



# Dynamic Configuration Software (DCS)

## Selector Module

The Selector Module provides the intelligence to dynamically configure the system for the current process state. The module executes configurable logic to command the execution of appropriate action modules. These action modules then reconfigure the control system parameters.

### Features

- Manual / semi-automatic / automatic modes
- Controls execution of global alarm, analog alarm, configuration and other selector modules
- Periodic case enforcement
- Area access security
- Interface schematic displays

The selector logic determines which action modules to activate in semi-automatic or automatic mode. The logic allows multiple relational tests with real, enumerated, and boolean values, multiple extended PLC-type logic functions and bad value handling to be configured. Logic conclusions can be bound to cases. Upon change of case, a chain of action module executions is usually initiated. The selector can also be configured to periodically enforce a case. Manual operation allows the operator to select among permitted cases.

The global alarm, analog alarm and configuration modules provide the actual reconfiguration of general and alarm related point parameters. The entire structure of linked modules offers virtually unlimited extendibility and allows the control system to be dynamically reconfigured for any operating mode. A custom change zone provides operator interface to the selector module. Standard generic schematics provide engineer access to all modules.

Digital control systems provide multiple alarm functions for virtually every input, many of which are alarmed. Many alarm points provide valuable precursor alarm information to help the operator contain minor disturbances and prevent them from growing in severity. However, alarm points are only important when the associated equipment or process is in service.

### Situations

- Normal Situations: The selector can be configured to detect normal processing states and transitions including: steady-state, start-up, shutdown, equipment swapping and product switching.
- Abnormal Situations: The selector can be configured to detect abnormal processing states and transitions including: emergency shutdown, instrument or equipment failures, upstream problems and downstream problems.

With the intelligence and capability of the Selector Module, these situations can be better managed.

