



Dynamic Configuration Software (DCS)

Configuration Module

The Configuration Module provides a dynamic mechanism to re-configure the system for start-ups, shutdowns and operating mode changes. Alarm and non-alarm parameters can be configured. Therefore, the configuration of control and alarm points is always appropriate for the current operating mode.

Features

- Change alarm priorities / trip points
- Change mode / mode attribute
- Change tuning / point configuration
- Periodic case enforcement
- Area access security
- Interface schematic displays

Configuration is accomplished by changing any program-accessible parameter. Logically related points are grouped into configuration modules with a defined sequence of point parameter references and associated values to be read or written. Not a single line of custom code is required for these generic capabilities.

The configuration modules are activated through a generic selector which operates in manual, semi-automatic or automatic mode. A user-configurable logic dynamically determines which configuration module to activate in semi-automatic or automatic mode. Other module types can be linked together to provide the final application. The selector can also be configured to periodically enforce a configuration module.

Built-in security prevents accidental use from other areas. Operator interface schematic displays provide module details, execution status, and easy-to-use access to both selectors and configuration modules. These displays are accessed through a target subpicture which allows seamless integration with client schematic displays. Advanced features include time delays, links to other selectors, alarm and configuration modules, error branching and event initiated processing.

Control and alarm points are generally configured based on normal operating conditions. The operator uses these points to maintain automatic control, respond to disturbances and prevent them from growing in severity. However, things are not always ideal.

Situations

- Unit Start-ups and Shutdowns: During operating mode changes, many meaningless alarms are annunciated. The operator must search displays and determine which alarms are significant. Conversely, some start-up and shutdown conditions do not have appropriate alarms because they conflict with normal operation alarm settings.
- Product Switches: Some process units produce a variety of products or grades. Such units do not have a single set of normal operation conditions. This introduces management problems because of a static configuration.

With the intelligence of the selector and the flexibility of the configuration module, these situations can be better managed.

