

# Structured Electronic Design

## Amplifiers: modeling nonideal port isolation

# Two-ports and four-terminal networks

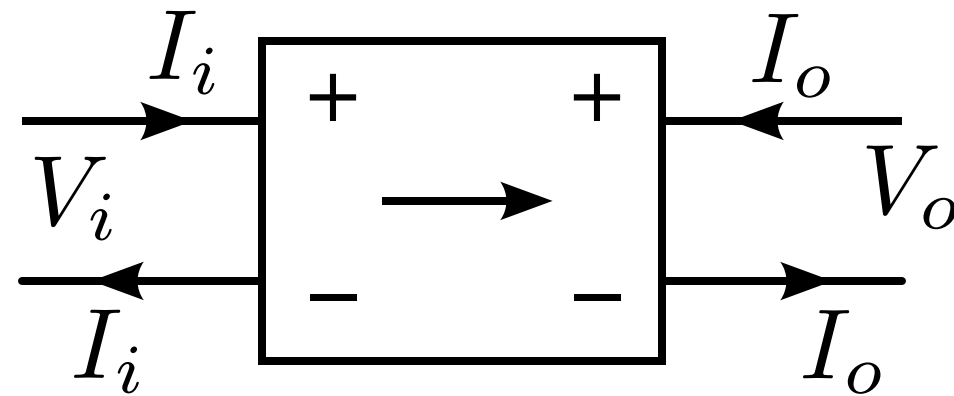
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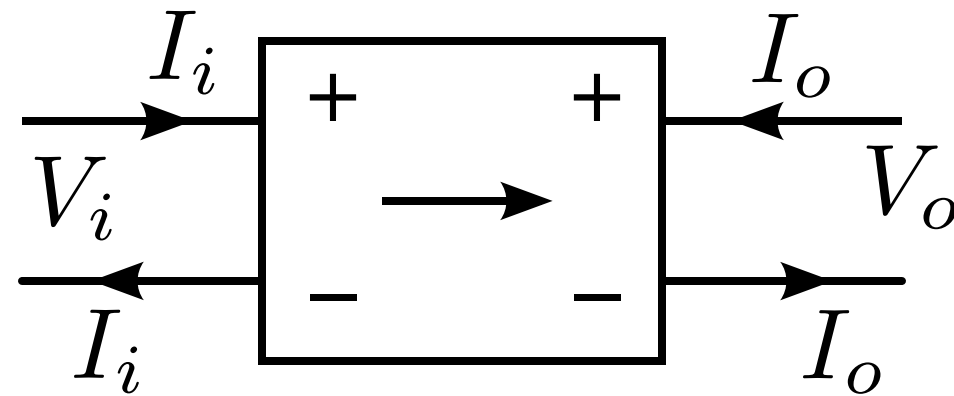
