

GE
Security

AL-1291 Point ID DGP
Installation Manual



imagination at work

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3. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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Introduction

This is the *GE AL-1291 Point ID DGP Installation Manual*. This document includes an overview of the product and detailed instructions explaining:

- how to install the hardware; and
- how to do basic programming.

There is also information describing how to contact technical support if you have questions or concerns.

To use this document effectively, you should have the following minimum qualifications:

- a basic knowledge of the Alliance system; and
- a basic knowledge of electrical wiring and low-voltage electrical connections.

Read these instructions and all ancillary documentation entirely before installing or operating this product. The most current versions of this and related documentation may be found on our website. Refer to [Online publication library](#) on page 20 for instructions on accessing our online publication library.

Note: A qualified service person, complying with all applicable codes, should perform whatever hardware installation is required.

Conventions used in this document

The following conventions are used in this document:

Bold	Menu items, buttons, and keys.
<i>Italic</i>	Titles of books and various documents.
	Emphasis of an instruction or point; special terms
	Windows, panes, tabs, fields, variables, and other GUI elements.
Monospace	Text that displays on the keypad screen.
	File names, path names, or coding sequences.
<i>Blue italic</i>	Hyperlinks to cross-references, related topics, and URL addresses.

Safety terms and symbols

These terms may appear in this manual:



Improper use may cause equipment damage.

Cautions identify conditions or practices that may result in damage to the equipment or other property.



Improper use could cause equipment damage or serious personal injury.

Warnings identify conditions or practices that could result in equipment damage or serious personal injury.

Overview

The AL-1291 Point ID DGP (data gathering panel) is an interface between the Alliance system data bus and a point ID data bus. The DGP provides two-wire bidirectional communication with up to 32 individually addressed point ID devices. The system bus supports up to 15 DGPs at a distance of up to 5,000 feet (1.5 km) from the control panel.

Product contents

Each AL-1291 Point ID DGP ships with the following:

- 2 three-position terminal blocks
- 1 four-position terminal block
- 4 clip-in standoffs
- 4 mounting screws

Inspect the package and contents for visible damage. If any components are damaged or missing, do not use the unit; contact the supplier immediately. If the unit needs to be returned, it must be shipped in the original box.

Other required equipment

You will also need a DVM (digital volt meter).

Installation

Mount the DGP in any existing Alliance enclosure.

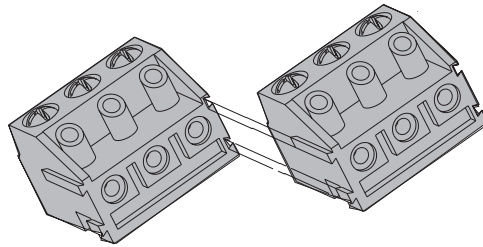


You must be free of static electricity before handling circuit boards. Wear a grounding strap or touch a bare metal surface to discharge static electricity.

To install the unit, do the following:

