

Generation 3 Controller Advanced Programming Guide

March 24, 2021

v1.0.5

Technical Brief

CLI Commands



INNOVATION

A Caldwell Company

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

If you READ nothing else, read this...

- Prior to installing an INMOTION G3 system verify the mechanical installation is 100% operational.
 - All panels move smoothly, without excessive force required at all points across the span
 - The frame is square & plumb, and the lead panel meets the jam evenly top to bottom.
 - All required weather stripping is installed properly and not binding during panel movement.
 - Panels are NOT warped, and panel pickups release and operate smoothly without issues.
 - Interlocks engage and disengage properly without dragging extra panels etc.
 - In a nutshell the door should be at its mechanical “best” before automation is installed
- NEVER leave a door running on a Cycle Test unattended...even for a minute, unless it is in a controlled environment completely void of people and pets.
- DO NOT experiment with commands you find in this guide unless you know what you are doing or have been directed to do so by a trained factory representative.
- Remember the G3 has been certified by UL to be safe, but that only applies if it has been installed safely by the installer.
- If you have any question or concerns, please consult the factory.
- Remember INMOTION offers free training, year-round, all you have to do is ask.

About this Guide...

This guide documents the more advanced options and features of the G3 Controller by INMOTION. It covers the G3 Controller with v0.7.0 or later firmware. This release added 4 “special feature” modes besides the “normal” mode present in the previous release. In addition, there is a cycle test option available to integrators and installers that can exercise the G3 while running any of the 5 supported modes for testing, option enabling or tuning.

When the G3 first boots, it is operating at the “user” level, and no password is required. In this mode, all commands to operate the door must come from wired or wireless accessories such as wall switches and remotes or from a home automation system wired into the wall switch circuit.

To access any of the advanced mode options, called modifiers, a password is required. The password entered will set the user level. The current user / password level can be checked at any time by entering the command “**pwd**” or “**p**” on the CLI. The current level will be displayed on the CLI.

In this guide each page will indicate what user level is required for the given command or function by the graphic shown. A checkmark next to the various levels indicate which user levels can call or modify the command or function documented.

Installers have access to the User, Installer and Developer levels by entering the appropriate password. The difference between the Installer and Developer levels is that some commands change such that the Installer level will not accidentally erase critical door programming information causing more work than necessary. If an installer needs to access one these protected commands, they only need to change to the Developer level to perform the task. For general and advanced programming, the Installer password will work for 99% of the tasks required.

Supported User Levels

<input checked="" type="checkbox"/>	User
<input checked="" type="checkbox"/>	Installer
<input checked="" type="checkbox"/>	Developer
<input checked="" type="checkbox"/>	Factory

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CLI Password Access

Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

Starting with the “Special Features” v0.7.0 firmware release, the G3 controller requires unique passwords for each controller. This is due a California law, as of Jan 1, 2020, requiring minimum security for IoT devices. To address this change, the G3 utilizes its unique serial number as part of the password. Once programmed at the factory, this new password scheme is activated. The previous release supported 2 password levels for access to the CLI. Those being “Installer” and “Developer” and they were the same for all G3’s running v0.6.7 firmware. If you memorized those passwords, then the new password mechanism will not take too much effort.

The previous passwords for firmware v0.6.7 were:

User:	“0”	// Rarely used as it’s the default at boot
Installer:	“pwd1”	
Developer:	“IM1635”	

The new passwords use the same characters as before but with different numbers at the end.

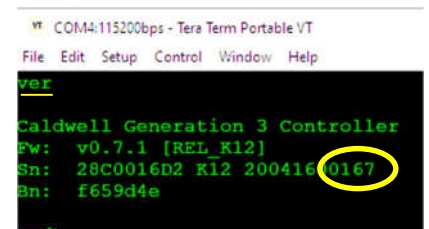
User:	“0”	// Did not change from v0.6.7
Installer:	“pwdXXXX”	// Replace the “XXXX” with the last 4 digits of the serial number
Developer:	“IMXXXX”	// Replace the “XXXX” with the last 4 digits of the serial number

Note: Entering an incorrect password, immediately puts the controller into “user” mode or minimum access.

As shown above adding the last 4 digits of the G3’s serial number will allow the installer to determine the password and access the G3’s CLI at the required user level. The serial number can be found on a sticker affixed to the back of the controller itself.



If for some reason the label is unreadable or missing, then the serial number must be obtained from the CLI using the “**ver**” or “**info**” commands. Both the password (**pwd**) and version (**ver**) commands are supported at boot (user level).



G3 VERSION COMMAND

After obtaining the serial number, the password can be entered in the CLI using the password command “**pwd**” or “**p**” for short.

Installer:	pwd pwd0167	// Installers should use this one
Developer:	pwd IM0167	// Only use if needed or when directed to do so by the factory

```
cmd>pwd pwd0167
Level = 1 (Installer)
cmd>
```

```
cmd>pwd IM0167
Level = 2 (Developer)
cmd>
```

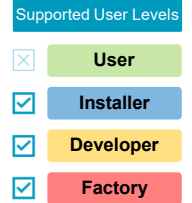
* Passwords will auto-expire after 30 minutes regardless of CLI activity. This timeout can be extended by issuing the “**pwd**” or its abbreviation “**p**” (just the command, no password needs to follow)

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Config Commands

Configuration commands differ from help commands in 2 important ways. The first is that all configuration commands are password protected and are not available at the user level. At least an “Installer” level password is required for access to most commands.



The second difference is that all config commands affect door operation in one way or another and the effect is persistent. Once a configuration change is acknowledged, that change is written to flash memory and will persist through a reboot. This includes features and feature modifiers.

Some configuration commands that should not be executed because they are “learned” during programming are “**pje**” (Jam Position), “**pop**” (Position Open), “**epol**” (Encoder Polarity), “**mdir**” (Motor Polarity).

It may be tempting to just tweak the full open position “pop” when the open position is off by an inch. DON'T DO IT. The learned friction profile is linked to physical length of the span. If that length is changed, the friction profile will be out of sync possibly causing an entrapment hazard for the operator. If the span needs to be changed **REPROGRAM THE CONTROLLER. Don't be lazy...be SAFE.**

Activated On Close Commands

Although CLI commands can be called at any time, some commands do not take effect until the “*next*” Close command. Modifier commands that change the span, normal or special feature mode attributes will not be recognized by the controller until the next time the door enters the jam. Even if the door is in the jam, changed modifiers of this type require an additional “close” command before the door's behavior changes to the new functionality. This is done for safety so that all mode changes occur at a known execution point in the code.

Non-activated on close commands take effect immediately or at the start of the next panel movement, either opening or closing.0

**Activated
On Close**

Commands that have this behavior are documented with the above symbol in the upper right page corner.

Description	Command	Description	Command
Normal Mode Open Span	pop	Party Mode Span	fpm�
Normal Mode Sub Span	pops	Party Mode Close Wait Time	fpmw
Brake On Close	mboc	Party Mode Brake On Close	fpmբ
Brake On Open	mbpop	Egress Mode Span	fegđ
Brake Disable (Global)	mbđ	Egress Close Wait Time	fegw
Span Adjust Time	fsat	Egress Brake On Close	fegբ
Party Mode Enable	fpme	One Button Span	fobđ
Egress Mode Enable	fege	One Button Close Wait Time	fobw
One Button Op Enable	fobe	One Button Brake On Close	fobb
Move Assist Enable	fmae	Move Assist Span	fmad
		Move Assist Close Wait Time	fmaw
		Move Assist Span Adjust Time	fmat

If the panel is in the process of closing, changing an “Activated On Close Command” will be activated at *this* jam entry. In this case an additional manual “close” command will not be required.

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

drtp (Door Type)

Syntax: config drtp [VALUE]
Abbreviation: c drtp
Range/Units: oneway, bipart
Default: oneway

Command Description

This is an optional parameter that tells the controller what type of door it is attached to either one-way or bi-part. For this release, the value of this parameter has no functional effect on the operation of the door however it does affect some functions that report panel travel distances. Specifically, the “**cyct**” (Cycle Test) command will double its reported “panel travel distance” when set to “**bipart**”, however internally the data is always stored as the “**oneway**” distance.

Beginning with firmware release v0.7.2, the value for “p1ms” is doubled for internal calculations when the door type is set to “bipart”. This allows the controller to better estimate the panel mass to maintain UL325 safety limits. When this is in effect, the “info” report will list show the “p1ms” as “2x” and display the internal calculated mass.

Parameter Protection

Although not a critical parameter it has some built in protection from accidental changes while performing some operations.

- config all reset: Will not change this parameter’s value.

Terminal Output

```
cmd>c drtp bipart
OK: bipart

cmd>c drtp oneway
OK: oneway
```

References

pwd Requires a minimum user level of “Installer”
cyct Cycle test doubles panel travel distance if door is a “bipart”
c p1ms Sets the mass in pounds of a single panel
Appendix B Inch position to Encoder count conversion table.

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Supported User Levels



User



Installer



Developer



Factory

p1ms (Panel 1 Mass)

Syntax: config p1ms [VALUE]
Abbreviation: c p1ms
Range/Units: 0 – 50000 lbs
Default: 172 lbs

Command Description

The “p1ms” (Panel 1 Mass) parameter tells the G3 controller the weight the lead panel. The UL325 velocity algorithm uses this information to limit the velocity of the lead panel to value low enough to pass the kinetic energy maximums dictated by the specification.

The G3’s open and close velocities are low enough already to easily pass the requirement. However, if these velocities are higher than 6” per second and a heavy panel mass is entered, the overall speed of the door will be lowered by the algorithm to maintain safety and compliance with UL325.

Beginning with firmware release v0.7.2, the value for “p1ms” is doubled for internal calculations when the door type is set to “bipart”. This allows the controller to better estimate the panel mass to maintain UL325 safety limits. When this is in effect, the “info” report will list show the “p1ms” as “2x” and display the internal calculated mass.

Parameter Protection

Due to the critical nature of this parameter, it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter’s value.

Terminal Output

```
cmd>config plms 50 // Set panel 1's mass to 50 lbs
OK: 50.0000

Cmd>config plms reset // Reset plms to factory default
172.0000
```

References

pwd Requires a minimum user level of “Installer”
c kp PID parameter for the motor control algorithm
c ki PID parameter for the motor control algorithm
c drtp Set the door type to either “oneway” or “bipart”

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Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

pdia (Pulley Diameter)

Syntax: config pdia [VALUE]
Abbreviation: c pdia
Range/Units: 0.5 – 4.5 inches
Default: 1.7998 inches (for current OEM tall silver pulley)



Command Description

This command allows the G3 controller to adapt to a different pulley size, in the rare circumstance where the pulley installed is not the original OEM pulley from INMOTION. The G3 controller uses the pulley diameter for several internal algorithms to calculate panel velocity and distances. UL 325 and “Soft Touch” depend on it and its very important that the value is correct.

Parameter Protection

Due to the critical nature of this parameter, it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter's value.
- rst 2: Will not change this parameter's value. (Wipe for Reprogram)

Terminal Output

```
cmd>c pdia
1.7988 // This is the diameter of the current OEM pulley

cmd>c pdia 4 // Set the pulley diameter to 4.0000"
OK: 4.0000

cmd>c pdia reset // Reset the pulley diameter to factory default
1.7988
```

References

pwd Requires a minimum user level of “Installer”
rst Reset command
Appendix B Inch position to Encoder count conversion table.
Tech Brief Pulley Diameter Calculation

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fpme (Feature Party Mode Enable)

Syntax: config fpme [VALUE]
Abbreviation: c fpme
Range/Units: 0 – 1
Default: 0 (Disabled)

Activated
On Close

Command Description

CLI command to enable “Party Mode”. Enabling this mode disables any currently active mode including Normal mode. All functions of an attached wall switch, remote or home automation connection remain functional in this mode.

When the door is closed and a motion signal is received by the controller, the controller will open the door to the programmed span(default 40”), wait for a designated period(default 10s) and then close. On closure the door does not engage the magnetic brake by default but can be enabled with the modifier “**fpmb**”.

If while closing motion is detected, the door will stop and return to its programmed span and restart the auto close timer if enabled.

