



# Dynamic Configuration Software (DCS)

## Analog Alarm Module

The Analog Alarm Module provides a mechanism to dynamically reconfigure alarm priorities and trip limits for analog points during process upsets, start-ups and shutdowns. Only significant alarms are annunciated allowing the operator to focus on the current situation.

### Features

- Manage individual trip points / priorities
- Manual / semi-automatic / automatic selector
- Periodic case enforcement
- Area access security
- Interface schematic displays

Alarm management is accomplished by modifying individual alarm parameters. Logically related alarm point parameters are grouped into analog alarm modules with a defined priority or trip point for each. Modules are then linked together to provide the final application. These modules are dynamically activated through a selector that operates in manual, semi-automatic or automatic mode. The selector logic determines which modules to activate in semi-automatic or automatic mode. The selector can also be configured to periodically enforce a 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 analog alarm modules. These displays are accessed through a target subpicture that allows seamless integration with client schematic displays. Advanced features include time delays, links to other alarm and configuration modules and event initiated processing.

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

- **Equipment Failures:** When a major piece of process equipment like a charge pump, compressor, or fired heater shuts down, most alarms become unnecessary. They indicate secondary, non-critical effects and no longer provide the operator with important information.
- **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. This wastes valuable time when the operator needs to make important operating decisions and take action.

NDX	CND	FUNC	ALARM TAG	LD#	LIM	TIP	INTEL	LIM	ALARM CUP	PARAMS	ERR	TRY
1	0	LOPR	LV_32001	3600	0	120	HIGH	High				-0
2	0	LLPR	LV_32001	3600	0	120	EMERGENCY	Emergency				-0
3	0	LOPR	LV_32010	7200	0	120	LOW	Low				-0
4	0	LOPR	LV_32010	7200	0	120	LOW	Low				-0
5	0	LOPR	LV_32100	7200	0	120	LOW	Low				-0
6	0	LOPR	LV_32330	7200	0	120	LOW	Low				-0
7	0	LOPR	LV_32330	7200	0	120	LOW	Low				-0
8	0			0	0	0		-1.000				0
9	0			0	0	0		-1.000				0
10	0			0	0	0		-1.000				0

ASSOCIATED BLOCKS

NDX	BLOCK	LIM	BE	ON	NDX	BLOCK	LIM	BE	ON	NDX	BLOCK	LIM	BE	ON
		0	0	0	2		0	0	0	3		0	0	0

With the intelligence of the Selector and the capabilities of the Analog Alarm Module, these situations can be better managed.