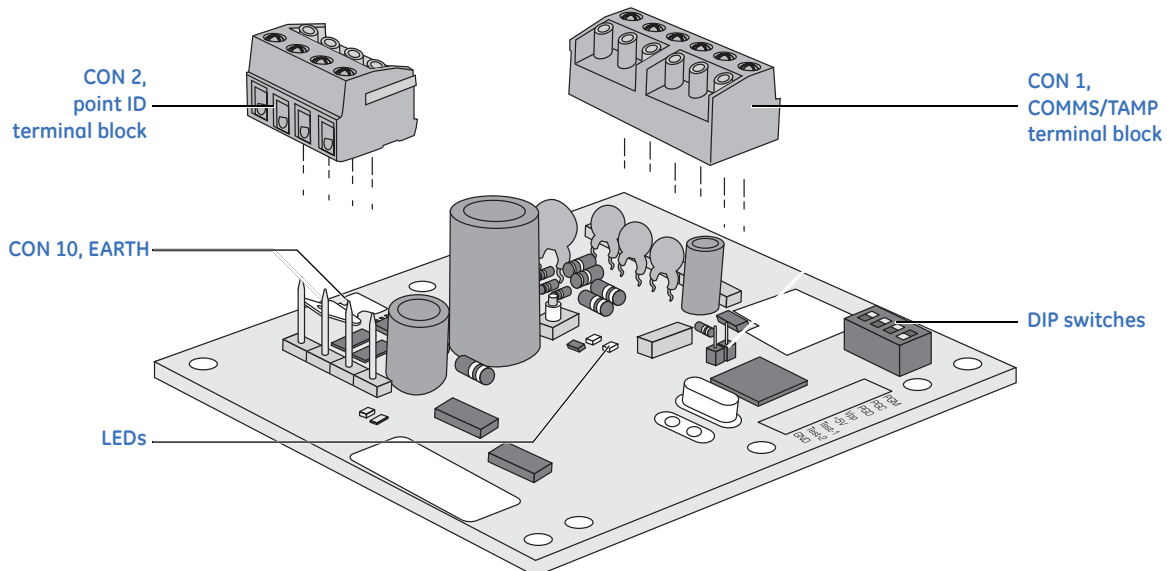
1. Slide the terminal blocks together (*Figure 1*).

Figure 1. Slide terminal blocks together



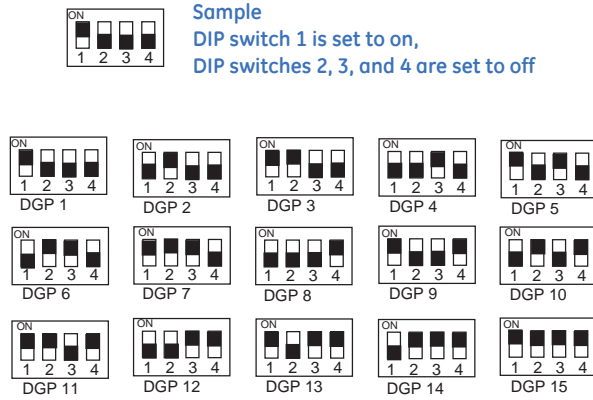
2. Slide the terminal blocks over the pins on the board (*Figure 2*).

Figure 2. Exploded view



- The DIP switches on the DGP (*Figure 2*) are used to identify the DGP address (from 1 to 15) to the Alliance control panel. Set the DIP switches for the appropriate address, as shown in *Figure 3*.

Figure 3. DGP address DIP switch settings



- Mount the DGP in the enclosure using four clip-in standoffs and mounting screws.
- Wire the unit to the system data bus and to point ID devices (see *Wiring* on page 7).

Wiring

Wire the DGP terminals as shown in *Figure 4*. Earth wires from all pieces of equipment must be grounded at one system earth. For more information on grounding details, refer to the Alliance control panel's installation instructions.

Figure 4. Wiring diagram

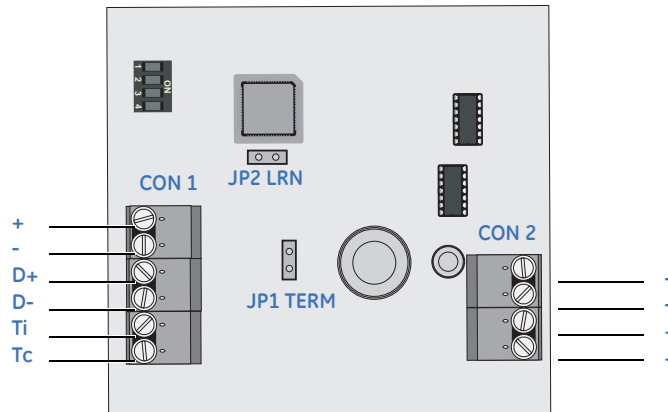


Table 1 shows the DGP wiring terminal details.

