

Digital Gateway[®]

Installation & Owners Manual

Model DG1215

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HOW TO USE MANUAL

Throughout this manual, the following key words are used to alert the reader of potential hazardous situations, or situations where additional information for successfully performing the procedure is presented:

WARNING

WARNING is used to indicate the potential for personal injury, if the procedure is not performed as described.

CAUTION

CAUTION is used to indicate the potential for damage to the product or property damage, if the procedure is not followed as described.

IMPORTANT: *IMPORTANT* is also used to relay information **CRITICAL** to the successful completion of the procedure.

NOTE: *NOTE* is used to provide additional information to aid in the performance of the procedure, or operation of the door, but not necessarily safety related.

INTRODUCTION

INTRODUCTION

The DG1215 is a direct replacement for Rytec's® Digital Gateway® model DG1000 and DG1100. (See REPLACING MODELS DG1000 AND DG1100 WITH

MODEL DG1215 on page 16 for replacement procedures.) It provides connections for multiple activators, close delay timers, back-up timers, and status indicators. (See Figure 1 for an overview of the Digital Gateway controls.)

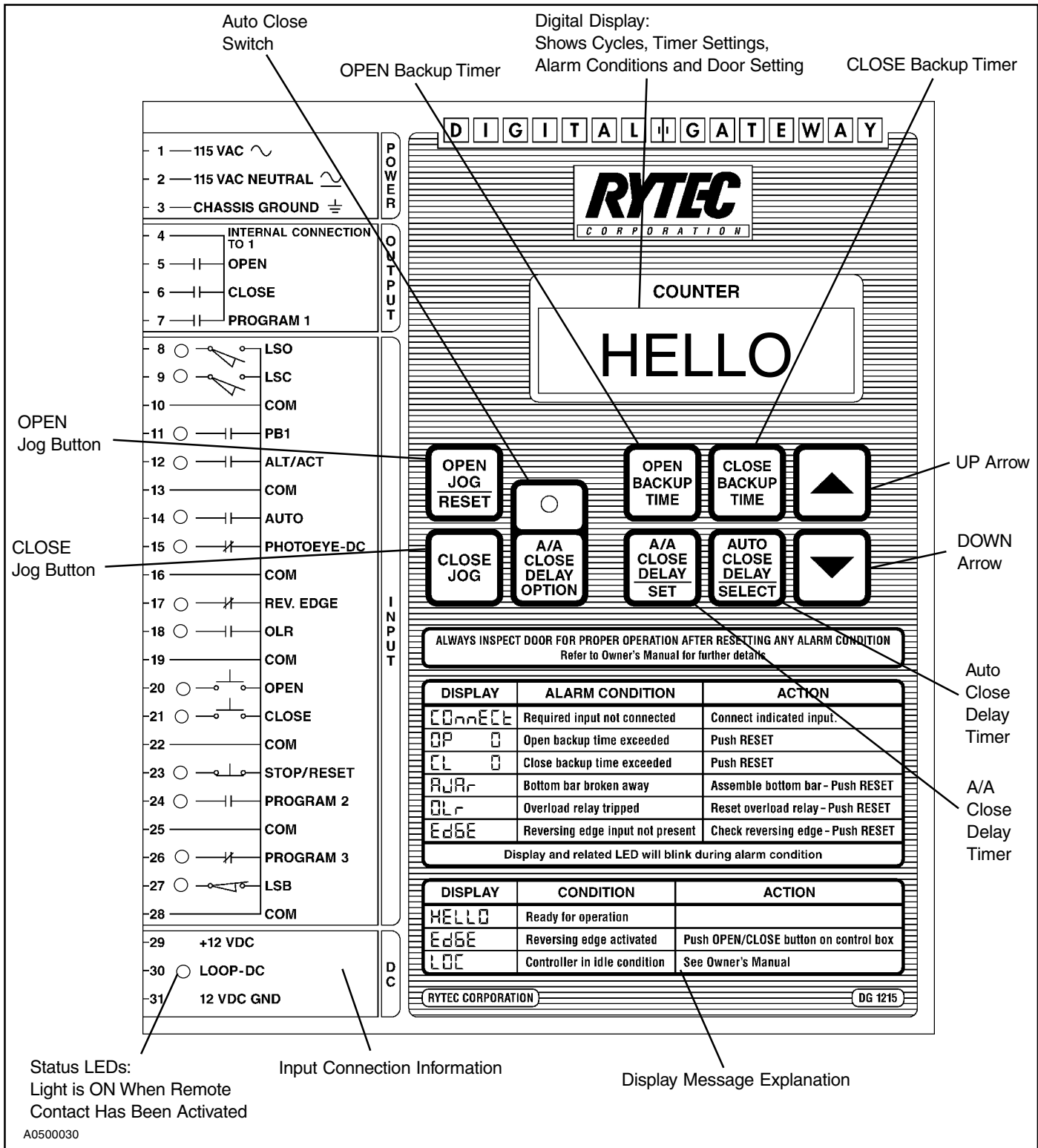


Figure 1

Digital Gateway® is a registered trademark of Control Associates & Mfg., Inc.

EXPLANATION OF DIGITAL GATEWAY CONTROLS

TERMINAL STRIP

The Digital Gateway has plug-in terminal strips along the left side of the unit. The power, output, and input connections to the Digital Gateway are made through this terminal strip. The terminal strip is factory-wired to a larger terminal strip in the control box. The larger strip is used for the external connections.

INPUT STATUS LEDS

These lights will show the status of the activator, safety device or other input connected to the controller. The light will be on if the input has been activated. (See Figure 2 for an example of an LED.)

If the input requires a normally open (N.O.) contact: The LED will light when the contact closes.

If the input requires a normally closed (N.C.) contact: The LED will light when the contact opens.

In an alarm condition: The LED connected to the input causing the problem will blink.

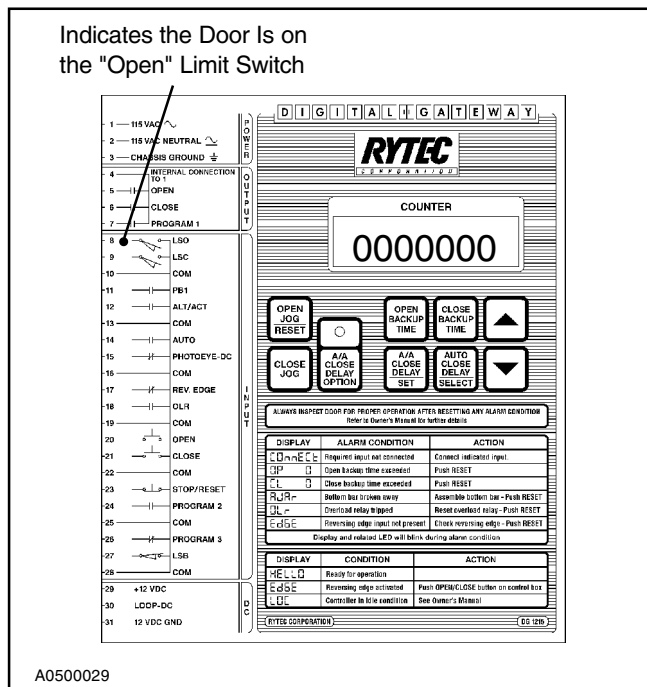


Figure 2

PUSHBUTTONS

OPEN JOG/RESET: This pushbutton jogs the door open. It is also the reset for alarm conditions once the fault causing the alarm has been corrected. It is not operational when the door is being controlled by any activator. The open jog/reset button will operate while the Digital Gateway is in the AJAr or EdGE alarm condition. (See Figure 1.)

CLOSE JOG: This pushbutton jogs the door closed. It is not operational when the door is being controlled by any activator. The close jog button will operate while the Digital Gateway is in the AJAr or EdGE alarm condition. (See Figure 1.)

UP ARROW/DOWN ARROW: In the normal operating mode these pushbuttons are used to set the timers. The up arrow will increase the setting. The down arrow will decrease the setting. In the program mode the arrows are used to set various program options. (See Figure 1.)

