

Service Note: Emergency Override Speed

Applicable Drives:

All E7 and P7 model drives with software version S3020 thru S4011.

Issue:

Parameter b1-14, Emergency Override Speed, cannot be adjusted anytime parameter E1-03 is set to any value other than "F" (default setting) or "FF". Both "F" and "FF" settings result in the user being able to program a custom V/F pattern.

Background Information:

Parameter b1-14 is used in conjunction with an Emergency Override (EO) multifunction input (H1-XX = 81: Emergency Override Forward or H1-XX = 82: Emergency Override Reverse) to command the drive to run should the normal Drive Enable command be removed. The drive will start and run in an Emergency Override mode in the commanded direction when the EO input is closed as long as the Drive Enable input is removed. If the Drive Enable input is applied, the Emergency Override feature is ignored and a normal run command via terminal S1 or S2 is used to start and stop the drive.

The speed reference during EO is determined by parameter b1-15, Emergency Override Reference Selection. Parameter b1-15 selects whether the speed reference is the auto speed reference (when b1-15 = 1) or a digital speed reference as set in parameter b1-14 (when b1-15 = 0).

With b1-15 = 0, parameter b1-14 becomes the speed reference when EO is activated. As the default for parameter b1-14 is 0, parameter b1-14 needs to be set to the desired EO running speed by the user or commissioner of the drive at the time of start-up. It is during this time that individuals programming the drive may experience the locked status of this parameter.

The default settings for the associated parameters are as follows.

Emergency Override Speed
Emergency Override Reference Selection
V/F Pattern Selection
Multifunction Inputs S3, S4, S5, S6, S7

Investigation:

E7 and P7 software versions S3020 thru S4011 have a software lockout flag that has been inadvertently applied to parameter b1-14 that prohibits its change anytime E1-03 is set to any value other than "F" or "FF". This software oversight has been identified and brought to the attention of Yaskawa's software development group. A plan of action will be determined after a more thorough review of this oversight is conducted.

Recommendations/Corrective Action:

When using the Emergency Override (EO) feature, be sure to set the aforementioned parameters. When setting parameter E1-03 to any value other than "F" or "FF" make sure to program parameter b1-14 prior to changing E1-03. If E1-03 is already set to a value different from "F" or "FF" and parameter b1-14 needs to be changed, it will be necessary to change E1-03 back to "F", program the desired speed into b1-14, and then, reprogram the desired E1-03 setting.

WARNING: THE EMERGENCY OVERRIDE FEATURE MUST BE FULLY TESTED AFTER ALL PROGRAMMING HAS BEEN COMPLETED TO VERIFY DESIRED OPERATION RESULTS.

WARNING: PERFORMING A RESET VIA PARAMETER A1-03 RESETS PARAMETERS BACK TO FACTORY DEFAULT SETTINGS. BE SURE TO CONFIRM ALL PROGRAMMING AND TEST ANY SAFETY/OVERRIDE CIRCUITS TO CONFIRM COMPLIANCE WITH DESIRED OPERATION ANYTIME A RESET IS PERFORMED.