

SECTION 14 - CONTROL STATUS WORD BIT COMMANDS (CAR)

The **Futura™** operating system provides Control Status Words for customizing the operation of the elevator. An example would be the ability to enable or disable pre-opening of the doors. Each Control Status Word is made up of 16 bits labeled 0-15. Each bit controls a specific operation of the elevator or one of its devices. Each bit can be set (1) or reset (0) and the operation which each bit controls is affected by the state (set or reset) of the bit.

The following command <BIT> is used to set or reset the individual control flags (bits) of the control status word parameters. Each bit of a control status word is used to activate or deactivate a particular service or function. These control status words are found both in the individual car controllers and in the group controller.

- ✓ Set designates that a bit is a logic 1 (True).
- ✓ Reset designates that a bit is a logic 0 (False).
- ✓ There are 16 bits per control status word, referenced 0-15
- ✓ Control status words (CAR) available: CSW (CS0), CS1, CS2, CS3, CS4, CS5, CS6, CS7, CS8.

Note: *The number of Control Status Words used on a particular job depends on the job itself. Your particular job may not contain all the Control Status Words.*

CSW Car (Control Status Word 0)

BIT	AFFECT	DEFAULT	DESCRIPTION
0	EDS	R	When set, prevents Emergency Dispatching (EDS parameter) from enabling when a Dispatch Loss occurs, even if EDS is activated.
1	DPP	S	When set, permits presetting the Digital Position Pulse (DPP) at start sequence. Note: must always be set in normal operation.
2	DRIVE	S	When set, permits Fault Reset of an internal Drive Fault after car stops.
3			Not used on FUTURA™.
4	CALL	S	Dumps all calls after consecutive car calls answered per Car Call Dump (CCD parameter) number order with no Electronic Eye (EE device) break.
5			Not used on FUTURA™.
6	DOOR	R	Set to allow doors to reverse before reaching Door Open Limit (DOL input): Presently used only with an extra Door Reversal Limit (DLR input) switch.
7	LOBBY	R	When set, car will return to lobby floor after the last call (Lobby Recall).
8	EMP	R	During Manual Emergency power selection, setting this bit causes the car NOT to recall to the main floor if car loses communication with the dispatcher.
9	IND	R	When set and on Independent service mode, calls are accepted only when the doors are closed.
10	IND	R	When set and on Independent service mode, car calls are canceled when a slowdown is initiated.



CSW Car (Control Status Word 0) *continued*

11	DRIVE	R	When set, if Motor Generator (MG) switch input is deactivated, car will be returned to the main lobby floor and no calls will be accepted.
12	DRIVE	R	When set, doors remain open when MG switch is deactivated.
13	DOOR	R	When set and on Independent Service, the doors will close automatically when a car call is registered.
14	GONG	R	When set, no double gong occurs with the down hall lantern.
15			Not used on <i>FUTURA</i>™.

CS1 Car (Control Status Word 1)

BIT	AFFECT	DEFAULT	DESCRIPTION
0			Not used on <i>FUTURA</i>™.
1			Not used on <i>FUTURA</i>™.
2	DOOR	R	When set, pre-opening is disabled for the rear door operation.
3	DOOR	R	When set, rear door pre-opening will occur at the 2" (5cm) leveling zone.
4	DOOR	R	When set, pre-opening is disabled for the front door operation.
5	DOOR	R	When set, front door pre-opening will occur at the 2" (5 cm) leveling zone.
6	HOMING	R	When set, all calls are answered. When reset, calls are canceled immediately if a homing recall occurs.
7	DOOR	R	When set, rear door operation disabled. (Similar to door disconnect switch.)
8	FIRE	R	When set, the fire buzzer is pulsed.
9	FIRE	R	When set, the fire emergency light is pulsed.
10	FIRE	R	When set, the stop switch is not bypassed. When reset, it is bypassed according to bit 11.
11	FIRE	R	When set, s is bypassed all the time. When reset, the stop switch is bypassed according to ANSI code standard.
12	FIRE	R	When set and on Fire Phase II, the doors will open automatically when the car returns to the designated floor. If reset, the fireman must open doors.
13	FIRE	R	When set, the in-car fire service light also operates during Phase II.
14	FIRE	R	When set, the doors will close when a car call is registered. If reset the door must be closed with the Door Close Button (DCB input).
15	FIRE	R	If set, car is not a designated car. If reset, car is a designated car: Under Fire Phase II (New York City only)



CS2 Car (Control Status Word 2)

