Custom fault autoreset

Selecting a non-standard fault to autoreset

In the various applications that use variable frequency drives, some critical applications require the drive to be always running and if a fault occurs the drive must be able to automatically reset that fault. Currently in the 580 family of drives, the default autoreset faults in 31.12 are: Overcurrent, Overvoltage, Undervoltage, AI supervision fault, External Fault 1-5, and Selectable fault. The Selectable fault is a new feature in 580 family of drives and was not available in the previous 550 family of drives. The Selectable fault now allows a user to enter any fault code that the drive needs to autoreset on. The list of fault codes can be referenced in the fault tracing section of the firmware manual, which displays their hexadecimal value along with the fault description. The 580 family of drives is made up of the ACH580, ACQ580, and ACS580 drives.

For example, a drive trips intermittently on an input phase loss during a utility to generator transfer test. Input phase loss is not one of the default autoreset faults listed in parameter 31.12, so the fault will not autoreset. This fault that is occurring in this application, would be considered a nuisance fault. To eliminate the need to send a technician to the drive to manually reset the input phase loss fault, the following parameters below need to be configured.

Entering parameter group 31 and selecting parameter 31.12 will prompt the Autoreset selection of faults. For the application described above, the nuisance fault is not a defaulted option. The user will need to configure bit [10] and will need to be changed to a value of 1 as shown pictured on the left.

The next step is configuring parameter 31.13 to match the fault code, that is being presented in the active faults, when the nuisance fault occurs. The Hex code for input phase loss fault is “3130”. The user will need to set parameter 31.13 to 3130.

Once this Selectable fault has been configured, when the fault occurs it will follow the standard autoreset procedure that is defaulted in the drive. Adjusting the amount of trials and the trial time is accomplished by adjusting 31.14-31.16 to meet the applications needs. As shown above, the ease of configuring this feature requires minimal effort. This feature eliminates troubleshooting time by automatically resetting a nuisance fault. Implementing this feature can save time and cost by eliminating downtime.