OTHER PUSHBUTTONS: The remaining buttons include:

- OPEN BACKUP TIME
- CLOSE BACKUP TIME
- A/A CLOSE DELAY OPTION
- AA CLOSE DELAY/SET
- AUTO CLOSE DELAY/SELECT

These pushbuttons are used to turn on various timers and set various program options. (See TIMERS on page 7 and OPTIONAL PROGRAMS on page 13 for additional information.) (See Figure 1.)

DISPLAY/COUNTER

The 7-digit display shows timer settings, alarm conditions, door functions, program settings and the number of door cycles. The count displayed on the counter is permanent even with the loss of power. (See Figure 1.)

DISPLAY MESSAGE EXPLANATION

The front of the Digital Gateway gives an explanation of the various display messages. It also lists actions required to solve the problems indicated by the Digital Gateway display. (See Figure 1.)

INPUTS TO THE DIGITAL GATEWAY

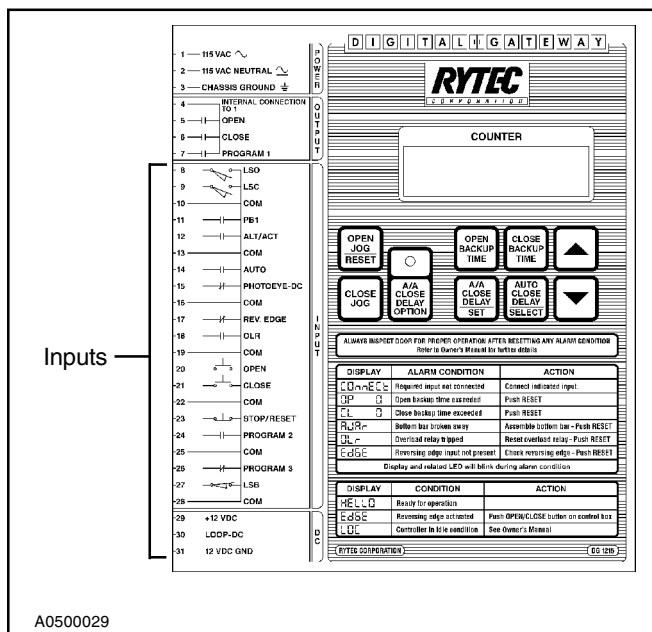


Figure 3

NOTE: All DC inputs should be contact closure or NPN open collector only. RC networks, MOV's or noise suppression devices allowing leakage current may cause the inputs to become active and should be removed.

All inputs operate at 12 vdc which is supplied internally. The ground side of 12 vdc, provided at terminal 10 (COM) on the Digital Gateway, is connected to one side of the input contact (limit switch, activator, etc). The other side is connected to the proper input. Terminals 10, 13, 16, 19, 22, 25, and 28 are all the same.

LIMIT SWITCHES—TERMINALS 8 AND 9 (N.O. CONTACT)

Once the door has started, it will move until it is shut off by one of the limit switches or a backup timer.

Open (LSO)

The LSO LED will be on when the door has reached the full open position.

Close (LSC)

The LSC LED will be on when the door has reached the full close position.

PB1 (PUSHBUTTON)—TERMINAL 11 (N.O. CONTACT)

The pushbutton on the control box is connected here.

Pushing the button (a momentary connection) while the door is closed, closing or stopped between limits will open the door. Pushing the button while the door is in the full open position will close the door.

The PB1 input can be converted to automatic closing. Refer to the section on setting the timers.

The PB1 input works the same as the A/A input described in the following.

ALTERNATE ACTION INPUTS (A/A MOMENTARY CONTACT ACTIVATORS)—TERMINAL 12 (N.O. CONTACT)

A momentary connection while the door is closed, closing or stopped between limits will open the door. A momentary connection while the door is in the full open position will close the door.

The A/A input can be converted to automatic closing. Refer to the section on setting the timers.

Typical activators include pull cords, pushbuttons, or radio controls.

This input works the same as the PB1 input as described above.

AUTO INPUTS (MAINTAINED CONTACT ACTIVATORS)—TERMINAL 14 (N.O. CONTACT)

A maintained connection while the door is closed, closing or stopped between limits will open the door. The door will remain open as long as the connection is present. When the connection is removed the Auto Close delay timer (dEL) will count down and close the door.

The Auto Close delay timer will reset if another maintained connection is made while the timer is timing out. If you require no closing delay set the timer to 0.

Typical activators include floor loops and motion detectors.

PHOTOEYE—TERMINAL 15 (N.C. CONTACT)

A loss of this connection while the door is closing will immediately reverse the door to the open position. The door will remain open as long as something is in the path of the photoeye beam.

After the obstruction is removed the door will remain open, if it was originally opened by a non-automatic activator (A/A, PB1, or Open-Close) until it is closed by a non-automatic activator. The door will close automatically if it was originally opened with an automatic activator. (Auto or PB1-A/A with A/A Close Delay timer on).

If the photoeye is activated while either Close Delay timer is timing down, the timer will reset and resume timing down after the photoeye beam is cleared.

The photoeye input is inactive while the door is closed or opening.

REVERSING EDGE—TERMINAL 17 (N.C. CONTACT)

A momentary loss of this connection, such as the door coming down on something while it is closing, will immediately reverse the door to the open position. The door will remain open and the Digital Gateway display will read EdGE until the system is reset.

To reset the system and close the door: Activate an A/A activator, the pushbutton (PB1) on the enclosure, or the Close input. The system will reset and the door will close.

To reset the system and leave the door open: Activate the Stop input or push the Open Jog/Reset button on the Digital Gateway. The system will reset and the door will remain open.

This input is inactive when the door is opening or when the door is closed (on the "Close" limit switch).

A loss of this connection for two seconds while the door is open (LSO on) will keep the door from closing. This is an alarm condition. The display message EdGE and the Reversing Edge LED will blink.

To reset the system: Re-establish the connection, then push the Open Jog/Reset button or the Stop input. (See ALARM CONDITIONS on page 9 for more information.)

OLR (OVERLOAD RELAY)—TERMINAL 18 (N.O. CONTACT)

When the overload relay in the control box detects a motor malfunction it will trip and turn off the motor contactors. It will also send a signal to the Digital Gateway by closing the contact connected to terminal 18. The display message OLR will blink and the OLR LED will be on.

Once the malfunction has been corrected and the overload reset, the OLR LED will go out but the Alarm Condition message OLR will continue to blink until the system is reset. Reset the system by pressing the Open Jog /Reset button or the Stop input.

OPEN—TERMINAL 20 (N.O. CONTACT)

A momentary connection while the door is closed, closing or stopped between limits will open the door. This input is ignored during the opening cycle.

CLOSE—TERMINAL 21 (N.O. CONTACT)

A momentary connection while the door is opened or stopped between limits will close the door. This input is ignored when the door is closed or during the opening cycle.

STOP/RESET—TERMINAL 23 (N.C. CONTACT)

A momentary loss of this connection will stop the door while it is opening or closing when the door was activated by the Open or Close input.

This input can also be used as a remote reset for Alarm Conditions. It will reset the system the same as the Open Jog/Reset button.

PROGRAM 2—TERMINAL 24 (N.O. CONTACT)

This input has various functions that are explained in the programming section of this manual. (See OPTIONAL PROGRAMS on page 13.)

The default function is the LOC command. When a connection is present and the door is closed (LSC on) the Digital Gateway will be idle. The message LOC will be on the display and no inputs will be active. Removing the connection will return the Digital Gateway to normal operation.

INPUTS TO THE DIGITAL GATEWAY

PROGRAM 3—TERMINAL 26 (N.C. CONTACT)

This input has various functions that are explained in the programming section of this manual. (See OPTIONAL PROGRAMS on page 13.)

The default function is Photoeye AC. A loss of this connection while the door is closing will immediately reverse the door to the open position. The door will remain open as long as something is in the path of the photoeye beam.

After the obstruction is removed the door will remain open (if it was originally opened by a non-automatic activator: A/A, PB1, or Open-Close) until it is closed by a non-automatic activator. The door will close automatically if it was originally opened with an automatic activator (Auto or PB1-A/A with A/A Close Delay timer on).

If the photoeye is activated while either Close Delay timer is timing down, the timer will reset and resume timing down after the photoeye beam is cleared.

The photoeye input is inactive while the door is closed or opening.

