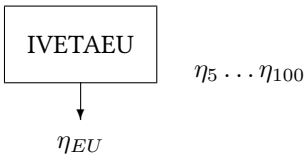
Block IVETAEU

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

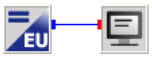
Description

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

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

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

ivetaeu.vseit



The IVETAEU 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.