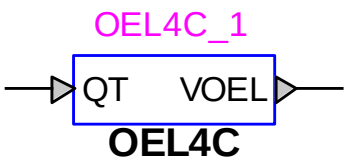
Exciters and Governors: Over Excitation Limiter OEL4C



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1 Description

This device is an implementation of the IEEE type OEL4C summation point over excitation limiter model. This device is implemented as described in [1]. Implementation details can be viewed by inspecting the subcircuit of this device.

1.1 Pins

This device has 2 pins:

Pin name	Type	Description	Units
QT	Input	Generator reactive power	pu
VOEL	Output	Over Excitation Limiter signal	pu

1.2 Parameters

The default set of parameters can be found in [1].

1.2.1 Data tab

The parameters on the Data tab are:

1. **Reactive power Q_{REF}**: OEL timed reactive power limiter pick up level
2. **Time constant T_{delay}**: OEL integral time constant
3. **Gain K_P**: OEL proportional gain
4. **Gain K_I**: OEL integral gain
5. **Minimum output V_{min}**: OEL minimum output

2 Initial conditions

The OEL is supposed to be inactive during the steady-state conditions.

3 References

[1] “IEEE Recommended Practice for Excitation System Models for Power System Models for Power System Stability Studies,” IEEE Standard 421.5-2016.