

Bpr

%Bpr function

Old name	%BprB												
Function	The function implements a two-position controller. Result is a value of Boolean type.												
Declaration	<pre>BOOL %Bpr(REAL in RV, REAL in IV, REAL in DeadBand, REAL in Hysteresis, BOOL in OO/CO)</pre>												
Parameters	<table border="1"><tr><td>RV</td><td>Required value.</td></tr><tr><td>IV</td><td>Input value.</td></tr><tr><td>DeadBand</td><td>Dead band.</td></tr><tr><td>Hysteresis</td><td>Hysteresis.</td></tr><tr><td>OO</td><td>Opening output.</td></tr><tr><td>CO</td><td>Closing output.</td></tr></table>	RV	Required value.	IV	Input value.	DeadBand	Dead band.	Hysteresis	Hysteresis.	OO	Opening output.	CO	Closing output.
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Note	<p>Regulation is executed according to the left part of the figure ($OO/CO = @OO$) or according to the right part of the figure ($OO/CO = @CO$).</p> <p>Parameters:</p> <ul style="list-style-type: none">• DeadBand = AC (>0) - real value• Hysteresis = BC (>0) - real value <p>Input variables:</p> <ul style="list-style-type: none">• IV (input value) - real value• RV (required value) - real value (constant or continuous signal) <p>Output variables:</p> <ul style="list-style-type: none">• OO (opening output) - value of Boolean type• CO (closing output) - value of Boolean type <p>Function:</p> <ul style="list-style-type: none">• State1: $IV \leq RV - AD$, then $OO=1$ and $CO=0$• State2: $RV - AD < IV < RV - AB$, then OO is not changing and $CO=0$• State3: $RV - AB \leq IV \leq RV + AB$, then $OO=CO=0$• State4: $RV + AB < IV < RV + AD$, then $OO=0$ and CO is not changing• State5: $RV + AD \leq IV$, then $OO=0$ and $CO=1$												



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