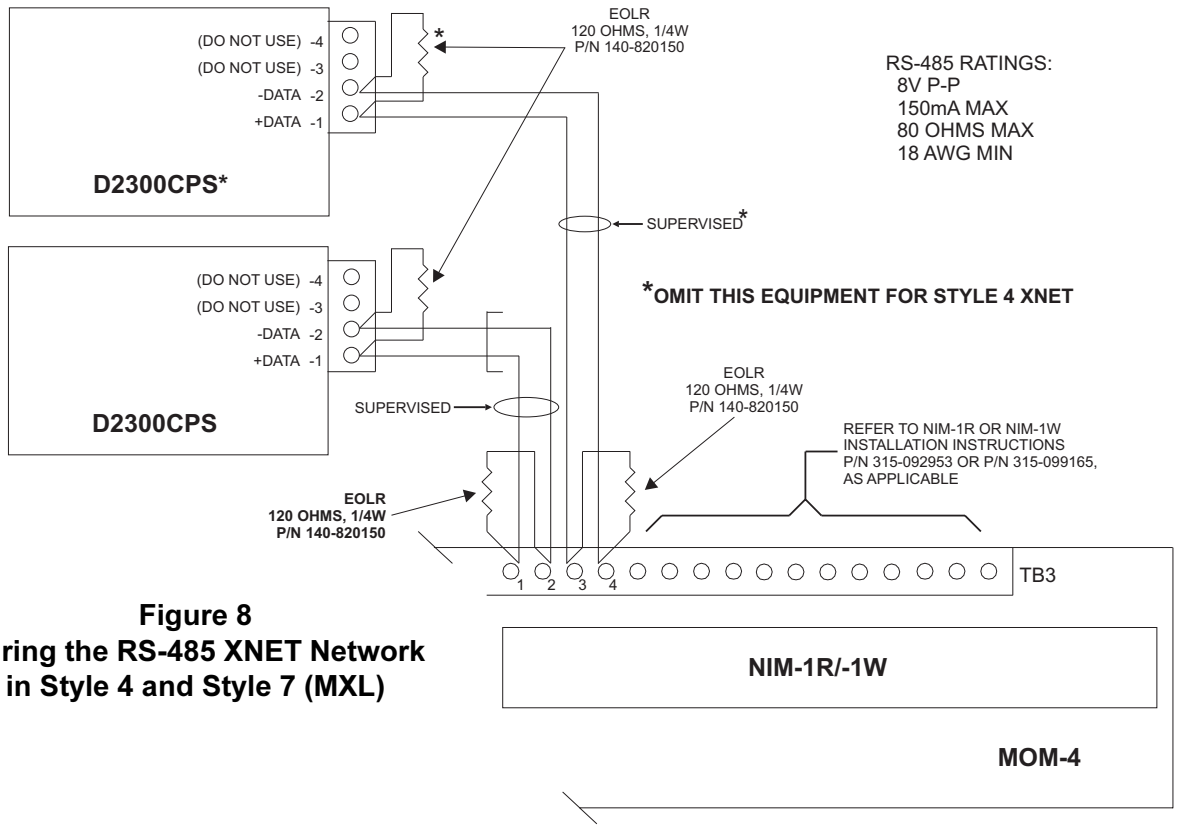


Figure 8
Wiring the RS-485 XNET Network in Style 4 and Style 7 (MXL)

RS-485 NETWORK

The RS-485 MNET, XNET and HNET networks connect to the D2300CPS on the terminal block with the markings +DATA (1) and -DATA(2). **Terminals 3 and 4 are not used.** For Style 4 networks one D2300CPS is needed at each Fiber Optic drop. For Style 7 networks two D2300CPS modules are needed at each drop.End of line devices are required on each RS-485 pair in the system. Install them at the extreme ends of each pair. Refer to Figures 7 and 8 (MXL) and Figure 9 (FireFinder XLS) for wiring instructions and ratings for both Style 4 and Style 7.

NOTE: Positive and negative ground fault detected when terminals shorted to earth.

FIBER CONNECTIONS

The D2300CPS can function as both a *repeater* and an *end point* unit. *When used as an end point,* connect to the fiber connectors labeled **A**. Make no connection to the **B** connectors. *In the repeater mode,* use both pairs of connectors, **A** and **B**.

Two Fiber Optic cables are required between each pair of D2300CPS modules. Use a high quality duplex Fiber Optic cable containing either 50/125 or 62.5/125 fiber. Duplex fiber optic cable has two cables in a single shield similar to electrical *zip cord*. Use ST style fiber connectors. **Please contact the fiber manufacturer regarding instructions for terminating the fiber.**

When installing the fiber pairs, each fiber must connect between the transmit data (DATA XTMR) on one D2300CPS and the receive data line (DATA REC) on the other D2300CPS.

The D2300CPS fiber connection is classified as Style DCLB per ULC-527.