BIT	AFFECT	DEFAULT	DESCRIPTION
0	DOOR	R	If set, wait for the generator to be running before opening the doors.
1	DOOR	R	If set, pressing the Door Close Button (DCB input) shortens the door open time (transfer time). If reset DCB has no affect on door open time.
2	FAULT	R	If set, allows a reset of a panic motion fault. Note that if the fault keeps recurring, the processor will not continue to reset the fault.
3	FAULT	R	Must be set to activate the panic motion fault feature. (See VDF & TDF parameters and bit 2 of this status word.) When a panic fault is detected, an error 9 is registered and the processor immediately begins to shutdown the car by removing the SYSTEM MASTER (SM output) and the direction signals. The brake will apply immediately.
4	IND	R	If set, Independent Service mode will be disabled after IFT parameter time when a Fire Recall is initiated.
5	BRAKE	R	If set, applies brake on Run time-out.
6	DOOR	R	Allows short rear door reversal. Allows doors to reverse before reaching Rear Door Open Limit.
7	BUZZER	R	If set and car door is closing on Nudging Mode, nudging buzzer activates only when a Door Open Device is activated. If reset, nudging buzzer sounds while doors are nudging closed.
8	DOOR	R	Does not allow reopening of doors with the Safety-edge (SE input) or the Electric-Eye (EE input) during nudging.
9	DOOR	R	If set, simultaneous front and rear door operation instead of selective.
10	MG	R	If set, Motor Generator (MG) always remains on when doors are open.
11		R	Reserved.
12	VIP	R	If set, enables buzzer to sound during VIP mode to alert passenger that car is in VIP operation mode.
13	VIP	R	If set, enables the buzzer to sound at VIP floor.
14	SEC	R	If set, a special buzzer sounds during security with push-button keypad operation. A brief sound indicates acceptance of security code and registration of call while extended sound indicates rejection of security code. (Per contract basis.)
15	LANT	R	Must be set for software version that utilizes a Lantern Master I/O module for controlling the lantern's power supply.



CS3 Car (Control Status Word 3)

BIT	AFFECT	DEFAULT	DESCRIPTION
0			Not used on FUTURA™.
1	DOOR	R	If set, allows call pilots to be accepted when on door protection mode.
2	DOOR	R	If set, allows Door Open Delay (DOD output) to operate every time door opens.
3	FIRE	R	If set, allows car to shut door automatically after Phase II key switch is set to "OFF" and Phase I condition exists.
4	INDEP	R	Independent Service: If reset, independent service mode overridden by fire service after Independent/Fire service override time (IFT parameter) expires.
5	FIRE	R	When set, the door open button is disabled during Phase I fire service.
6		R	Reserved
7	MOTION	R	Enables preconditioning operation.
8	CALL	R	If set, no slowdown for hall calls and the floor is secured by the <SFL> command from the Human Interface.
9	ZONE	R	If set, no ZONE slowdown at floors secured by <SFL> command from Human Interface.
10	LOBBY	R	If set, car can be removed from lobby independent service at any floor when the key switch is turned off. If reset, the car must be at lobby floor.
11	LOBBY	R	If set, Short Door Timer (SDT parameter) disabled when car at lobby floor.
12		R	Reserved
13	DOOR	R	If set, door nudging operation is disabled.
14	FIRE	R	If set, door nudging operation is activated during Phase I fire service operation while door is closing. This bit will override Bit 13 (Disable nudging).
15	DOOR	R	If set, the Electric Eye (EE) time-out feature (nudging) is disabled.



CS4 Car (Control Status Word 4)

BIT	AFFECT	DEFAULT	DESCRIPTION
0	FIRE	R	If reset, car will open front door automatically when it reaches the fire floor during Phase I.
1	FIRE	R	If reset, car will open rear door automatically when it reaches fire floor during Phase I.
2	CALL	R	If set, Car Calls are latched internally.
3	CALL	R	If set, Hall Calls are latched internally for a simplex car.
4	LANT	R	If set, cab lantern is triggered when door reaches Door Open Limit switch (DOL input).
5	DOOR	R	If set, front door pre-opening will occur when car levels into mid level zone.
6	DOOR	R	If set, rear door pre-opening will occur when car levels into mid level zone.
7	INDEP	R	If set, a car on independent service mode will answer car calls secured from the secure floor <SFL> command with the human interface.
8	POSIT	R	If set, the position output is disabled when the car is out of service.
9	POSIT	R	If set, the position output will flash when the car is out of service.
10	CALL	R	If set, Car Calls will not be canceled when the car has a reversal slowdown.
11	CALL	R	If set, cancel car calls for positions above the car when the car is moving down and cancel car calls below the car when the car is moving up.
12	LOBBY	R	When set, car will stop at lobby if it is above lobby and calls are placed below lobby or if car is below lobby and calls are placed above lobby.
13	VIDEO	R	If set, do not blink the car symbol in the video display.
14	ELD	R	If set, do not "refresh" the ELD display in the car.
15		R	Reserved