Table 1. Wiring terminals

Connector	Category	Terminals	Description
CON 1	COMMS	+, -	12 VDC power supply.
		D+, D-	Positive and negative connection of the system bus.
	TAMP	Ti, Tc	Connect the enclosure tamper switch across these terminals. Requires closed loop tamper switch.
CON 2	PID	+, -	9.9 to 13.2 VDC power supply.

DGP to Alliance control panel wiring restrictions

You can locate the DGP up to 5,000 feet (1.5 km) from the Alliance control panel. The DGP must be connected via a 2-pair twisted, shielded data cable from the system bus connection. We recommend you use Belden 8723.

Where the DGP power supply source is at a distance greater than 328 feet (100 m), you must use an external supply. We recommend a supply output of 13.8 VDC 1 A fused.

DGP to point ID devices wiring restrictions

Connection to all point ID devices requires one + and one - terminal to provide power and data transmission. Point ID devices provide for one or two bus terminals and can be connected in a single loop or in a multidrop configuration (*Figure 5*). The bus loop does not need special termination.

Figure 5. Multidrop configuration

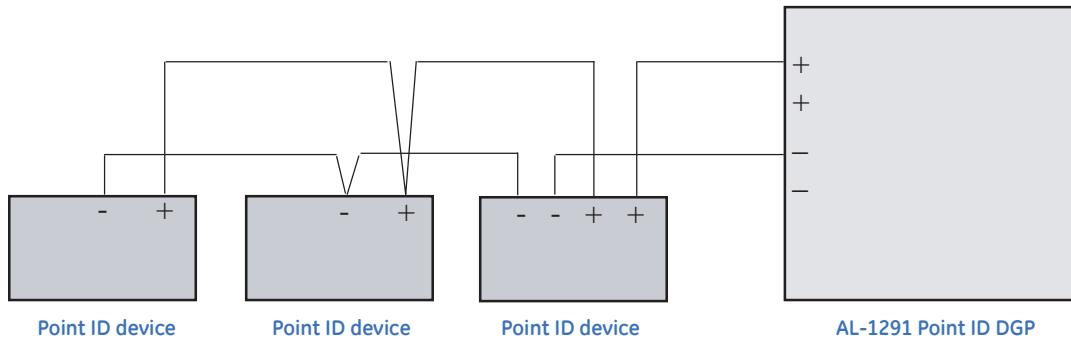


Table 2 shows the point ID bus load limits.

Table 2. Load limits

Wire gauge (AWG)	Maximum number of point ID devices per point ID bus length		
	1000 feet (305 m)	2500 feet (762 m)	5000 feet (1524 m)
22	32	20	16
20	32	32	20
18 or less	32	32	32

LEDs

The two LEDs (*Figure 2* on page 5) on the DGP indicate polling status as follows:

- RX.** The RX LED flashes to indicate polling data is being received by the point ID DGP from the Alliance control panel. If the RX LED does not flash, the DGP is not operational or the system bus is faulty. Check the cabling.
- TX.** The TX LED flashes to indicate the point ID DGP is replying to polling from the Alliance control panel. If the RX LED flashes, but the TX LED does not flash, the DGP is not programmed to be polled in the control panel or the DGP is not addressed correctly.

Jumpers

Use the two jumpers (*Figure 4* on page 7) on the DGP as follows:

TERM (JP1). Fit the JP1 jumper on the DGP if the DGP is the last device on the control panel system bus.

LRN (JP2). Short the JP2 jumper for two seconds to start learn mode and enable the DGP to recognize (learn) point ID devices.

Point ID device address settings

The point ID device address settings are directly linked to the zone number the device will have on the DGP (*Table 3*). The address numbering starts at 0.

