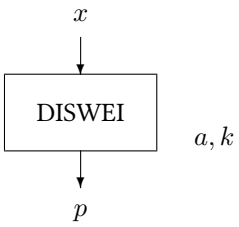
Block DISWEI

The DISWEI block calculates the Weibull distribution.





Name	DISWEI
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	Scale parameter a
2	Shape parameter k

Strings

None

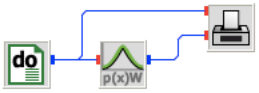
Description

The Weibull distribution is defined by the probability density function

$$p(x) = \frac{k}{a}\left(\frac{x}{a}\right)^{k-1} \exp\left(-\frac{x^k}{a^k}\right) \tag{1}$$

For $k = 2$ the Weibull distribution degenerates to the Rayleigh distribution, and for $k = 1$ equals the exponential distribution.

diswei.vseit



A DO block varies x from 0 to 5 in steps of 0.01. The DISWEI block calculates the Weibull distribution with scale parameter one and shape parameter two which is plotted by a PLOT block.

