

The SignalLimiter function block is used to constrain an input signal within specified minimum and maximum limits, with support for hysteresis to prevent output instability caused by rapid oscillation around limit thresholds.

Inputs

Name	Type	Description
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IN	REAL	The input signal to be limited.
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MIN_LIMIT	REAL	The minimum allowable value of the input signal.
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MAX_LIMIT	REAL	The maximum allowable value of the input signal.
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HYSTERESIS	REAL	Defines the deadband around the output to suppress small changes within a threshold.
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Outputs

Name	Type	Description
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OUT	REAL	The output signal after applying limits and hysteresis.
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LIMITED_HIGH	BOOL	TRUE if the input was above MAX_LIMIT and has been clamped.
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LIMITED_LOW	BOOL	TRUE if the input was below MIN_LIMIT and has been clamped.
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Internal Variables

Name	Type	Description
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ClampedValue	REAL	Intermediate value representing the signal after clamping.
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WithinHysteresis	BOOL	TRUE if the output did not change due to being within the hysteresis band.
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LastOut	REAL	Stores the last output value for hysteresis comparison.
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