Table 3. Device addresses and related zone numbers

DGP	Zones	Point ID address	DGP	Zones	Point ID address
Control panel	1 to 16	None	DGP 8	129 to 144	0 to 15
DGP 1	17 to 32	0 to 15	DGP 9	145 to 160	0 to 15
DGP 2	33 to 48	0 to 15	DGP 10	161 to 176	0 to 15
DGP 3	49 to 64	0 to 15	DGP 11	177 to 192	0 to 15
DGP 4	65 to 80	0 to 15	DGP 12	193 to 208	0 to 15
DGP 5	81 to 96	0 to 15	DGP 13	209 to 223	0 to 15
DGP 6	97 to 112	0 to 15	DGP 14	225 to 240	0 to 15
DGP 7	113 to 128	0 to 15	DGP 15	241 to 256	0 to 15

The 4I4O point ID devices require eight zone numbers per device. Be sure to take the 8-zone requirement into account when addressing the 4I4O devices. For example, if a 4I4O device is the first device you add to point ID DGP 1, it will be address 0 and the next device you add will be address 8.

Use the DIP switches (*Figure 6*) located on each point ID device to set the device addresses.

Figure 6. DIP switch settings for point ID device addresses



Programming

Program settings for the DGP through the onboard menu. To access this menu, do the following:

1. Press **Menu**.
2. Enter **1278**, and press **Enter**.
3. Enter **19** (installer menu) and press **Enter**.
4. Press the * key (advanced programming mode).
5. Enter **28** (access remote device programming) and press **Enter**.
6. Enter **1** (DGP option) and press **Enter**.
7. Enter the address number for the point ID DGP and press **Enter**.

The following programming menus are available and explained in detail in this section:

1. DGP status
2. Device status
3. Device settings
4. Reset settings
5. Learn mode
6. DGP mode
7. Factory defaults

Use the navigation tools shown in *Table 4* to access the programming options.

Table 4. Programming navigation tools

Key	Description
* / Menu	Scroll backward within the menu.
# / Enter	Scroll forward within the menu.
0	Exit the menu and scroll to the next menu.

1. DGP status menu

The DGP status menu is a read-only menu. Use this menu to view DGP status information including:

- Operation status
- Number and status of devices
- Input and output range
- Voltage supplied to the DGP
- Current consumption.

Enter **1** and press **Enter** to access the DGP status menu (*Figure 7*), or if you do not need to use this menu, press **Enter** to scroll to [2. Device status menu](#) on page 13.

Operational status. *Figure 8* shows normal operational status. If there is a tamper or device-missing status, the display will show *DGP Tamper*.

Number and status of devices. *Figure 9* shows the number of devices known to the system, the number of devices in alarm, and the number of devices that have a tamper status.

Input and output range. *Figure 10* shows the DGP number with the associated zone (input) and relay (output) numbers.

Voltage supplied to the DGP. *Figure 11* shows the voltage supplied to the DGP.

Current consumption. *Figure 12* shows the current consumption (total load on the power supply) of the DGP and devices.

Figure 7. DGP status

```
1. DGP status
0 - EXIT, Menu:
```

Figure 8. Operational status

```
Operating
* = -, # = +, 0 = EXIT
```

Figure 9. Number and status of devices

```
Dev:16 A:0 T:0
* = -, # = +, 0 = EXIT
```

Figure 10. Input and output range

```
DGP 1 I:17-32, O:17-32
* = -, # = +, 0 = EXIT
```

Figure 11. Voltage supplied to the DGP

```
V-bus 13.4 VDC
* = -, # = +, 0 = EXIT
```

Figure 12. Current consumption

```
I-bus 100 mA
* = -, # = +, 0 = EXIT
```

2. Device status menu

Use this menu to view the status of all point ID devices connected to the DGP.

