Product manual
PGMMOD05
Display / programming front

FM APPROVED

c UL us LISTED
E179259

UK CA

CE

Drawing No. LP1200 Rev A
From serial no.: 221207001
Revision Date July 2023

Display / programming front PGMMOD05

Contents

Warning

GENERAL

This device is designed for connection to hazardous electric voltages. Ignoring this warning can result in severe personal injury or mechanical damage.
To avoid the risk of electric shock and fire, the safety instructions of this guide must be observed and the guidelines followed. The specifications must not be exceeded, and the device must only be applied as described in the following.
Prior to the commissioning of the device, this installation guide must be examined carefully.
Only qualified personnel (technicians) should install this device.
If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Repair of the device must be done by Red Lion Controls only.

Symbol identification

Triangle with an exclamation mark: Read the manual before installation and commissioning of the device in order to avoid incidents that could lead to personal injury or mechanical damage.

The CE mark proves the compliance of the device with the essential requirements of the EU directives.

The UKCA mark proves the compliance of the device with the essential requirements of the UK regulations.

Safety instructions

Receipt and unpacking

Unpack the device without damaging it and check whether the device type corresponds to the one ordered. The packing should always follow the device until this has been permanently mounted.

Environment

Avoid direct sunlight, dust, high temperatures, mechanical vibrations and shock, as well as rain and heavy moisture. If necessary, heating in excess of the stated limits for ambient temperatures should be avoided by way of ventilation.
The device must be installed in pollution degree 2 or better.
The device is designed to be safe at least under an altitude up to 2 000 m.
The device is designed for indoor use.
If the equipment is installed within an ultimate enclosure, the inner service temperature of the enclosure corresponds to the ambient temperature of the device.
If the device is operated in an ambient temperature between +55°C and +60°C, the temperature of the device housing may be higher than +60°C. The device must therefore be installed so that it is only accessible to service personnel or users that are aware of the reason for restricted access and the required safety measures at an ambient temperature of +55°C to +60°C.

Mounting

Only qualified technicians who are familiar with the technical terms, warnings, and instructions in this installation guide and who are able to follow these should connect the device. Only devices which are undamaged and free of moist and dust may be installed. The device may be installed and supplied by PGMMOD02 and IAMS/AFCM/IFM devices only.

Should there be any doubt as to the correct handling of the device, please contact your local distributor or, alternatively,

Red Lion Controls
www.redlion.net

Cleaning

When disconnected, the device may be cleaned with a cloth moistened with distilled water.

Warranty

Red Lion Controls offers a 5-year warranty on this product.

Liability

To the extent the instructions in this manual are not strictly observed, the customer cannot advance a demand against Red Lion Controls that would otherwise exist according to the concluded sales agreement.

Mounting / demounting of a PGMMOD communication interface

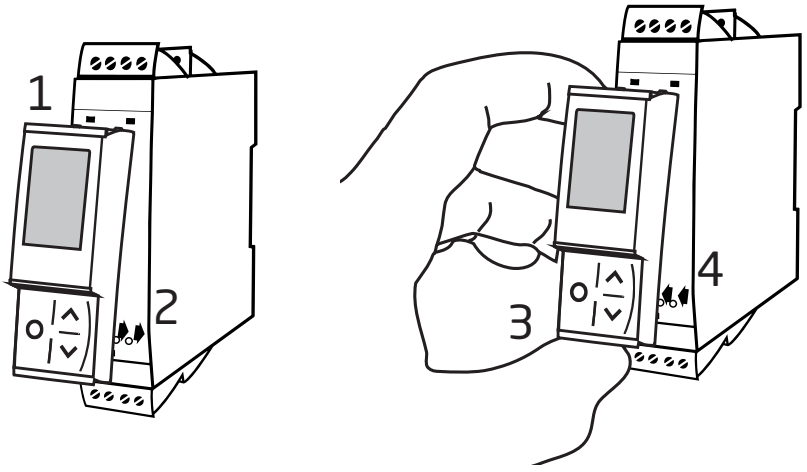
Communication interfaces in the PGMMOD series are detachable displays that can be mounted on a PGMM0D02 or all IAMS/ AFCM/IFM fronts for programming and signal monitoring.

