OPERATING INSTRUCTIONS

EXMOD™ DXM1
RELAY EXPANSION MODULE

Introduction

Please read carefully! No liability can be accepted for damage caused by improper use or installation of the eXmod™ expansion module.

The eXmod™ is a 4-relay output module that connects to select Universal Process Displays via RS-485 serial communication (4-wire). The eXmod is extremely versatile and can be mounted locally or remotely to allow for a purely distributed system. Display(s) can be mounted in the plant or control panel, while the eXmod can be mounted in the motor control cabinet for reduced cost of control wiring. Additionally, the eXmod's BIG 10 AMP AC/DC rated relays bring added value to your control/alarm monitoring systems.

⚠ Safety Precautions

If you are unsure of the suitability of an eXmod™ expansion module for installation, please consult your FLO-Corp representative for further information.

Electrical Shock Hazard

It is possible to contact components that carry high voltage, causing serious injury or death. All power to the eXmod™ and (where applicable) the relay circuit it controls should be turned OFF prior to working on the eXmod™. If it is necessary to make adjustments during powered operation, use extreme caution and use only insulated tools. Making terminal block adjustments or installation adjustments to a powered eXmod™ is not recommended by Flow Line Options Corporation.

Flammable or Explosive Applications

FLO-CORP manufactures several different display models with different mounting and internal configurations. It is the user's responsibility to select a controller model that is appropriate for the application, install it properly, perform tests on the installed system, and maintain all components.

Attention

eXmod™ Expansion Module products are compatible with supply voltage of 90-265 VAC or 12-28 VDC. Please respect the polarity of the power terminals as indicated in this user's manual and on the instrument itself. FLO-CORP assumes no responsibility for incorrect wiring of the eXmod™. Any instrument connected to the eXmod™ Expansion Module are not recommended for life support applications or applications where malfunctioning could result in personal injury or property loss. Anyone using this product for these types of applications should do so at his or her own risk. FLO-CORP will not be held liable for damages resulting from such improper use.

Disclaimer

The information contained in this document is subject to change without notice. FLO-CORP makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for a particular purpose.

Incorrect Wiring

FLO-CORP assumes no responsibility for users incorrectly wiring their eXmod™ Expansion Module (including but not limited to): Supply Voltage, RS485 Communication and normally open, or normally closed relay output.. Please refer to the wiring diagrams for correct wiring of the eXmod™ Expansion Module.

Description

The eXmod™ is a 4-relay output module that connects to select Universal Process Displays via RS-485 serial communication (4-wire). The eXmod is extremely versatile and can be mounted locally or remotely to allow for a purely distributed system. Display(s) can be mounted in the plant or control panel, while the eXmod can be mounted in the motor control cabinet for reduced cost of control wiring. Additionally, the eXmod's BIG 10 AMP AC/DC rated relays bring added value to your control/alarm monitoring systems.
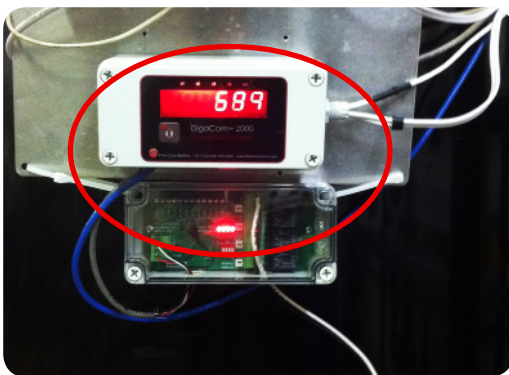
Features & Benefits

- Relay Setpoint for Rate or Total
- Auto or Manual Reset of Relay - Latching or Non-Latching Relay Logic
- NEMA 4X Enclosure
- Expands Capabilities of Universal Process Displays
- Increase Wiring Flexibility
- Stocking Efficiencies
- Economical Solution

Compatible Units

Display™

Application Photo

The eXmod™ Relay Expansion Module shown in pump activation application

Specifications

|	
Status Indicators	(4) Red LED Relay Indicators
User Interface	4 internal DIP Switches Used To Select ModBus® Address
Contact Form	SPDT
Relay Rating	5A @ 28 VDC; 5A @ 120/240 VDC at Max Ambient Temperature; NO Contact Rated at 10A @ 20˚C
Operating Temperature	F: -40º to 149º C: -40º to 85º
Storage Temperature	F: -40º to 149º C: -40º to 85º
Relative Humidity	0-90%, non-condensing
Supply Voltage	12-24 VDC
Connection	Removable Screw Terminal; Accepts 12-22 AWG Wire
Enclosure Type	Panel/Field Mount
Enclosure Rating	NEMA 4X (IP65)
Enclosure Material	Polycarbonate
Classification	General Purpose
Display Compatibility	Display™ and DigaTouch™ Universal Process Displays Only

Specifications are subject to change without notice.