LSB (BREAKAWAY KILL SWITCH)—TERMINAL 27 (N.C. CONTACT)

The breakaway kill switches are connected to this input. If the breakaway bottom bar is hit and comes apart, the connection to terminal 27 is lost. The Digital Gateway will turn off the motor contactors and the door will stop and not operate until the system is reset. The AJAr message will be displayed and the LSB LED will blink.

To reset the system: Reassemble the breakaway bottom bar and press the Open Reset/Jog button on the Digital Gateway or the Stop input.

LOOP—TERMINAL 29, THREE TERMINAL PLUG (N.O. CONTACT)

This input is used if a 12 vdc loop detector is used as an activator. When something is present on the loop a contact in the detector will close. This maintained connection will open the door if the door is closed, closing or stopped between limits. The door will remain open as long as the connection is present. When the connection is removed the Auto Close delay timer will count down and close the door.

The Auto Close delay timer (dEL) will reset if another maintained connection is made while the timer is timing out. If you require no closing delay, set the timer to 0.

This input operates the same as the Auto input (terminal 14).

PRIORITY OF INPUTS

Various inputs to the Digital Gateway have priority over other inputs. The following paragraphs explain how some inputs affect others:

- If any other input is activated while the door is being opened by the Auto input, the new input will be ignored.
- If the Auto input is activated while the door is being opened by the A/A, PB1, or Open input the Auto input will be ignored.
- If the RE, Close, Stop, or Program 2 inputs are activated while the Auto Close delay timer is counting down, these inputs are ignored.
- If the A/A, PB1 or Open input is activated while the Auto Close delay timer is counting down the new input will immediately take over.
- If the A/A Close delay timer option is turned on and the A/A or PB1 input is activated while the Auto Close timer is counting down the A/A Close delay timer will immediately take over.
- If the Auto, Photoeye DC or Program 3 input is activated while the Auto Close delay timer is counting down, the timer will reset and start over when the activator is no longer activated.
- If the door is open in a normal condition and the Auto input is activated, the door will remain open when the Auto input is not present. If another activator tries to close the door while the Auto input is on the door will remain open until the Auto input is not present.

TIMERS

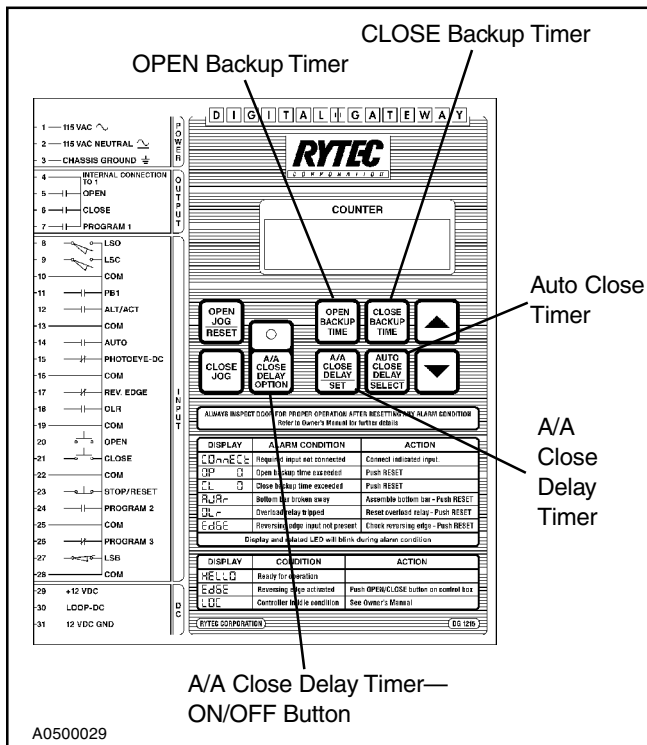


Figure 4

NOTE: The timers have a range of 0–99 seconds. They will count down from the set value to 0 in 1-second intervals. The factory default setting for each timer is one second.

OPEN BACKUP TIMER

This is the backup timer for the opening of the door. This timer will stop the door if it does not reach the open limit switch in the time set. When the time has been exceeded the display message OP = 0 and the LSO LED will blink until the system has been reset.

To reset the system: Determine the reason the door did not reach the limit switch and correct the problem. Then reset the Digital Gateway by pressing the Open Jog/Reset button or Stop button.

This timer should be set 1–2 seconds longer than it takes the door to open. It will count down as the door is opening. Settings and messages for this timer will be displayed as "OP =" plus time.

CLOSE BACKUP TIMER

This is the backup timer for the closing of the door. It functions the same as the open backup timer. When the time has been exceeded the display message CL = 0 and the LSO LED will blink until the system has been reset. This timer should be set 1–2 seconds longer than it takes the door to close. Settings and messages for this timer will be displayed as "CL =" plus time.

ALTERNATE ACTION (A/A) CLOSE DELAY TIMER

This timer delays the closing of the door when it is opened by an A/A activator or PB1 (terminal 11 or 12). After the A/A or PB1 connection is removed and the door has reached the open limit switch, the timer will time out and close the door.

For no closing delay set the timer to 0. Settings and messages for this timer will be displayed as "ACL=" plus time.

The use of this timer is optional. It is turned on with the A/A Close Delay Option button. The LED above the button will be on when the timer is on. To operate the door manually with the A/A or PB1 connection this timer should be off (Figure 5).

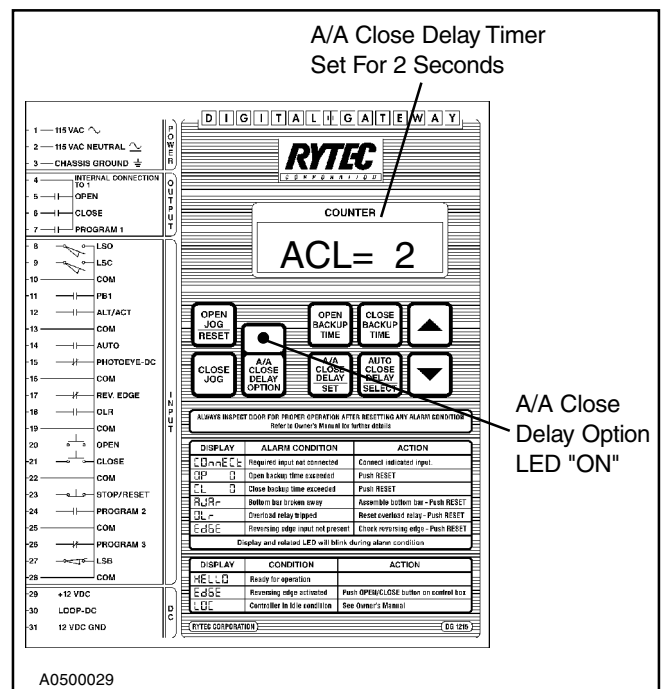


Figure 5

START-UP PROCEDURES

AUTO CLOSE DELAY TIMER

This timer delays the closing of the door when it is opened by an Auto input activator (terminal 14) or floor loop (terminal 30). After the connection is removed and the door has reached the open limit switch, the timer will time out and close the door.

For no closing delay set this timer to 0. This timer is always on. Settings and messages for this timer will be displayed as "dEL =" plus time.

SETTING THE TIMERS

The timers are set using the UP and DOWN arrow buttons described in PUSHBUTTONS on page 3 and the individual button for each timer. The Digital Gateway should be in a normal state (display showing the cycle count and no activators activated) before setting the timers. The timers will count in one-second increments.

To set the timers:

1. Push the button for the timer you want to set. The display will show the present setting of that timer.
2. Use the UP and DOWN arrow keys to raise or lower the setting. Releasing the arrow key will put the new setting into memory. The display will show that setting for 4 seconds or until another button is pushed. Figure 6 shows the setting of the Close Delay backup timer.

