



ProMix® PD2K CGM Installation Kits

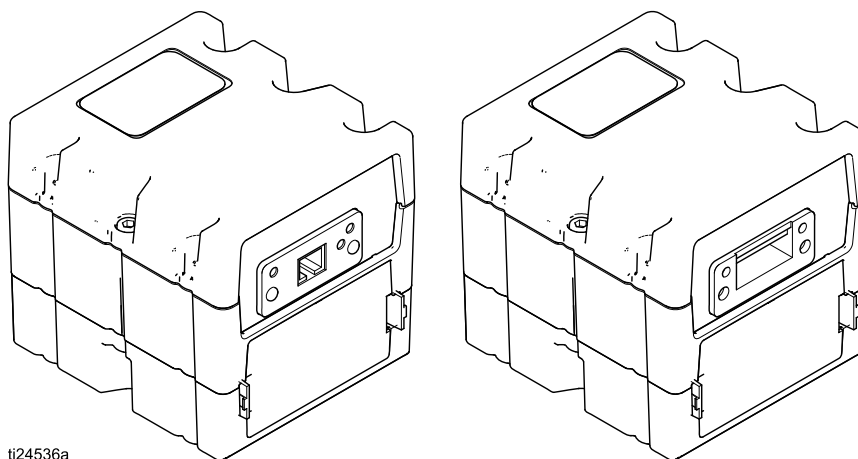
334494E
EN

For use with the ProMix® PD2K to provide FieldBus communication abilities. For professional use only.



Important Safety Instructions

Read all warnings and instructions in this manual and in your system installation, operation, and repair manuals. Save these instructions.



ti24536a

Contents

Related Manuals	2	Troubleshooting.....	6
Introduction	3	Parts.....	7
Installation.....	4	Appendix A: Graco PD2K Integration with a PLC.....	9
Mount the Module	4		
Connect the Cables.....	5		

