

Block IVETAEU

The IVETAEU block calculates the European inverter efficiency (Euro-efficiency).



Name	IVETAEU
Function	se0027
Inputs	0
Outputs	1
Parameters	6
Strings	0
Group	C

Inputs
None

Outputs
1 Euro-efficiency

Parameters
1 Inverter efficiency at 5 percent DC-nominal power
2 Inverter efficiency at 10 percent DC-nominal power
3 Inverter efficiency at 20 percent DC-nominal power
4 Inverter efficiency at 30 percent DC-nominal power
5 Inverter efficiency at 50 percent DC-nominal power
6 Inverter efficiency at 100 percent DC-nominal power

Strings
None

Description The Euro-efficiency η_{EU} of an inverter weights the partial load efficiencies with average radiation conditions in Central Europe and is defined by

$$\eta_{\text{EU}} = 0.03 \eta_5 + 0.06 \eta_{10} + 0.13 \eta_{20} + 0.10 \eta_{30} + 0.48 \eta_{50} + 0.20 \eta_{100}$$

where η_i denotes the partial load efficiency at i % of the inverter's nominal DC power input.

ivetaeu.vseit



The **IVETAU** block with its parameters set to $\eta_5 = 0.8$, $\eta_{10} = 0.9$, $\eta_{20} = 0.92$, $\eta_{30} = 0.93$, $\eta_{50} = 0.96$, and $\eta_{100} = 0.94$ calculates a European efficiency of

0.93939996

as displayed by the **SCREEN** block.