Party Mode requires a “motion” trigger from a wired or wireless motion detector, IR Beam sensor or a motion signal from a 3rd party device wired into the motion circuit (requires a RS485 GPIO adaptor). When the system is wireless only, a wireless motion detector is the only supported signaling option. For wired & wireless systems, the “**button motion**” or “**b m**” command will simulate an actual motion signal.

Command Options

Party modes supports the following options. Note the span adjust time (**fsat**) is shared between Normal & Party Mode, Egress, and One Button Operation.

Modifier	Description
fpmd	Span adjustable from 6” to full physical span. Default 40”.
fpmw	Auto close disable(0), immediate(1) or delayed(1s to 1day)
fpmb	Brake On Close disable(0), immediate(1) or delayed(1s to 1day)
fsat	Span adjust time disable(0), time limit(1 – 98s), forever(99)
mbpop	Brake On Open disable(0), enabled(1)

Terminal Output

```
cmd>c fpme 1
036.654: FEATURE: Party Mode ENABLED
cmd> c fpme 0
070.932: FEATURE: Party Mode DISABLED
cmd>c fpme // Check feature status; Status is Disabled
0
cmd>c fpme // Check feature status; Status is Enabled
1
```

References

pwd Requires a minimum user level of “Installer”
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fpmd Party Mode full open span (sub-span)
c fpmw Party Mode auto close wait time
c fpmb Party Mode brake on close enable, disable or delay
c mbpop Brake on Open

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Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fpmd (Feature Party Mode Distance)

Syntax: config fpmd [VALUE]
Abbreviation: c fpmd
Range/Units: 6"– full span inches
Default: 40 inches

Activated
On Close

Command Description

CLI command to set the open distance or sub-span for "Party Mode". This is the distance the door will open when this mode is active. If the user adjusted the sub-span manually, the new span will be stored in this parameter.

The sub-span can be set from a minimum of 6" to the physical full span of the door. If the sub-span is set to a value greater than the physical span of the door, the full span is set without error.

Terminal Output

```
cmd>c fpmd // Check the modifiers current value
40.0000

cmd>c fpmd 75.5 // Set new sub-span to 75.5 inches
OK: 75.5000

cmd>c fpmd 99999 // Entered sub-span is too large so automatically set to full span
OK: 122.5061

cmd>c fpmd 6 // Sub-span set to 6" minimum
OK: 6.0000

cmd>c fpmd reset // Reset sub-span modifier to factory default
40.0000
```

References

pwd Requires a minimum user level of "Installer"
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fpme Party Mode enable
c fpmw Party Mode auto close wait time
c fpmb Party Mode brake on close enable, disable or delay
c mbpop Brake on Open
Appendix B Inch position to Encoder count conversion table.

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fpmw (Feature Party Mode Wait Time)

Syntax: config fpmw [VALUE]
Abbreviation: c fpmw
Range/Units: 0 – 86400 seconds
Default: 10 seconds

Activated
On Close

Command Description

This modifier adjusts the wait before auto-closing while in Party Mode. The default is 10s, and it can be disabled(0), set to close immediately(1) or delay the closure (2s to 1day).

The time limit set here takes precedence over the span adjust time set by the “fsat” command. For more information refer to “Tech Brief – Info Report, Actual Adjustment Time”.

Terminal Output

```
cmd>c fpmw // Check the modifier's current value
0

cmd>c fpmw 1 // Set auto close to immediately
OK: 1

cmd>c fpmw 60 // Set auto close delay to 60s
OK: 60

cmd>c fpmw 3600 // Set auto close delay to 1 hour
OK: 3600

cmd>c fpmw 86400 // Set auto close delay to 1 day
OK: 86400

cmd>c fpmw reset // Set auto close to factory default
10
```

References

pwd	Requires a minimum user level of “Installer”
c fpme	CLI enable for the special feature “Party Mode”
c fsat	Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fpme	Party Mode enable
c fpmd	Party Mode full open span (sub-span)
c fpmb	Party Mode brake on close enable, disable or delay
c mbpop	Brake on Open
Tech Brief	Info Report, Actual Adjustment time
Appendix A	Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fpmb (Party Mode Brake on Close)

Activated
On Close

Syntax: config fpmb [VALUE]
Abbreviation: c fpmb
Range/Units: 0 – 86400 seconds
Default: 0 seconds (Disabled)

Command Description

This modifier adjusts the wait before engaging the magnetic brake when in Party Mode and the door has just closed. The default is disabled(0), but it can be set to brake immediately(1) or to delay the brake from (2s to 1day).

A setting of 1 does not mean, delay by 1 second. When set to 1, the brake is enabled immediately to help lock the panel in place for installs that have a warped jam which can cause the panel to “bounce” out as the clutch disengages. Previous controllers had a separate “brake timer” that would control this functionality.

When set to 1, the G3 on close will engage the brake *before* releasing the clutch to lock the panel in place and prevent panel “bounce out”.

“fpmb” Value	Description
0	Brake on close is DISABLED
1	Brake is engaged IMMEDIATELY on close before releasing the clutch
2 – 86400	Brake is engaged after a delay of this many seconds. 2s – 1day

Terminal Output

```
cmd>c fpmb // Check the modifier's current value
0

cmd>c fpmb 1 // Set brake on close to immediately
OK: 1

cmd>c fpmb 60 // Set brake on close delay to 60s
OK: 60

cmd>c fpmb 3600 // Set brake on close delay to 1 hour
OK: 3600

cmd>c fpmb 86400 // Set brake on close delay to 1 day
OK: 86400

cmd>c fpmb reset // Set brake on close to factory default
0
```

References

pwd Requires a minimum user level of “Installer”
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fpme Party Mode enable
c fpmd Party Mode full open span (sub-span)
c fpmw Party Mode auto close wait time
c mbpop Brake on Open
c mboc Normal mode brake on close
Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fege (Feature Egress Enable)

Syntax: config fege [VALUE]
Abbreviation: c fege
Range/Units: 0 – 1
Default: 0 (Disabled)

Activated
On Close

Command Description

CLI command to enable “Egress Mode”. Enabling this mode disables any currently active mode including Normal mode. All functions of an attached wall switch, remote or home automation connection remain functional in this mode.

When an “Open” command is received from a wired or wireless wall switch, the controller will open the door to the programmed span(default 40”), wait for a designated period(default 10s) and then close. On closure the door does not engage the magnetic brake by default but can be enabled with the modifier “fegb”.

Command Options

Egress mode supports the following options. Note the span adjust time “fsat” is shared between Normal & Party Mode, Egress, and One Button Operation.

Table	Description
fegd	Span adjustable from 6” to full physical span. Default 40”.
fegw	Auto close disable(0), immediate(1) or delayed(1s to 1day)
fegb	Brake On Close disable(0), immediate(1) or delayed(1s to 1day)
fsat	Span adjust time disable(0), time limit(1 – 98s), forever(99)
mbpop	Brake On Open disable(0), enabled(1)

Terminal Output

```
cmd>c fege 1
119.458: FEATURE: Egress ENABLED

cmd>c fege 0
142.274: FEATURE: Egress DISABLED

cmd>c fege // Check feature status; Status is Disabled
0

cmd>c fege // Check feature status; Status is Enabled
1
```

```
cmd>cmd OTHER_VERSIONS
output here
```

References

pwd Requires a minimum user level of “Installer”
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fegd Egress Mode full open span (sub-span)
c fegw Egress Mode auto close wait time
c fegb Egress Mode brake on close enable, disable or delay
c mbpop Brake on Open

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fegd (Feature Egress Distance)

Syntax: config fegd [VALUE]
Abbreviation: c fegd
Range/Units: 6" – full span inches
Default: 40 inches

Activated
On Close

Command Description

CLI command to set the open distance or sub-span for "Egress Mode". This is the distance the door will open when this mode is active. If the user adjusted the sub-span manually, the new span will be stored in this parameter.

The sub-span can be set from a minimum of 6" to the physical full span of the door. If the sub-span is set to a value greater than the physical span of the door, the full span is set without error.

Terminal Output

```
cmd>c fegd // Check the modifiers current value
40.0000

cmd>c fegd 75.5 // Set new sub-span to 75.5 inches
OK: 75.5000

cmd>c fegd 99999 // Entered sub-span is too large so automatically set to full span
OK: 122.5061

cmd>c fegd 6 // Sub-span set to 6" minimum
OK: 6.0000

cmd>c fegd reset // Reset sub-span modifier to factory default
40.0000
```

References

pwd Requires a minimum user level of "Installer"
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fege Egress Mode enable
c fegw Egress Mode auto close wait time
c fegb Egress Mode brake on close enable, disable or delay
c mbpop Brake on Open
Appendix B Inch position to Encoder count conversion table.

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fegw (Feature Egress Wait Time)

Syntax: config fegw [VALUE]
Abbreviation: c fegw
Range/Units: 0 – 86400 seconds
Default: 10 seconds

Activated
On Close

Command Description

This modifier adjusts the wait before auto-closing while in Egress Mode. The default is 10s, and it can be disabled(0), set to close immediately(1) or delay the closure (2s to 1day).

The time limit set here takes precedence over the span adjust time set by the “fsat” command. For more information refer to “Tech Brief – Info Report, Actual Adjustment Time”.

Terminal Output

```
cmd>c fegw // Check the modifier's current value
0

cmd>c fegw 1 // Set auto close to immediately
OK: 1

cmd>c fegw 60 // Set auto close delay to 60s
OK: 60

cmd>c fegw 3600 // Set auto close delay to 1 hour
OK: 3600

cmd>c fegw 86400 // Set auto close delay to 1 day
OK: 86400

cmd>c fegw reset // Set auto close to factory default
10
```

References

pwd Requires a minimum user level of “Installer”
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fege Egress Mode enable
c fegd Egress Mode full open span (sub-span)
c fegb Egress Mode brake on close enable, disable or delay
c mbpop Brake on Open
Tech Brief Info Report, Actual Adjustment time
Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fegb (Feature Egress Brake on Close)

Activated
On Close

Syntax: config fegb [VALUE]
Abbreviation: c fegb
Range/Units: 0 – 86400 seconds
Default: 0 seconds (Disabled)

Command Description

This modifier adjusts the wait before engaging the magnetic brake when in Egress Mode and the door has just closed. The default is disabled(0), but it can be set to brake immediately(1) or to delay the brake from (2s to 1day).

A setting of 1 does not mean, delay by 1 second. When set to 1, the brake is enabled immediately to help lock the panel in place for installs that have a warped jam which can cause the panel to “bounce” out as the clutch disengages. Previous controllers had a separate “brake timer” that would control this functionality.

When set to 1, the G3 on close will engage the brake *before* releasing the clutch to lock the panel in place and prevent panel “bounce out”.

“fegb” Value	Description
0	Brake on close is DISABLED
1	Brake is engaged IMMEDIATELY on close before releasing the clutch
2 – 86400	Brake is engaged after a delay of this many seconds. 2s – 1day

Terminal Output

```
cmd>c fegb 0 // Check the modifier's current value
0

cmd>c fegb 1 // Set brake on close to immediately
OK: 1

cmd>c fegb 60 // Set brake on close delay to 60s
OK: 60

cmd>c fegb 3600 // Set brake on close delay to 1 hour
OK: 3600

cmd>c fegb 86400 // Set brake on close delay to 1 day
OK: 86400

cmd>c fegb reset // Set brake on close to factory default
0
```

References

- pwd Requires a minimum user level of “Installer”
- c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
- c fege Egress Mode enable
- c fegd Egress Mode full open span (sub-span)
- c fegw Egress Mode auto close wait time
- c mboc Normal mode brake on close parameter
- c mbpop Brake on Open
- Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fmae (Feature Move Assist Enable)

Syntax: config fmae [VALUE]
Abbreviation: c fmae
Range/Units: 0 – 1
Default: 0 (Disabled)

Activated
On Close

Command Description

Use this CLI command to enable “Move/Motion Assist Mode”. Enabling this mode disables any currently active mode including Normal mode. All functions of an attached wall switch, remote or home automation connection remain functional in this mode including “**release**” to activate the magnetic brake.