Mounting

1: Insert the tabs of the PGMMOD into the holes at the top of the device.
2: Hinge the PGMMOD down until it snaps into place.

Demounting

3: Push the release button on the bottom of the PGMMOD and hinge the the PGMMOD out and up.
4: With the PGMMOD hinged up, remove from the holes at the top of the device.



Display / programming front
PGMMOD

- Programming display for all past and present IAMS/AFCM/IFM devices
- Monitor process value and status from the built-in display
- Scrolling help text in 7 languages

Applications

- Communications interface for programming and modification of operational parameters.
- The easily readable PGMMOD display can be used to monitor the process signal, simulate the output signal, indicate sensor errors and internal device errors.
- The PGMMOD can be moved from one device to another. The individual system IAMS/AFCM/IFM device configuration of a transmitter can be saved and downloaded to subsequent transmitters.

Technical characteristics

- Easy-to-read dot matrix LCD display.
- Backup memory for loading and saving of device configuration.
- Programming access can be blocked by assigning a password. The password is saved in the device in order to ensure a high degree of protection against unauthorized modifications to the configuration.

Mounting / installation / programming

- Mounting in Zone 2 / Div 2.
- All configuration data from an IAMS/AFCM/IFM device can be transferred to a PC using the PGMMOD02.
- When mounted on devices that are installed upside down, a menu item allows the display on the PGMMOD to be rotated 180° and the up/down buttons to switch function.
- The PGMMOD is approved and certified as an add-on component for the IAMS/AFCM/IFM series of devices. All technical characteristics are valid with the PGMMOD attached.

Ordering information

Description	Part Number
Display / programming front	**PGMMOD05**
Programming module kit	**PGMMOD02**

Electrical specifications

Environmental conditions:

Operating temperature . . . . . -20°C to +60°C
Storage temperature . . . . . -20°C to +85°C
Humidity. . . . . < 95% RH (non-cond.)
Protection degree . . . . . IP20 when installed
Installation in pollution degree 2 / overvoltage category II.

Mechanical specifications:

Dimensions (HxWxD) . . . . . 73.2 x 23.3 x 26.5 mm
Dimensions (HxWxD) w/ IAMS/AFCM/IFM unit . . . . . 109 x 23.5 x 131 mm
Weight approx. . . . . 20 g

Common specifications:

Supply voltage . . . . . 6.5...20 V supplied from host IAMS/AFCM/IFM device
Max. required power . . . . . 0.15 W

Observed authority requirements:

EMC. . . . . 2014/30/EU & UK SI 2016/1091
RoHS . . . . . 2011/65/EU & UK SI 2012/3032

Approvals:

c UL us, UL 61010-1. . . . . E179259

Ex:

FM, US FM23US0021X
FM, CA FM23CA0015X

Display layout

By default, the PGMMOD enters monitor mode for process surveillance. With the front keys, the PGMMOD can enter programming or simulation mode.

Layout for IAMS/AFCM/IFM series products (in monitor mode)

<table>
<tr><td rowspan="4">IAMS/IFM</td><td>Line 1 shows the scaled process value.</td><td rowspan="4"> 
</td></tr>
<tr><td>Line 2 shows the selected engineering unit.</td></tr>
<tr><td>Line 3 shows analog output value or TAG no.</td></tr>
<tr><td>Line 4 shows status for relay, communication and e.g. signal trending.</td></tr>
<tr><td rowspan="3">AFCM</td><td>Line 1 shows status for input channel/-s.</td><td rowspan="3"> 
</td></tr>
<tr><td>Line 2 and 3 show analog output value / digital output status / analog input value / TAG no. where appliable or alternating values.</td></tr>
<tr><td>Line 4 shows status for relay, communication and e.g. signal trending.</td></tr>
</table>

Operating the function keys / display

In general

When using the PGMMOD for configuration of an IAMS/IFM or AFCM device, you will be guided through all parameters and can choose the settings which fit the application. For each menu there is a scrolling help text which is automatically shown in line 3 on the display.