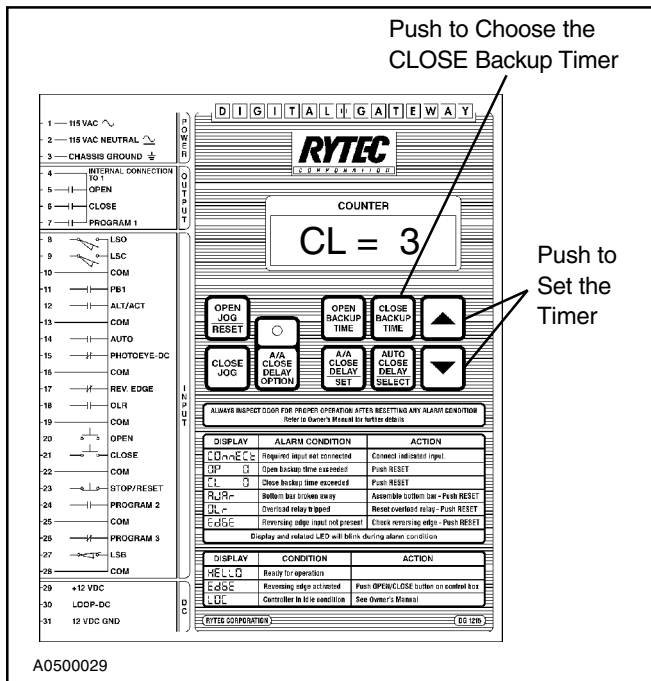


Figure 6

START-UP PROCEDURES

1. Install the door following the procedures outlined in the door installation manual.
2. Make all the necessary electrical connections. Follow the electrical schematic shipped in each door's control box. The schematics shown in this manual are for informational purposes only. (See INPUTS TO THE DIGITAL GATEWAY on page 4 for a description of the various inputs to the Digital Gateway.)
3. Turn on the power. If any required N.C. connections are missing the display message CONnECT and the missing input LED will blink. Once the connection is made the LEDs will go off and the system will be ready for operation. (See ALARM CONDITIONS—CONnECT, MISSING CONNECTIONS on page 9 for more information on missing connections.)
4. Set the timers as required. The backup timers should be set 1–2 seconds longer than it will take the door to open or close. The A/A Close Delay and Auto Close Delay timers should be set as required for proper closing of the door. (See SETTING THE TIMERS.)

NOTE: Use the OPEN and/or CLOSE jog buttons to check door operation. If a problem is noticed, the buttons can be released to stop the door.

5. Run the door. Check the door for proper operation. Check the motor rotation, limits, reversing edge, breakaway kill switch, timer settings, etc. Check all activators for proper operation.

ALARM CONDITIONS

COnnECT, MISSING CONNECTIONS

The Digital Gateway monitors the N.C. inputs on power up. This alarm indicates one or more of the required N.C. inputs are missing. The LED(s) for the missing input(s) and the display message COnnECT will blink. Once the missing input(s) are connected the LED(s) will go off, the display will change to the cycle count and the system will be ready for operation. Figure 7 shows a missing photoeye connection.

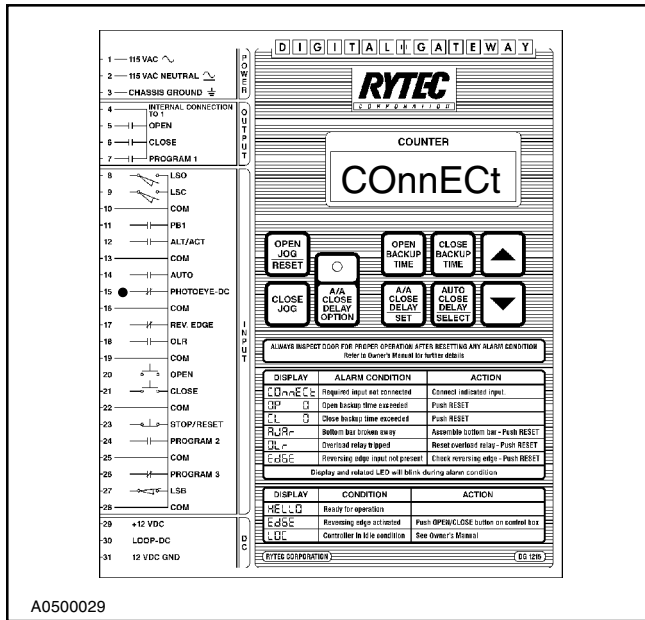


Figure 7

OP = 0, OPEN TIME EXCEEDED

This alarm indicates that the open backup timer has timed out before the door has fully opened and that the door has not operated in the time set on the backup timer. The display message OP = 0 and the LSO LED will blink. Check the door for proper operation and reset the Digital Gateway. (See Figure 8.)

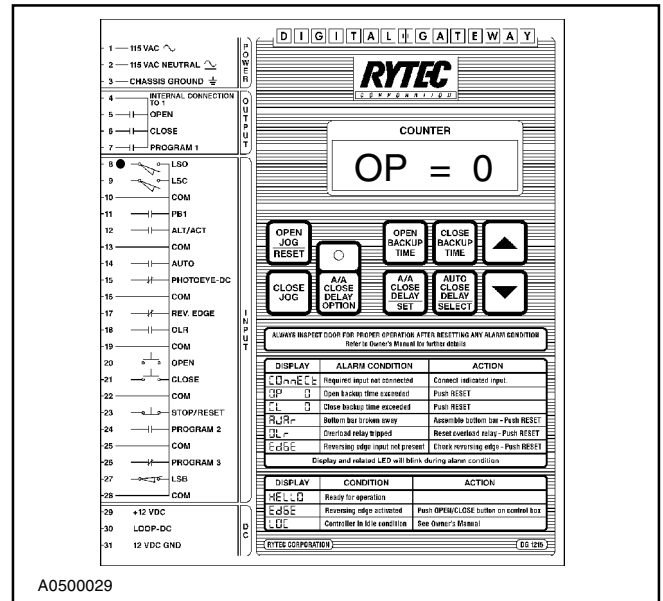


Figure 8

CL = 0, CLOSE TIME EXCEEDED

This alarm indicates that the close backup timer has timed out before the door has fully closed and the door has not operated in the time set on the backup timer. The display message CL = 0 and the LSC LED will blink. Check the door for proper operation and reset the Digital Gateway. (See Figure 9.)

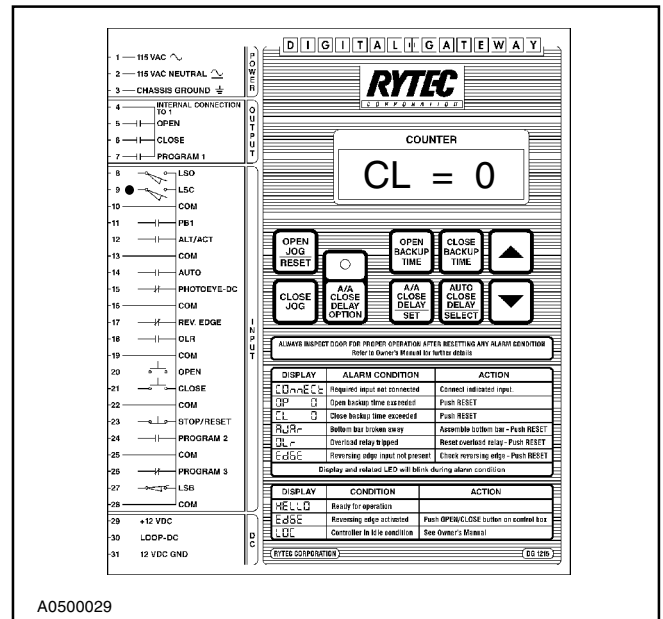


Figure 9

ALARM CONDITIONS

AJAr, BREAKAWAY KILL SWITCH

This alarm tells you the bottom bar on the door has been broken away. The display message AJAr and the LSB LED will blink. Reassemble the bottom bar and reset the Digital Gateway. (See Figure 10.)