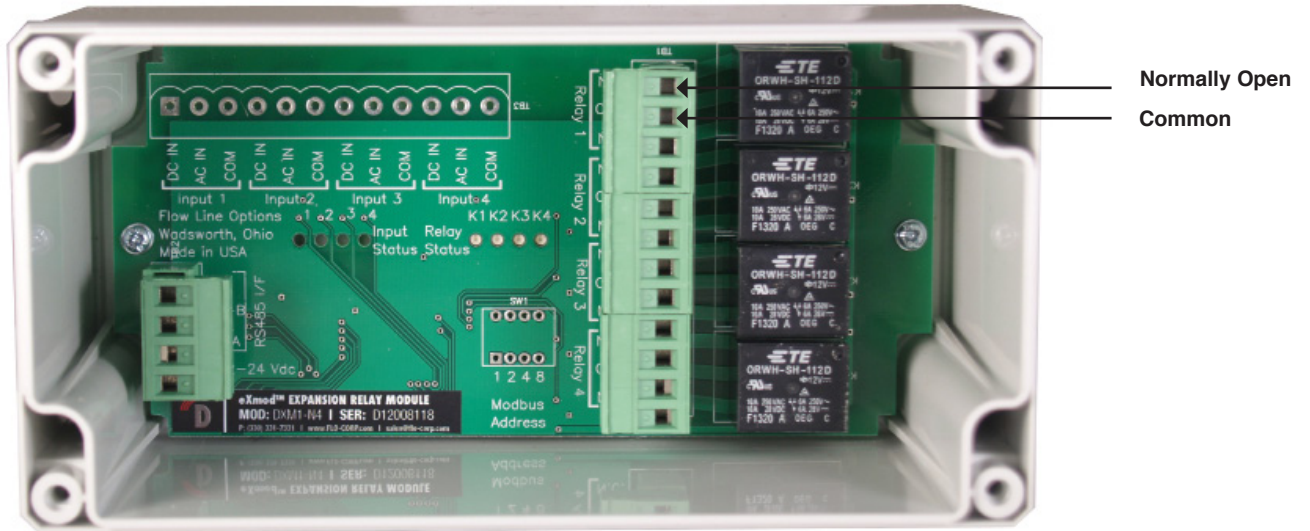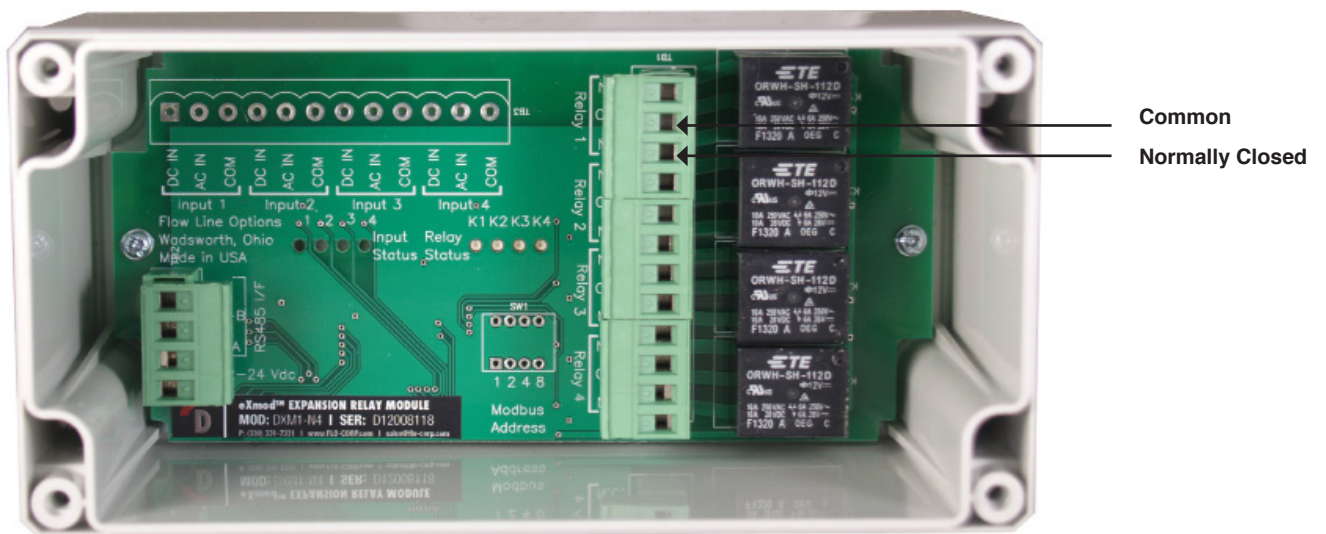# WIRING DIAGRAM: Display + eXmod