Move assist automatically moves the door in the direction of a manual movement of the panel by the operator. The panel only needs to be moved a fraction of an inch to initiate an automatic motor assisted movement. By default, the panel does not auto close but that can be changed with the modifier “**fmaw**”. Brake on Close & Open are not supported with move assist however the magnetic brake can be enabled with the wall switch “release” button if desired.

The Span Adjust Time Limit for Move Assist can be disabled(0) or timed for 1s to 98s. Move assist span adjust cannot be set to “forever(99)”.

Command Options

Move Assist supports the following options. Note the span adjust time (fmat) is an independent setting for move assist only, and does NOT support adjust forever(99).

Table	Description
fmad	Span adjustable from 6” to full physical span. Default 40”.
fmaw	Auto close disable(0), immediate(1) or delayed(1s to 1day)
fmab	Brake On Close disable(0), immediate(1) or delayed(1s to 1day)
fmat	Span adjust time disable(0), time limit(1 – 98s).
mbpop	Brake On Open is not supported & ignored with Move Assist enabled

Terminal Output

```
cmd>c fmae 1
203.584: FEATURE: Move Assist ENABLED

cmd>c fmae 0
232.574: FEATURE: Move Assist DISABLED

cmd>c fmae // Check feature status; Status is Disabled
0

cmd>c fmae // Check feature status; Status is Enabled
1
```

References

pwd Requires a minimum user level of “Installer”
c fmat Span adjust time for Move Assist only
c fmad Move Assist full open span (sub-span)
c fmaw Move Assist auto close wait time
c mbpop Brake On Open is IGNORED when this feature is enabled

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fmad (Feature Move Assist Distance)

Activated
On Close

Syntax: config fmad [VALUE]
Abbreviation: c fmad
Range/Units: 6" – full span inches
Default: 40 inches

Command Description

This CLI command sets the open position or sub-span for "Move Assist". This is the distance the door will open when this mode is active. If the user adjusted the sub-span manually, the new span will be stored in this parameter.

The sub-span can be set from a minimum of 6" to the physical full span of the door. If the sub-span is set to a value greater than the physical span of the door, the full span is set without error.

Terminal Output

```
cmd>c fmad // Check the modifiers current value
40.0000

cmd>c fmad 75.5 // Set new sub-span to 75.5 inches
OK: 75.5000

cmd>c fmad 99999 // Entered sub-span is too large so automatically set to full span
OK: 122.5061

cmd>c fmad 6 // Sub-span set to 6" minimum
OK: 6.0000

cmd>c fmad reset // Reset sub-span modifier to factory default
40.0000
```

References

pwd Requires a minimum user level of "Installer"
c fmae Move Assist enable
c fmat Span adjust time for Move Assist only
c fmad Move Assist full open span (sub-span)
c fmaw Move Assist auto close wait time
c mbpop Brake-On-Open is IGNORED when this feature is enabled
Appendix B Inch position to Encoder count conversion table.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fmax (Feature Move Assist Wait Time)

Syntax: config fmax [VALUE]
Abbreviation: c fmax
Range/Units: 0 – 86400 seconds
Default: 0 seconds (Disabled)

Activated
On Close

Command Description

This modifier adjusts the wait before auto-closing while in Move Assist. The default is disabled(0), but it can be set to close immediately(1) or to delay closure from (2s to 1day).

The time limit set here takes precedence over the span adjust time set by the “fmat” command. For more information refer to “Tech Brief – Info Report, Actual Adjustment Time”.

Terminal Output

```
cmd>c fmax // Check the modifier's current value
0

cmd>c fmax 1 // Set auto close to immediately
OK: 1

cmd>c fmax 60 // Set auto close delay to 60s
OK: 60

cmd>c fmax 3600 // Set auto close delay to 1 hour
OK: 3600

cmd>c fmax 86400 // Set auto close delay to 1 day
OK: 86400

cmd>c fmax reset // Set auto close to factory default
0
```

References

pwd	Requires a minimum user level of “Installer”
c fmae	Move Assist enable
c fmat	Span adjust time for Move Assist only
c fmad	Move Assist full open span (sub-span)
c fmax	Move Assist auto close wait time
c mbpop	Brake On Open is IGNORED when this feature is enabled
Tech Brief	Info Report, Actual Adjustment time
Appendix A	Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fmat (Feature Move Assist Span Adjust Time)

Syntax: config fmat [VALUE]
Abbreviation: c fmat
Range/Units: 0 – 98 seconds
Default: 5 seconds

Activated
On Close

Command Description

This parameter sets the span adjust time limit an operator has to adjust the sub-span of the door just after the door has reached its programmed open position. It is **Move Assist** is specific. Upon stopping, a timer is started, set to “fmat” seconds allowing the operator to manually move the panels to a new open position. If panel movement begins before the “fmat” timer runs out AND does not stop during the adjustment for longer than “fmat” seconds, the new span will be registered for this feature.

For modes that support auto-close, the time limit for auto close can shorten or eliminate the span adjust time. Refer to the “Tech Brief – Info Report, Actual Adjustment Time” for more information.

If additional changes to the span are required after an adjustment is attempted, pressing Open again, even while at full open, will give the operator an additional “fmat” timer run to retry the span adjustment for Move Assist.

Panel 1 Manually Moved To...	Description
Between 6” from closed TO 2” from full open	Sub-span is SET for the active feature
Between 2” & 4” from closed	Sub-span is SET to the minimum span of 6”
Less than 2” from closed	Sub-span is NOT set
Between 2” from full open & full open	Sub-span is set to the full open value

Terminal Output

```
cmd>c fmat          // Report the current span adjust time for Move Assist
5
cmd>c fmat 1         // Set span adjust time to 1 second which is too short to be useful.
OK: 1

cmd>c fmat 30        // Set span adjust time to 30 seconds
OK: 30

cmd>c fmat 98        // Set span adjust time to its maximum timed period of 98 seconds
OK: 98

cmd>c fmat reset     // Reset span adjust time period to factory default of 5 seconds
5
```

References

pwd	Requires a minimum user level of “Installer”
c fmae	Move Assist Enable
c fmat	Span adjust time for Move Assist only
c fmad	Move Assist full open span (sub-span)
c fmaw	Move Assist auto close wait time
c mbpop	Brake On Open is IGNORED when this feature is enabled
Tech Brief	Info Report, Actual Adjustment Time
Appendix A	Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fsat (Shared Feature Span Adjust Time)

Activated
On Close

Syntax: config fsat [VALUE]
Abbreviation: c fmat
Range/Units: 0 – 98 seconds or 99(forever)
Default: 5 seconds

Command Description

This parameter sets the time limit for an operator to adjust the span of the door just after the door has reached its programmed open position and stopped while **Normal**, **Party Mode**, **Egress**, or **One Button Operation** are enabled. Upon stopping a timer is started, set to “fsat” seconds allowing the operator to manually move the panels to a new open position. If panel movement begins before the “fmat” timer runs out AND does not stop during the adjustment for longer than “fsat” seconds, the new span will be registered for this feature.

If additional changes to the span are required after an adjustment is attempted, pressing Open again, even while at full open, will give the operator an additional “fsat” timer run to retry the span adjustment for the currently active mode.

Span adjust for all these features can be disabled(0) or enabled with a timer value from 1 to 98s. Setting the parameter to 99 sets the span adjust time to unlimited or “forever”. *For modes that support auto-close, the time limit for auto close can shorten or eliminate the span adjust time. Refer to the “Tech Brief – Info Report, Actual Adjustment Time” for more information.*

Panel 1 Manually Moved To...	Description
Between 6” from closed TO 2” from full open	Sub-span is SET for the active feature
Between 2” & 4” from closed	Sub-span is SET to the minimum span of 6”
Less than 2” from closed	Sub-span is NOT set
Between 2” from full open & full open	Sub-span is set to the full open value

Commands Sharing this Parameter

The shared parameter “fsat” controls the span adjust time for **Normal** as well as **Party Mode**, **Egress Mode** and **One Button Operation** as these are the only features that support an unlimited adjustment period(99).

Terminal Output

```
cmd>c fsat          // Report the current span adjust time for Normal, Party Mode Egress & OBO
5
cmd>c fsat 1         // Set span adjust time to 1 second which is too short to be useful.
OK: 1
cmd>c fsat 98        // Set span adjust time to its maximum timed period of 98 seconds
OK: 98
cmd>c fsat 99        // Set span adjust time period to “forever” with (99)
OK: 99
cmd>c fsat reset     // Reset span adjust time period to factory default of 5 seconds
5
```

References

pwd Requires a minimum user level of “Installer”
c fpme Party Mode enable
c fege Egress Mode enable
c fobe One Button Operation enable
Tech Brief Info Report “Actual Adjustment Time”
Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fobe (Feature One Button Operation Enable)

Activated
On Close

Syntax: config fobe [VALUE]
Abbreviation: c fobe
Range/Units: 0 – 1
Default: 0 (Disabled)

Command Description

CLI command to enable “One Button Operation/Simplicity Mode”. Enabling this mode disables any currently active mode including Normal mode. One Button Operation makes the door operate like an automated garage door opener.

One Button Operation uses a single wall switch button/command to open, close and stop the door. It operates in the same manner as a garage door opener. The “Stop” button/command is used to initiate all door movements. If the door is opening and “Stop” is pressed, the door stops. Pressing “Stop” again will close the door. Once the door reaches programmed open or close, pressing “Stop” will move the door to the opposite jam.

All functions of an attached wall switch or remote remain functional, except for the “Stop” function, where it will perform as previously described.

Command Options

One Button Operation supports the following options. Note the span adjust time (fsat) is shared between Normal & Party Mode, Egress, and One Button Operation.

Table	Description
fobd	Span adjustable from 6” to full physical span. Default 40”.
fobw	Auto close disable(0), immediate(1) or delayed(1s to 1day)
fobb	Brake On Close disable(0), immediate(1) or delayed(1s to 1day)
fsat	Span adjust time disable(0), time limit(1 – 98s), forever(99)
mbpop	Brake On Open disable(0), enabled(1)

Terminal Output

```
cmd>c fobe 1
277.772: FEATURE: One Button Operation ENABLED

cmd>c fobe 0
332.330: FEATURE: One Button Operation DISABLED

cmd>c fobe // Check feature status; Status is Disabled
0

cmd>c fobe // Check feature status; Status is Enabled
1
```

References

pwd Requires a minimum user level of “Installer”
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fobd One Button Operation full open span (sub-span)
c fobw One Button Operation auto close wait time
c fobb One Button Operation brake on close enable, disable or delay
c mbpop Brake on Open

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G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fobd (Feature One Button Op Distance)

Activated
On Close

Syntax: config fobd [VALUE]
Abbreviation: c fobd
Range/Units: 6" – full span in inches
Default: 40 inches

Command Description

CLI command to set the open distance or sub-span for "One Button Operation". This is the distance the door will open when this mode is active. If the user adjusted the sub-span manually, the new span will be stored in this parameter.

The sub-span can be set from a minimum of 6" to the physical full span of the door. If the sub-span is set to a value greater than the physical span of the door, the full span is set without error.

Terminal Output

```
cmd>c fobd // Check the modifiers current value
40.0000

cmd>c fobd 75.5 // Set new sub-span to 75.5 inches
OK: 75.5000

cmd>c fobd 99999 // Entered sub-span is too large so automatically set to full span
OK: 122.5061

cmd>c fobd 6 // Sub-span set to 6" minimum
OK: 6.0000

cmd>c fobd reset // Reset sub-span modifier to factory default
40.0000
```

References

pwd Requires a minimum user level of "Installer"
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fobe One Button Operation enable
c fobw One Button Operation auto close wait time
c fobb One Button Operation brake on close enable, disable or delay
c mbpop Brake on Open
Appendix B Inch position to Encoder count conversion table.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fobw (Feature One Button Op Wait)

Syntax: config fobw [VALUE]
Abbreviation: c fobw
Range/Units: 0 – 86400 seconds
Default: 0 seconds (Disabled)

Activated
On Close

Command Description

This modifier adjusts the wait before auto-closing while in One Button Operation mode. The default is disabled(0), but it can be set to close immediately(1) or to delay closure from (2s to 1day).