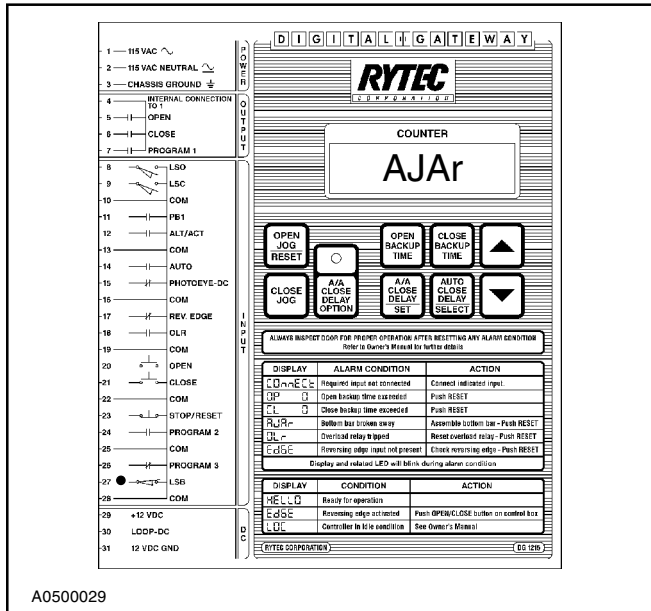


Figure 10

OLr, OVERLOAD RELAY

This alarm indicates that the overload relay in the control box has tripped. The display message OLr will blink and the OLR LED will be on. Find the problem that caused the overload relay to trip, reset the overload relay and reset the Digital Gateway. (See Figure 11.)

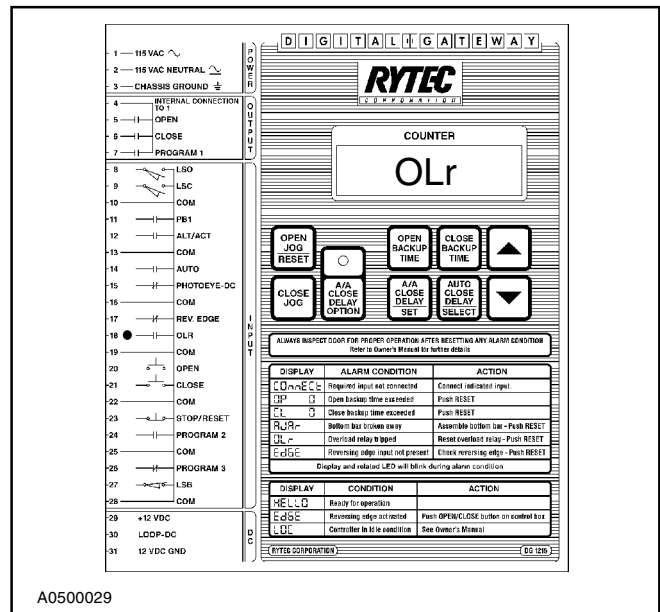


Figure 11

EdGE, REVERSING EDGE

This alarm indicates that the reversing edge connection (input 17) is missing. The Digital Gateway monitors the connection every time the door is fully open. If the connection is missing for 2 seconds or more, the door will remain open, the display message EdGE, and the RE input LED will blink. Reconnect the input and reset the Digital Gateway. (See Figure 12.)

The message EdGE will be displayed, but will not blink if the door came down on something activating the reversing edge. The door will then reverse to the open position. The display will show EdGE like Figure 12, but the LED will be off.

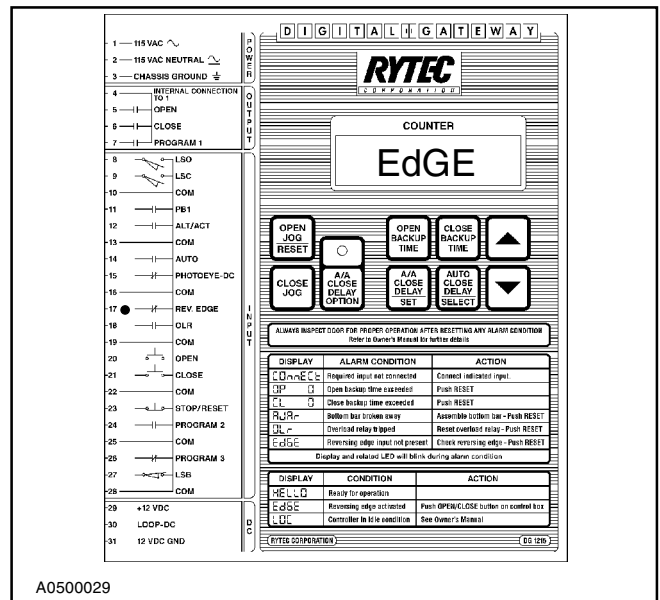


Figure 12

NON-ALARM CONDITIONS

HELLO, SAFE START-UP

When power is applied to the Digital Gateway the door will not move regardless of the status of any activator. The display will read HELLO. The system will reset and be operational with any activator change or if the Digital Gateway is reset with the Open Jog/Reset button or Stop input (Figure 13).

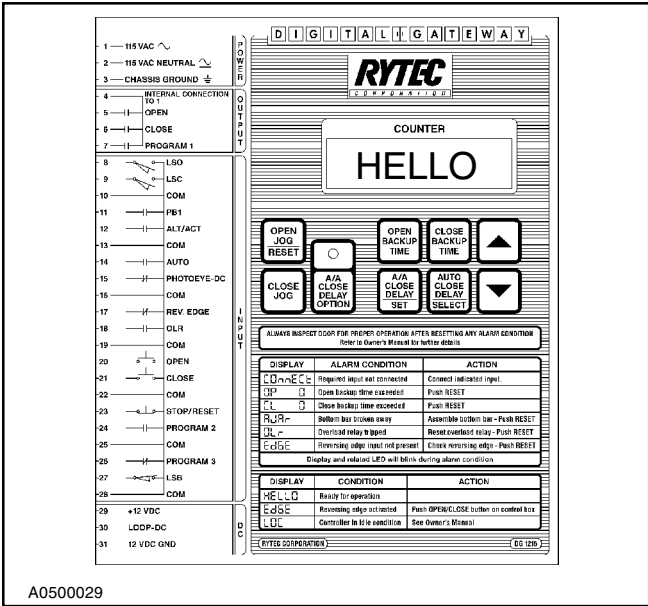


Figure 13

EdGE, REVERSING EDGE TRIPPED

The message EdGE will be displayed if the door comes down on something activating the reversing edge. The door will reverse to the open position. To reset the system and close the door use the PB1, A/A, or Close input. To reset the system and leave the door open use the Open Jog/Reset button or the Stop input. (See Figure 14.)

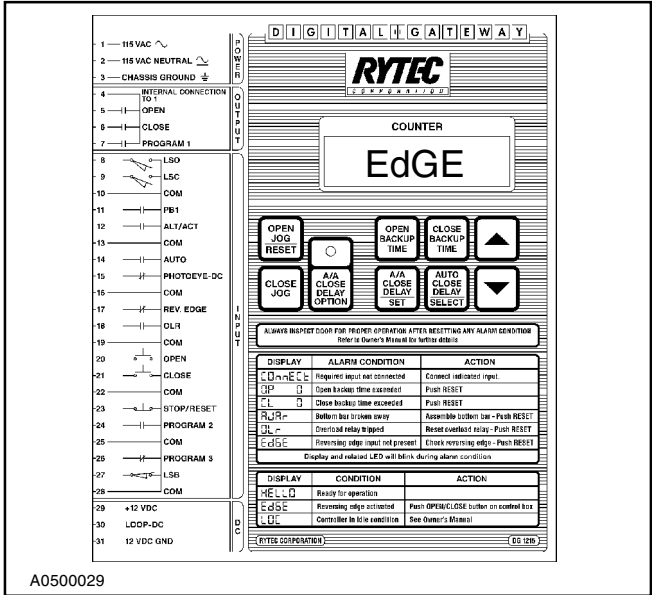


Figure 14

LOC, IDLE STATE

This message will be displayed when input 24 is activated, the door is fully closed (on the "Close" limit switch) and the Digital Gateway programmed for LOC. The Digital Gateway will be inactive and no inputs will operate the door. (See Figure 15).

