

MODEL XCCN - CANopen OPTION CARD FOR DATA STATION PLUS AND MODULAR CONTROLLER



- CONFIGURED USING MONICO VIEW™ SOFTWARE
- DIGITALLY ISOLATED CANopen PORT CAPABLE OF COMMUNICATING WITH ANY CANopen DEVICE
- EASY INSTALLATION

GENERAL DESCRIPTION

Both the Modular Controller Master (enhanced models) and Data Station Plus contain a proprietary expansion port which provides a high speed, parallel architecture that extends the functionality and flexibility of the platform. This approach allows these products to evolve concurrently with the latest advances in communications and standards, without sacrificing performance. This high bandwidth channel has significantly greater throughput when compared to the traditional (external) serial gateway approach.

The XCCN option card adds a CANopen communication port to the series. This isolated card protects user equipment from potentially harmful ground loops while providing the ability to communicate to any high speed CANopen device. The XCCN option card has a termination resistor built-in, which is selectable via a jumper setting. Additionally, the XCCN connector is pluggable for easy removal of the Modular Controller Master or Data Station Plus from the CANopen bus without disturbing communications with other devices on the bus.

The XCCN communication card is easily installed by removing the blank expansion port cover of your Modular Controller or Data Station Plus, and plugging the XCCN card into the expansion port. Configuration is simple using Monico's free Monico View software.

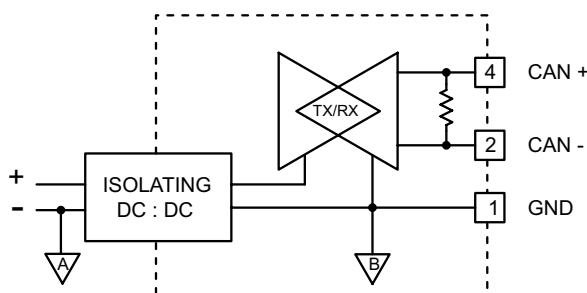
CONTENTS OF PACKAGE

- XCCN option card
- This hardware bulletin

ORDERING INFORMATION

MODEL NO.	DESCRIPTION	PART NUMBER
XCCN	CANopen option card for Modular Controller or Data Station Plus	OEMDA018

BLOCK DIAGRAM



SAFETY SUMMARY

All safety related regulations, local codes and instructions that appear in the literature or on equipment must be observed to ensure personal safety and to prevent damage to either the instrument or equipment connected to it. If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Do not use the controller to directly command motors, valves, or other actuators not equipped with safeguards. To do so can be potentially harmful to persons or equipment in the event of a fault to the controller.



THIS EQUIPMENT IS SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C, D, HAZARDOUS LOCATIONS, OR NON-HAZARDOUS LOCATIONS ONLY



WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.



WARNING - EXPLOSION HAZARD - SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2



CAUTION: Risk of Danger.
Read complete instructions prior to installation and operation of the unit.

SPECIFICATIONS

- POWER REQUIREMENTS:** 24 V @ 50 mA max. Power is supplied to the option card from the main board of the Modular Controller Master or Data Station Plus.
- COMMUNICATIONS:**
CANopen Port: The CANopen port has format and baud rates that are software programmable up to 1M baud and are digitally isolated. This port may be configured for various CANopen protocols.
Isolation from XCCN Communication ports to the Modular Controller Master or Data Station Plus: 1000 VDC for 1 minute.
- CERTIFICATIONS AND COMPLIANCES:**
Consult factory.
- ENVIRONMENTAL CONDITIONS:**
Refer to the specifications of the Modular Controller Master or Data Station Plus you are installing this card in.
- CONSTRUCTION:** For indoor use only. Installation Category II, Pollution Degree 2.
- INSTALLATION REQUIREMENTS:** See "Installing the XCCN Option card" for more details.
- WEIGHT:** 2.3 oz (65.2 g)

INSTALLING THE XCCN OPTION CARD

1. Remove power from the unit
2. Insert a flat-bladed screwdriver into the slot at the top of the expansion port cover. Gently apply pressure on the screwdriver in an upward direction until the expansion port cover disengages from the unit as shown in Figure 1.
3. Verify that the option card knobs are in the “unlocked” position as shown in Figure 2.
4. Carefully insert the option card into the expansion port opening while aligning the card-edge connector on the option card with the main board's header, as shown in Figure 3. Once aligned, gently press on the front of the card until it is flush with the front of the case.
5. Turn the option card knobs to the locked position as shown in Figure 4.