The time limit set here takes precedence over the span adjust time set by the “fsat” command. For more information refer to “Tech Brief – Info Report, Actual Adjustment Time”.

Terminal Output

```
cmd>c fobw // Check the modifier's current value
0

cmd>c fobw 1 // Set auto close to immediately
OK: 1

cmd>c fobw 60 // Set auto close delay to 60s
OK: 60

cmd>c fobw 3600 // Set auto close delay to 1 hour
OK: 3600

cmd>c fobw 86400 // Set auto close delay to 1 day
OK: 86400

cmd>c fobw reset // Set auto close to factory default
0
```

References

pwd Requires a minimum user level of “Installer”
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
c fobe One Button Operation enable
c fobd One Button Operation full open span (sub-span)
c fobb One Button Operation brake on close enable, disable or delay
c mbpop Brake on Open
Tech Brief Info Report, Actual Adjustment time
Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fobb (Feature One Button Op Brake on Close)

Syntax: config fobb [optional]
Abbreviation: c fobb
Range/Units: 0 – 86400 seconds
Default: 0 seconds (Disabled)

Activated
On Close

Command Description

This modifier adjusts the wait period before engaging the magnetic brake when in One Button Operation and the door has just closed. The default is disabled(0), but it can be set to brake immediately(1) or to delay the brake from (2s to 1day).

A setting of 1 does not mean, delay by 1 second. When set to 1, the brake is enabled immediately to help lock the panel in place for installs that have a warped jam which can cause the panel to “bounce” out as the clutch disengages. Previous controllers had a separate “brake timer” that would control this functionality.

When set to 1, the G3 on close will engage the brake *before* releasing the clutch to lock the panel in place and prevent panel “bounce out”.

“fobb” Value	Description
0	Brake on close is DISABLED
1	Brake is engaged IMMEDIATELY on close before releasing the clutch
2 – 86400	Brake is engaged after a delay of this many seconds. 2s – 1day

Terminal Output

```
cmd>c fobb // Check the modifier's current value
0

cmd>c fobb 1 // Set brake on close to immediately
OK: 1

cmd>c fobb 60 // Set brake on close delay to 60s
OK: 60

cmd>c fobb 3600 // Set brake on close delay to 1 hour
OK: 3600

cmd>c fobb 86400 // Set brake on close delay to 1 day
OK: 86400

cmd>c fobb reset // Set brake on close to factory default
0
```

References

- pwd Requires a minimum user level of “Installer”
- c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
- c fobe One Button Operation enable
- c fobd One Button Operation full open span (sub-span)
- c fobw One Button Operation auto close wait time
- c mbpop Brake on Open
- Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

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G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

mhdc (Modifier Hard Close Enable [Global])

Syntax: config mhdc [VALUE]
Abbreviation: c mhdc
Range/Units: 0 – 1
Default: 1 (Enabled)

Command Description

While closing with this parameter enabled, the amount of motor current is slightly increased to overcome the friction demands of door entering the jam with heavy weather-strip or a deep channel jam.

The default for Hard Close is enabled as it really helps at making sure that one-way panels are pushed deep enough into the jam so that the mechanical lock can be engaged after every cycle. When used on a bi-part it ensures both panels meet in the center tightly.

The force applied is controlled by the modifier “**hdctf**” which multiplies the applied torque when the lead panel is near the closed or open position. The term “near” means at or less than the jam depth set during programming using the parameter “**pje**”. The jam depth is typically around a half an inch but will vary depending on how deep the jam was set during programming.

The second modifier which controls both Hard Close & Open is “**hdclf**”. The “**hdclf**” adds to the defined current limit at the either end of the span. If for example the panel is over currenting while pushing the panel into the jam, the “**hdclf**” can be increased in small increments until over current issues are resolved.

Terminal Output

```
cmd>c mhdc          // Report the current value of this parameter
1

cmd>c mhdc 0         // Disable Hard Close
OK: 0

cmd>c mhdc reset     // Reset Hard Close to factory default
1

cmd>c mhdc 1         // Enable Hard Close
OK: 1
```

References

pwd Requires a minimum user level of “Installer”
c mhdo Hard Open enable modifier
c hdctf Hard Open & Close torque factor
c hdclf Hard Open & Close limit factor

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

mhdo (Modifier Hard Open Enable [Global])

Syntax: config mhdo [VALUE]
Abbreviation: c mhdo
Range/Units: 0 – 1
Default: 0 (Disabled)

Command Description

This parameter is the opposite of Hard Close where additional motor current is applied during the close cycle from full open. If for some reason the panel, at full open, requires more torque to pull out of a pocket for this parameter will apply addition power without an over overcurrent.

The force applied is controlled by the modifier “**hdctf**” which multiplies the applied torque when the lead panel is either near the closed or open position. The term “near” means at or less than the jam depth set during programming using the parameter “**pje**”. The jam depth is typically around a half an inch but will vary depending on how deep the jam was set during programming.

The second modify which controller both Hard Close & Open is “**hdclf**”. The “**hdclf**” adds to the defined current limit at the either end of the span. If for example the panel is over currenting while pushing into the jam, the “**hdclf**” can be increased in small increments until over current issues are resolved.

Terminal Output

```
cmd>c mhdo          // Report the current value of this parameter
1

cmd>c mhdo 0         // Disable Hard Open
OK: 0

cmd>c mhdo reset     // Reset Hard Open to factory default
1

cmd>c mhdo 1         // Enable Open Close
OK: 1
```

References

pwd Requires a minimum user level of “Installer”
c mhdc Hard Close enable modifier
c hdctf Hard Open & Close torque factor
c hdclf Hard Open & Close limit factor

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

mbd (Modifier Brake Disable [Global])

Activated
On Close

Syntax: config mbd [VALUE]
Abbreviation: c mbd
Range/Units: 0 – 1
Default: 0 (Disabled)

Command Description

This parameter will disable the magnetic brake for nearly all controller functions. Some installs utilize a 3rd party locking mechanism to secure the door and the magnetic brake can interfere with this. In the past installers would disconnect the brake at the motor BOB. With the G3, the brake can be disabled with this parameter.

Wall switch “release/unlock” commands will be ignored as well as the CLI “button release/unlock” commands. Brake on close & open are also disabled. The only brake functionality that does work is the help command “**brake**”.

Note that when this feature is enabled, the “motor” click sound used during programming and selecting features from a wall switch will be noticeably quieter since the brake is disabled and only the clutch is used to make the “click” sound.

Terminal Output

```
cmd>c mbd // Report the status of this parameter
0

cmd>c mbd 1 // Enable Brake Disable global modifier
OK: 1

cmd>b unlock // If enabled & unlock is attempted the brake does not toggle with CLI message
OK
128.758: FEATURE: Brake DISABLED.
Use 'c mbd 0' to ENABLE brake functionality.

cmd>c mbd 0 // Disable Brake Disable meaning the brake is now free to operate
OK: 0

cmd>c mbd reset // Reset Brake Disable to factory default or disabled
0
```

References

pwd	Requires a minimum user level of “Installer”
brake	When “mbd” is enabled, the help “brake” command remains functional.
b unlock	When “mbd” is enabled, the button command will NOT toggle the brake.
c fpmb	When “mbd” is enabled, Party Mode brake on close will be disabled
c fegb	When “mbd” is enabled, Egress Mode brake on close will be disabled
c fobe	When “mbd” is enabled, One Button Operation brake on close will be disabled

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

mboc (Modifier Brake On Close [Normal])

Activated
On Close

Syntax: config mboc [VALUE]
Abbreviation: c mboc
Range/Units: 0 – 86400
Default: 1 (Enable)

Command Description

In normal mode, the “mboc” parameter enables, disables, or delays the brake on close.

A setting of 1 does not mean, delay by 1 second. When set to 1, the brake is enabled immediately to help lock the panel in place for installs that have a warped jam which can cause the panel to “bounce” out as the clutch disengages. Previous controllers had a separate “brake timer” that would control this functionality.

When set to 1, the G3 on close will engage the brake *before* releasing the clutch to lock the panel in place and prevent panel “bounce out”.

“mboc” Value	Description
0	Brake on close is DISABLED
1	Brake is engaged IMMEDIATELY on close before releasing the clutch
2 – 86400	Brake is engaged after a delay of this many seconds. 2s – 1day

Terminal Output

```
cmd>c mboc // Report the status of this parameter
1

cmd>c mboc 0 // Disable Brake On Close
OK: 0

cmd>c mboc reset // Reset Brake On Close to factory default
1

cmd>c mboc 1 // Enable Brake On Close
OK: 1
```

References

- pwd Requires a minimum user level of “Installer”
- c mbd When “mbd” global brake disable is enabled, brake on close will not enable the brake.
- Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

mbpop (Modifier Brake On Open [Global])

Activated
On Close

Syntax: config mbpop [VALUE]
Abbreviation: c mbpop
Range/Units: 0 – 1
Default: 0 (Disabled)

Command Description

Enabling “**mbpop**” enables the magnetic brake after the door reaches its programmed open position. The open position can be its full programmed open position or a sub-span open position.

Unlike the brake on close functionality, it does not support delayed enabling and activates the brake immediately at the open position.

This is a global feature meaning when enabled, it affects nearly all modes including Normal & Special Feature modes. The exception is Move Assist which does not allow any magnetic brake enabling unless commanded from a wall switch, remote or home automation controller by the operator.

Terminal Output

```
cmd>c mbpop          // Report the status of this parameter
0

cmd>c mbpop 1         // Enable Brake On Open
OK: 1

cmd>c mbpop 0         // Disable Brake On Open
OK: 0

cmd>c mbpop reset     // Set Disable Brake On Open to factory default or disabled.
0
```

References

pwd Requires a minimum user level of “Installer”
c mboc Brake on Close parameter
c mbd The global brake disable parameter will prevent this modifier from enabling the brake

G3 Advanced Programming Guide

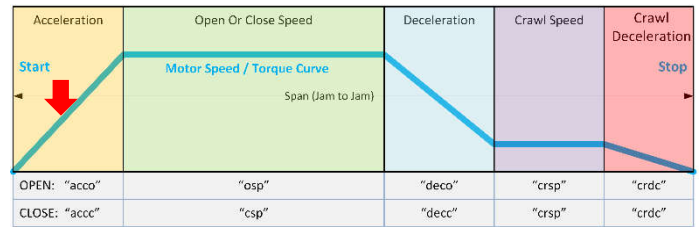
Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

acco (Acceleration for Open)

Syntax: config acco [VALUE]
Abbreviation: c acco
Range/Units: 0.5 – 30 seconds
Default: 2.5 seconds



Command Description

The Acceleration for Open **"acco"**, sets the number of seconds the motor will take to ramp its velocity from stopped to full speed as set by the Open Speed **"osp"** setting.

The default of 2.5s is a good balance for most installations. If a door is on the heavy side, increasing **"acco"** can help if the motor struggles to ramp the panel to full speed while opening. This is exactly the way the **"hfi"** command helps with **"TLE"** over-current/over-temp issues.

Decreasing the **"acco"** to speed up the door should be done with a bit of caution. If the **"acco"** is set to a very short duration such as 0.5 seconds and cannot ramp the panel fast enough the controller may fail with a friction fault or noticeable jerky motions.

Unless there is a real need, its best to keep this parameter at the factory setting or at least greater than 1.5 seconds to be safe.

When a partial move is enabled, that is when a panel is commanded to move from a position other than full open or full close, the Acceleration Partial Move Factor **"apmf"** is multiplied by **"acco"** to create an increased acceleration time, i.e. it will take longer to get up to speed. This acceleration increase is needed to pick up out-of-place panels or during sub span moves when partial moves are active.

Parameter Protection

Due to this parameter's relationship with the **"hfi"** command it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter's value.