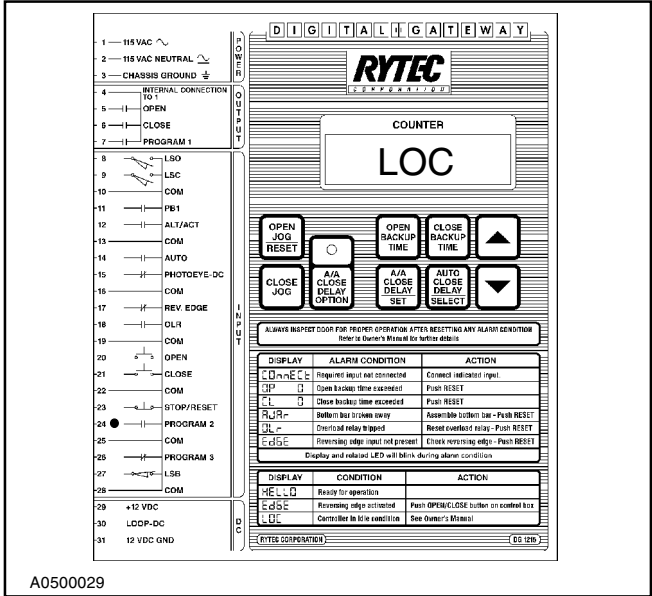


Figure 15

TROUBLESHOOTING

POWER

The Digital Gateway operates at 115 volts AC. Power is supplied through terminals 1, 2 and 3. Terminal 1 is 115 vac hot, terminal 2 is 115 vac neutral and terminal 3 is ground. (See Figure 16.)

OUTPUTS

The 3 triac outputs of the Digital Gateway share a common power source which is terminal 4. Terminal 4 is internally connected to the 115 vac power source. Terminal 5 is the open output, supplying power to the open contactor. Terminal 6 is the close output, supplying power to the close contactor. Terminal 7 is the Program 1 output. It can be used to power a relay which can be used for a variety of things. See the programming section.

An RC network and MOV are connected across each output for noise suppression. An external MOV is recommended across any contactor coil or solenoid coil. The maximum rating for each output is 1 amp inductive continuous. (See Figure 16.)

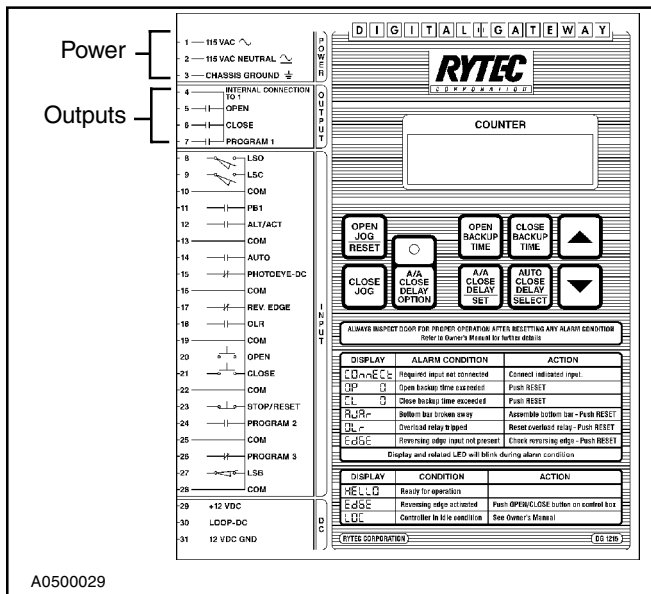


Figure 16

REPLACEMENT



The fused disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

If the Digital Gateway ever requires replacement:

1. Turn off the power to the door.
2. Remove the plug-in terminal blocks from the left side of the Digital Gateway.
3. Remove the existing Digital Gateway from the control box, by removing the four screws that hold it in place.
4. Install the replacement and reconnect the plug-in terminal blocks, making sure the numbers on the terminal blocks correspond with the terminal numbers on the Digital Gateway.
5. Turn on the power.
6. Reset all the timers and program options as required.

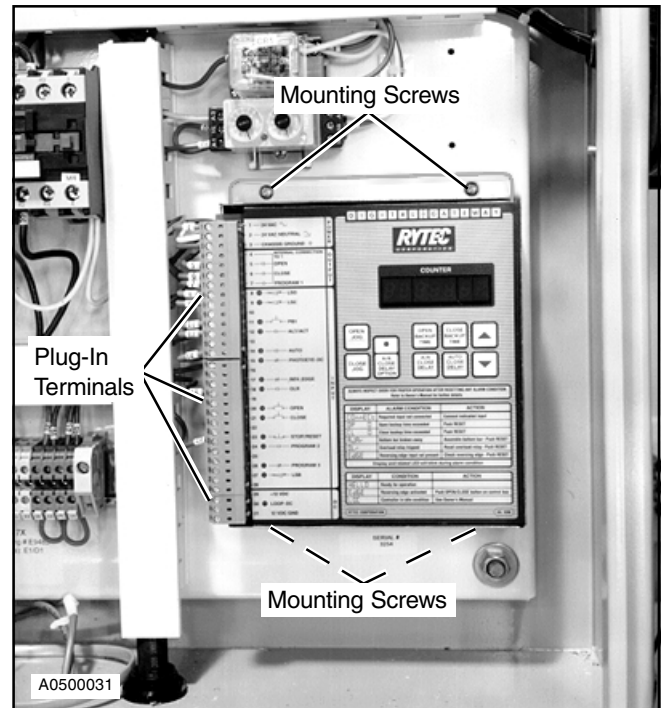


Figure 17

TROUBLESHOOTING

The Digital Gateway has diagnostic features that aid in troubleshooting door problems. There are status LEDs and alarm conditions that show you what the door is doing. The alarm condition explanations and descriptions of the LEDs will identify problems that may come up.

OPTIONAL PROGRAMS

NOTE: The Digital Gateway has one programmable output (output 7), two programmable inputs (inputs 24 and 26) and various other program options built in. A description of each available program follows. See SETTING THE PROGRAM OPTIONS on page 15 for programming instructions.

PROGRAM 1, OUTPUT 7

This output can tell you if the door is not closed, fully open or about to close. When output 7 is turned on 115 vac will be available at terminal 7. This power can be used to turn on a 115 vac relay which can indicate where the door is or what it is about to do. The relay can operate warning lights, horns or signal an energy management system. Only one of the three options available in Program 1 can be selected at a time.

Door Not Closed, P1 = LSC

Output 7 will be on when the door is not closed. (Not on the "Close" limit switch). The output will be off when the door is fully closed. (On the "Close" limit switch). This is the factory default setting. It tells you the door is not closed.

Door Open, P1 = LSO

Output 7 will be on when the door is fully open. (On the "Open" limit switch). The output will be off when the door is below the open position. (Off of the "Open" limit switch). It tells you the door is fully open.

Delay to Close, P1 = dtC

When the door is signaled to close, output 7 will turn on, the Delay to Close timer (dtC) will start, but output 6, which closes the door will not be on. When the Delay to Close timer times out, output 6 will activate and the door will close. Output 7 will remain on until the door is completely closed. Maximum time is 15 seconds. This option tells you the door is about to close.

PROGRAM 2, INPUT 24

This input can be used to place the Digital Gateway into an inactive condition, operate the door manually or automatically or open the door to a height below fully open. Only one of the Program 2 options can be selected at a time.

LOC Condition, P2 = LOC

When input 24 is on and the door is fully closed the Digital Gateway will go into an inactive condition. No inputs will be able to activate the door. The message LOC will be on the display. Once the connection is removed from the input, the system will be ready for normal operation. This is the factory default Program 2 setting and can be used to "lock out" the door.

MAN-AUTO Selector Switch, P2 = SSA

If this option is selected, a manual-automatic two position selector switch can be connected to input 24. When the switch is in the MAN position (there is no connection at terminal 24) the A/A and Auto Close delay timers are disabled. The Auto and Loop inputs are inactive when the door is closed, but will reverse the door if it is closing or hold it open when it is fully open.

When the switch is in the AUTO position (there is a connection at input 24) the A/A Close Delay timer will turn on and all inputs will operate normally.

This option allows you to operate the door manually or automatically.

MAN-AUTO Selector Switch with Open and Close Inactive in Auto, P2 = SSb

This option operates the same as the MAN-AUTO option described in MAN-AUTO Selector Switch, P2 = SSA, except in the Auto position the Open and Close inputs are inactive.

Passage Entry—Timed, P2 = Pet

When this option is used and the door is activated to open with input 24, it will open for a predetermined time. This allows you to open the door part way with an activator connected to terminal 24 while other activators connected to other inputs will open the door completely. A 20 foot door could be opened 8–10 feet for small loads and 20 feet for large loads.