Display™ shown

eXmod™ shown
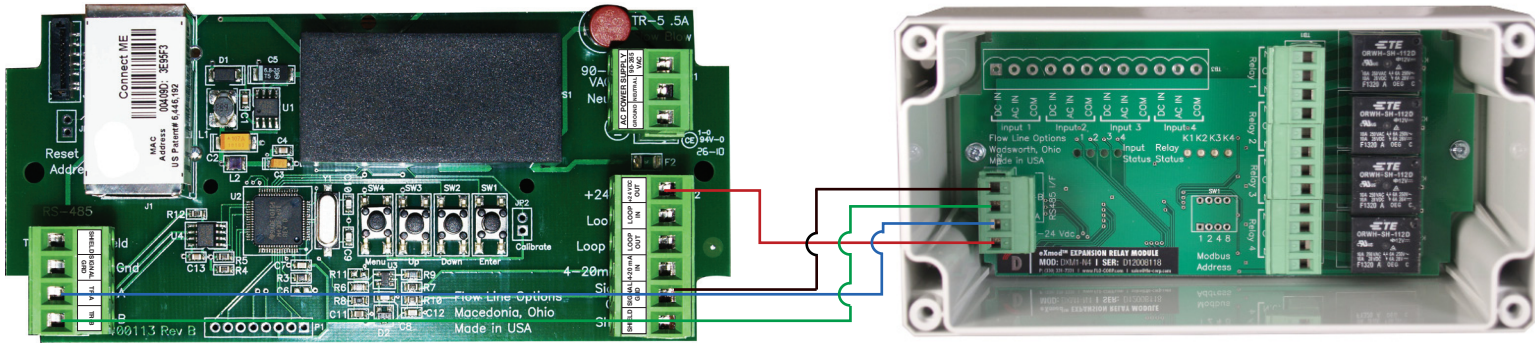
- 🟥 **+ 24 VDC**
- 🟦 **TRANSIT / RECEIVE A**
- 🟩 **TRANSIT / RECEIVE B**
- ⬛ **GROUND**

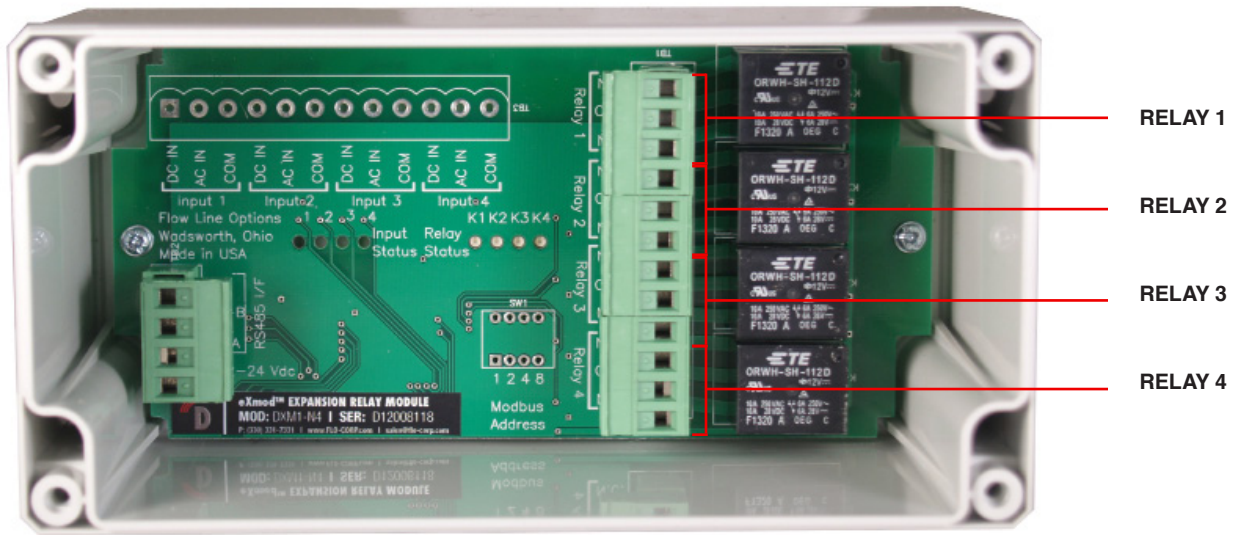**WIRING DIAGRAM:** Normally Open / Normally Closed

To configure the Relay for Normally Open Follow the wiring diagram below.