Caution: The expansion and main circuit boards contain static sensitive components. Before handling the cards, discharge static charges from your body by touching a grounded bare metal object. Ideally, handle the cards at a static controlled clean workstation. Also, handle the cards by the edges only. Dirt, oil, or other contaminants that may contact the cards can adversely affect circuit operation.



Warning: Risk of Danger: Be sure to remove all power before removing the expansion port cover

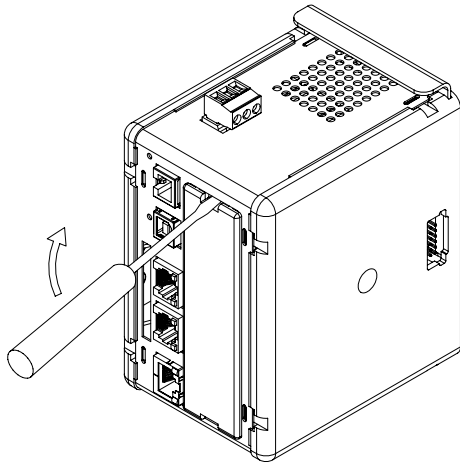


Figure 1

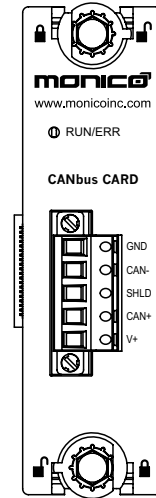


Figure 2

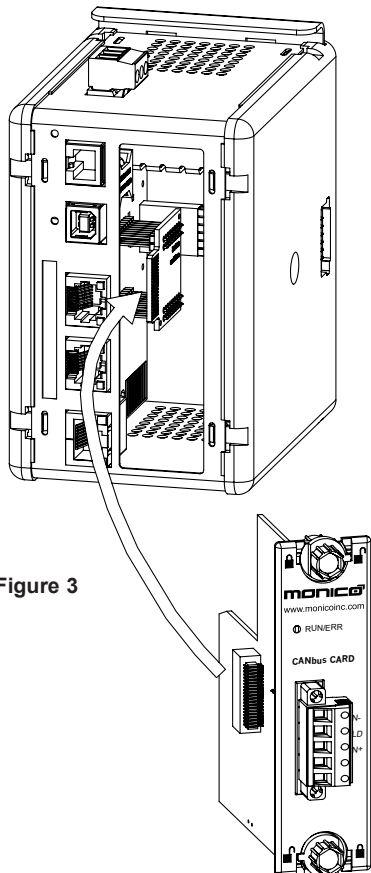


Figure 3

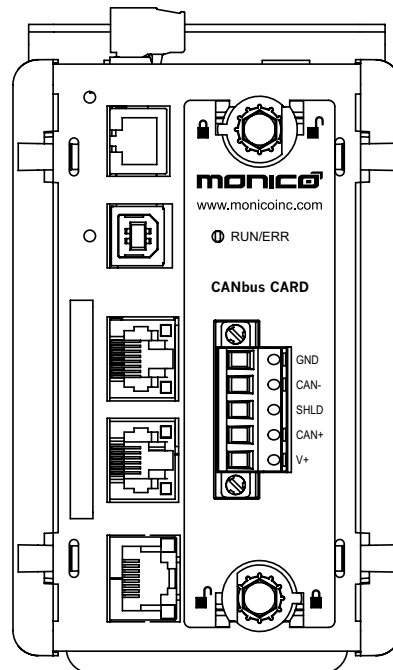


Figure 4

POWER SUPPLY REQUIREMENTS NEW AND EXISTING INSTALLATIONS

The XCCN option card draws all of its power from the main board of the Modular Controller Master or Data Station Plus. The specifications of the Modular Controller Master or Data Station Plus account for the power needs of an option card.