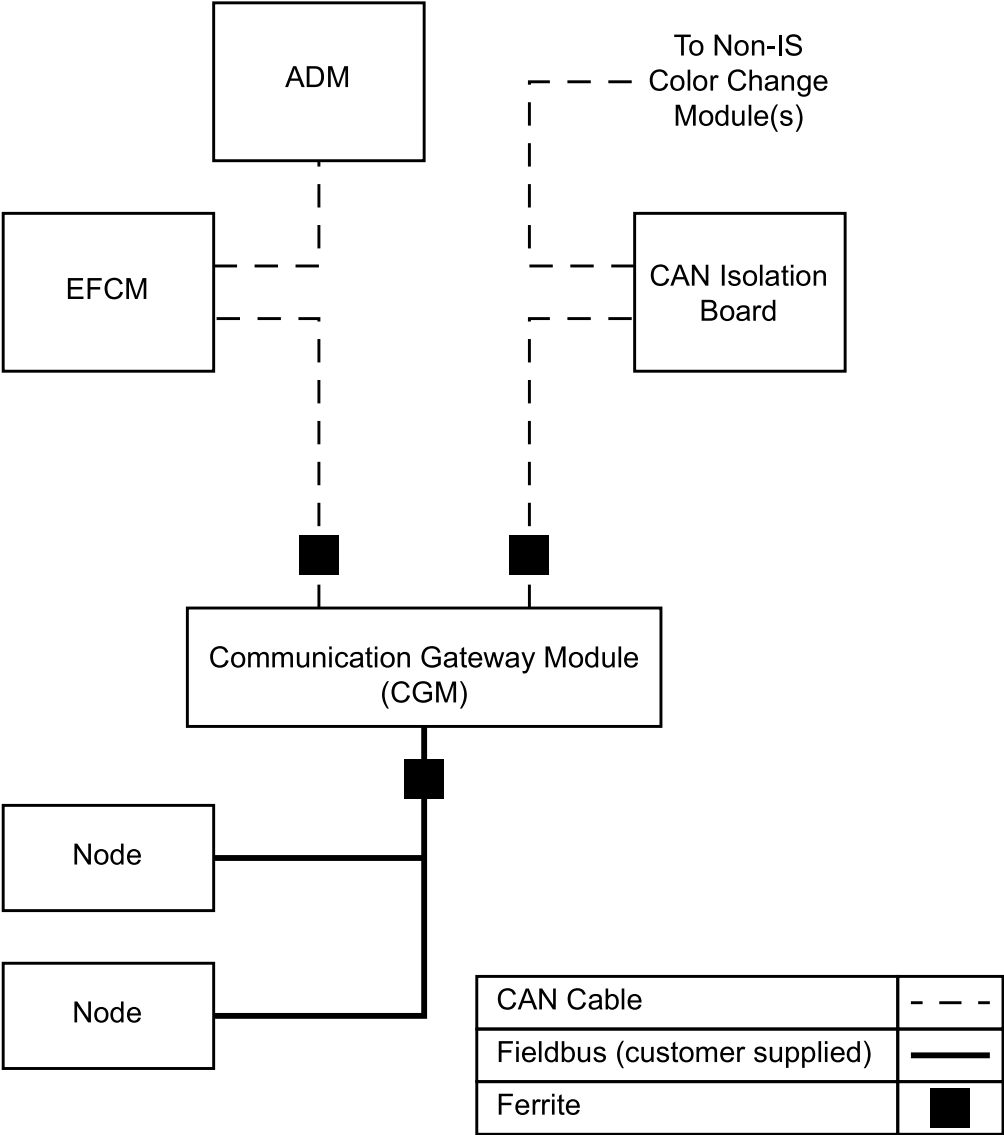
Related Manuals

Current manuals are available at www.graco.com.

Manual No.	Description
332458	ProMix PD2K Proportioner for Automatic Spray Applications, Installation
332564	ProMix PD2K Proportioner for Automatic Spray Applications, Operation
332709	ProMix PD2K Proportioner for Automatic Spray Applications, Repair-Parts
3A4486	ProMix PD2K Dual Panel Proportioner for Automatic Spray Applications, Operation
332339	Dosing Pumps, Instructions/Parts
332454	Color/Catalyst Dispense Valves, Instructions/Parts
332455	Color Change Kits, Instructions-Parts
333282	Color Change and Remote Mix Manifold Kits, Instructions-Parts
332456	Pump Expansion Kits, Instructions-Parts
312864	Communications Gateway Module (for DeviceNet, EtherNet/IP, PROFIBUS, and PROFINET), Instructions-Parts
334183	Communications Gateway Module (for Modbus TCP), Instructions-Parts

Introduction

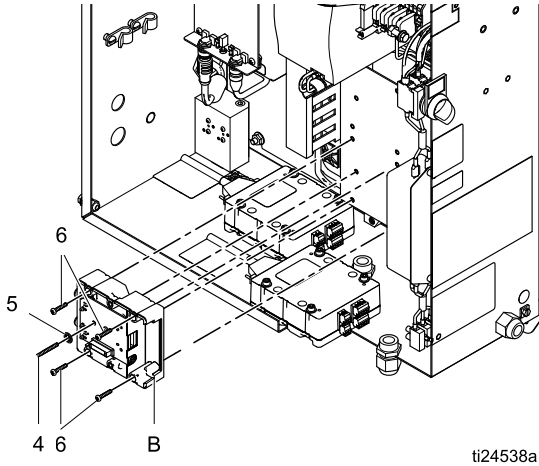
This manual provides instructions for installing a communication gateway module (CGM) in a ProMix® PD2K system. See Manual 334183 for detailed information on the CGM for the Modbus TCP protocol. See Manual 312864 for further information on the CGM for the DeviceNet, EtherNet/IP, and PROFINET protocols. See the ProMix PD2K Operation Manual 332564 or ProMix PD2K Dual Panel Operation Manual 3A4486 for setup details and available internal data.



