

## Event Logger Overview

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The Event Logger is designed to capture and log various process events, which are detected by a PLC processor. The events trigger messages, which help diagnose machine malfunctions and process upsets. Events are captured in the exact order of occurrence and accurately time stamped. Conventional HMI alarm-logging techniques incorporated in Wonderware, RSView, and DCS systems are not capable of accurately time stamping multiple events that might occur in a time period of five seconds or less. The events are grouped by user-defined categories. There can be a maximum of ten categories. The following list of event groups is an example from an existing application:

- Group 1: PLC Hardware Status
- Group 2: Motor And Drive Faults
- Group 3: Drive State Tracking
- Group 4: Perm/Interlock First-Outs
- Group 5: Equipment Position Faults
- Group 6: Miscellaneous Events
- Group 7: Operator Commands
- Group 8: Motor Start Time Stamp
- Group 9: Motor Stop Time Stamp
- Group 10: Spare

Each event is time stamped with the PLC processor internal clock to an accuracy of one program scan. Events occurring simultaneously in one program scan will be detected as such and logged with identical time stamps. The events are stored in a FIFO array until polled by the RSV Event Logger VB program, which runs in conjunction with the RSView application (HMI) on the diagnostic computer. Should loss of communication occur with the diagnostic computer, the FIFO array in the PLC processor would continue to accumulate events. The PLC processor will always store the most recent events – up to a maximum of 50 (can be expanded if necessary). As the diagnostic computer polls the accumulated events, the event is unloaded from the FIFO array and displayed on the HMI event screen. The event is also logged to an Access database and a comma delimited '.csv' file (example - EL Log 04\_2001.csv) that can be imported into Excel for viewing and sorting. The 'EL Log' file contains all the events for a given month.