## Two-port model



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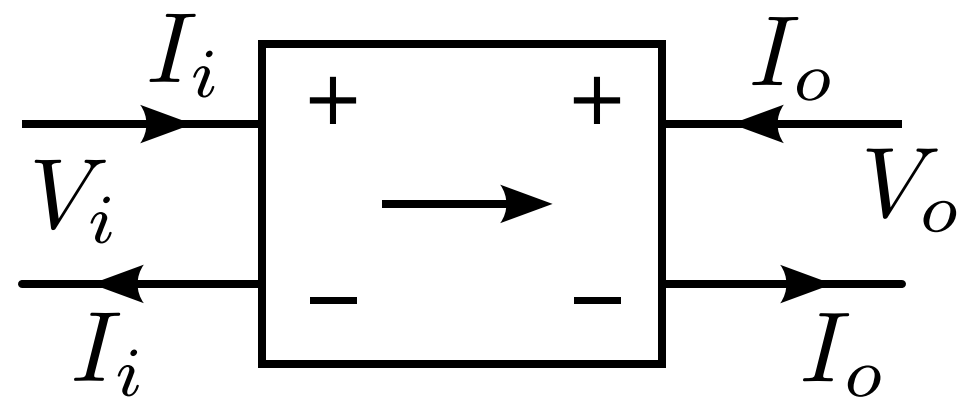


Useful functional model  
with two independent and  
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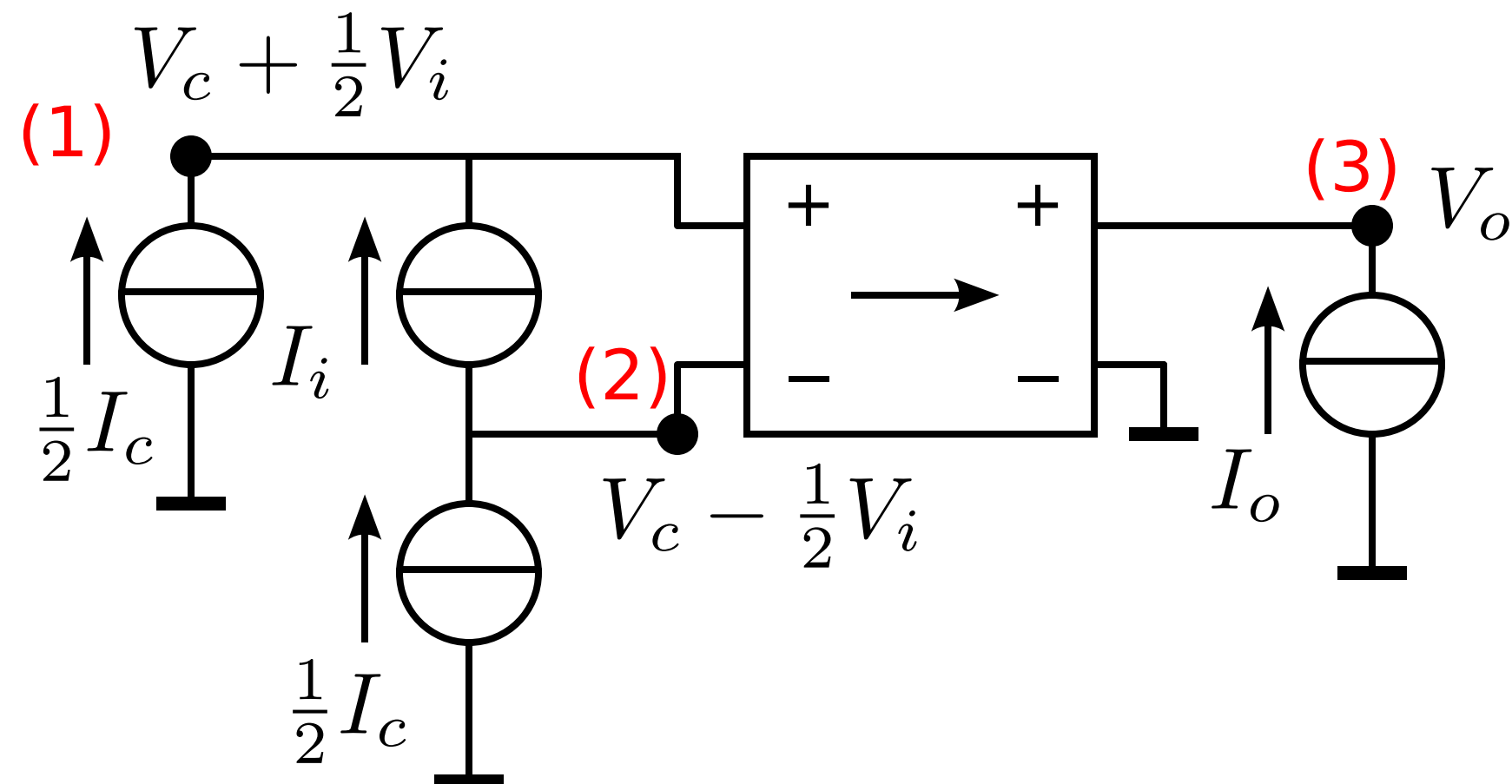
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