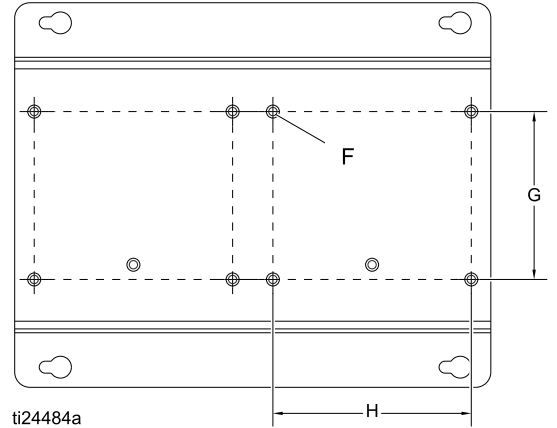
Installation

Mount the Module

1. Remove power from the system.
2. Install the CGM on the mounting bracket in the Electrical Control Box.

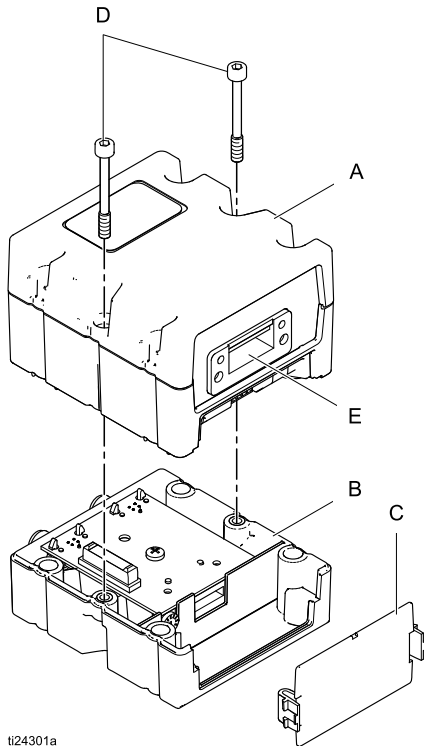


- b. Use four screws (6) to mount the base (B) to the CGM bracket in the Electrical Control Box. See the following mounting dimensions.



F	10 x 0.213 in. hole size
G	2.75 in. (70 mm)
H	3.25 in. (83 mm)

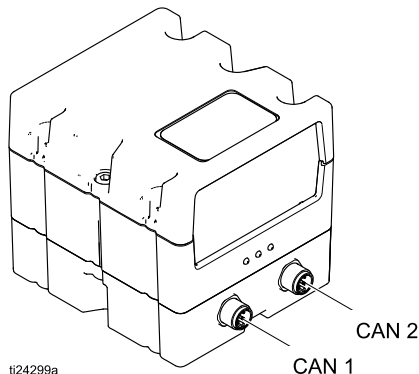
- a. Remove access cover (C). Loosen two screws (D) and remove CGM (A) from the base (B).



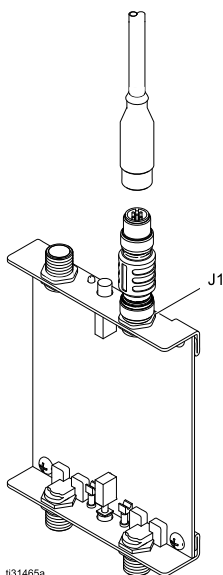
- c. Install the grounding screw (4) and washer (5) and tighten so that the grounding screw threads into the mounting bracket.
- d. Mount the CGM (A) on the base (B) with two screws (D).
- e. Install the access cover (C).

Connect the Cables

NOTE: CAN ports are located on the base of the cube-shaped modules.



1. Disconnect the existing CAN cable from Isolation Board port J1 and connect it to CAN1 of the CGM module.
2. Connect the supplied CAN cable (2) to CAN2 of the CGM module and to port J1 of the Isolation Board.



3. Route both CAN cables through the wire duct adjacent to the left side of the CGM.

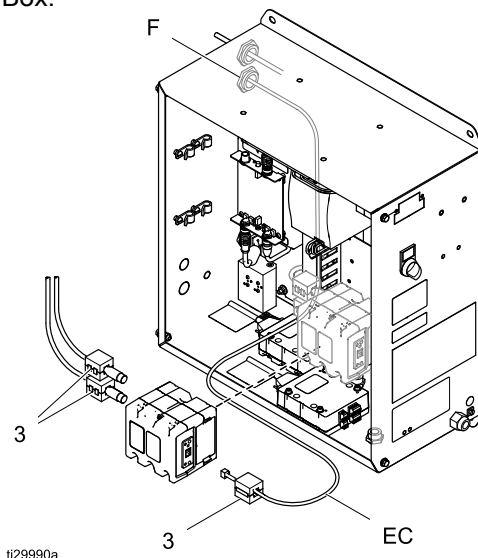
NOTICE

To avoid severe damage to the CGM modules, ensure that each CAN cable is connected to the appropriate CAN connection.