1. Enter 2 and press **Enter** to access the device status menu (*Figure 13*), or if you do not need to use this menu, press **Enter** to scroll to *3. Device settings menu* on page 14.
2. *Figure 14* shows the zone number/point ID address, device category, and device type for the first device on the list. A \$ in front of the device category indicates the device holds settings other than the defaults. To scroll through the list, press **ENTER**. To get status information for a specific device, enter the device zone (input) number and press **ENTER**.
3. *Figure 15* shows the status for the device. Devices not known (learned) to the system will show as *Not Used*. When devices share the same address by mistake, the status will read *Multiple Devices*. Correct the address settings of the devices to cancel the fault.

Figure 13. Point ID device status menu

```
2. Device status
0 - EXIT, Menu:
```

Figure 14. Device list

```
17/0, IO T1
Input No:
```

Figure 15. Device status

```
17/0, Normal
* = -, # = +, 0 = EXIT
```

Table 5 explains the codes used in the device status menu.

Table 5. Device status codes

Code	Category	Type
MISC	Miscellaneous	T0
PIR	PIR devices	T0
GLASS	Glassbreak devices	T0
IO	I/O devices	T0 (single input) T1 (4I/4O)

3. Device settings menu

Use this menu to view and program settings for devices connected to the point ID DGP. **Only IO device settings can be changed.** PIR and glassbreak device settings are read-only defaults and can not be changed.

1. Enter 3 and press **Enter** to access the device settings menu (*Figure 16*), or if you do not need to use this menu, press **Enter** to scroll to *4. Reset settings menu* on page 17.
2. *Figure 17* shows the zone number/point ID address, device category, and device type for the first device on the list. To scroll through the list, press **Enter**. To access programming locations for a specific device, enter the device zone (input) number and press **Enter**.
3. *Figure 18* shows the programming location number and either a decimal value (upper screen) or a binary value (lower screen). You can enter the setting needed for each location either as a value (decimal) or as bits (binary). Press the * key to toggle between value and bits. When you enter a setting in one, the other will automatically update to the equivalent setting. Press **Enter** to accept the setting displayed and scroll to the next location.

Figure 16. Device settings menu

```
3. Device settings
0 - EXIT, Menu:
```

Figure 17. Device list

```
17/0, IO T1
Input No:
```

Figure 18. Location programming

```
17/0, Loc 1:0
*, Value

17/0, Loc 1:00000000
*, Bits
```

The following IO device programming locations are available:

- Location 1. Outputs 1 to 4 (read/write)
- Location 2. Reserved for future use
- Location 3. Zone types 1 to 4 (read/write)
- Location 4. Reserved for future use
- Location 5. Output supervision (read/write)
- Location 6. Reserved for future use
- Location 7. Reserved for future use
- Location 8. EOL value (read only)
- Location 9. Number of inputs/outputs (read only)

Read-only locations are set by the point ID DGP. Use these locations to view information. Do not change the settings shown.

Location 1

Use this location to program the output settings for outputs 1 to 4 for IO devices. *Table 6* shows the available options.

Table 6. Location 1 setting options

Output 4 (bits 7 and 6)	Output 3 (bits 5 and 4)	Output 2 (bits 3 and 2)	Output 1 (bits 1 and 0)
11 = undefined	11 = undefined	11 = undefined	11 = undefined
10 = temporal	10 = temporal	10 = temporal	10 = temporal
01 = off, open	01 = off, open	01 = off, open	01 = off, open
00 = on	00 = on	00 = on	00 = on

The default setting for the 4I4O is an 8-digit binary setting of 01010101 or a decimal setting of 85. This indicates that all outputs are set to 01 (off, open). To change the default, change the 2 digits assigned to the output in the binary code. For example, reading the binary code from right to left (bits 0 to 7), the first two digits on the right indicate the settings for output 1. If you need to set output 1 to **10** (temporal), the new binary code would be 010101**10**. You can change as many of the output codes as needed. If all outputs need to be 10 (temporal), the new binary code would be 10101010.

Location 2

Location 2 is reserved for future programming options. Press **Enter** to scroll to the next location.

Location 3

Use this location to program zone types for IO devices. *Table 7* shows the available options.