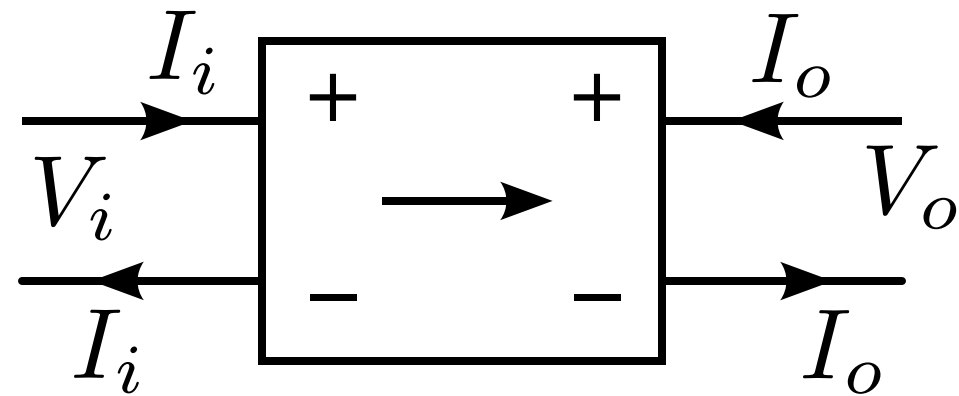
## Complete network model



# Two-ports and four-terminal networks

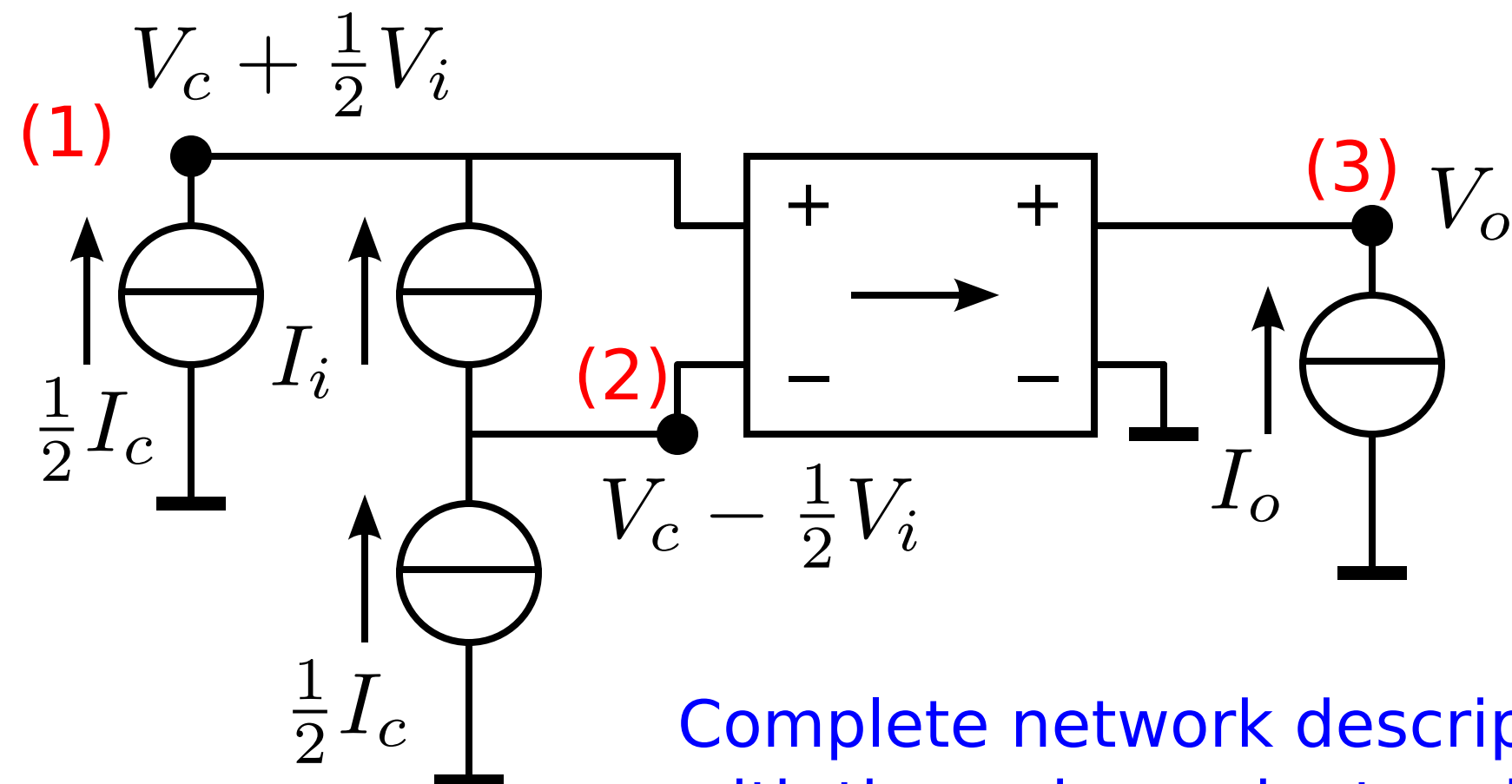
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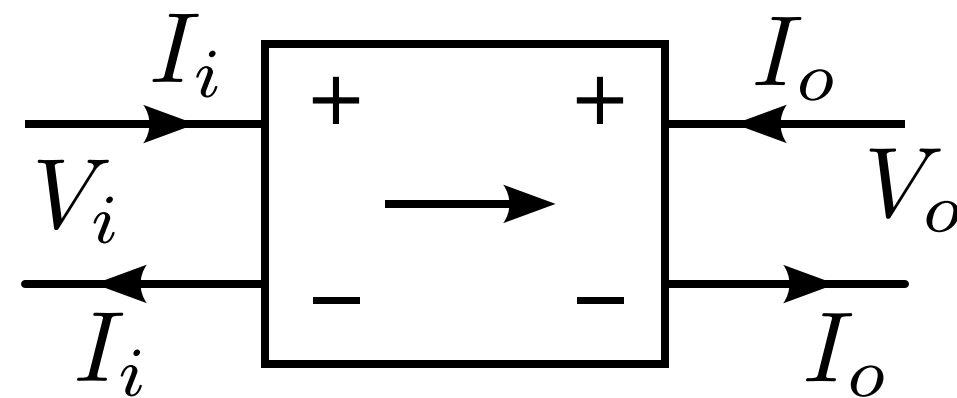


Complete network description  