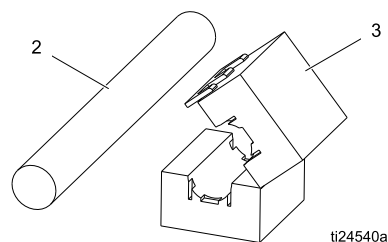
4. If used, connect the ethernet, DeviceNet, or PROFINET cable to the CGM as applicable. Connect the other end of the cable to the FieldBus device.

NOTE: Connect the CGM to the FieldBus per FieldBus standards. The Ethernet and Modbus TCP interface operate at 100Mbit, full duplex. The interface is auto polarity sensing and auto-crossover capable.

- a. Locate fitting (F) on the Electrical Control Box.

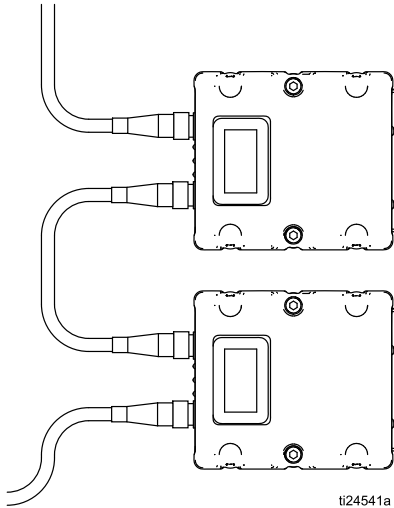


- b. Disconnect the CAN cable from Isolation Board J4.
 - c. Remove the nut on fitting (F).
 - d. Remove the fitting far enough to allow disassembly of the fitting and to open the grommet.
 - e. Route FieldBus cable (EC) through the left wireway up to the grommet. Ensure that the ethernet cable is inserted with enough length to allow for routing within the box and for connection to the CGM.
 - f. Insert the FieldBus cable into the grommet and insert the grommet into the fitting.
 - g. Insert the fitting through the Electrical Control Box wall and install the nut. Tighten finger tight.
 - h. Attach the CAN cable to Isolation Board J4.
 - i. Attach a ferrite (3) near the end of the FieldBus cable.
 - j. Attach the FieldBus cable to the CGM.
5. Connect ferrites (3) on CAN cables, adjacent to the CGM.

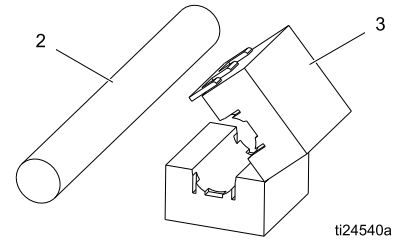


To Connect a Second Module

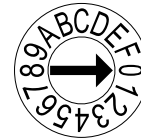
1. Install the new module (see [Mount the Module, page 4](#)).
2. Disconnect the cable from CAN 1 on the first module. Connect it to CAN 1 on the newly installed second module.
3. Connect the supplied CAN cable (2) to CAN 1 on the first module and to CAN 2 on the newly installed second module.



4. Connect ethernet, DeviceNet, or PROFINET, if used. (See step 4 of [Connect the Cables, page 5](#).)
5. Connect ferrites (3) on CAN cables, adjacent to the CGM.



NOTE: If both modules are Modbus TCP, the rotary switch on one must be set at position "0" and the other should be set to position "1".