CS5 Car (Control Status Word 5)

BIT	AFFECT	DEFAULT	DESCRIPTION
0	DOOR	R	If set, the Electric Eye (EE device) is disabled when the door is closing.
1	DOOR	R	If set, then full door reversal after the Safety Edge (SE device) is activated when the door is on nudging operation.
2	MG	R	If set, system checks (using SUF input) to ensure voltage is not building across hoist motor armature when generator in suicing operation (only used for European standard EN81). (also called MG suicide fault check)
3	DOOR	R	If set, car will shutdown if car goes out of level zone and doors are open.
4	LOBBY	R	Set to use lobby independent service as lobby recall service.
5	LOBBY	R	Set to open the rear door when car is on lobby recall service.
6	LOBBY	R	Set to take car out of group svc. when car is returning on lobby recall svc.
7	HOMING	R	Set to allow door to close & Motor Generator (MG) to deactivate when car in homing service mode.
8			Not used on FUTURA™.
9	ERROR	R	Set to disable interrupt error display.
10			Not used on FUTURA™.
11			Not used on FUTURA™.
12			Not used on FUTURA™.
13	ELD	R	If set, no lines are displayed on the ELD screen.
14	ELD	R	If set, ELD screen remains on all the time.
15	DOOR	R	If set, drops Door Close (DC) module output after car in motion for 0.5 seconds.

CS6 Car (Control Status Word 6)

BIT	AFFECT	DEFAULT	DESCRIPTION
0			Not used on FUTURA™
1			Not used on FUTURA™
2			Not used on FUTURA™
3	DOOR	R	Set to disable electronic Detector Edge time out.
4	DOOR	R	Set to enable electronic Detector Edge operation vs. mechanical Safety Edge (SE).
5	DOOR	R	Set to enable electronic Proximity Edge operation vs. mechanical Safety Edge (SE).
6	BUZZER	R	Set to enable handicap buzzer all the time. If reset, the Audible Service Button (ASB input) must be pressed on each run to enable the handicap buzzer.
7	DRIVE	R	Set to disable Auto Fault Reset for the Drive unit.
8	DRIVE	R	Set to enable Analog Speed Reference.
9	DRIVE	R	Set to disable drive communications check (must have bit 8 set).
10	DRIVE	R	Set for direction from DPP pulses instead of from 703 drive.
11	INSP	R	Set to allow hydro controller to run high speed on inspection mode.
12	DOOR	R	Set to disable Door Open Buzzer (DOB input) when front door is secured with lockout switches.
13	DOOR	R	Set to disable Rear Door Open Buzzer (RDOB input) when rear door is secured with lockout switches.
14	DOOR	R	Set to enable drive fault GLR (Gate & Lock input) error. (Both GLR input and DOL input active while level at the floor).



CS7 Car (Control Status Word 7)

BIT	AFFECT	DEFAULT	DESCRIPTION
0	FAULT	R	Set to cause motion fault when tach direction error occurs with DRIVE unit, SPU board, or VFC board.
1	FAULT	R	Set to disable deceleration check in emergency mode
2	FAULT	R	Set to disable ESV and ETS parameter checks at slowdown limit switches
3	MOTION	R	Set to disable linear time (max change in speed ref) parameter
4	DPP	R	Set to disable updating position count when error is detected (more than 5 counts off)
5	MOTION	R	Set to adjust cars maximum velocity from MMS parameter
6	LW	R	Set to have load anti-nuisance service enabled
7	LW	R	Set to have load bypass service enabled
8	LW	R	Set to have load dispatch service enabled
9	LW	R	Set to have load weight overload enabled
10	DOOR	R	Set to invert detector edge input
11	DOOR	R	Set to enable door close button to latch during attendant service.
12	BUZZER	R	Set to enable attendant buzzer at every floor (adj ABT for buzz duration)
13	ATT	R	Set to enable AUB/ADB inputs (attendant Up/Down buzzer) to latch
14	FAULT	R	Set to cause motion fault when SPU, VFC, OR VFC_HS boards emit velocity error
15	CALL	R	Set to pulse car call output for low intensity light

CS8 Car (Control Status Word 8)