Terminal Output

```
cmd>c acco
2.5000

cmd>c acco 5
OK: 5.0000

cmd>c acco reset
2.5000
```

References

pwd	Requires a minimum user level of "Installer"
c apmf	Acceleration "partial move" factor. "apmf" multiplies this parameter for partial moves.
c accc	Acceleration for Close and Acceleration for Open should be set to the same value
c osp	Open speed setting
c csp	Close speed setting
c hfi	This parameter can be changed by the "hfi" command to help address "TLE" issues
Tech Brief	TLE Mitigation

G3 Advanced Programming Guide

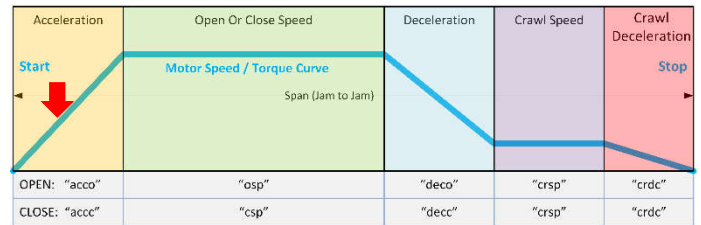
Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

accc (Acceleration for Close)

Syntax: config accc [VALUE]
Abbreviation: c accc
Range/Units: 0.5 – 30 seconds
Default: 2.5 seconds



Command Description

The Acceleration for Close “**accc**”, sets the number of seconds the motor will take to ramp its velocity from stopped to full speed as set by the Close Speed “**csp**” setting.

The default of 2.5s is a good balance for most installations. If a door is on heavy side increasing “**accc**” can help if the motor struggles to ramp the panel to full speed while closing. This is exactly the way the “hfi” command helps with “TLE” over-current/over-temp issues.

Decreasing the “**accc**” to speed up the door should be done with a bit of caution. If the “**accc**” is set to a very short duration such as 0.5 seconds and cannot ramp the panel fast enough the controller may fail with a friction fault or noticeable jerky motions.

Unless there is a real need its best to keep this parameter at the factory setting or at least greater than 1.5 seconds to be safe.

Parameter Protection

Due to this parameter’s relationship with the “hfi” command it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter’s value.

Terminal Output

```
cmd>c accc
2.5000

cmd>c acco 5
OK: 5.0000

cmd>c accc reset
2.5000
```

References

pwd	Requires a minimum user level of “Installer”
c acco	Acceleration for Open & Acceleration for Close should be set to the same value
c apmf	Acceleration “partial move” factor. “apmf” multiplies this parameter for partial moves.
c osp	Open speed setting
c csp	Close speed setting
c hfi	This parameter can be changed by the “hfi” command to help address “TLE” issues
Tech Brief	TLE Mitigation

G3 Advanced Programming Guide

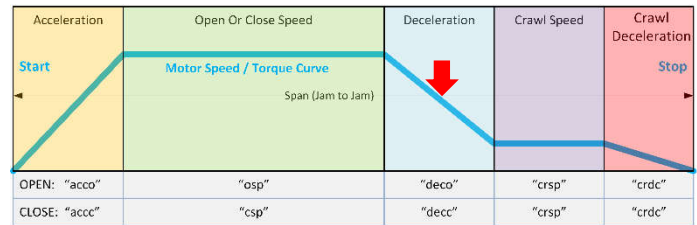
Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

deco (Deceleration for Open)

Syntax: config deco [VALUE]
Abbreviation: c deco
Range/Units: 0.5 – 30 seconds
Default: 3.0 seconds



Command Description

The “**deco**” command tells motor how many seconds to decelerate from full speed to crawl speed before finally coming to a halt while opening. Testing has shown that 3 seconds is good average deceleration time for most doors.

Extremely fast deceleration times of 1s or less should be avoided as it can cause the door “jerk” while slowing down. The excessive momentum causes an overshoot of the short period deceleration time and motor attempts to correct this and fails.

The same door momentum issue can also cause problem in the learned friction profile. In this case the door’s momentum causes an artificially low motor current value to be stored in the profile table. This low point tends to cause friction faults when passing through that bin location in the span. The only fix is to increase the deceleration for open/close and reprogram.

For heavy doors such as large glass panels, with lots of mass AND extremely smooth movement, momentum may cause the door to overrun its programmed deceleration value because 3.0 seconds is not long enough. If the motor cannot correct its position while decelerating, the correction attempts may cause the panel to jerk or vibrate, sometimes violently. Increasing the deceleration to 5, 6 or more seconds will allow the door to slow down naturally, not back drive the motor and avoid motor over correction attempts.

Parameter Protection

Due to this parameter’s relationship with the “hfi” command it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter’s value.

Terminal Output

```
cmd>c deco
3.0000 // Report the status of the parameter

cmd>c deco 1 // Set Deceleration for Open to 1 second
OK: 1.0000

cmd>c deco reset // Reset the Deceleration for Open parameter to the factory default
3.0000
```

References

pwd	Requires a minimum user level of “Installer”
c decc	Deceleration for Close
c osp	Sets the Open speed in inches / second
c csp	Sets the Close speed in inches / second
c hfi	This parameter can be changed by the “hfi” command to help address “TLE” issues
Tech Brief	TLE Mitigation

G3 Advanced Programming Guide

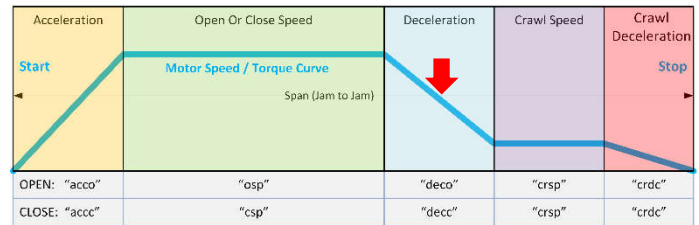
Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

decc (Deceleration for Close)

Syntax: config decc [VALUE]
Abbreviation: c decc
Range/Units: 0 – 30.0 seconds
Default: 3.0 seconds



Command Description

The “**decc**” command tells motor how many seconds to decelerate from full speed to crawl speed before finally coming to a halt while closing. Testing has shown that 3 seconds is good average deceleration time for most doors.

Extremely fast deceleration times of 1s or less should be avoided as it can cause the door “jerk” while slowing down. The excessive momentum causes an overshoot of the short period deceleration time and motor attempts to correct this and fails.

The same door momentum issue can also cause problem in the learned friction profile. In this case the door’s momentum causes an artificially low motor current value to be stored in the profile table. This low point tends to cause friction faults when passing through that bin location in the span. The only fix is to increase the deceleration for open/close and reprogram.

For heavy doors such as large glass panels, with lots of mass AND extremely smooth movement, momentum may cause the door to overrun its programmed deceleration value because 3.0 seconds is not long enough. If the motor cannot correct its position while decelerating, the correction attempts may cause the panel to jerk or vibrate, sometimes violently. Increasing the deceleration to 5, 6 or more seconds will allow the door to slow down naturally, not back drive the motor and avoid motor over correction attempts.

Parameter Protection

Due to this parameter’s relationship with the “hfi” command it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter’s value.

Terminal Output

```
cmd>c decc
3.0000 // Report the status of the parameter

cmd>c decc 1 // Set Deceleration for Close to 1 second
OK: 1.0000

cmd>c decc reset // Reset the Deceleration for Close parameter to the factory default
3.0000
```

References

pwd	Requires a minimum user level of “Installer”
c deco	Deceleration for Open
c osp	Sets the Open speed in inches / second
c csp	Sets the Close speed in inches / second
c hfi	This parameter can be changed by the “hfi” command to help address “TLE” issues
Tech Brief	TLE Mitigation

G3 Advanced Programming Guide

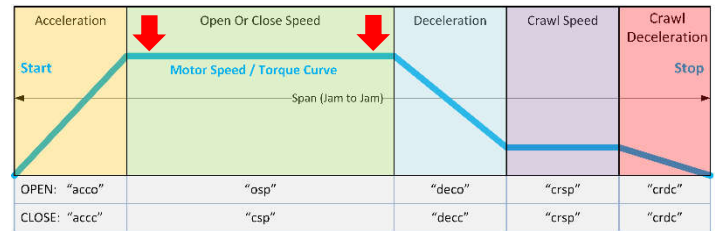
Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

csp (Close Speed)

Syntax: config csp [VALUE]
Abbreviation: c csp
Range/Units: 0 – 10.0 in / sec
Default: 4.0 IPS



Command Description

The “csp” setting sets the close speed in inches / second. The speed setting as well as the “av” (Actual Velocity) help command, which reports the current speed, are approximations only. Setting the speed to 10 does not guarantee the door will move that fast. The motor will attempt to run at the commanded speed but, due to the door’s mass, track friction and a dozen other factors, it may not be possible. When this happens, the controller may cause erratic door movements as it tries to correct for velocity and positional errors.

Open and close speeds have been carefully selected to provide smooth operation during panel pickups and helps avoid panels slamming into their collector plates and interlocks. Running panels too fast can result in bent collector plates or damaged collectors. It is best to select a speed that results in smooth panel pickups and controlled acceleration & deceleration ramps.

If the speed of the panel is increased to 6 IPS or higher, the default acceleration & deceleration parameters should also be increased to avoid erratic door movements. Setting any speed above 6.0 IPS is not recommended.

“csp”	Acceleration, Deceleration & Crawl Speed Recommendations
4.0 IPS	At 4.0 IPS acceleration & deceleration values should be adequate
5.0 IPS	Set accel/decel open & close to 3.5 - 4.5 seconds
6.0+ IPS	Set accel/decel open & close to 4.0 - 6.0 seconds

Parameter Protection

Due to this parameter’s relationship with the “hfi” command it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter’s value.

Terminal Output

```
cmd>c csp // Report the status of the parameter
4.0000

cmd>c csp 7 // Set the Close Speed to 7 inches / second
OK: 7.0000

cmd>c csp reset // Reset Close Speed to factory default
4.0000
```

References

pwd	Requires a minimum user level of “Installer”
c osp	Open speed setting. Open and close speeds are typically the same.
c acco	Acceleration for Open. Should be the same or close to the accel value for close.
c accs	Acceleration for Close. Should be the same or close to the accel value for open.
c deco	Deceleration for Open. Should be the same or close to the decel value for close.
c decc	Deceleration for Close. Should be the same or close to the decel value for open.
c hfi	This parameter can be changed by the “hfi” command to help address “TLE” issues.
c spl	The speed limit, if set may limit the close speed
Tech Brief	TLE Mitigation

G3 Advanced Programming Guide

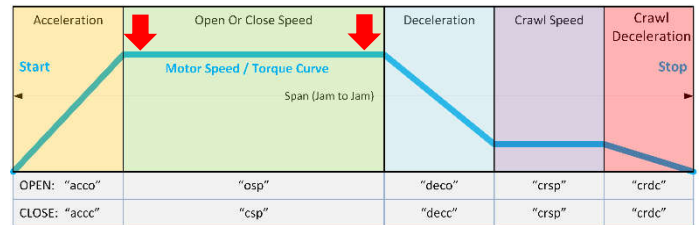
Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

osp (Open Speed)

Syntax: config osp [VALUE]
Abbreviation: c osp
Range/Units: 0 – 10.0 in / sec
Default: 4.0 IPS



Command Description

The “osp” setting sets the open speed in inches / second. The speed setting as well as the “av” (Actual Velocity) help command, which reports the current speed, are approximations only. Setting the speed to 10 does not guarantee the door will move that fast. The motor will attempt to run at the commanded speed but, due to the door’s mass, track friction and a dozen other factors it may not be possible. When this happens, the controller may cause erratic door movements as it tries to correct for velocity and positional errors.

Open and close speeds have been carefully selected to provide smooth operation during panel pickups and helps avoid panels slamming into their collector plates and interlocks. Running panels too fast can result in bent collector plates or damaged collectors. It is best to select a speed that results in smooth panel pickups and controlled acceleration & deceleration ramps.

If the speed of the panel is increased to 6 IPS or higher, the default acceleration & deceleration parameters should also be increased to avoid erratic door movements. Setting any speed above 6.0 IPS is not recommended.

“csp”	Acceleration, Deceleration & Crawl Speed Recommendations
4.0 IPS	At 4.0 IPS acceleration & deceleration values should be adequate
5.0 IPS	Set accel/decel open & close to 3.5 - 4.5 seconds
6.0+ IPS	Set accel/decel open & close to 4.0 - 6.0 seconds

Parameter Protection

Due to this parameter’s relationship with the “hfi” command it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter’s value.