Table 7. Location 3 setting options

Zone 4 (bits 7 and 6)	Zone 3 (bits 5 and 4)	Zone 2 (bits 3 and 2)	Zone 1 (bits 1 and 0)
11 = undefined	11 = undefined	11 = undefined	11 = undefined
10 = double EOL	10 = double EOL	10 = double EOL	10 = double EOL
01 = single EOL	01 = single EOL	01 = single EOL	01 = single EOL
00 = zone is off	00 = zone is off	00 = zone is off	00 = zone is off

The default setting for 4I4O device is a binary setting of 10101010 or a decimal setting of 170. This indicates that all zone types are set to 10 (double EOL). To change the default, change the 2 digits assigned to the zone type in the binary code. For example, reading the binary code from right to left, (bits 0 to 7), the last two digits on the left indicate the setting for zone type 4. If you need zone type 4 set to **01** (single EOL), change the binary code to **01**101010. You can change as many of the zone types as needed. If all zone types need to be 01 (single EOL), change the binary code to 01010101.

Location 4

Location 4 is reserved for future programming options. Press **Enter** to scroll to the next location.

Location 5

Use this location to program output supervision for IO devices. *Table 8* shows the available programming options.

Table 8. Location 5 setting options

Output 4 (bit 3)	Output 3 (bit 2)	Output 2 (bit 1)	Output 1 (bit 0)
0 = disabled	0 = disabled	0 = disabled	0 = disabled
1 = enabled	1 = enabled	1 = enabled	1 = enabled

The default setting for the 4I4O device is a binary code of 00001111, or a decimal setting of 15. This indicates that outputs 5 to 8 are set to 0 (disabled) and outputs 1 to 4 are set to 1 (enabled). Outputs 5 to 8 are reserved for future use and can not be changed. To change the default for outputs 1 to 4, change the single digit assigned to the output in the binary code. For example, reading the binary code from right to left (bits 0 to 7), the first digit on the right indicates the setting for output 1. If you need output 1 to be set to **0** (disabled), change the binary code to 0000111**0**.

Location 6

Location 6 is reserved for future programming options. Press **Enter** to scroll to the next location.

Location 7

Location 7 is reserved for future programming options. Press **Enter** to scroll to the next location.

Location 8

Location 8 is a read-only location that indicates the EOL (end-of-line) value. The default setting is 47K, which has a binary value of 00000101 and a decimal value of 5. Do not change the default values. Press **Enter** to scroll to the next location.

Location 9

Location 9 is a read-only location that indicates the number of inputs and outputs. The values are set by the DGP. Do not change the default values. Press **Enter** to scroll to the next location.

4. Reset settings menu

Use this menu to reset specific devices to their default settings

1. Enter 4 and press **Enter** to access the reset settings menu (*Figure 19*), or if you do not need to use this menu, press **Enter** to scroll to *5. Learn mode menu*.
2. *Figure 20* shows the zone number/point ID address, device category, and device type for the first device on the list. To scroll through the list, press **Enter**. To reset the settings for a specific device, enter the device zone (input) number and press **Enter**.
3. Press the * key to confirm the reset request. When settings are unknown, all values will be set to 10 (*Figure 21*).

Figure 19. Reset device settings menu

```
4. Reset settings
0 - EXIT, Menu:
```

Figure 20. Device list

```
17/0, IO T1
Input No:
```

Figure 21. Confirm reset

```
17/0, Reset (Y/N)
* = Yes, # = No
```

5. Learn mode menu

Point ID devices must be recognized (learned) by the point ID DGP before the devices can transfer status information or be configured. Use this menu to access the learn mode and make the devices known to the system:

1. Enter 5 and press **Enter** to access the learn mode menu (*Figure 22*), or if you do not need to use this menu, press **Enter** to scroll to *6. DGP mode menu* on page 18.
2. Press the * key to confirm learn mode activation (*Figure 23*). While in learn mode, the display will show *DGP is learning, please wait*. Do not exit this menu before the sequence has ended.