INDICATORS

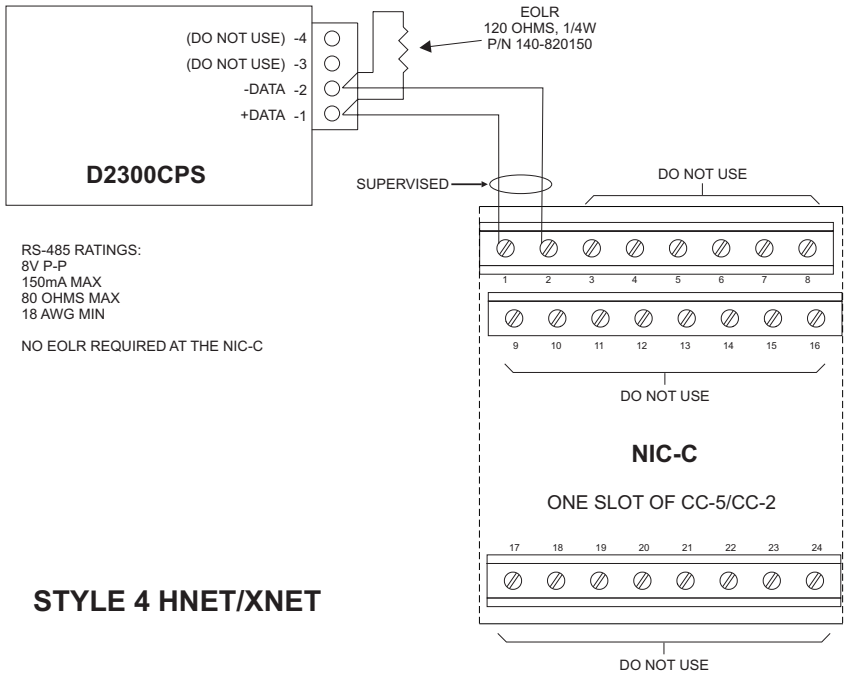
The D2300CPS has five LED indicators for Power and Status.

The LEDs are located on the side of the module with the Fiber Optic connectors. The **Power** LED is green and lights whenever there is 24 VDC. Both channels **A** and **B** have a yellow and green LED. The green LED indicates that the D2300CPS is transmitting data on that channel. The yellow LED lights when data is received.

ELECTRICAL RATINGS

Active 24VDC Module Current	57mA
Standby 24VDC Module Current	57mA

Input Power	18-31 VDC, 57mA max
Battery Power	24 VDC, 57mA max
RS-485	8V (P-P), 150mA max
Transmitter Power	20µW (-17dBm) (62.5/125 Fiber)



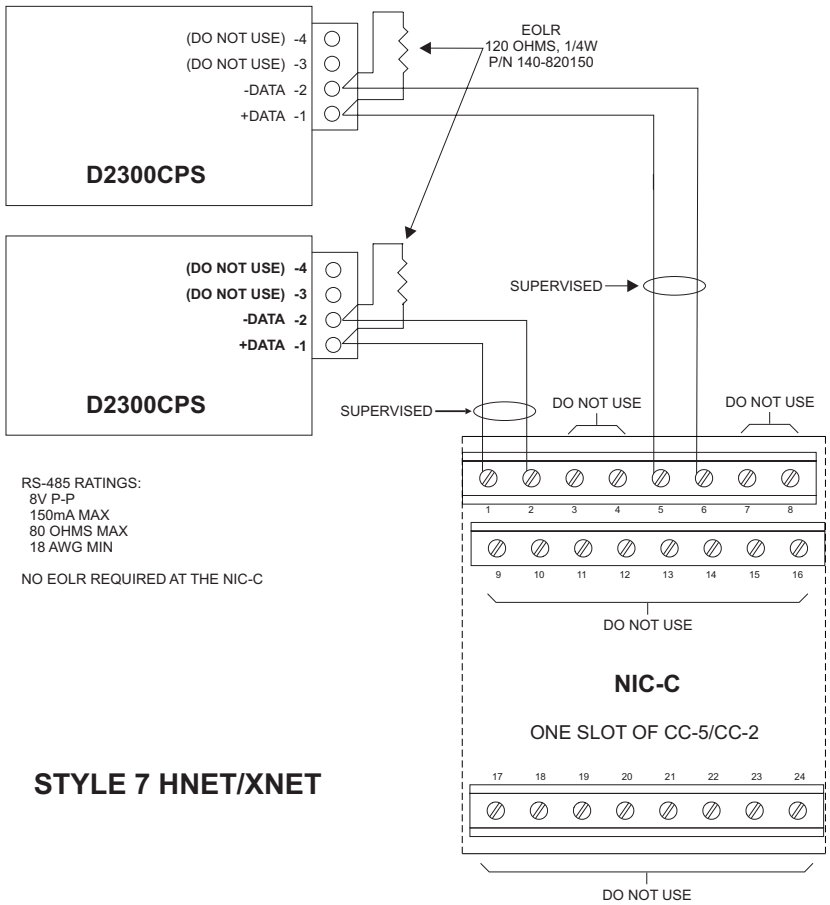


Figure 9
Wiring the RS-485 HNET or XNET Network in Style 4 and Style 7 (FireFinder XLS)

Contacting us

For help installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, contact us during business hours (Monday through Friday, excluding holidays, between 5 a.m. and 5 p.m. Pacific Time).

Table 3. Sales and support contact information

	Sales	Technical support
Phone:	**Toll-free:** 888.437.3287 in the US, including Alaska and Hawaii; Puerto Rico; Canada. Outside the toll-free area: 503.885.5700.	
E-mail		*techsupport@interlogix.com*
Fax	888.329.0331	888.329.0332

Note: Be ready at the equipment before calling.

Online

Another great resource for assistance with your Interlogix product is our online publication library. To access the library, go to our website at the following location:

http://www.interlogix.com[1]

1. Many Interlogix documents are provided as PDFs (portable document format). To read these documents, you will need Adobe Reader, which can be downloaded free from Adobe's website at *www.adobe.com*.

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Manufacturer

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2955 Red Hill Avenue, Costa Mesa, CA 92626-5923, USA

Authorized EU manufacturing representative:
UTC Fire & Security B.V.
Kelvinstraat 7, 6003 DH Weert, The Netherlands

Certification

CE N4131

FCC compliance

Class A: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

ACMA compliance

Notice! This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Canada

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

European Union directives

2004/108/EC (EMC directive): Hereby, UTC Fire & Security declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC.

2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

Contact information

For contact information, see www.interlogix.com.