with three dependent and  
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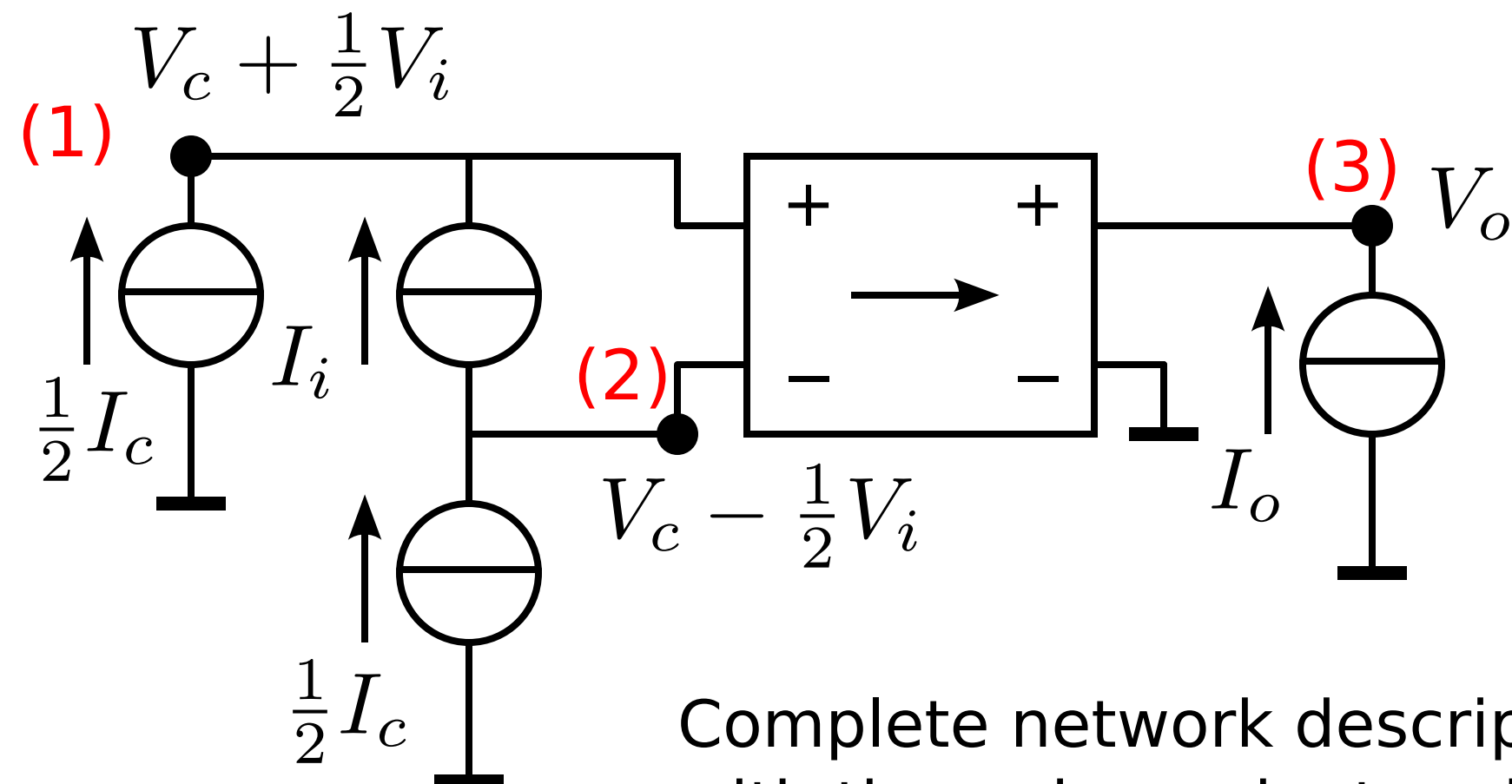
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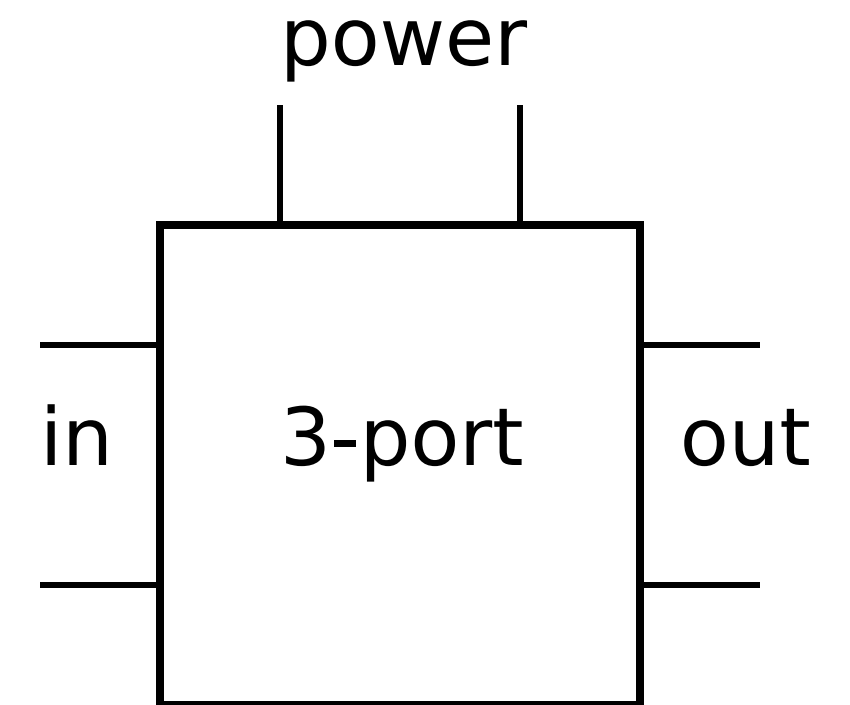
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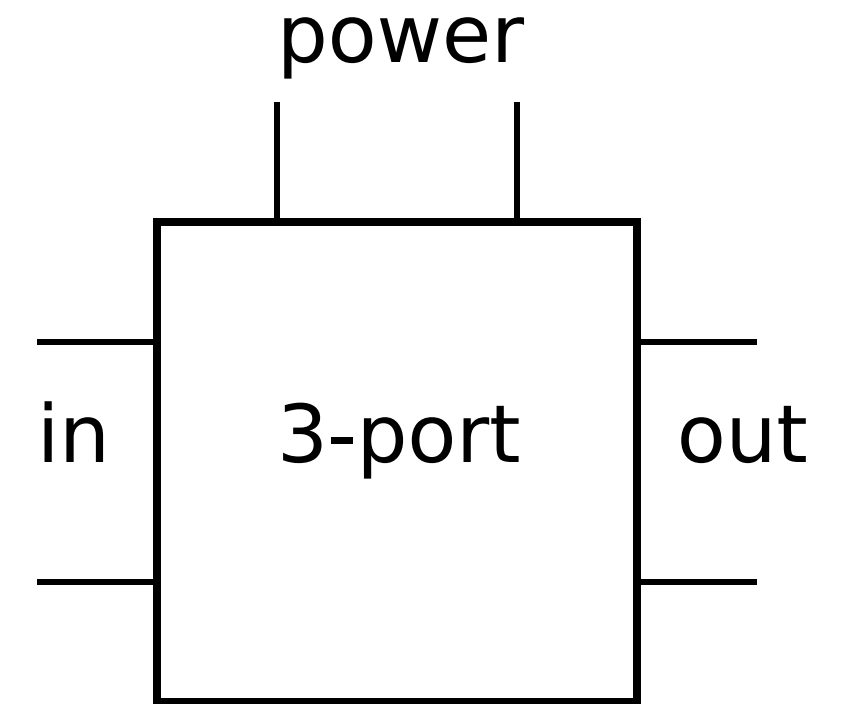
