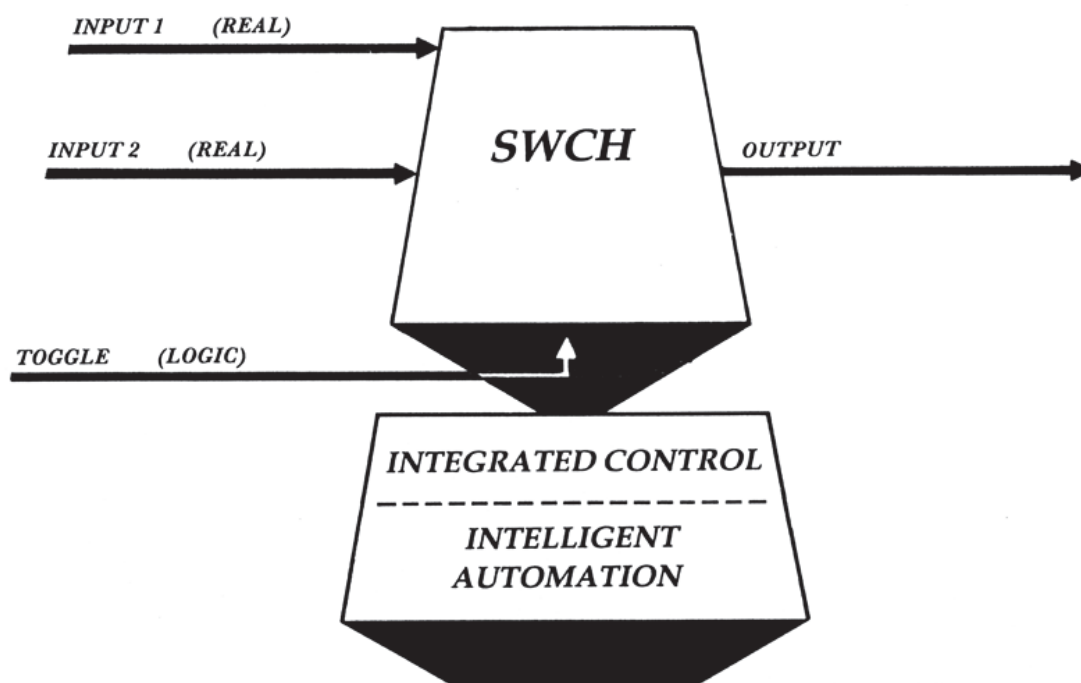


Switch (SWCH) Block



The Switch (SWCH) block provides a switching element that permits switching of one output signal from source A to source B (for example, switching from one control strategy to another based on a process condition).

OVERVIEW

The Switch block is a single-pole, double throw switch element that is switched by the Toggle parameter (Boolean). A balance feature optionally provides for smooth transition of the output signal when switching between inputs. When the output is switched, it approaches the other input with the response characteristic of a first order lag having a time constant equal to the balance time.

The user specifies an independent balance time constant for each input. Auto/ Manual control of the output signal is also available.

In auto, the Toggle input controls which input is selected for the output. In manual, an operator or external program can set the output to the desired value. Upon transfer to auto, the block will instantaneously drive the output to the input value selected by the Toggle input.

STANDARD FEATURES

- ▶ Manual/Auto control of the output signal, which can be initiated by a host process or another block.
- ▶ Bumpless transfer of the output signal during switching.
- ▶ Independent balance time constraints for switching the output from one input to the other.

PRINCIPAL PARAMETERS

Inputs:

- ▶ 2 switchable signals (real)
- ▶ 2 balance times (real)
- ▶ Toggle (Boolean)
- ▶ Manual/Auto control mode switching (Boolean)

Outputs:

- ▶ 1 control signal (real)