Terminal Output

```
cmd>c osp // Report the status of the parameter
4.0000

cmd>c osp 7 // Set the Open Speed to 7 inches / second
OK: 7.0000

cmd>c osp reset // Reset Close Speed to factory default
4.0000
```

References

pwd	Requires a minimum user level of “Installer”
c osp	Open speed setting. Open and close speeds are typically the same.
c acco	Acceleration for Open. Should be the same or close to the accel value for close.
c acccl	Acceleration for Close. Should be the same or close to the accel value for open.
c deco	Deceleration for Open. Should be the same or close to the decel value for close.
c decc	Deceleration for Close. Should be the same or close to the decel value for open.
c hfi	This parameter can be changed by the “hfi” command to help address “TLE” issues.
c spl	The speed limit, if set may limit the open speed.
Tech Brief	TLE Mitigation

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

<input type="checkbox"/>	User
<input checked="" type="checkbox"/>	Installer
<input checked="" type="checkbox"/>	Developer
<input checked="" type="checkbox"/>	Factory

spl (Speed Limit)

Syntax: config spl [VALUE] ([Firmware v0.7.2 and later](#))
Abbreviation: c osp
Range/Units: 0 – 10.0 in / sec
Default: 0 IPS (Disabled)

Command Description

The “spl” setting limits both the open (osp) and close (csp) speeds. It is useful when “tuning” a door because it allows the installer to effectively set both speeds using a single command. When set to a value less than either the open speed or close speed, the door’s velocity will not exceed the speed limit during travel. When set to “0”, the speed limit is disabled and the open and close speeds will be in effect. When experimenting with a speed limit make sure the open (osp) and close (csp) speeds are higher than the desired speed limit otherwise a speed limit will have no effect.

Parameter Protection

Due to this parameter’s relationship with the “hfi” command it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter’s value.

Terminal Output

```
cmd>c spl // Report the status of the parameter
3.0000

cmd>c spl 3 // Limits the open(osp) & close(csp) speeds to 3 inches/sec
OK: 7.0000

cmd>c spl reset // Reset Close Speed to factory default
0.0000
```

References

pwd	Requires a minimum user level of “Installer”
avi	Help command that reports the panel’s velocity in inches / sec. (Firmware v0.7.2 and later)
acdc	Sets both acceleration & deceleration. (Firmware v0.7.2 and later)
c osp	Open speed setting. Open and close speeds are typically the same.
c csp	Close speed setting. Open and close speeds are typically the same.
c hfi	Useful while experimenting with custom “hfi” settings. (Firmware v0.7.2 and later)
Tech Brief	TLE Mitigation

G3 Advanced Programming Guide

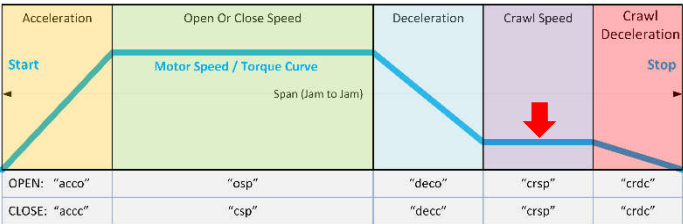
Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

crsp (Crawl Speed)

Syntax: config crsp [VALUE]
Abbreviation: c crdc
Range/Units: 0 – 5.0 seconds
Default: 2.0 seconds



Command Description

The “**crsp**” setting adjusts the number of seconds the run the motor at crawl speed after decelerating from the full run speed set by “**osp**” or “**csp**” before decelerating again to stop. This parameter has not been shown to require any modification in the field. It is however available when and if it is ever needed.

Terminal Output

```
cmd>c crdc // Report parameter value
1.0000
cmd>c crsp // Set crawl speed to 2.0 IPS
2.0000
cmd>c crsp 4 // Set crawl speed to 2.0 IPS
OK: 4.0000
cmd>c crsp reset // Reset crawl speed to factory default
2.0000
```

References

- pwd** Requires a minimum user level of “Installer”
- c osp** Open speed setting. Open and close speeds are typically the same.
- c csp** Close speed setting. Open and close speeds are typically the same.
- c acco** Acceleration for Open. Should be the same or close to the accel value for close.
- c accc** Acceleration for Close. Should be the same or close to the accel value for open.
- c deco** Deceleration for Open. Should be the same or close to the decel value for close.
- c decc** Deceleration for Close. Should be the same or close to the decel value for open.
- c crdc** Crawl deceleration. May need to increase for high speed, high momentum panels.

G3 Advanced Programming Guide

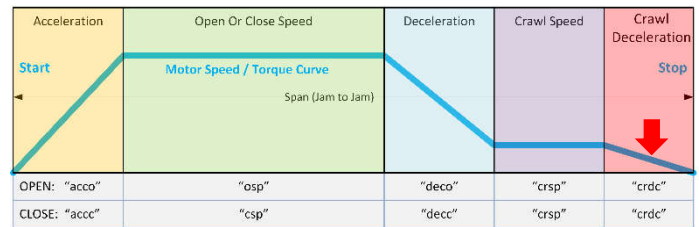
Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

crdc (Crawl Deceleration)

Syntax: config crdc [VALUE]
Abbreviation: c crdc
Range/Units: 0.5 – 5.0 seconds
Default: 1.0 second



Command Description

After the door completes its timed crawl speed portion of a movement, it ramps down one more time before stopping the panel. This final ramp time is the “**crdc**” setting. The “**crdc**” value tends to be quite small because the panel speed at this point is already very low.

Terminal Output

```
cmd>c crdc // Report parameter value
1.0000

cmd>c crdc 5 // Set Crawl Deceleration to 5 seconds
OK: 5.0000

cmd>c crdc reset // Reset Crawl Deceleration to factory default
1.0000output here
```

References

- pwd Requires a minimum user level of “Installer”
- c osp Open speed setting. Open and close speeds are typically the same.
- c csp Close speed setting. Open and close speeds are typically the same.
- c acco Acceleration for Open. Should be the same or close to the accel value for close.
- c accc Acceleration for Close. Should be the same or close to the accel value for open.
- c deco Deceleration for Open. Should be the same or close to the decel value for close.
- c decc Deceleration for Close. Should be the same or close to the decel value for open.
- c crsp Crawl speed. May need to adjust for high speed, high momentum panels.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

apmf (Acceleration Partial Move Factor)

Syntax: config apmf [VALUE]
Abbreviation: c apmf
Range/Units: 0.0000 – 20.0000
Default: 5.0

Command Description

The “**apmf**” parameter sets the partial move acceleration factor. This setting is multiplied by the Acceleration for Open or Closed, to extend the acceleration ramp during a partial move. Partial moves are any movement that does not begin at full open or full closed, in other words movements that begin “mid-span”.

Special note for HFI and TLE Faults: If the installation is utilizing the “High Friction Installation” command “**hfi**”, the recommendation is to set this parameter to 1.0. This will prevent the acceleration values from being increased 5x from their already high value set by “**hfi**” setting. If “**apmf**” is NOT reset, the result will be the accel time will be increased to 45s (15s x 5) on partial moves causing the door to move slowly for too long a period.

If the door is stopped mid span due to a command, over current or fault or a sub span setting a movement from this point is considered a “partial move”. The door will also move utilize this parameter when operating under a “sub-span”.

Partial moves are special because the door has been stopped and the location of the panels can be indeterminant. This parameter extends the acceleration time to help smoothly pick up panels when they are out of position without causing additional friction faults.

Terminal Output

```
cmd>c apmf // Report parameter value
5.0000

cmd>c apmf 10 // Set Acceleration Partial Move Factor to 10.0
OK: 10.0000

cmd>c apmf reset // Reset "apmf" to factory default
5.0000
```

References

pwd Requires a minimum user level of “Installer”
c acco Acceleration for Open. Should be the same or close to the accel value for close.
c accc Acceleration for Close. Should be the same or close to the accel value for open.
c vpmf Velocity partial move factor.
c epmf Envelope partial move factor.
Tech Brief TLE Mitigation

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

vpmf (Velocity Partial Move Factor)

Syntax: config vpmf [VALUE]
Abbreviation: c vpmf
Range/Units: 0.0 – 1.0
Default: 0.70

Command Description

The maximum speed of a partial move is set by this parameter. By default, this speed is set to 70% of either the open speed, “osp” or the close speed “csp”. The speed of a partial move is reduced to help eliminate over currents when panels are out of place due to a mid-span stoppage or friction fault.

Special note for HFI and TLE Faults: If the installation is utilizing the “High Friction Installation” command “hfi”, this command will reduce the programmed Open & Close by 30% on partial moves. If this causes “TLE” faults on the CLI to reappear, set “vpmf” to 1.0 to allow full speed on partial moves.

Warning: Setting the “vpmf” to 0 should only be used for factory debugging. When “vpmf” is set to 0, any stoppage will result in a panel that will not be able to move because the speed is set to 0 for mid-span moves.

Terminal Output

```
cmd>c vpmf // Report parameter value
0.7000

cmd>c vpmf 0.5 // Set "vpmf" to 50% speed of open or close full speed for partial moves
OK: 0.5000

cmd>c vpmf 1 // Set "vpmf" to 100% speed of open/close effectively disabling "vpmf"
OK: 1.0000

cmd>c vpmf 0 // Sets "vpmf" to 0. DON'T DO THIS. Panels stopped mid span will not move.
0.0000

cmd>c vpmf reset // Resets "vpmf" to the factory default
0.7000
```

References

pwd Requires a minimum user level of “Installer”
c osp Open speed setting. Open and close speeds are typically the same.
c csp Close speed setting. Open and close speeds are typically the same.
c apmf Acceleration partial move factor
c epmf Envelope partial move factor
Tech Brief TLE Mitigation

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

<input type="checkbox"/>	User
<input checked="" type="checkbox"/>	Installer
<input checked="" type="checkbox"/>	Developer
<input checked="" type="checkbox"/>	Factory

epmf (Envelope Partial Move Factor)

Syntax:	config epmf [VALUE]
Abbreviation:	c epmf
Range/Units:	1.0 – 100.0
Default:	1.0 (Disable)

IMPORTANT:

- This is an advanced command. Consult the factory prior to use.

Command Description

The “epmf” parameter is used to modify the Friction Profile Envelop Limit during partial moves. Its intended use is to increase the current limit during partial moves when picking up heavy out-of-place panels. The default is 1.0, which when multiplied by the “fpce” parameter has no affect by design.

Misuse of this parameter can cause the controller to ignore genuine friction fault conditions and drive the panel with so much current that it exceeds the UL325's force limit.

Terminal Output

```
cmd>c epmf // Report parameter value
1.0000

cmd>c epmf 5 // Multiply friction profile envelope limit by 5x during partial moves
OK: 5.0000

cmd>c epmf reset // Reset "epmf" to factory default (Disabled)
1.0000
```

References

pwd	Requires a minimum user level of “Installer”
c osp	Open speed setting. Open and close speeds are typically the same.
c csp	Close speed setting. Open and close speeds are typically the same.
c apmf	Acceleration partial move factor
c vpmf	Velocity partial move factor

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fpce (Friction Profile Current Envelope Limit)

Syntax: config fpce [VALUE]
Abbreviation: c fpce
Range/Units: 0 – 2000mA (0 Disables Soft Touch)
Default: 470mA

Command Description

The “fpce” is an adjustable current limit the controller uses to determine when something maybe impeding the doors motion and thus representing a safety hazard.

Lowering “fpce” will **increase current faults count**, friction faults will be triggered **more often**, and the force required to stop the door is **reduced**. A lower current limit may cause false faults to **increase**.

Increasing “fpce” will **reduce the current faults count**, friction faults will be triggered **less often**, and the force required to stop the door is **increased**. A higher current limit may cause false faults to **decrease**.

Increasing “fpce” in 50mA steps is recommended for doors that friction fault during normal unimpeded operation. If the “fpce” setting is above 600 – 700mA and the door still faults check the door for mechanical issues and repair if necessary.