Configuration is carried out by use of the 3 function keys:

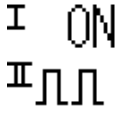
- ⌃ will increase the numerical value or choose the next parameter
- ⌄ will decrease the numerical value or choose the previous parameter
- OK will save the chosen value and proceed to the next menu

When configuration is completed, the display will return to the default state (monitor). Pressing and holding OK will return to the previous menu or return to the default state without saving the changed values or parameters.

If no key is activated for 1 minute, the display will return to the default state without saving the changed values or parameters.

For device-specific programming menus, please refer to the user manual for each device.

PGMMOD **display icons explained**

IAMS/IFM		Relay status (Relay energized]. Icon with 1 or 2 blinking indicates delayed relay action (programmable on/off delay).
		Arrow up/down indicates process value is trending higher/lower.
		Circular indicator confirms display to host communication.
AFCM		Relay status (Relay energized]. Icon with 1 or 2 blinking indicates delayed relay action (programmable on/off delay).
		Arrow up/down indicates process value is trending higher/lower.
		Circular indicator confirms display to host communication. Steady dot indicates device is SIL-locked, blinking dot indicates non SIL-locked device.
		Checkmark indicates input OK or '!' for error condition / device error on channel input.
		One or two channels: ON indicates that the relay / digital output is energized. OFF = not energized. The pulse icon indicates input frequency above 1 Hz. Device faults are displayed in channel 1 status. Device or sensors faults messages e.g. CA.BR (cable break) are device-dependent, please consult device manual for a complete list of applicable error codes.

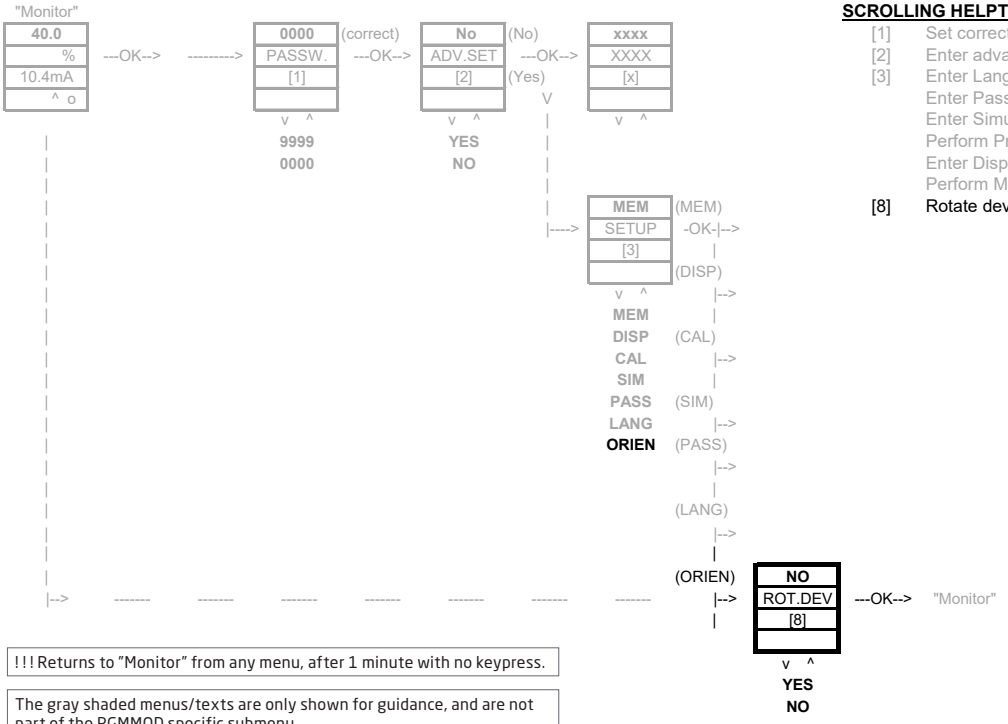
PGMMOD **functions**

The PGMMOD gives access to a number of functions which can be reached by answering “Yes” to the menu point “ADV.SET” (see “PGMMOD settings - routing diagram” on page 10).