BIT	AFFECT	DEFAULT	DESCRIPTION
0	CPU	R	Unused.
1	FAULT	R	Set to disable DPP velocity window check. Velocity window is a difference (tolerance) of ± 100 fpm (0.5 m/s) from previous velocity calculation per CPU. If difference $> \pm 100$ fpm, error 119 occurs.
2	DPP	R	Set to use tach direction from Drive Unit to count DPP instead of using DPP quadrature to count DPP.
3	BRAKE	R	Set to disable Brake Lift Switch feature
4	BRAKE	R	Set to invert the Brake Lift Switch input
5	CWD	R	Set to invert the Counter Weight Derailment (CWD parameter) input
6	MOTION	R	Set for PEK parameter compensation instead of RVT parameter compensation
7		R	Unused.
8	LW	R	Set to disable analog load weighing.
9	MOTION	R	Set to enable torque compensation.
10	MOTION	R	Set to have analog reference show speed reference and pre-conditioning offset. This is used with a digital drive to see an analog speed reference with the pre-conditioning offset for debugging. CS6 bit 8 must also be set.
11	MOTION	R	Set for pre-conditioning during re-leveling.
12	MOTION	R	Set to reset VCD-703 drive integral gain during slowdown.
13	MOTION	R	Set to enable quicker communications packets to the VCD-703 drive.
14		R	Unused.
15	MOTION	R	Set to enable timed leveling mode. Should only be used for test.



CS9 Car (Control Status Word 9)

BIT	AFFECT	DEFAULT	DESCRIPTION
0	GROUP	R	Set for slave car to execute group commands. Note that parameters will be overwritten by whichever car is the master (i.e. the group).
1	DOOR	R	Set to disable SRU or SRD inspection door close option.
2	DRIVE	R	Set to use speed reference feed forward for DSD-412 drive.
3	DOOR	R	Set to disable door field economy voltage on door close.
4	MOTION	R	Set to zero speed reference quickly on stop.
5	DOOR	R	Set to require DCL on (with GL1 and GL) to start the car.
6	LW	R	Set to disable automatic load weighing calibration.
7	MOTION	R	Set to disable pre-start. Pre-start allows the controller to prepare to run when the DCL6 limit is made.
8	BUZZER	R	Set to disable nudging buzzer with EESW in OFF position.
9	DOOR	R	Set to disable DCR if door is open in SAFETIES.
10	DOOR	R	Set to enable hall call door re-open.
11	MOTION	R	Set to delay start for PDT time.
12	LIMIT	R	Set to disable software ETS limits.
13	PI & BUZZER	R	Set for PI and HBZ to ring at dpp position.
14	MOTION	R	Set to run 500 fpm down out of the blind hoistway.
15	FAULT	R	Set to disable deceleration rate check during emergency deceleration.

CS10 Car (Control Status Word 10)

BIT	AFFECT	DEFAULT	DESCRIPTION
0	PILOT	R	If set then release (SU & SD) Pilot at leveling.
1	PILOT	R	If set then release (SU & SD) Pilot at reversal.
2	MOTION	R	If set then Start Sequence at DCL point.
3	MOTION	R	If set then Start Sequence at DCL6 point.
4	CALL	R	If set then do not latch car call outputs. Mostly used for Overlay.
5	MOTION	R	If set then enable one floor run sequence.
6	MOTION	R	If set to initiate Start master (ASM) at door close.
7	PILOT	R	If set then do not set PS on reversal car call.
8	LANTERN	R	If set then activate pawl to ring lantern when car parked.
9	MOTION	R	If set then hold EBR until fully stopped.
10		R	Not Used.
11		R	Not Used.
12		R	Not Used.
13		R	Not Used.
14		R	Not Used.
15	LCD DISPLAY	R	If set then LCD cursor location blinks when changing parameters.



CS11 Car (Control Status Word 11)

BIT	AFFECT	DEFAULT	DESCRIPTION
0	DOOR	R	If set then enable front DHB time out.
1	DOOR	R	If set then enable front DOB time out.
2	DOOR	R	If set then enable rear DHB time out.
3	DOOR	R	If set then enable rear DOB time out.
4	FIRE	R	If set to assign the car as fire fighting car. For UK jobs only.
5	SECURITY	R	If se to invert security inputs to use card reader rather than lockouts.
6	LIGHT	R	If set to blink GLBL output.
7	FIRE	R	If set then allow secondary fire bypass (Input HFBPA) to work.
8	LIGHT	R	If set to invert the logic of in service light. (Output ISL)
9		R	Not Used.
10		R	Not Used.
11		R	Not Used.
12		R	Not Used.
13		R	Not Used.
14		R	Not Used.
15		R	Not Used.