For more information about “Soft Touch” review the “fpce” command and “Tech Brief – Soft Touch Tuning” section. Below are parameters used and tested on our factory standard door.

Terminal Output

```
cmd>c fpce          // Report the parameter value
470

cmd>c fpce 125       // Set “fpce” to 125mA
OK: 125

cmd>c fpce reset     // Reset “fpce” to the factory default
470

cmd>c fpce 0         // Disables Soft Touch
OK: 0               // IF SOFT TOUCH IS DISABLED, the alternate current limit MUST be activated
                   // using the command 'c fpcl' to immediately stop the door on the first
                   // overcurrent. Refer to the Tech Brief: “Soft Touch” Tuning for more info.
```

References

pwd Requires a minimum user level of “Installer”
c fpthr Friction profile fault count
c fpcl Friction profile hard limit
Tech Brief “Soft Touch” Tuning

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

fpthr (Friction Profile Fault Count Limit)

Syntax: config fpthr [VALUE]
Abbreviation: c fpthr
Range/Units: 1 – 2147483647 counts
Default: 10 counts

Command Description

The “**fpthr**” parameter sets the friction profile fault count. When this count is exceeded, the G3 recognizes this as a friction fault and stops the door for safety.

When adjusting “**fpthr**” make larger incremental changes of 100 to 150. If you find yourself with a count of 300, this maybe an indication that the door has mechanical issues that needs to be corrected.

For more information about “Soft Touch” review the “**fpce**” command and “**Tech Brief – Soft Touch Tuning**” section.

Terminal Output

```
cmd>c fpthr // Report the parameter value
10

cmd>c fpthr 25 // Set "fpthr" to 25 counts
OK: 25

cmd>c fpthr reset // Reset "fpthr" to the factory default
10
```

References

pwd Requires a minimum user level of “Installer”
c fpce Friction profile current envelope limit
c fpcl Friction profile hard limit
Tech Brief “Soft Touch” Tuning

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

<input type="checkbox"/>	User
<input checked="" type="checkbox"/>	Installer
<input checked="" type="checkbox"/>	Developer
<input checked="" type="checkbox"/>	Factory

fpcl (Friction Profile Current Hard Limit)

Syntax:	config fpcl [VALUE]
Abbreviation:	c fpcl
Range/Units:	0 – 8000mA
Default:	0 (Disabled)

IMPORTANT:

- This is an advanced command. Consult the factory prior to use.

Command Description

The Friction Profile Hard Limit provides a secondary “peak” current limit. By default this feature is disabled. It does not provide a “soft touch” but instead works on the peak current draw of the motor alone and stops the motor immediately when the limit is exceeded.

Terminal Output

```
cmd>c fpcl // Report the parameter value
0

cmd>c fpcl 1500 // Sets "fpcl" to fault when exceeding 1500mA or 1.5A
OK: 1500

cmd>c fpcl reset // Reset the parameter to factory default which is disabled
0
```

References

pwd	Requires a minimum user level of “Installer”
c fpce	Friction profile current envelope limit
c fpthr	Friction profile fault count
Tech Brief	“Soft Touch” Tuning

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

<input type="checkbox"/>	User
<input checked="" type="checkbox"/>	Installer
<input checked="" type="checkbox"/>	Developer
<input checked="" type="checkbox"/>	Factory

fpwar (Friction Profile Weighted Average Ratio)

Syntax: config fpwar [VALUE]
Abbreviation: c fpwar
Range/Units: 0 – 20
Default: 10

IMPORTANT:

- This is an advanced command. Consult the factory prior to use.

Command Description

This parameter controls the motor current averaging ratio used by an internal algorithm. The algorithm averages the real time current values at run time for all modes. Do not modify this parameter without consulting the factory.

Terminal Output

```
cmd>c fpwar          // Report the parameter value
10

cmd>c fpwar 0         // Set "fpwar" to 0 effectively disabling the algorithm
OK: 0

cmd>c fpwar 18        // Set the weighted average ration to 18:1
OK: 18

cmd>c fpwar reset     // Reset the parameter value to factory default
10
```

References

pwd Requires a minimum user level of "Installer"
dpro Reports the friction profile table

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

hdctf (CLI Hard Close/Open Torque Factor)

Syntax: config hdctf [VALUE]
Abbreviation: c hdctf
Range/Units: 1 – 100
Default: 1 (Minimum torque)

Command Description

The “hdctf” controls the motor torque increase applied when the Hard Close/Open feature is enabled. The values passed to this parameter are very sensitive. The torque increase applied is adjustable from a minimum of 1.0001% @ 1 to a maximum of 1.01% @ 100.

This parameter affects both hard close “mhdc”, and hard open “mhdo” modifiers.

Only make small changes to this parameter if needed and use very small incremental changes such as an increase of 1 or 2.

Terminal Output

```
cmd>c hdctf          // Report the current value which is @ 1.0001%
1

cmd>c hdctf 50        // Set the hard close torque to 1.005%
OK: 50

cmd>c hdctf 100       // Set the maximum torque increase @ 1.01%
OK: 100

cmd>c hdctf reset     // Reset the parameter to factory defaults
1
```

References

pwd Requires a minimum user level of “Installer”
c hdctf Hard Close/Open Torque Factor
c mhdc Modifier “Hard Close” enable
c mhdo Modifier “Hard Open enable”

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

hdclf (Hard Close Open/Close Limit)

Syntax: config hdclf [VALUE]
Abbreviation: c hdclf
Range/Units: 1.25 – 5.0
Default: 2.0

Command Description

When hard close/open is enabled, this parameter increases the Friction Profile Current Envelope, “**fpce**” by a factor of 2.0 (default) while the door is within the jam. The jam depth controlled by “**pje**” which was set during programming.

In simpler terms, once the panel has passed the edge of the jam entry, the over current limit is increased by a factor of “**hdclf**” to prevent overcurrent faults during hard close or open.

This parameter does not increase the force applied to the door at the jam, but instead prevents over current faults when pushing into the jam on close or while closing as the door is moved from the full open position.

If while entering the jam, the door stops and backs up this is an indication of a current fault in the jam. There should be a CLI message indicating this. Increasing the “**hdclf**” will raise the current limit threshold to help prevent jam entry faults when hard close/open is enabled.

Terminal Output

```
cmd>c hdclf // Report parameter value
2.0000

cmd>c hdclf 5 // Set the current envelop to 5 x “fpce” during hard close & open
OK: 5.0000

cmd>c hdclf reset // Reset “hdclf” to factory default
2.0000
```

References

pwd Requires a minimum user level of “Installer”
c fpce Friction profile current envelope limit
c fpcl Friction profile hard limit
c hdctf Hard Close/Open Torque Factor
c mhdc Modifier “Hard Close” enable
c mhdo Modifier “Hard Open enable”
Tech Brief “Soft Touch” Tuning

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

pcl (Position Closed)

Syntax: config pcl [VALUE]
Abbreviation: c pcl
Range/Units: 0 – 5.0000 inches
Default: 0 inches

IMPORTANT:

- This is an advanced command automatically set during programming. Changing this parameter is not recommended.

Command Description

The command is for factory testing only and must remain at offset 0.0” for production controllers.

This command sets an offset at close in inches. For example, if set to 2.5”, then the door will consider the door closed at 2.5” from the actual closed position. The means there will be a 2.5” gap when the door closes.

Parameter Protection

Due to the critical nature of this parameter it has some built in protection from accidental changes while performing other operations.

- config all reset: Will NOT change this parameter’s value.

Terminal Output

```
cmd>c pcl // Return the parameter value
0.0000

cmd>c pcl 3.5 // Set the close position offset to 3.5” open
OK: 3.5000

cmd>c pcl 5 // Set the close position offset to 5.0” open
OK: 5.0000

cmd>c pcl reset // Reset the parameter to factory default
0.0000
```

References

- pwd Requires a minimum user level of “Installer”
pos Position help command reports true door position in inches regardless of the “pcl” offset.
Appendix B Inch position to Encoder count conversion table.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

<input type="checkbox"/>	User	Syntax:	config pje [VALUE]
<input checked="" type="checkbox"/>	Installer	Abbreviation:	c pje
<input checked="" type="checkbox"/>	Developer	Range/Units:	0 – 100.0000 inches
<input checked="" type="checkbox"/>	Factory	Default:	0.5000 inches

pje (Position Jam Entry)

IMPORTANT:

- This is an advanced command automatically set during programming. Changing this parameter is not recommended.

Command Description

This parameter stores the jam depth determined during the first panel movement initiated during programming. When panel 1 is moved the requested $\frac{1}{4}$ - $\frac{1}{2}$ ", the jam depth is determined and stored in "pje". The stored jam depth is used by the Hard Close feature to enable the extra torque and an increased current limit required to fully seat panel 1 on close.

Setting "pje" to a jam depth which is greater than the actual depth, increases the risk of entrapment and represents a "pinch" hazard for the operator.

For example, if "pje" is set to 5", Hard Close will activate 5.0" from the jam allowing for the possibility of a finger or hand being caught between the closing panel and the jam. With the increased power of Hard Close the door will not stop per the "Soft Touch" parameters and could cause significant injury.

DON'T CHANGE THIS PARAMETER MANUALLY.

In the field there is little reason to change this parameter unless directed to do so by a factory representative.

Terminal Output

```
cmd>c pje // Report the parameter value (Determined during programming)
0.5180

cmd>c pje reset // Set "pje" to the factory default
0.5000

cmd>c pje 0.518 // Set "pje" back to the original programmed value
OK: 0.5180
```

Parameter Protection

Due to the critical nature of this parameter it has some built in protection from accidental changes while performing other operations.

- config all reset: Will NOT change this parameter's value.

References

pwd	Requires a minimum user level of "Installer"
hdctf	Hard Close & Open Torque Factor
hdctl	Hard Close & Open Current Limit
Appendix B	Inch position to Encoder count conversion table.

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G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels



User



Installer



Developer



Factory

pop (Position Full Open)

Syntax: config cmd [VALUE]
Abbreviation: c pop
Range/Units: 0 – 1200.0000 inches
Default: 0.0000 inches

Activated
On Close

IMPORTANT:

- This is an advanced command automatically set during programming. Changing this parameter is not recommended.

Command Description

The “**pop**” parameter stores the fully open position determined during programming. The last manual panel movement during programming, when the installer moves panel 1 to “full open”, sets this parameter.

During programming, it is important that the installer move panel 1 to its full physical or desired “full open” position to maintain alignment to the learned friction profile bins. Changing the “**pop**” value after programming will break this alignment and cause false friction faults near the open position.

Tip: The “**pop**” value is checked at boot to determine if the controller is programmed. If “**pop**” is 0 at boot, the CLI prompts the installer to program the door. If the “**pop**” value is restored, and the controller is rebooted again with “**rst 0**”, the controller will boot normally and not require reprogramming (assuming the door was previously programmed before “**pop**” was zeroed)

There is no reason to manually change this value after programming unless directed to do so by a factory representative.

Terminal Output

```
cmd>c pop // Report the parameter value
46.1742

cmd>c pop reset // Resets the parameter to factory default
0.0000

cmd>c pop 46.1742 // Sets the “pop” to the original span of 46.1742”
OK: 46.1742
```

Parameter Protection

Due to the critical nature of this parameter it has some built in protection from accidental changes while performing other operations.

- config all reset: Will NOT change this parameter’s value.

References

pwd Requires a minimum user level of “Installer”
pops Full open sub-span parameter
Appendix B Inch position to Encoder count conversion table.

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

pops (Position Sub Span Open)

Syntax: config pops [VALUE]
Abbreviation: c pops
Range/Units: 6 – 1200.0000 inches
Default: 0.0000 inches (Disabled)

Activated
On Close

Command Description

The “**pops**” parameter stores the sub-span distance for Normal Mode when none of the Special Features are enabled. When an operator performs a manual sub-span adjustment, the sub-span detected is stored in “pops”. If “pops” is set while a Special Feature is active, the new sub-span will be activated when the user returns the door to Normal mode.