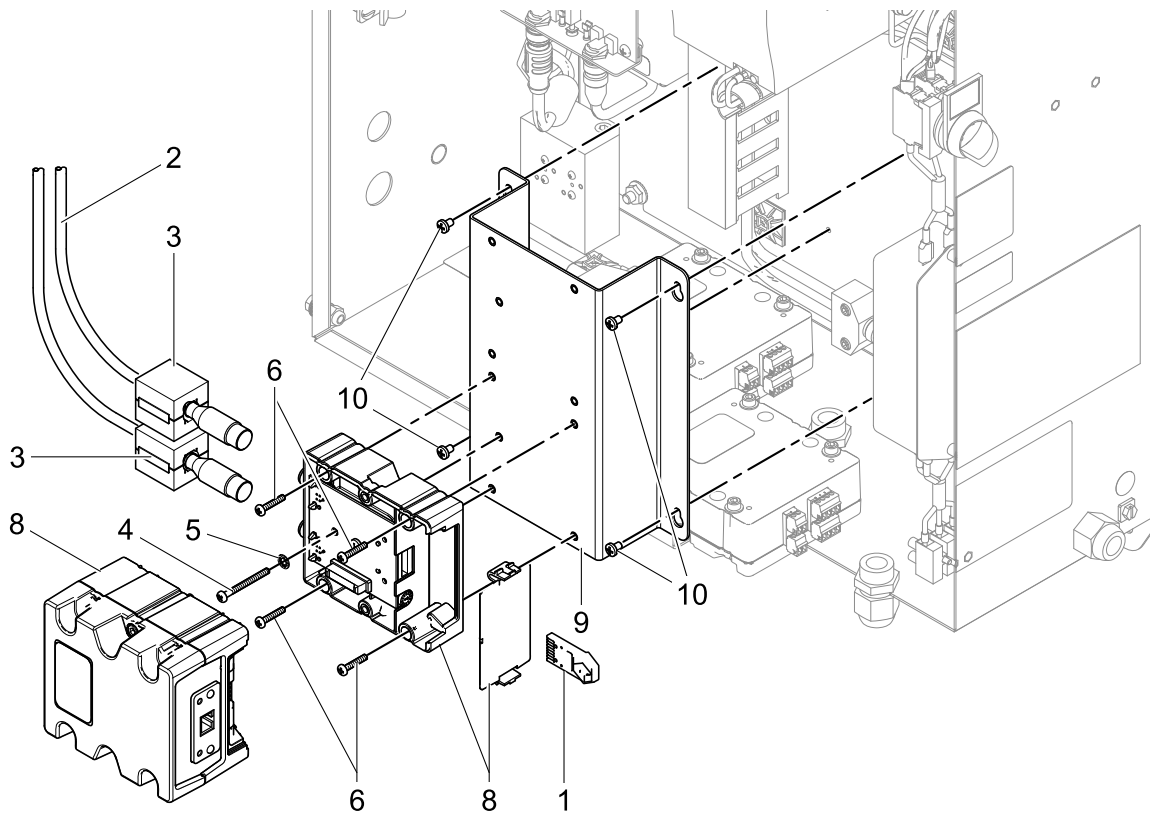
NOTICE

To avoid severe damage to the CGM modules, ensure that each CAN cable is connected to the appropriate CAN connection.

Troubleshooting

This manual provides instructions for installing a communication gateway module (CGM) in a ProMix® PD2K system. See Manual 334183 for detailed information on the CGM for the Modbus TCP protocol. See Manual 312864 for further information on the CGM for the DeviceNet, EtherNet/IP, and PROFINET protocols. See the ProMix PD2K Operation Manual 332564 or ProMix PD2K Dual Panel Operation Manual 3A4486 for setup details and available internal data.

Parts



ti24537b

Kit 24W829 ProMix PD
Kit 26A303 ProMix PD Dual Mix
Kit 25D997 ProMix PD Dual Mix with ProfiNet
Kit 26C284 ProMix PD3K+

Ref	Part	Description	Qty
1	17C087	TOKEN, map, for ProMix PD only	1
	17N995	TOKEN, map, for ProMix PD Dual Mix only	1
	17W599	TOKEN, map, for ProMix PD3K+ only	1
2	121227	CABLE, CAN, female/female, 0.6m	1
3	121901	SUPPRESSOR, box snap, ferrite	2
4	123286	SCREW, machine, #6-32 x 1.5 in.	1
5	100272	WASHER	1
6	113964	SCREW, pan head, #6-32 x 0.75 in.	4
8 *		MODULE, Communications Gateway	1
	CGMDNO	DeviceNet	
	CGMEPO	EtherNet/IP	
	CGMPNO	PROFINET	
	24W462	Modbus TCP	
9	16V797	BRACKET, mount	1
10	112144	SCREW, pan head	4

* Included in kit 25D997. Not included in kit 24W829, 26A303, or 26C284. See Manual 312864 for parts list for CGMxxx models. See Manual 334183 for parts list for 24W462.

Appendix A: Graco PD2K Integration with a PLC

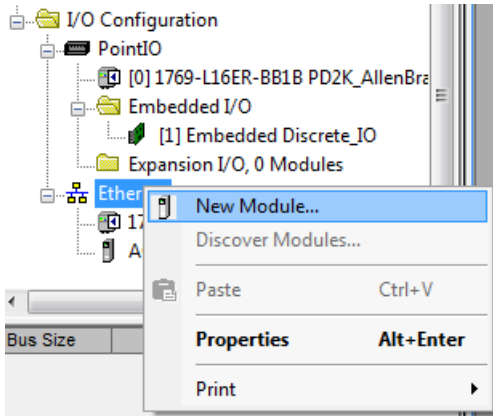
Allen Bradley PLC

This appendix outlines how to integrate a ProMix PD2K with an Allen Bradley Studio 5000 Programmable Logic Controller (PLC).