Display orientation

The menu item “ORIEN” allows the user to rotate the display 180 degrees for correct operation with upside down mounting of the device.

PGMMOD settings - routing diagram



SCROLLING HELPTEXTS:

[1] Set correct password
[2] Enter advanced setup menu?
[3] Enter Language setup
Enter Password setup
Enter Simulation mode
Perform Process calibration
Enter Display setup
Perform Memory operations
[8] Rotate device upside down?

!!! Returns to "Monitor" from any menu, after 1 minute with no keypress.

The gray shaded menus/texts are only shown for guidance, and are not part of the PGMMOD specific submenu.
Refer to the individual product manual for each IAMS/AFCM/IFM device to see the product-specific menu structure.

FM Installation drawing

FM Certificates	FM23US0021X FM23CA0015X
Standards:	See Certificate
Marking:	CL I Div 2 GP A,B,C,D T5 CL I Zone 2 AEx/Ex ec IIC T5 Gc

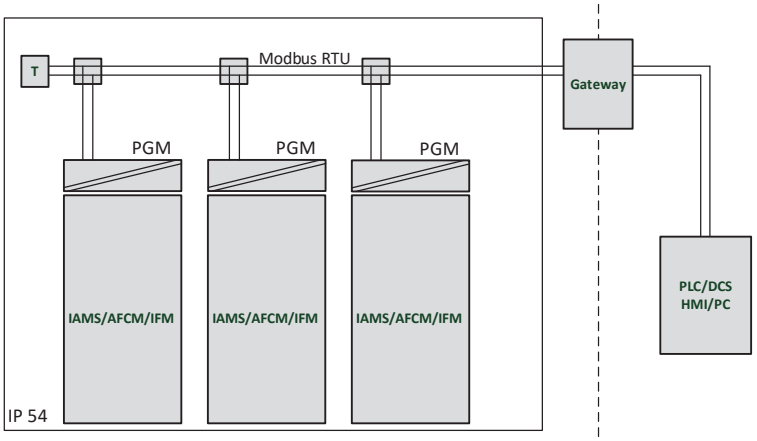
Temperature range -20°C ≤ Ta ≤ +60°C

AEx/Ex ec Installation Instructions

For safe installation of the PGMMOD products the following must be observed.

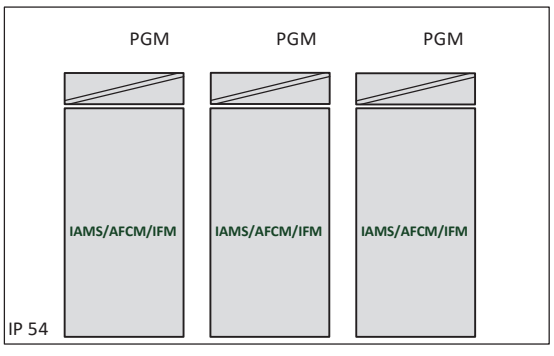
Hazardous Area
CL I Div2 GP A,B,C,D
CL I Zone 2 AEx/Ex ec IIC T5 Gc

