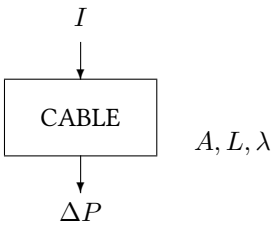
Block CABLE

The CABLE block calculates ohmic losses in a cable.





Name	CABLE
Function	se0003
Inputs	1
Outputs	1
Parameters	3
Strings	0
Group	S

Inputs

1 Current I / A

Outputs

1 Power loss ΔP / W

Parameters

1 Cable area A / mm^2
2 Cable length L / m (single wire)
3 Ohmic conductance λ / $\Omega\,\mathrm{mm}^2\,\mathrm{m}^{-1}$ (e. g., $\lambda_{\mathrm{Cu}} = 0.0178\,\Omega\,\mathrm{mm}^2\,\mathrm{m}^{-1}$)

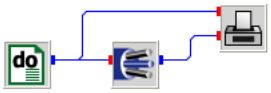
Strings

None

Decription The cable loss is calculated after

$$\Delta P = \frac{2L}{A}\,\lambda I^2$$

cable.vseit



For a cable area of 4 mm^2, a length of 10 m and an ohmic conductance of 0.0178 $\Omega\,mm^2\,m^{-1}$ a DO block varies current from 0 to 10 A in steps of 0.01 A.

The PLOT block displays the ohmic losses as function of the current.