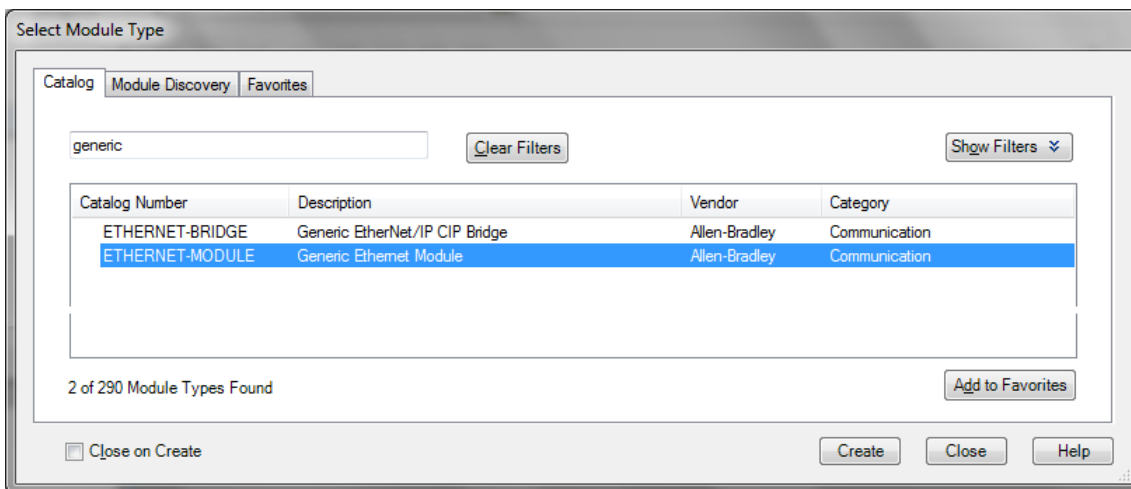
To integrate, the ProMix PD2K must have the Ethernet/IP protocol for PLC CGM (Graco Part number CGMEPO) installed prior to performing this procedure.

In the PLC software, perform the following steps:

1. Add the new Ethernet module. Right-click and select **New Module**.

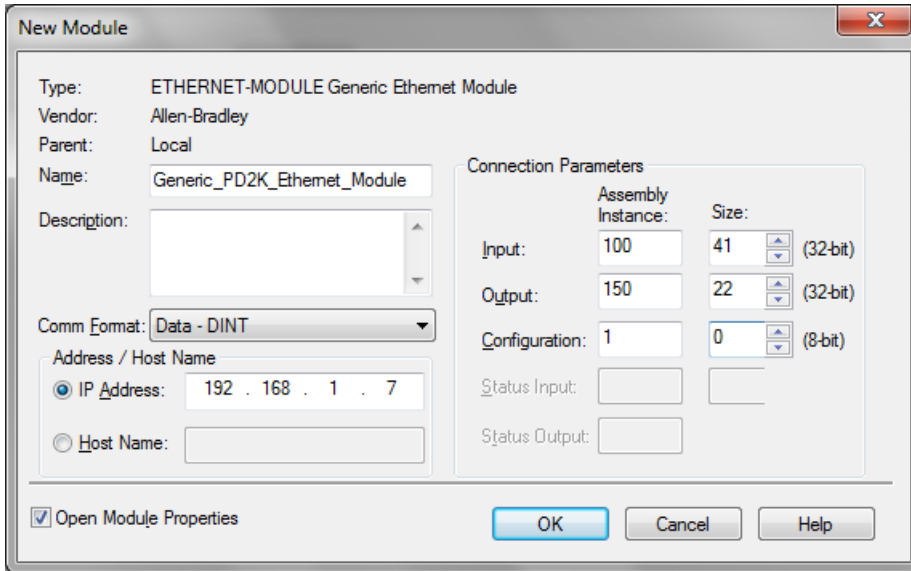


2. On the **Select Module Type** screen, do the following:



- a. In the search field, type **generic**.
- b. Select **ETHERNET-MODULE Generic Ethernet Module**.
NOTE: Do not select the Close on Create checkbox.
- c. Click **Create**.