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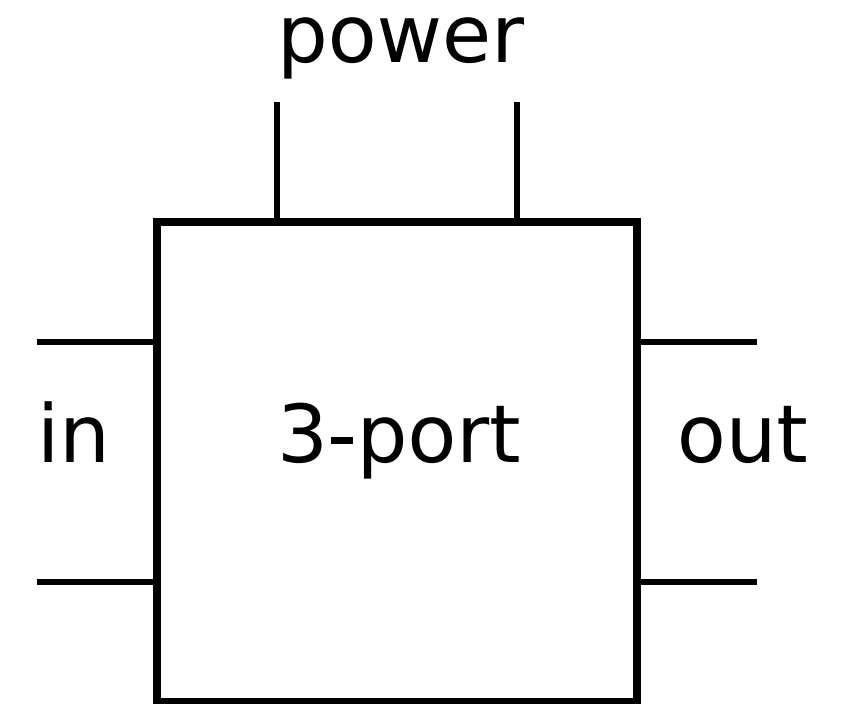
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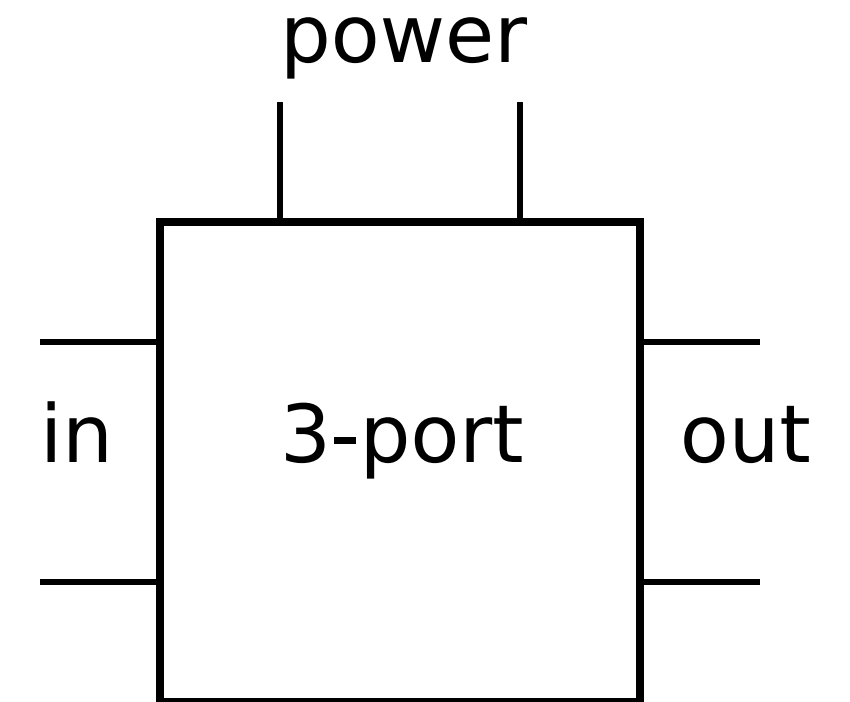


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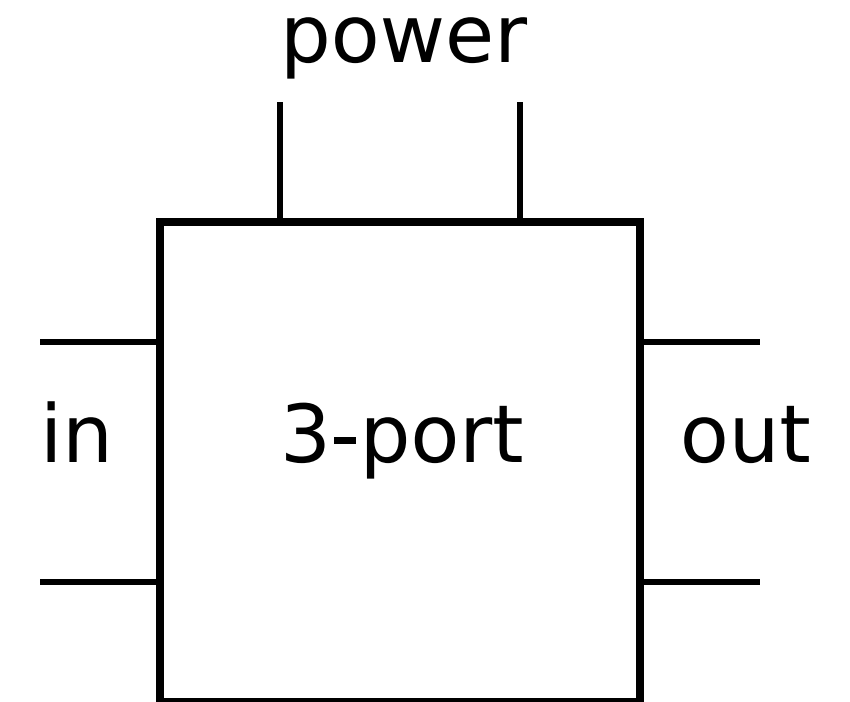
