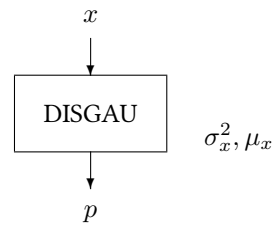


Block DISGAU

The DISGAU block calculates the normal distribution.



Name	DISGAU
Function	fb0029
Inputs	1
Outputs	1
Parameters	2
Strings	0
Group	S

Inputs

- | | |
|---|--------------------------|
| 1 | Independent variable x |
|---|--------------------------|

Outputs

- | | |
|---|----------------------------|
| 1 | Probability density $p(x)$ |
|---|----------------------------|

Parameters

- | | |
|---|-----------------------|
| 1 | Variance σ_x^2 |
| 2 | Mean value μ_x |

Strings

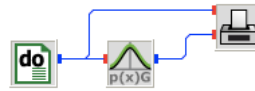
None

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.

