

1 Variables

2 root

	var	symbol	documentation	type	units	eqs
10	$F_{N,A}$	F	fundamental incidence matrix	network		
5	t	t	time	frame	s	
6	to	to	time zero	frame	s	4
7	te	te	time end	frame	s	5
8	dt_{pulse}	dt_pulse	pulse length	frame	s	6
9	$pulse$	pulse	pulse function	frame		7
1	$value$	value	numerical value	constant		
2	one	one	numerical value one	constant		1
3	$zero$	zero	numerical value zero	constant		2
4	$onehalf$	onehalf	numerical value one half	constant		3

3 physical

	var	symbol	documentation	type	units	eqs
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4 control

	var	symbol	documentation	type	units	eqs
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5 reactions

	var	symbol	documentation	type	units	eqs
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6 material

	var	symbol	documentation	type	units	eqs
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7 macroscopic

	var	symbol	documentation	type	units	eqs
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8 solid

	var	symbol	documentation	type	units	eqs
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9 fluid

	var	symbol	documentation	type	units	eqs
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10 energy

	var	symbol	documentation	type	units	eqs
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11 liquid

	var	symbol	documentation	type	units	eqs
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12 gas

	var	symbol	documentation	type	units	eqs
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13 control-control

	var	symbol	documentation	type	units	eqs
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14 energy–gas

	var	symbol	documentation	type	units	eqs
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15 energy–energy

	var	symbol	documentation	type	units	eqs
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16 gas–gas

	var	symbol	documentation	type	units	eqs
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17 energy–liquid

	var	symbol	documentation	type	units	eqs
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18 liquid–liquid

	var	symbol	documentation	type	units	eqs
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19 energy–solid

	var	symbol	documentation	type	units	eqs
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20 solid-solid

	var	symbol	documentation	type	units	eqs
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21 gas–liquid

	var	symbol	documentation	type	units	eqs
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22 gas-solid

	var	symbol	documentation	type	units	eqs
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23 liquid–solid

	var	symbol	documentation	type	units	eqs
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24 material–material

	var	symbol	documentation	type	units	eqs
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25 reactions-reactions

	var	symbol	documentation	type	units	eqs
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26 control-reactions

	var	symbol	documentation	type	units	eqs
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27 reactions-control

	var	symbol	documentation	type	units	eqs
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28 control-material

	var	symbol	documentation	type	units	eqs
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29 material-control

	var	symbol	documentation	type	units	eqs
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30 control-macroscopic

	var	symbol	documentation	type	units	eqs
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31 macroscopic-control

	var	symbol	documentation	type	units	eqs
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32 reactions-material

	var	symbol	documentation	type	units	eqs
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33 material-reactions

	var	symbol	documentation	type	units	eqs
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34 reactions–macroscopic

	var	symbol	documentation	type	units	eqs
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35 macroscopic-reactions

	var	symbol	documentation	type	units	eqs
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36 material–macroscopic

	var	symbol	documentation	type	units	eqs
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37 macroscopic-material

	var	symbol	documentation	type	units	eqs
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38 Equations

39 Generic

no	equation	documentation	layer
1	$one := \text{Instantiate}(value, value)$	numerical value one	root
2	$zero := \text{Instantiate}(value, value)$	numerical value zero	root
3	$onehalf := \text{Instantiate}(value, value)$	numerical value one half	root
4	$to := \text{Instantiate}(t, value)$	time zero	root
5	$te := \text{Instantiate}(t, value)$	time end	root
6	$dt_{pulse} := \text{Instantiate}(t, value)$	pulse length	root
7	$pulse := \text{sign}(t - to) - \text{sign}(t - (to - dt_{pulse}))$	pulse function	root