linear(ized):

25 matrix parameters

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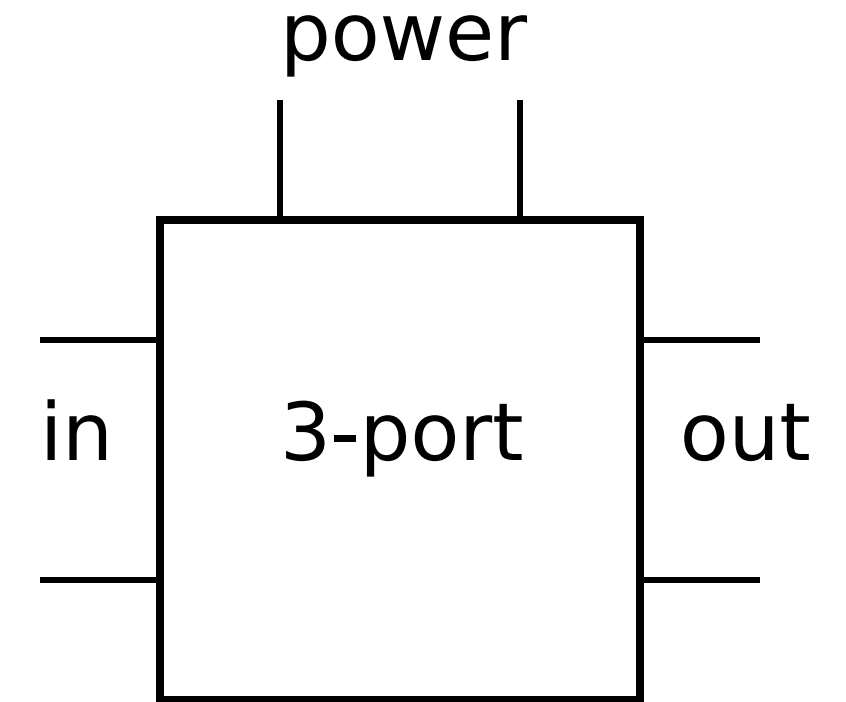
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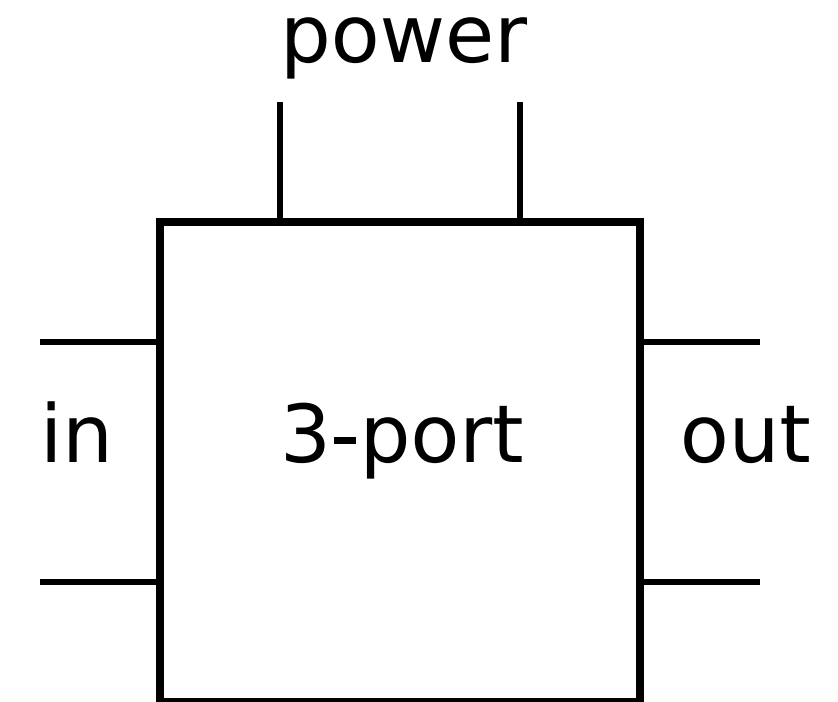
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