COMMUNICATING WITH THE XCCN OPTION CARD

CONFIGURING A XCCN OPTION CARD

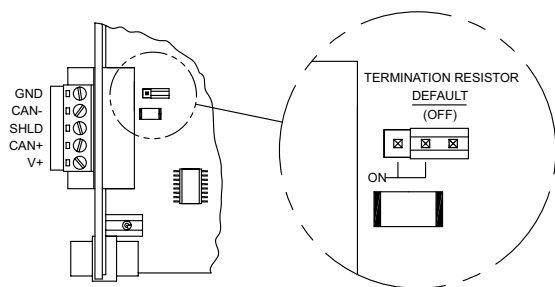
The XCCN is configured using Monico View software. Monico View is available as a free download from www.monicoinc.com, or it can be ordered on CD. Updates to Monico View for new features and drivers are posted on the website as they become available. By configuring the XCCN using the latest version of Monico View, you are assured that your unit has the most up-to-date feature set. Monico View software can configure the XCCN through the RS232 PGM port, USB port, Ethernet port, or CompactFlash socket on your Modular Controller Master or Data Station Plus. Additional information can be found in your Modular Controller Master or Data Station Plus hardware bulletin.

CANopen PORT PROTOCOLS

The XCCN option card has one CANopen port. This port may be configured for various CANopen protocols.

XCCN PORT PIN OUTS

Must use only NEC Class 2 or Limited Power Source (LPS) rated power supply.



TERMINATION RESISTOR

An onboard termination resistor is selectable via a jumper setting. The termination resistor is rated for 124Ω at 1W. If a different termination resistance is desired, choose the jumper setting for no termination resistor and connect your own termination resistor between positions 2 and 4 of the five position connector.

GND

Position 1 of the pluggable connector provides a CAN ground connection. This terminal is isolated from the Modular Controller Master and Data Station Plus.

CAN-

Position 2 of the pluggable connector provides the CAN- bus line (active low). This terminal is isolated from the Modular Controller Master and Data Station Plus.

SHLD (OPTIONAL CAN SHIELD)

Position 3 of the pluggable connector is provided for optional shield connections. This position is available only to tie shield wires together or to earth ground. There is no internal connection to earth ground. The SHLD position is not connected to any circuitry internal to the XCCN option card or Modular Controller Master and Data Station Plus.

CAN+

Position 4 of the pluggable connector provides the CAN+ bus line (active high). This terminal is isolated from the Modular Controller Master and Data Station Plus.

V+ (OPTIONAL 24 VDC)

Position 5 of the pluggable connector is provided for optional 24 VDC connections. This position is available only to tie 24 VDC wires together. The XCCN card neither provides 24 VDC power nor uses 24 VDC power through this connection. The V+ position is not connected to any circuitry internal to the XCCN option card or Modular Controller Master and Data Station Plus.

LED

The LED will illuminate green when the XCCN option card establishes communication with other CANopen devices (RUN). The LED will illuminate red if no communications have been established with other CANopen devices (ERROR).

Monico View SOFTWARE

Monico View software is available as a free download from www.monicoinc.com or it can be purchased on a CD, see "Ordering Information" for part number. The latest version of the software is always available from the web site, and updating your copy is free.

TROUBLESHOOTING YOUR XCCN OPTION CARD

If for any reason you have trouble operating, connecting, or simply have questions concerning your new XCCN option card, contact Monico's technical support. For contact information, refer to the back page of this bulletin for phone and fax numbers.

EMAIL: support@monicoinc.com

Web Site: <http://www.monicoinc.com>

LIMITED WARRANTY

The Company warrants the products it manufactures against defects in materials and workmanship for a period limited to two years from the date of shipment, provided the products have been stored, handled, installed, and used under proper conditions. The Company's liability under this limited warranty shall extend only to the repair or replacement of a defective product, at The Company's option. The Company disclaims all liability for any affirmation, promise or representation with respect to the products.

The customer agrees to hold Red Lion Controls and Monico Monitoring, Inc. harmless from, defend, and indemnify RLC against damages, claims, and expenses arising out of subsequent sales of RLC products or products containing components manufactured by RLC and based upon personal injuries, deaths, property damage, lost profits, and other matters which Buyer, its employees, or sub-contractors are or may be to any extent liable, including without limitation penalties imposed by the Consumer Product Safety Act (P.L. 92-573) and liability imposed upon any person pursuant to the Magnuson-Moss Warranty Act (P.L. 93-637), as now in effect or as amended hereafter.

No warranties expressed or implied are created with respect to The Company's products except those expressly contained herein. The Customer acknowledges the disclaimers and limitations contained herein and relies on no other warranties or affirmations.

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