

Filters out small signal changes (e.g. sensor noise) around a defined CENTER. This is common in analog inputs that fluctuate around a steady value. Inputs

IN – Raw input signal.

DEADBAND – Allowed range of fluctuation (tolerance).

CENTER – Central reference point.

ENABLE – (Not present here, but should be added for consistency)

Outputs

OUT – Filtered output.

IS_ACTIVE – Indicates whether the input is outside the deadband (i.e., real movement).

Internal Variable

Deviation – Difference between input and center.

This block gradually changes a value (usually a setpoint or command) towards a target value, at a limited rate. This avoids abrupt jumps that could damage equipment or cause instability. If reset is activated output will be current value.

Inputs

TARGET – Desired final value.

CURRENT – Starting value or reference.

RAMP_UP – Maximum allowed increase per scan cycle.

RAMP_DOWN – Maximum allowed decrease per scan cycle.

ENABLE – Activates the function.

RESET – Resets internal state to CURRENT.

Outputs

OUT – The smoothed (ramped) output value.

REACHED – TRUE if OUT has reached TARGET.

Internal Variable

PrevOut – Stores the previous output for comparison.