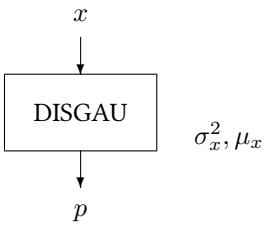
Block DISGAU

The DISGAU block calculates the normal distribution.





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Function	fb0029
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Inputs

1	Independent variable x

Outputs

1	Probability density $p(x)$

Parameters

1	Variance σ_x^2
2	Mean value μ_x

Strings

None

Description

The probability density function

$$p(x) = \frac{1}{\sigma_x \sqrt{2\pi}} \exp\left(\frac{-(x-\mu_x)^2}{2\sigma_x^2}\right)$$

is called normal distribution or Gauß distribution after the German mathematician Karl Friedrich Gauß (1777–1855).

disgau.vseit



A DO block varies x from -4 to 4 in steps of 0.05. The DISGAU block with mean value zero and variance one calculates the normal distribution which is plotted by a PLOT block.

