

1 Variables

2 root

	var	symbol	documentation	type	units	tokens	eqs
13	$F_{N,A}$	F	directed graph incidence matrix	network		[]	
1	t_N	t	time	frame	s	[]	
3	t_N^o	to	starting time	frame	s	[]	1
4	t_N^e	te	end time	frame	s	[]	2
2	$\#$	value	numerical value	constant		[]	

3 System

	var	symbol	documentation	type	units	tokens	eqs
5	x_N	x	state - length	state	m	[]	13
11	π_N^a	pi_a	effort a	state	m	[]	7
12	π_N^b	pi_b	effort b	state	m	[]	8
14	\hat{x}_N^a	fx_a	flow of x mechanism a	state	ms^{-1}	[]	9
15	\hat{x}_N^b	fx_b	flow of x mechanism b	state	ms^{-1}	[]	10
16	\dot{x}_N	dx	differential state	state	ms^{-1}	[]	11
17	xo_N	xo	initial condition	state	m	[]	12
7	K_N	K	frequency a	constant	s^{-1}	[]	3
8	L_N	L	frequency b	constant	s^{-1}	[]	4
9	M	M	gain a	constant		[]	5
10	N	N	gain b	constant		[]	6

4 Properties

	var	symbol	documentation	type	units	tokens	eqs
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5 Control

	var	symbol	documentation	type	units	tokens	eqs
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6 System-Properties

	var	symbol	documentation	type	units	tokens	eqs
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7 Properties-System

	var	symbol	documentation	type	units	tokens	eqs
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8 System-Control

	var	symbol	documentation	type	units	tokens	eqs
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9 Control-System

	var	symbol	documentation	type	units	tokens	eqs
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10 Properties-Control

	var	symbol	documentation	type	units	tokens	eqs
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11 Control-Properties

	var	symbol	documentation	type	units	tokens	eqs
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12 Equations

12.1 Model equations

no	equation	documentation	layer
1	$t^o_N := Set(t_N, \#)$	starting time	root
2	$t^e_N := Set(t_N, \#)$	end time	root
3	$K_N := Set((t_N)^{-1}, \#)$	frequency a	System
4	$L_N := Set((t_N)^{-1}, \#)$	frequency b	System
5	$M := Set(\#, \#)$	gain a	System
6	$N := Set(\#, \#)$	gain b	System
7	$\pi^a_N := M . x_N$	effort a	System
8	$\pi^b_N := N . x_N$	effort b	System
9	$\hat{x}^a_N := F_{N,A} \overset{A}{\star} \left(K_N . F_{N,A} \overset{N}{\star} \pi^a_N \right)$	flow of x mechanism a	System
10	$\hat{x}^b_N := F_{N,A} \overset{A}{\star} \left(L_N . F_{N,A} \overset{N}{\star} \pi^b_N \right)$	flow of x mechanism b	System
11	$\dot{x}_N := \hat{x}^a_N + \hat{x}^b_N$	differential state	System
12	$xo_N := Set(x_N, \#)$	initial condition	System
13	$x_N := \int_{t^o_N}^{t^e_N} \dot{x}_N dt_N + xo_N$	state - length	System