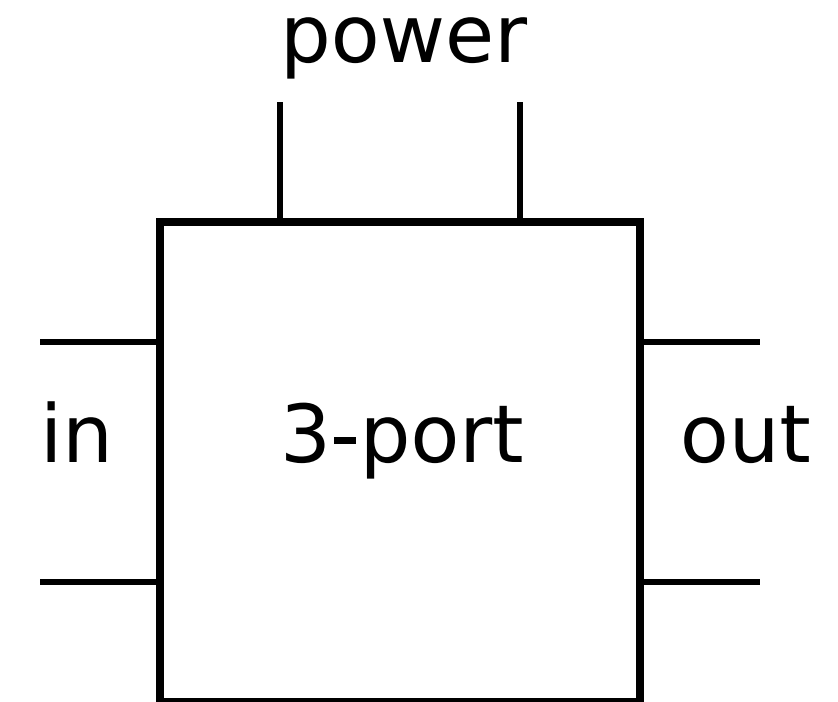
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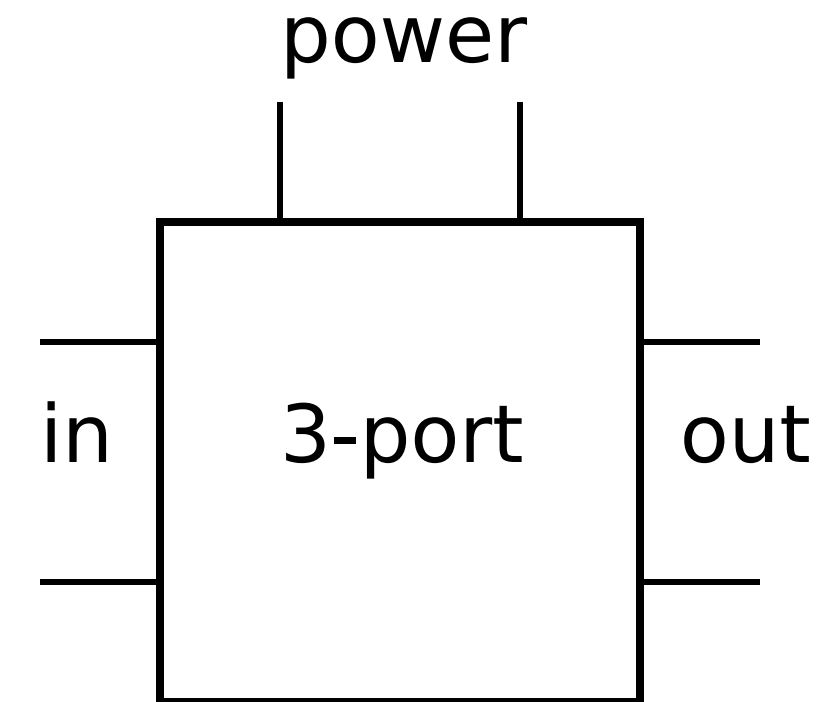
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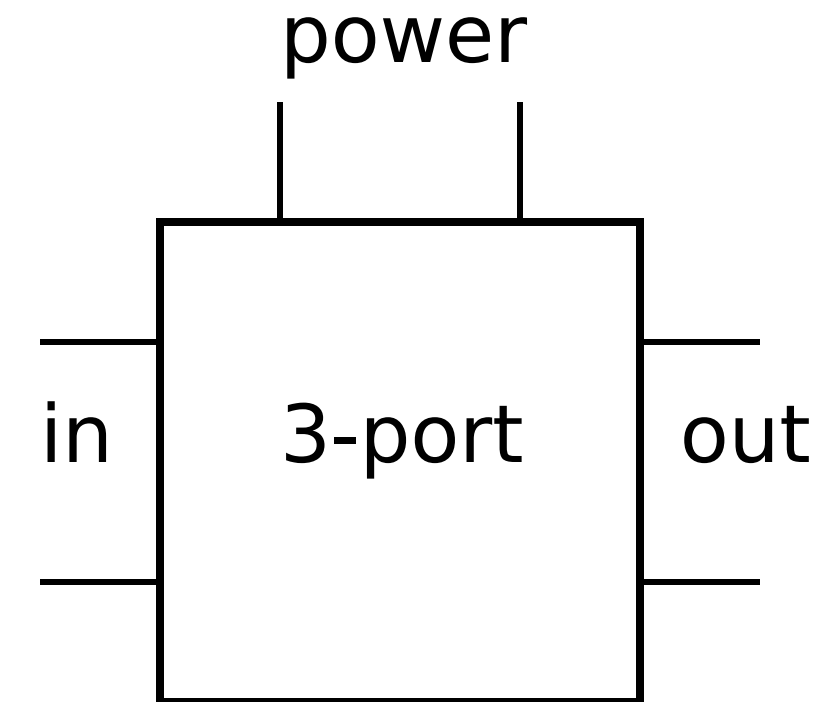
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