To set a Normal Mode sub-span, first set the new span with “c pops VALUE”, then command the door to close. Failure to immediately close the door after setting “pops” will cause the controller to ignore the change.

```
cmd>c pops 25.5 // Sets the Normal Mode subspan to 25.5000"
cmd>b c // Command the door to close. Upon entering the jam the new sub-span is set
```

Setting “pops” to a value greater than the programmed full span will result in “pops” being set to the value of full open or “pop” meaning that a sub-span is not really set at all.

Setting “pops” to 0 disables the sub-span function.

Parameter Protection

Due to the critical nature of this parameter, it has some built in protection from accidental changes while performing other operations.

- config all reset: Will NOT change this parameter’s value.

Terminal Output

```
cmd>c pops // Sub-span currently disabled. Door will open to full span
0.0000
cmd>c pops 25 // CLI used to set new sub-span "pops"
OK: 25.0000
cmd>b c // Command door to close saves the new "pops" value of 25"
OK
cmd>c pops // The sub-span is set and saved. Door will open to 25" now
25.0000

cmd>c pops // Sub-span currently disabled. Door will open to full span
0.0000
cmd>c pops 25 // CLI used to set new sub-span "pops"
OK: 25.0000
cmd>b o // Door commanded to open instead of close; "pops" will not be saved. . .
OK
cmd>030.770: FULL sub-span position DISABLED // Displayed at full open after the span adjust
25.00 => 46.17 inches // timer expires. 46.17" is full span or "pop"
036.102: 5s Span Adjust timer expired.
cmd>c pops // Verified: Sub-span setting failed.
0.0000 // Door will open to full span width
```

References

- pwd Requires a minimum user level of “Installer”
- c pop Full programmed span as recorded during the controller programming procedure
- Appendix B Inch position to Encoder count conversion table.

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Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

epol (Encoder Polarity)

Syntax: config epol [VALUE]
Abbreviation: c epol
Range/Units: normal or invert
Default: normal

IMPORTANT:

- This is an advanced command automatically set during programming. Changing this parameter is not recommended.

Command Description

The encoder polarity, “epol” is determined during programming and should not need adjustment via the CLI unless instructed to do so by a factory representative.

Parameter Protection

Due to the critical nature of this parameter, it has some built in protection from accidental changes while performing other operations.

- config all reset: Will NOT change this parameter’s value.

Terminal Output

```
cmd>c epol // Report the parameter value
invert

cmd>c epol normal // Sets the encoder polarity to “normal”
OK: normal

cmd>c epol invert // Sets the encoder polarity to “inverted”
OK: invert

cmd>c epol reset // Resets encoder polarity to “normal”
normal

cmd>c epol invert // Set the original setting to restore functionality
OK: invert
```

References

pwd Requires a minimum user level of “Installer”
mdir Motor polarity determined during programing
pop Full span determined during programming

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

mdir (Motor Polarity)

Syntax: config mdir [VALUE]
Abbreviation: c mdir
Range/Units: normal or invert
Default: normal

IMPORTANT:

- This is an advanced command automatically set during programming. Changing this parameter is not recommended.

Command Description

The motor polarity, “mdir” is determined during programming and should not need adjustment via the CLI unless instructed to do so by a factory representative.

Parameter Protection

Due to the critical nature of this parameter, it has some built in protection from accidental changes while performing other operations.

- config all reset: Will NOT change this parameter’s value.

Terminal Output

```
cmd>c mdir // Report the parameter value
invert

cmd>c mdir normal // Sets the motor polarity to “normal”
OK: normal

cmd>c mdir invert // Sets the motor polarity to “inverted”
OK: invert

cmd>c mdir reset // Resets motor polarity to “normal”
normal

cmd>c mdir invert // Set the original setting to restore functionality
OK: invert
```

References

pwd Requires a minimum user level of “Installer”
epol Encoder polarity determined during programing
pop Full span determined during programming

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

ctfl (Cycle Test Fault Limit)

Syntax: config ctfl [VALUE]
Abbreviation: c ctfl
Range/Units: 1 – 1000 cycles
Default: 5 faults

Command Description

The “**ctfl**” parameter is used to set the maximum number of friction faults allowed during a cycle test before failing the test. The number of faults is counted during each cycle starting with an “open” cycle and then the “close” cycle. If the max number of faults does not exceed the “**ctfl**” limit during the open + close cycles, any faults recorded are discarded and the cycle test will proceed.

If for example “**ctfl**” equals 5, and during the open cycle 2 faults occur then during close 3 more occur, the test will stop with an error after the 3rd friction fault. When the test is stopped due to an error, testing is stopped and cannot be continued without requesting a new cycle test run.

The “**ctfl**” parameter and the entire Cycle Test feature is thoroughly discussed in the “Tech Brief – Cycle Testing”

Terminal Output

```
cmd>c ctfl 5 // Report the parameter value

cmd>c ctfl 100 // Set the cycle test fault limit to 100 friction faults per cycle
OK: 100

cmd>c ctfl reset // Reset “ctfl” to factory default
5
```

TLE Warning:

Prior to running a cycle test verify the controller does not indicate “TLE” events in the CLI. Running a cycle test on a controller that is experiencing TLE Over-temperature faults will damage the controller’s motor driver chip after approximately 100 events. Refer to the TLE Mitigation Tech Brief for information on preventing TLE faults if you wish to cycle test a system on a high friction installation.

References

pwd Requires a minimum user level of “Installer”
cyst Request cycle test status or initiate a new cycle test run
Tech Brief Cycle Testing
Tech Brief TLE Mitigation

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

kp (PID Proportional Constant)

Syntax: config kp [VALUE]
Abbreviation: c kp
Range/Units: 0.0 – 10000
Default: 3000.0000

IMPORTANT:

- This is an advanced command. Consult the factory prior to use.

Command Description

This “kp” command sets the *proportional* constant used by the PID motor control algorithm.

Terminal Output

```
cmd>c kp // Report parameter value
3000.0000

cmd>c kp 1500 // Set “kp” to 1500
OK: 1500.0000

cmd>c kp reset // Reset “kp” back to factory default
3000.0000
```

References

pwd Requires a minimum user level of “Installer”
ki PID algorithm Integral Constant

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Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

ki (PID Integral Constant)

Syntax: config ki [VALUE]
Abbreviation: c ki
Range/Units: 0.0 – 25.0
Default: 2.0000

IMPORTANT:

- This is an advanced command. Consult the factory prior to use.

Command Description

This “ki” command sets the *integral* constant used by the PID motor control algorithm.

Terminal Output

```
cmd>c ki // Report parameter value
2.0000

cmd>c k 15 // Set “ki” to 15.0000
OK: 15.0000

cmd>c ki reset // Reset “ki” back to factory default
2.0000
```

References

pwd Requires a minimum user level of “Installer”
kp PID algorithm Proportional Constant

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Document Revisions

Revision	Release Date	Description
1.0.0	Sep 22, 2020	Initial release
1.0.1	Oct 2, 2020	Fixed typos in "Soft Touch" Tuning
1.0.2	Nov 19, 2020	Added info on "hard current limit" vs "Soft Touch"
1.0.3	Mar 15, 2021	TLE update with firmware v0.7.2
1.0.4	Mar 22, 2021	Updated TLE Tech Brief
1.0.5	Mar 24, 2021	Fixed some typos & added a recommended command to the TLE docs

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G3 Firmware Revisions

Revision	Release Date	Description															
0.7.2 (latest)	Mar 11, 2021	Maintenance release to address "TLE" over-current/temp issue. <ul style="list-style-type: none">• "hfi" help command added for "TLE" issues• Help commands "avi", "maxc" and "acdc" added• Config command "spl" added• "c all reset" updated to preserve "spl" and "hfi" settings• "TLE" over-current/temps counts tracked in flash• G3 LED color code updated• Panel 1 mass increased to 50,000/100,00lbs (Oneway/Bipart)															
0.7.1	Aug 28, 2020	Functionally identical to the v0.7.0 release. Updated 4 parameters to use new defaults. <table><tr><th>Command</th><th>v0.7.1 New Defaults</th><th>v0.7.0 Defaults</th></tr><tr><td>osp</td><td>4.0000 IPS</td><td>4.5000 IPS</td></tr><tr><td>csp</td><td>4.0000 IPS</td><td>4.5000 IPS</td></tr><tr><td>fpce</td><td>470mA</td><td>430mA</td></tr><tr><td>fpthr</td><td>10 counts</td><td>5 counts</td></tr></table>	Command	v0.7.1 New Defaults	v0.7.0 Defaults	osp	4.0000 IPS	4.5000 IPS	csp	4.0000 IPS	4.5000 IPS	fpce	470mA	430mA	fpthr	10 counts	5 counts
Command	v0.7.1 New Defaults	v0.7.0 Defaults															
osp	4.0000 IPS	4.5000 IPS															
csp	4.0000 IPS	4.5000 IPS															
fpce	470mA	430mA															
fpthr	10 counts	5 counts															
0.7.0	Aug 21, 2020	"Special Features" release for G3 K12. G3 K02 is not supported. <ul style="list-style-type: none">• Entertainment, Close Behind, Simplicity & Motion Assist modes• UL325 closing force reduced by 35% over v0.6.7• Improved security, delayed mag brake, manual span adjust, etc• Integrated cycle testing• Profile bin resolution increased by 300%.• Cleaner CLI interface optimized for smart phone access															
0.6.7 (K12) 0.5.91(K02)	Dec 3, 2019	Initial production release for G3 supporting basic door functions only using wired & wireless accessories. Processors K02 & K12 supported.															

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Terms Used in this Document

List of terms, definitions and equivalent terminology that will be used interchangeably throughout this document

Terms	Definition & Equivalent Terms
90 Degree	Installation where panels meet in a corner and open 90 from each other
Bi-Part	Installation where panels part in the middle and go left and right
CLI	Command Line Interface. Configuration method use by the G3
Clutch	Connects or disconnects motor from the G3 belt drive system
Config Commands	CLI persistent settings that affect the function, options, or behavior of a G3
cT	Short for the Cycle Test function
Developer	Same as Installer but with access to more technical CLI commands
Egress Mode	"Close Behind Mode"
Encoder	Digital count used by the G3 to determine panel position in the span
Factory	INMOTION support personnel for the G3 & G3 Accessories
Flashing	Act of installing the "code" that runs inside a G3 or G3 accessory.
Friction Fault	Same as "Soft Touch" or over-current
Friction Profile	Recorded motor power measurements across a door span
G1	INMOTION's first Generation (544/545) Single & Dual Motor Controllers
G2	INMOTION's previous Generation 2 (561) Single Motor Controller
G3	INMOTION's Generation 3 Controller or <i>this</i> controller
Help Commands	CLI informative commands that do not persist system changes after a reboot
High Friction Install	HFI refers to an installation that has a high friction load (very heavy pull required)
Installer	Trained or Untrained technician servicing a G3 automation system
Jam	Position where panel 1 is closed with fully engaged weatherstrip
Mag Brake	Magnetic brake that holds panel positions using an electro-magnet
Move Assist	Eq: "Motion Assist Mode" Powered move upon a slight manual panel movement
Normal Mode	Normal runtime mode when no special features such as Egress are enabled
One Button Operation	"Simplicity Mode", "ADA Mode". Single button for Open, Close & Stop
One-Way	Installation where panels open left to right or right to left only
Operator	Homeowner/End User or Installer when operating or testing a G3 system
Partial Move	A mid-span panel move. Moves that do not start at the programmed open or close
Party Mode	Open on motion. "Entertainment Mode"
Persistent	Refers to parameters that are saved and restored after a power loss or reboot
Programming	Act of configuring a G3 Controller for a particular door frame or installation
Reboot	Restarting or power cycling a G3 or component. A form of "reset"
Soft Touch	Stopping the door when movement is impeded by object or person for safety
Span Adjust	Option to change the full or programmed open position of a door
Special Features	"Lifestyle Modes" or modes other than Normal runtime mode.
Tech Briefs	Short, topic specific, sections published from this document
Terminal	Wired or wireless display used to display the G3 configuration data & options
TLE	Indicates a motor controller fault either Over-temperature or Over-current
UL325	UL Safety Standard for automatic doors & windows