When input 24 is activated while the door is fully closed the door will open and the Passage timer (PET) will begin counting down. When the Passage timer reaches zero the door will stop. Activating this input again will close the door. If the A/A Close Delay timer is on when the door is opened with input 24, the door will open until the Passage timer reaches zero. Then the A/A Close Delay timer will time out and close the door.

OPTIONAL PROGRAMS

Passage Entry—Position, P2 = PEP

When this option is turned on PROGRAM 3, INPUT 26—Passage Limit Switch, LSP will also be turned on. These two options allow you to open the door partially using an activator connected into input 24 and another limit switch (Passage Limit LSP) connected to input 26. A 20 foot door could be opened 8 feet for small loads and 20 feet for large loads. The Passage Limit would be set at 8 feet. Using the activator connected to input 24 would open the door to the Passage Limit. Using the other activators would open the door completely.

When input 24 is activated while the door is fully closed it will open until it reaches the Passage limit switch which will activate input 26. When input 24 is activated again the door will close. If the A/A Close Delay timer is used the door will open until it reaches the Passage limit switch, then the A/A Close Delay timer will time out and close the door. If the input is activated while the door is closing the door will open until it reaches the OPEN or Passage limit switch, depending on which limit switch is tripped first.

PROGRAM 3, INPUT 26

This program option will not appear in the Program Menu. These options are set through factory defaults or by other program options.

Photoeye AC

This input will operate the same as the photoeye input described in PHOTOEYE—TERMINAL 15 (N.C. CONTACT) on page 5, except it would be used for AC photoeyes. This is the factory default setting.

Passage Limit Switch, LSP

This option is turned on when the Passage Entry—Position option is turned on. The Passage Limit switch is connected to this input. When the door reaches the Passage position after it is opened by input 24, this input will be activated and the door will stop.

PROGRAM 4, PROGRAMMABLE OPTIONS

This program section allows you to change the Open and Close inputs to constant pressure/jog, set a reverse delay timer and/or a loop call delay. More than one of these options can be on at the same time.

Close Jog, CLJ = On/CLJ = OFF

This option converts the Close Input (input 21) to constant pressure/jog operation. The door will only close while the input is activated.

Open Jog, OPJ = On/OPJ = OFF

This option converts the Open Input (input 20) to constant pressure/jog operation. The door will only open while the input is activated.

Reverse Delay, rdt = 00

The Digital Gateway is programmed to immediately reverse the door if an activator or safety input is operated while the door is closing. This option can be used to delay the reversal of the door. If the A/A, Auto or Open input is activated while the door is closing the reversal will be delayed by the time set on the Reverse Delay timer. The door will stop, the Reverse Delay timer (rdt) will time out and the door will then open. Reversals due to the photoeye or reversing edge inputs will not be delayed.

The maximum setting is 15 seconds. The factory default setting is 0 which disables the timer.

Loop Call Delay, LPt = 00

This option will delay the opening of the door when it is opened by the Loop input. This can be used for cross traffic situations. Traffic crossing in front of the door will not remain on the loop long enough to open the door but traffic approaching the door will activate the door.

When the Loop input is activated while the door is fully closed the Loop timer will count down and then open the door. If the Loop input returns to the normal unactivated state while the timer is counting down the door will not open and the system will return to the normal state.

If the Loop input is activated while the door is closing the door will immediately reverse to the fully open position.

The maximum setting is 15 seconds. The factory default setting is 0 seconds which disables the timer.

PROGRAM 5, REVERSE INPUT LOGIC

This option can be used to reverse the required logic for some of the inputs. The required contact arrangement can be changed from normally closed (N.C.) to normally open (N.O.). The inputs that can be changed are Open Limit (LSO - #8), Close Limit (LSC - #9), Photoeye—DC (Pdc - #15), Reversing Edge (rE - #17), Stop (StP- #23), Program 3 (PG3 - #26) and Breakaway Limit (LSb - #27).

PROGRAM 6

This program option is set for factory use. It requires an additional three digit security code. If you find yourself in program 6 press the Set button to return to the main menu.

SETTING THE PROGRAM OPTIONS

As described in OPTIONAL PROGRAMS on page 13, there are 6 program menus and their submenus available. You will use the UP and DOWN arrows, the Set button (A/A Close Delay) and the Select button (Auto Close Delay) to select and set the program options which will be shown on the display. (See Figure 18.)

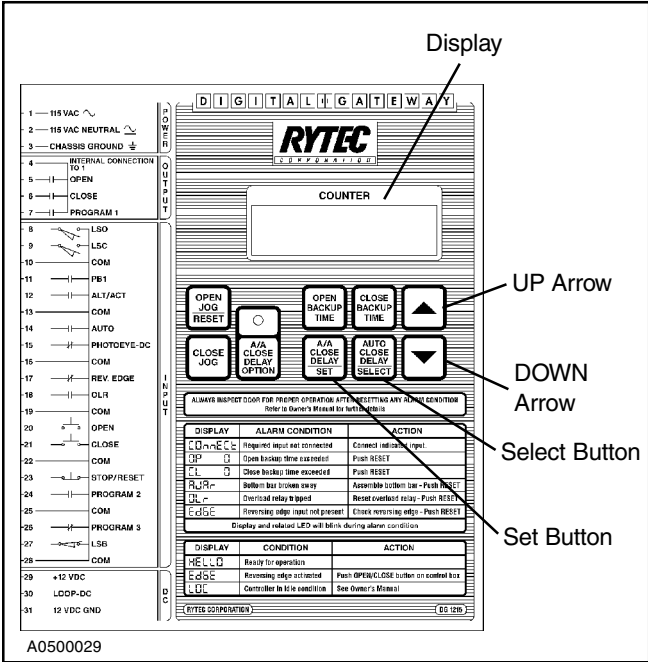


Figure 18

1. To enter the programming mode, press and hold both the OPEN and CLOSE Backup Timer buttons for three seconds. The display will change to three 0's as shown in Figure 19. To continue the programming mode, you will have to enter the three-digit security code. Contact the Rytec Customer Support Department at (414) 677-9046 for the code

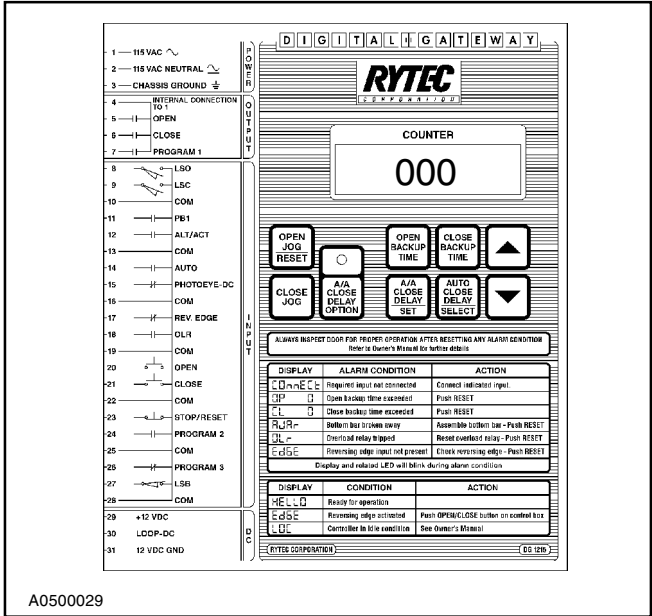


Figure 19

- 2. The first (left) digit will blink. Press the UP or DOWN arrow key to raise or lower the value of the first digit. After the first digit is set, press the Select button to move to the next digit. Repeat the process for all three digits of the security code, then press the Set button to enter the Program Mode.
- 3. Once you have entered the program mode, the display will show the various program menus. Press the Select button to scroll through the programs. (See Figure 20.)

