ProBell™ System

CGM Installation Kit 24Z574

For use when installing a Communication Gateway Module in a ProBell System 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.
### Related Manuals

<table>
<thead>
<tr>
<th>Manual No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>334452</td>
<td>ProBell Rotary Applicator</td>
</tr>
<tr>
<td>334626</td>
<td>ProBell Rotary Applicator, Hollow Wrist Style</td>
</tr>
<tr>
<td>3A3657</td>
<td>ProBell Electrostatic Controller</td>
</tr>
<tr>
<td>3A3953</td>
<td>ProBell Speed Controller</td>
</tr>
<tr>
<td>3A3954</td>
<td>ProBell Air Controller</td>
</tr>
<tr>
<td>3A3955</td>
<td>ProBell System Logic Controller</td>
</tr>
<tr>
<td>3A4232</td>
<td>ProBell Cart Systems</td>
</tr>
<tr>
<td>3A4346</td>
<td>ProBell Hose Bundle</td>
</tr>
<tr>
<td>334183</td>
<td>Modbus TCP Communication Gateway Module</td>
</tr>
<tr>
<td>312864</td>
<td>DeviceNet, Ethernet/IP, PROFINET Communication Gateway Modules</td>
</tr>
</tbody>
</table>
Introduction

This manual provides instructions for installing a communication gateway module (CGM) in a ProBell™ system. This kit contains mounting hardware, cables, and a programming token specific to the ProBell. A Communication Gateway Module (purchased separately) is needed to complete the installation.

- See Manual 334183 for detailed information on the CGM for Modbus TCP protocol.
- See Manual 312864 for further information on the CGM for DeviceNet, EtherNet/IP and PROFINET protocols.
- See the ProBell Logic Controller manual (3A3955) for setup details and available internal data.

![ProBell System Communication Diagram](image-url)
Installation

Mount the Module

1. Remove power from the system.
2. Remove access cover (C). Loosen two screws (D) and remove CGM (A) from the base (B). See Figure 2.

3. A CGM can be installed in a speed control box, electronic air control box, or a manual air control box.

   a. Use four screws (6) to mount the base (B) in the electrical control box (see Figures 3, 4, and 5 above).
   b. Install the grounding screw (4) and washer (5) and tighten so that the grounding screw threads into the mounting bracket.
   c. Mount the CGM on the base with the two previously removed screws and replace the access cover.
Connect the Cables

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

1. Install the CGM module (see Mount the Module, page 4)
   a. For speed control modules: Disconnect the cable from CAN 1 on the control module. Connect it to CAN 1 on the CGM, and connect the supplied CAN cable from CAN 1 on the control module to CAN 2 on the CGM.
   b. For air control modules: Disconnect the cable from CAN 2 on the control module. Connect it to CAN 2 on the CGM, and connect the supplied CAN cable from CAN 1 on the CGM to CAN 2 on the control module.

2. Clamp the 2 ferrites (3) onto the CGM cables.

3. If used, connect the ethernet or DeviceNet 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.

Install Cable Fitting

1. Locate the 1–5/16" plug on the side of the control box enclosure. (See Figures 8 and 9).

2. Remove the plug with a screwdriver or other device by pushing from the inside of enclosure.

3. Locate cable fitting that came with the kit. Pop open cable fitting (with screwdriver, if necessary) and remove grommet.

4. Open grommet and place FieldBus cable (EC) (Figure 10) inside, making sure there is enough length coming out to allow for routing within the box and for connection to the CGM (9).

5. Close grommet.

6. Place grommet back inside of cable fitting, and close fitting.

7. Insert cable/fitting (8) into control box hole.
Installation

8. Install nut to fitting on the inside of enclosure to keep the cable fitting in place (see Figures 8 and 9).

Install the Data Map

**NOTICE**
The Data Map must be installed before operation.

Install the Data Map from the Map Token. See installation instructions in the gateway manual (312864 or 3A3955).
### Kit 24Z574

<table>
<thead>
<tr>
<th>Ref</th>
<th>Part</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24Z578</td>
<td>TOKEN, map, for ProBell</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>130193</td>
<td>CABLE, CAN, female/female, 0.5m</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>121901</td>
<td>SUPPRESSOR, box snap, ferrite</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>—</td>
<td>SCREW, machine, #6–32 x 1.5 in.</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>—</td>
<td>WASHER</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>—</td>
<td>SCREW, pan head, #6–32 x 0.75 in.</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>—</td>
<td>GROMMET, Bulkhead, cable entry</td>
<td></td>
</tr>
<tr>
<td>9★</td>
<td></td>
<td>MODULE, Communications Gateway</td>
<td>1</td>
</tr>
</tbody>
</table>

CGMDN0  DeviceNet  
CGMEP0  EtherNet/IP  
CGMPN0  PROFINET  
24W462  Modbus TCP  

★ Not included in kit. See Manual 312864 for parts list for CGMxxx models. See Manual 334183 for parts list for 24W462.
Appendix A: Integration with Allen Bradley PLC

Appendix A: Integration with Allen Bradley PLC

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

To integrate, the ProBell system 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.

2. The Select Module Type screen opens.

   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 the Create button.

3. The New Module screen opens.

   a. Name (required): Enter a name for the module (select a name that will have meaning for you when viewed on the Ethernet directory shown by the figure in step 1).
   b. Description (optional): Use any description desired.
   c. IP Address (required): Enter the static IP address of the Graco EtherNet/IP CGM installed in the ProMix PD2K.
   d. Input: Assembly Instance (required): Enter “100”, which is a device-specific parameter for the Graco EtherNet/IP CGM.
   e. Input: Size (required): Enter “36”, which is the number of 32-bit registers that are allocated for input variables in the Graco EtherNet/IP CGM.
   f. Output: Assembly Instance (required): Enter “150”, which is the device-specific parameter for the Graco EtherNet/IP CGM.
   g. Output: Size (required): Enter “26”, which is the number of 32-bit registers that are allocated for output variables in the Graco EtherNet/IP CGM.
   h. Configuration: Assembly Instance (required): Enter “1”.
   i. Configuration: Size (required): Enter “0”.
   j. Click the OK button. The Module Properties Report window will be displayed.
4. On the Connection tab:

**NOTE:** An asterisk appears after the tab heading if unsaved changes are present. Click the Apply button to save changes without exiting this screen.

a. Enter a Requested Packet Interval (RPI) value.
   **NOTE:** Graco recommends a value of 30 ms or greater.

b. If desired, select the available checkboxes.

c. Click the OK button to save all changes and exit this screen.

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<table>
<thead>
<tr>
<th>Table 1 Potential Configuration Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Connection Request</strong></td>
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<tr>
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<td><strong>Connection Request</strong></td>
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<tr>
<td><strong>Connection Request</strong></td>
</tr>
<tr>
<td><strong>Module Configuration Rejected — Format Error</strong></td>
</tr>
</tbody>
</table>
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.

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

Original Instructions. This manual contains English. MM 3A4384

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