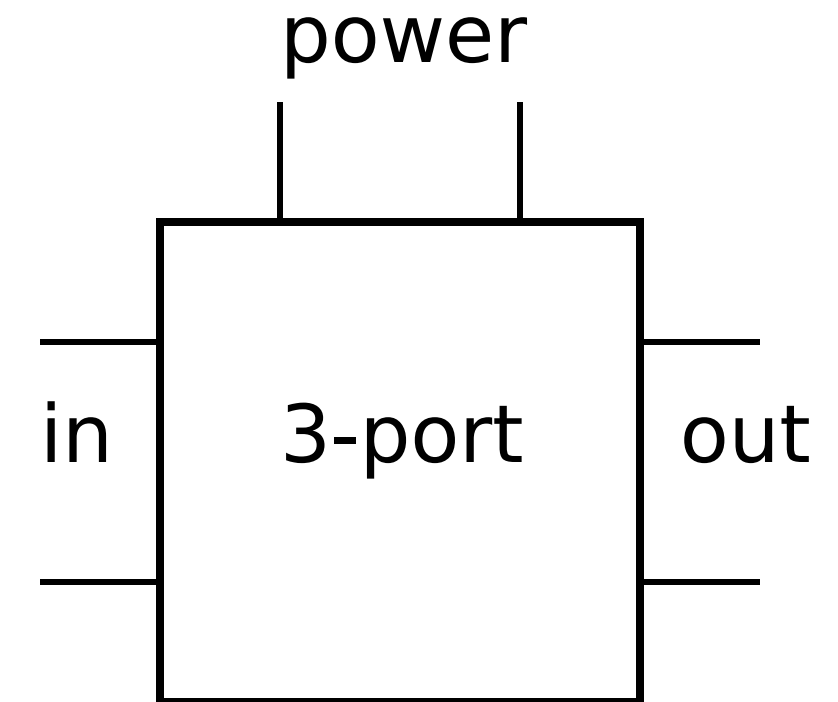
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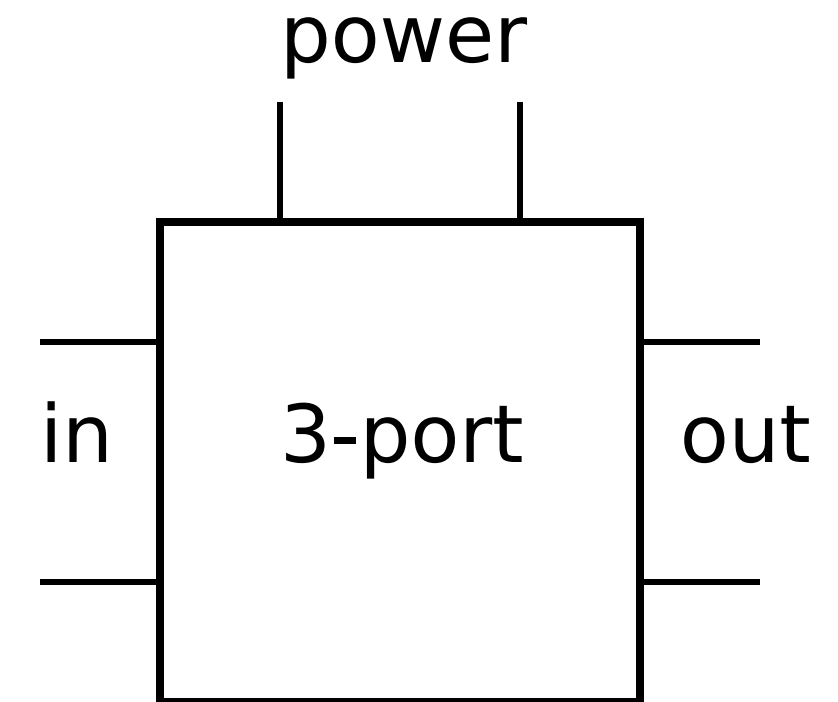
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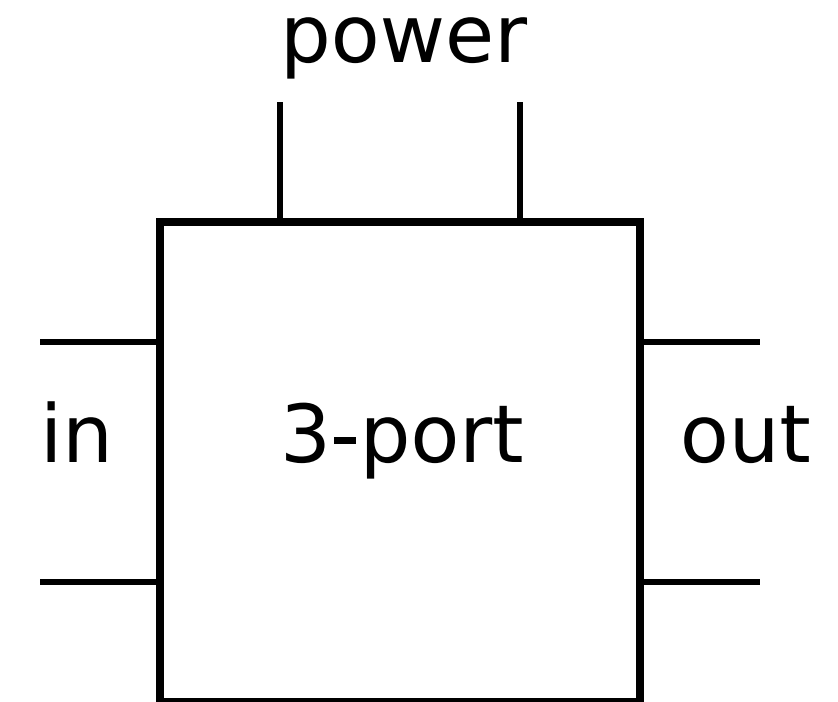
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