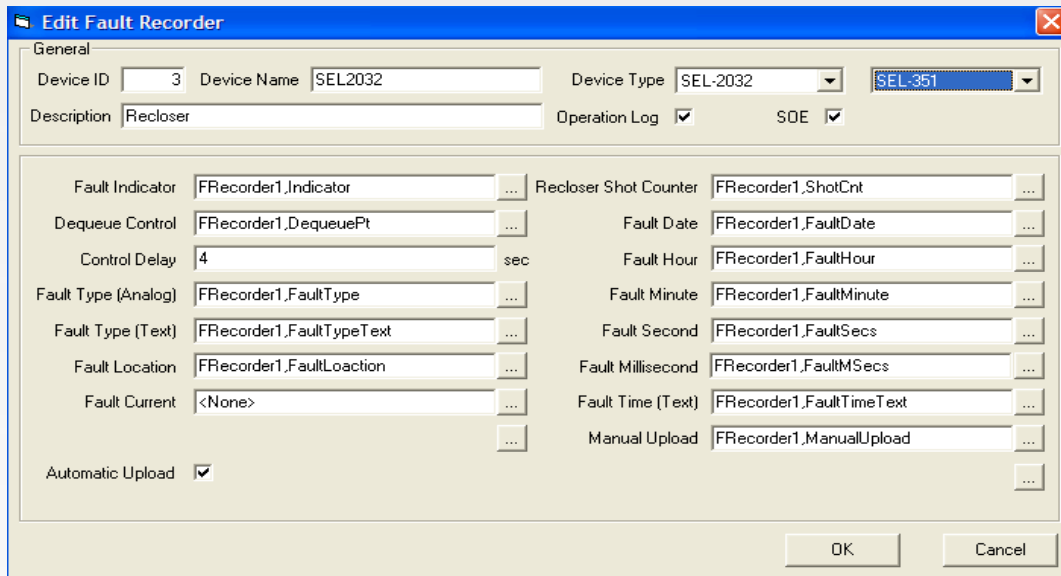


Fault Data Recorder is an application that you can use to upload and record fault data from SEL relays. The application consists of a Fault Recorder editor and an executive program. The editor allows you to identify fault data points as well as other points and parameters that are involved in the process of retrieving the fault data. The executive program does the actual retrieval (i.e. detection, uploading and storage) in cooperation with the scan task.



In an SEL relay, fault information (such as fault current, fault type etc.) is queued and stored in a buffer inside the relay. When commanded, the relay dequeues and transfers fault data to a group of data points called Relay Summary Event Data.

A relay fault indicator point indicates the readiness of the fault event queue. The value of this status point becomes 1 if there is at least one set of unread fault data in the queue. To read the fault data, the master station sends a control command to a specific binary output point of the relay. This causes the relay to dequeue the oldest fault event and load the fault data into a set of analog points. These analog points are reported to the master station in the usual way (by exception, for example, if the communication protocol is DNP). After processing the received fault data values, the master station then checks the fault indicator point again, which will still be "on" if the queue contains more unread fault event data. The master station continues this process until all the fault event data is read, whereupon the fault indicator point goes to the "off" state.

The executive program of the Fault Data Recorder can be configured to operate in either Automatic Upload mode or in Manual Upload mode.