Unclassified Area



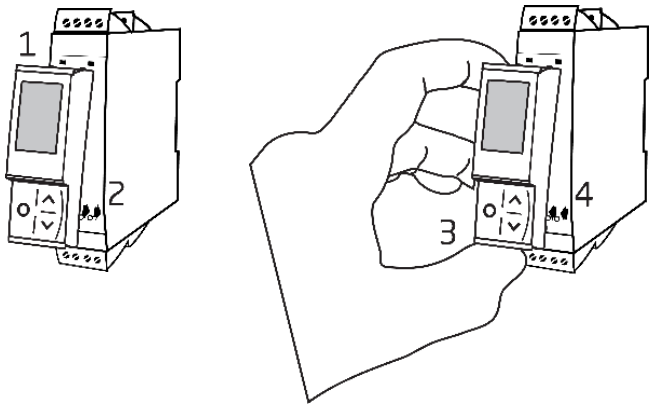
Hazardous Area
CL I Div2 GP A,B,C,D
CL I Zone 2 AEx/Ex ec IIC T5 Gc

Unclassified Area



General installation instructions

Year of manufacture can be taken from the first two digits in the serial number.
For safe Ex installation the following must be observed: The device must be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area.
To prevent ignition of the explosive atmospheres do not separate connectors when energized and an explosive gas mixture is present.
To avoid the risk of explosion due to electrostatic charging of the enclosure, do not handle the units unless the area is known to be safe, or appropriate safety measures are taken to avoid electrostatic discharge.



Mounting of PGMMOD communications interface:

1. Insert the tabs of the PGMMOD into the slots at the top of the device.
2. Hinge the PGMMOD down until it snaps into place.

Demounting of the PGMMOD communication interfaces:

3. Push the release button on the bottom of the PGMMOD and hinge the PGMMOD out and up.
4. With the PGMMOD hinged up, remove from the slots at the top of the device.

Specific Conditions of Use

Class 1, Division 2

In Class I, Division 2 installations, the subject equipment shall be mounted within a tool-secured enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National NEC or CEC.

Class 1, Zone 2

- The equipment shall be installed within an enclosure that provides a minimum ingress protection of IP54 in accordance with ANSI/UL 60079-0 or CSA C22.2 No. 60079-0.
- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.
- Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to the equipment.

Red Lion Controls Technical Support

If for any reason you have trouble operating, connecting, or simply have questions concerning your new product, contact Red Lion's technical support.

Support: support.redlion.net
Website: www.redlion.net

Inside US: +1 (877) 432-9908
Outside US: +1 (717) 767-6511

Red Lion Controls, Inc.
35 Willow Springs Circle York, PA 17406

LIMITED WARRANTY

(a) Red Lion Controls Inc. (the "Company") warrants that all Products shall be free from defects in material and workmanship under normal use for the period of time provided in "Statement of Warranty Periods" (available at www.redlion.net) current at the time of shipment of the Products (the "Warranty Period"). **EXCEPT FOR THE ABOVE-STATED WARRANTY, COMPANY MAKES NO WARRANTY WHATSOEVER WITH RESPECT TO THE PRODUCTS, INCLUDING ANY (A) WARRANTY OF MERCHANTABILITY; (B) WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; OR (C) WARRANTY AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY; WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE.** Customer shall be responsible for determining that a Product is suitable for Customer's use and that such use complies with any applicable local, state or federal law.
(b) The Company shall not be liable for a breach of the warranty set forth in paragraph (a) if (i) the defect is a result of Customer's failure to store, install, commission or maintain the Product according to specifications; (ii) Customer alters or repairs such Product without the prior written consent of Company.
(c) Subject to paragraph (b), with respect to any such Product during the Warranty Period, Company shall, in its sole discretion, either (i) repair or replace the Product; or (ii) credit or refund the price of Product provided that, if Company so requests, Customer shall, at Company's expense, return such Product to Company.
(d) **THE REMEDIES SET FORTH IN PARAGRAPH (c) SHALL BE THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDY AND COMPANY'S ENTIRE LIABILITY FOR ANY BREACH OF THE LIMITED WARRANTY SET FORTH IN PARAGRAPH (a).**
BY INSTALLING THIS PRODUCT, YOU AGREE TO THE TERMS OF THIS WARRANTY, AS WELL AS ALL OTHER DISCLAIMERS AND WARRANTIES IN THIS DOCUMENT.