3. On the **New Module** screen, configure the module by defining the fields as follows:

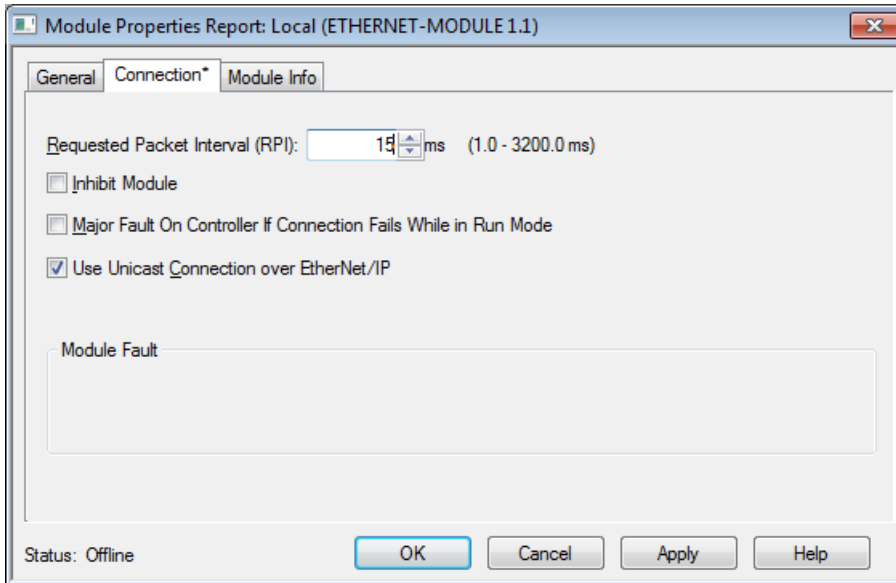


NOTE: The **Open Module Properties** checkbox must remain selected so that the configuration can be completed after completing this screen.

Field	Required?	Input
Name	Yes	Enter a name for the module. The name appears in the Ethernet directory shown by the figure in step 1.
Description	No	Use any description desired.
IP Address	Yes	Enter the static IP address of the Graco EtherNet/IP CGM installed in the system.
Input Assembly Instance	Yes	Enter 100 , which is a device-specific parameter for the Graco EtherNet/IP CGM.
Input Size	Yes	Enter the number of 32-bit registers that are allocated for input variables in the Graco EtherNet/IP CGM. <ul style="list-style-type: none"> • For ProMix PD systems, enter 41. • For ProMix PD2K Dual Panel systems, enter 62. • For ProMix PD3K+ systems, enter 46.
Output Assembly Instance	Yes	Enter 150 , which is the device-specific parameter for the Graco EtherNet/IP CGM.
Output Size	Yes	Enter the number of 32-bit registers that are allocated for output variables in the Graco EtherNet/IP CGM. <ul style="list-style-type: none"> • For ProMix PD systems, enter 22. • For ProMix PD2K Dual Panel systems, enter 30. • For ProMix PD3K+ systems, enter 18.
Configuration Assembly Instance	Yes	Enter 1 .
Configuration Size	Yes	Enter 0 .

4. Click **OK**.

5. On the **Module Properties Report** window, on the **Connection** tab, do the following:



- a. In the **Requested Packet Interval (RPI)** field, enter the interval value.
For ProMix PD systems, enter a value of **30** ms or more.
For ProMixPD Dual Mix and ProMix PD3K+ systems, enter a value of **50** ms or more.
- b. Select checkboxes as needed.
- c. Click **OK** to save all changes and exit this screen.
NOTE: An asterisk appears after the tab heading if unsaved changes are present. Click **Apply** to save changes without exiting this screen.

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Information

For the latest information about Graco products, visit www.graco.com.

To place an order, contact your Graco Distributor or call to identify the nearest distributor.

Phone: 612-623-6921 **or Toll Free:** 1-800-328-0211 **Fax:** 612-378-3505

All written and visual data contained in this document reflects the latest product information available at the time of publication.

Graco reserves the right to make changes at any time without notice.

For patent information, see www.graco.com/patents.

Original Instructions. This manual contains English. MM 334494

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA

Copyright 2014, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.

www.graco.com
Revision E, November 2022