To configure the Relay for Normally Closed Follow the wiring diagram below.

WIRING DIAGRAM: Relay 1,2,3,4

RELAY 1

RELAY 2

RELAY 3

RELAY 4

To configure Relay Actuation:

Press: Menu
  Display indicates: rELAY (Relay)
Press: Enter
  Display indicates: rELAY 1
Press: Enter to configure Relay 1 or press Down to scroll to desired relay
  Display indicates: Act (Actuation)
Press: Enter to adjust Actuation parameter or press down to select rate/total
  Display indicates: OFF (Relay Actuation OFF)
Press: Down
  Display indicates: AtorSt (Auto Reset Actuation: non-latching)
Press: Down for additional Actuation Options or Press: Enter to select Auto Reset Relay Actuation
  Display indicates: AtoNAn (Auto and Manual Relay Actuation: reset at anytime)
Press: Down for additional Actuation Options or Press: Enter to select Auto and Manual Relay Actuation
  Display indicates: LAtch (Latching Actuation: manual reset only)
Press: Down for additional Actuation Options or Press: Enter to select Latch Relay Actuation
  Display indicates: LtchCL (Latch with Clear Actuation: manual reset only after alarm condition has cleared)
Press: Down to recycle through Actuation Options or Press: Enter to select Latch Relay Closed Actuation

To configure Rate or Total Relay Actuation

Press: Menu
  Display indicates: rELAY (Relay)
Press: Enter
  Display indicates: rELAY 1
Press: Enter to configure Relay 1 or press Down to scroll to desired relay
  Display indicates: Act (Actuation)
Press: Down
  Display indicates rAttot (Rate Total)
Press: Enter
  Display indicates Rate
Press: Down for Totalizer Option or Press: Enter for Relay Activation of process rate or Display indicates totAL (Total)
Press: Enter for Relay Activation of Process Total or press down to recycle through the Rate/Total Relay Activation Menu

To configure Relay Fail Safe

Press: Menu
  Display indicates: rELAY (Relay)
Press: Enter
  Display indicates: rELAY 1
Press: Enter to configure Relay 1 or press Down to scroll to desired relay
  Display indicates: Act (Actuation)
Press: Down
  Display indicates rAttot (Rate Total)
Press: Down
  Display indicates FLSAFE (Fail Safe)
Press: Enter
  Display indicates: OFF
Press: Down to scroll to ON or Press: Enter to leave Fail Safe OFF

To Configure Relay ON/OFF Activation

Press: Menu
> Display indicates: rELAY (Relay)

Press: Enter
> Display indicates: rELAY 1

Press: Enter to configure Relay 1 or press Down to scroll to desired relay
> Display indicates: Act (Actuation)

Press: Down
> Display indicates rAttot (Rate Total)

Press: Down
> Display indicates FLSAFE (Fail Safe)

Press: Down
> Display indicates r1 On (Relay 1 On Point)

Display indicates: 00000.0 with the left most digit blinking
Configure the Level or Rate that Relay 1 will activate
Press UP to configure the numeral value
> - Press DOWN to scroll to the next numeral

Repeat the above steps until desired Level or Rate Relay 1 ON Value is indicated
> -Press Enter
> -Display indicates r1 OFF (Relay 1 OFF)

Press: Enter to configure Relay 1 OFF Value
> -Display indicates: 00000.0 with the left most digit blinking

Configure the Level or Rate that Relay 1 will Deactivate
Press UP to configure the numeral value
> - Press DOWN to scroll to the next numeral

Repeat the above steps until desired Level or Rate Value Relay 1 OFF Value is indicated
> -Press Enter

Display will indicate r2 On (Relay 2 ON)
> -Repeat the above steps to configure Relays 2, 3 and 4.
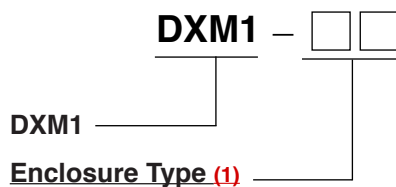
Ordering Information

FLO-CORP MODEL NUMBER BUILDER   For Assistance Call **877.FLO.LINE**

Use the diagram below, working from left to right to construct your FLO-Corp Model Number.
Simply match the category number to the corresponding box number.

Example: DXM1-NN   *eXmod™ Expansion Module, General Purpose Enclosure*

DXM1 – ☐☐

DXM1

Enclosure Type (1)

NN) General Purpose *(No Enclosure - Surface Mount)*
N4) NEMA 4X (IP65)
N7) NEMA 7

Ordering Notes:
(1) Select the best configuration based on your requirements