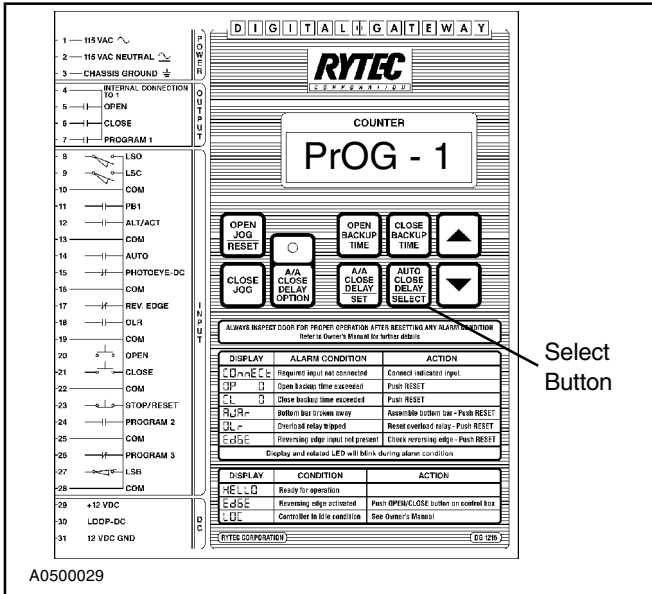


Figure 20

REPLACING MODELS DG1000 AND DG1100 WITH MODEL DG1215

- After you find the program you wish to change, press the Set button to enter the sub-menu for that particular program. Each sub-menu will be identified by the program number and an option code. Figure 21 shows the default setting (Door Not Closed) for Program 1.

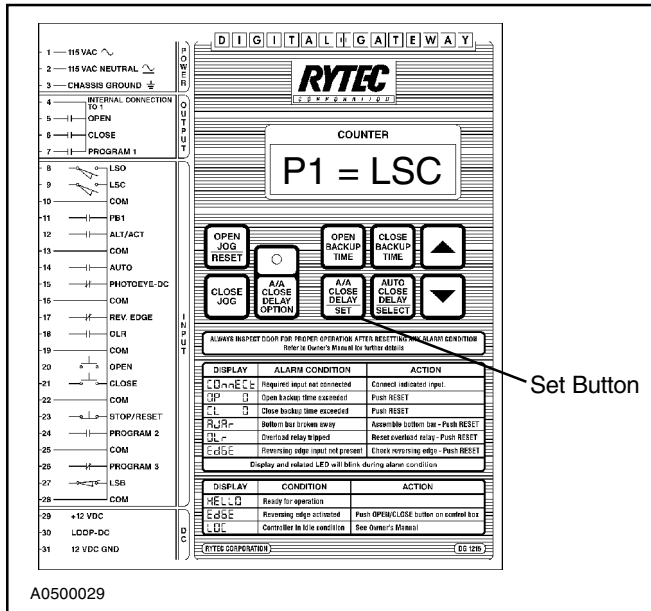


Figure 21

- For programs 1 and 2 only one option can be selected. Scroll through the options using the Select button. Press the Set button to select the option displayed. This will return you to the main Program menu.
- For the remaining programs use the Select button to scroll through the options. Use the UP and DOWN arrow keys to set the time or option and the Set button to return to the Main Program menu after all the selections are made.
- When a timer is associated with an option, the display will show the code for the option and the timer setting. Use the UP and DOWN arrow keys to set the timers. Figure 22 shows the Delay to Close timer set to 0 seconds. Use the Set button to return to the Main Program menu.

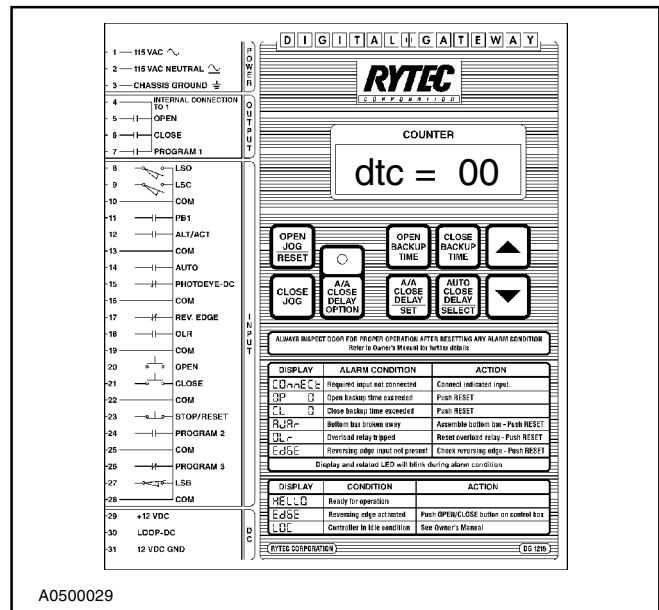


Figure 22

- When all options have been selected, press the Open and Close Backup Timer buttons to leave the program mode. The Digital Gateway is then ready for operation.

REPLACING MODELS DG1000 AND DG1100 WITH MODEL DG1215

NOTE: Digital Gateway model DG1215 is a direct replacement for models DG1000 and DG1100. To use all of the features of the DG1215 some minor wiring changes may have to be made in the control box.

To use the message AJAr, which tells you when a Roll door bottom bar has broken away, change the wiring as described in step 7.

If the door is set up using passage entry see PROGRAM 2, INPUT 24 on page 13 for wiring and programming. Consult the factory for other special applications.

Use the following instructions to install the replacement Digital Gateway.

⚠ WARNING

The fused disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

1. Note the timer and program option settings (if any) used on the existing Digital Gateway. These will be used to set up the replacement DG1215.
2. Turn off power to the door.
3. Unplug the plug-in terminal blocks from the left side of the existing Digital Gateway. Some versions do not have plug-in terminals for the lower three loop wires. If so, label these wires and remove them from the terminals. They will be connected into a plug-in terminal provided with the replacement DG1215.
4. Remove the existing Digital Gateway from the control box by removing the four screws that hold it in place. (See Figure 23.)

5. Install the replacement Digital Gateway with the four screws removed in step 4.
6. Reconnect the plug-in terminal blocks, making sure the numbers on the terminal blocks correspond with the terminal numbers on the replacement Digital Gateway. If required, connect the loop wires to the new three-pole terminal block. Make sure all wire terminals are tight.
7. To use the AJAr alarm message on the DG1215 the breakaway bottom bar kill switches must be rewired in the control box.

Wire #18 coming from the bottom bar kill switches and connected into terminal 18 must be moved to terminal 27 on the DG1215.

Wire #18 from the overload relay should remain in terminal 18.

8. Turn on power to the door.
9. Set all timers and program options as required.
10. Operate the door following the start-up procedures in this manual. (See START-UP PROCEDURES on page 8.)

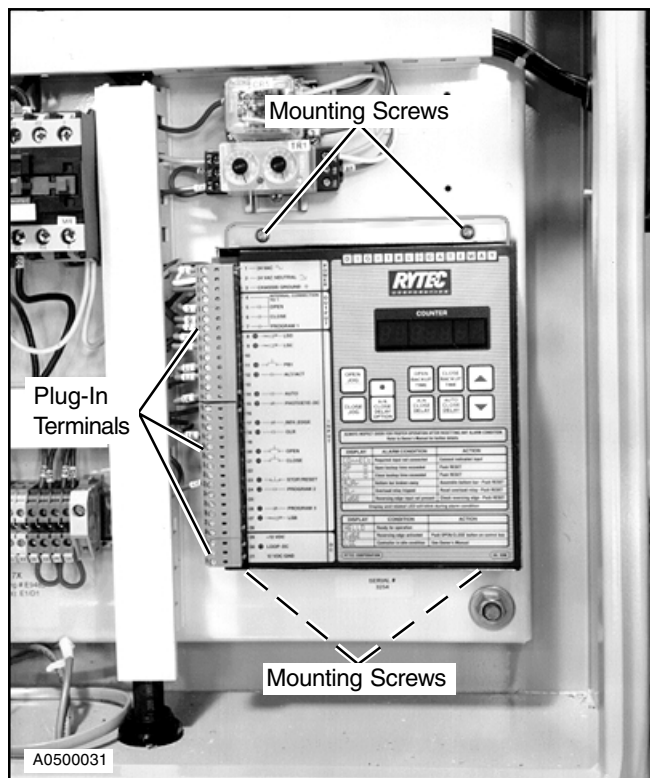


Figure 23