Figure 22. Learn mode menu

```
5. Learn mode
0 - EXIT, Menu:
```

Figure 23. Confirm learn mode

```
Start learn mode?
* = Yes, # = No
```

Note: You can also access learn mode by shorting the LRN jumper (see *Jumpers* on page 9).

6. DGP mode menu

Use this menu to select DGP address and polling modes.

1. Enter 6 and press **Enter** to access the DGP mode menu (*Figure 24*), or if you do not need to use this menu, press **Enter** to scroll to *7. Factory defaults menu* on page 19.

Figure 24. DGP mode menu

```
6. DGP mode
0 - EXIT, Menu:
```

2. *Figure 25* shows the three address mode options. To toggle between options, press the * key. To accept the displayed mode and scroll to the next menu option, press the # key.

Figure 25. Address mode

```
1 DGP address
* = Change, # = Enter
```

1 DGP address. Allows for a total of 16 zones (inputs) and 16 relays (outputs).

1 DGP plus expansion. Allows for a total of 32 zones (inputs) and 16 relays (outputs).

2 DGP addresses. Not supported, do not use.

```
1 DGP plus expansion
* = Change, # = Enter
```

```
2 DGP addresses
* = Change, # = Enter
```

3. *Figure 26* shows the two polling mode options. To toggle between options, press the * key. To accept the displayed mode and scroll to the next menu, press the # key.

Figure 26. Polling mode

```
Extended mode
* = Change, # = Enter
```

Extended mode. Polls 16 point ID devices and has enhanced reporting features.

Standard mode. The system does not support this option. **Do not use.**

The polling mode is available for compatibility with older products and should be set to extended mode.

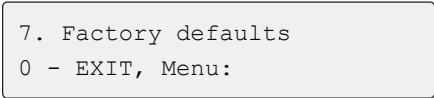
```
Standard mode
* = Change, # = Enter
```

7. Factory defaults menu

Use this menu to return all settings, including device settings, to factory defaults.:

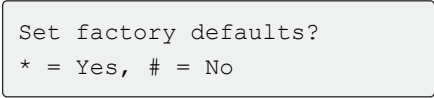
1. Enter 7 and press **Enter** to access the factory defaults menu (*Figure 27*), or if you do not need to use this menu, press **Enter** to exit programming.
2. Press the * key to confirm factory default activation (*Figure 28*). During the default process, the display will show *DGP is defaulting, please wait*. Do not exit this menu until the default process is complete.

Figure 27. Factory default menu



```
7. Factory defaults
0 - EXIT, Menu:
```

Figure 28. Confirm factory defaults



```
Set factory defaults?
* = Yes, # = No
```

Specifications

Power supply (CON 1)	10 to 14 VDC
Supply current (at 13.8 VDC ±5%)	53 mA (no point ID devices connected)
Point ID power supply (CON 2)	9.9 to 19.0 VDC
Max. point ID output current (at 13.2 VDC ±5%)	20 mA
Dimensions	3.1 x 3.5 in. (80 x 90 mm)
Weight	160 grams
Operating temperature	50 to 122°F (10 to 50°C)
Relative humidity	95% noncondensing

Contacting technical support

For assistance installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, you may contact technical support and sales.

For sales and technical support assistance, we provide customers with several options (see *Table 9*).

Table 9. Sales and support contact information

	Sales	Technical support
Phone:	888-437-3287	888-437-3287
Fax	503-691-7566	503-691-7568

Note: Be ready at the equipment before calling for technical support.

Online publication library

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<http://www.gesecurity.com>

In the **Tools** area at the top, click the *Publication Library* link. After you register and log on, you may search through our online library for the documentation you need.¹

1. Many GE Security documents are provided as PDFs (portable document format). To read these documents, you will need Adobe Acrobat Reader, which can be downloaded free from Adobe's website at www.adobe.com.