



SHAW-BOX[®]

GLOBAL KING[™] & WORLD SERIES[™]

ELECTRIC WIRE ROPE HOISTS



VARIABLE FREQUENCY DRIVE

⚠ WARNING

To ensure proper and safe operation of hoist, user should never attempt to change any parameter other than noted on CMCO VFD supplement.

Yale Global King and Shaw-Box World Series hoists have become synonymous with strength, serviceability, and long-life and now with our special hoist VFD control package through our partnership with Magnetek Control Systems, users will enjoy benefits & performance far exceeding contactor control including improved motor efficiency, precision control and reduced maintenance costs. The following supplement is intended to be used in conjunction with the Magnetek VFD Manual and will offer support on the CMCO standard settings, as well as user parameters that are enabled for modification in field. For technical support or information on replacement drives or parts, please contact the CMCO Customer Service Department.

CMCO User Parameters:

B01.01- Frequency reference 1.

This is normally the "low speed" setting and will be set to 6Hz at factory. It can be set as high as max frequency, but that would not typically be done. Users may find 6Hz to be too slow and it can be adjusted to a higher setting. The user can enter a number less than 6 Hz and the drive will accept it, but the drive won't operate below 6Hz.

+Note: With exception of 208V power which =5.9675Hz

B01.02- Frequency reference 2.

This is normally the "high speed" setting for 2-step controls. This will be set to 120Hz at factory. (except 208V power which = 108.5 Hz) User cannot go above factory preset max as the drive will not accept it. For 3-step controls, it's an intermediate speed. In that case factory will set it at half of max which is 60Hz.

+Note: With exception of 208V power which =54.3 Hz

B01.03- Frequency reference 3.

This is normally the "high speed" setting for 3-step controls. This will be set to 120Hz at factory with the exception of 208V power which is set at 108.5 Hz. User cannot go above our preset max as the drive won't accept it.

B02-01- Speed Adjustment.

This will be used when user has infinitely variable control and perceives that unit is going too fast. It would typically be set in the 70% to 90% range and should never be set below 5% or above 100% because these are the upper & lower speed limits. The drive will actually accept values from 0% to 110%.

B05.01- Acceleration time.

This is set to 2 seconds at factory. User can change this from 0 to 25.5 seconds per the Magnetek VFD operating manual. If the user sets it too low the drive will fault and the user will have to increase the value. Minimum recommended acceleration setting is 2 seconds.

B05.02- Deceleration time.

This is the timer for deceleration from one speed to another and is set to 1.5 seconds at factory. User can change this from 0 to 25.5 seconds per the Magnetek VFD operating manual. If the user sets it too low the drive will fault and the user will need to increase the value. Minimum recommended deceleration setting is 1.5 seconds.

Please note that our parameter file is set up so there are 3 different deceleration times based on how the user operates the pushbutton. From high speed to low speed, the deceleration time is B05.02 = 1.5 seconds. From high speed to off, the “quick stop” deceleration time is 1.0 seconds. From high speed up or down, then immediately pressing the other direction enables reverse plug simulation and the deceleration time = 0.5 seconds. The timers are not exact because of other built-in timers. Also, for 2-step infinitely variable control, B05.02 does not function because step 0 (releasing the pushbutton) is slow down or stop, step 1 is hold and step 2 is acceleration or high speed. With 2-step infinitely variable control you still have quick stop and reverse plug functionality and deceleration control can be achieved by momentary releasing the pushbutton (step 0) and then immediately depressing pushbutton to step 1.

C05.01- Load check.

This is enabled at factory and setup with 100% load. User can turn it off or run the setup themselves. If the user’s voltage and/or ambient temperature is lower or higher than ours they may need to do a setup. Also, if the hoist is de-rated user will need to do a setup. If the drive gets a load check fault, the user can lower the load at 30Hz. The drive must then be reset or power-cycled to lift again.

C05.05- Load check acceleration margin.

This is set to 5% at factory. This allows the user to “tune” the factory load check to their voltage/temperature versus doing a setup. The drawback to the user doing a setup is they have to have a known load which they may not readily have on site.

C05.07- Load check constant speed margin.

This is set to 5% at factory. This allows the user to “tune” the factory load check to their voltage/temperature versus doing a setup. The drawback to the user doing a setup is they have to have a known load which they may not readily have on site.

+Note: *If the user has a de-rated hoist, they will have to run a setup to enable the load check feature based on their rated capacity. Even if the load check feature is disabled the drive will not reach current values high enough to get a fault before the mechanical overload engages.*



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