

## Input/Output Blocks

you can:	with this block:
read a floating point value from I/O	Float Input
write a floating point value to I/O	Float Output
read an integer value from I/O	Integer Input
write an integer value to I/O	Integer Output
read a Boolean value from I/O	Boolean Input
write a Boolean value to I/O	Boolean Output
provide a floating point tunable constant as an input to a process	Float Tunable Constant
provide an integer tunable constant as an input to a process	Integer Tunable Constant
provide a Boolean tunable constant as an input to a process	Boolean Tunable Constant

## Data Conversion Blocks

you can convert a value from:	with this block:
floating point to integer	Float to Integer
floating point to Boolean	Float to Boolean
integer to float	Integer to Float
integer to Boolean	Integer to Boolean
Boolean to float	Boolean to Float
Boolean to integer	Boolean to Integer

## Time-Based Blocks

you can:	with this block:
measure how long an input signal stays on or off	Timer
generate a sine wave signal in repeatable fashion	Sine Generator
generate a signal based on a specified date and time	Date/Time
generate a specified signal in a repeatable fashion	Profile Generator

## Event-Based Blocks

you can:	with this block:
count the state transitions of a Boolean input signal	Counter
select one of two floating point inputs based on a Boolean input	Float Input Selector
update one of two floating point outputs based on a Boolean input	Float Output Selector
select one of two integer inputs based on a Boolean input	Integer Input Selector
update one of two integer outputs based on a Boolean input	Integer Output Selector
store and retrieve data in a prescribed order	FIFO
implement a retentive output function	Latch

## Arithmetic Blocks

you can:	with this block:
calculate the average or select the minimum, maximum, or median value from among several inputs	General Selector
perform weighted addition or subtraction of floating point inputs	Float Sum
perform weighted addition or subtraction of integer inputs	Integer Sum
multiply one floating point value by another	Float Multiply
multiply one integer point value by another	Integer Multiply
divide one input value by another	Divide
calculate the quotient and remainder when dividing one input value by another	Quotient/Remainder
raise the value of an input to a power	Power
evaluate an input exponentially	Exponential
calculate the square root of an input value	Square Root
calculate the reciprocal of an input value	Reciprocal
round an input either up or down as specified	Round
calculate the absolute value of a floating point input value	Float Absolute Value
calculate the absolute value of an integer input value	Integer Absolute Value
calculate the logarithm of an input value	Logarithm
convert an input value to engineering units	Scaling
multiply an input by a gain factor	Gain (integer or float)

## Logic and Compare Blocks

you can:	with this block:
perform an AND operation	And
perform an OR operation	Or
perform an exclusive OR operation	Exclusive Or
invert each bit of an integer	Integer Invert
invert the result of a Boolean expression	Boolean Invert
shift or rotate input bits in a specified direction (at each scan or when a trigger signals)	Bit Shift/Rotate
combine specified input bits to build an integer (at each scan or when a trigger signals)	Bit Combine
extract specified output bits from an integer input (at each scan or when a trigger signals)	Bit Extract
compare two inputs to see if they are equal in value	Equal
compare two inputs to see if they are not equal in value	Not Equal
compare two inputs to see if one is greater than or equal to the other	Greater (or Equal)
compare two inputs to see if one is less than or equal to the other	Less (or Equal)
check to see if an input is within specified limits	Limit Check

## Basic Process Control Blocks

you can:	with this block:
control the rate of change of a value	Rate Limiter
limit the maximum and minimum levels of a floating value	H/L Limit (float)
limit the maximum and minimum levels of an integer value	H/L Limit (integer)
record and save the highest float value of an input signal	Float Maximum
record and save the highest integer value of an input signal	Integer Maximum
record and save the lowest float value of an input signal	Float Minimum
record and save the lowest integer value of an input signal	Integer Minimum
activate an alarm when a specified event occurs	Alarm
maintain a process variable at a setpoint	PID
provide phase lead/lag to your system	Lead/Lag
integrate an input value	Integrator
evaluate the actual rate of change of a value	Derivative
implement a non-linear map between input and output	X-Y Map
delay an analog signal for a specified length of time	Dead Time (float)
delay an integer signal for a specified length of time	Dead Time (integer)
calculate the moving average of the input values	Moving Average
set a digital output for a length of time proportional to the analog input	Time Proportional Function

## Discrete

you can:	with this block:
control 2-state devices	Discrete 2-state Device Driver
control 3-state devices	Discrete 3-state Device Driver
set a retentive bit	Latch
detect when a step is complete or when to set the output to the next step	Drum Sequencer

## Advanced Process Control Blocks

you can:	with this block:
change the position of a device based on the output of a PID block	Position Proportional Function
specify how a process should operate based on whether the block's calculated output is positive or negative	Split Range Function
implement master/slave PID controllers	Cascade PID
maintain a process variable at a setpoint using more than one set of PID parameters	Multiple Parameter PID
control a process variable by manipulating a single control variable	IMC 1x1
control a process variable by manipulating as many as three control variables	CC* 1x3
control two process variables by manipulating as many as three control variables	MMC* 2x3

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