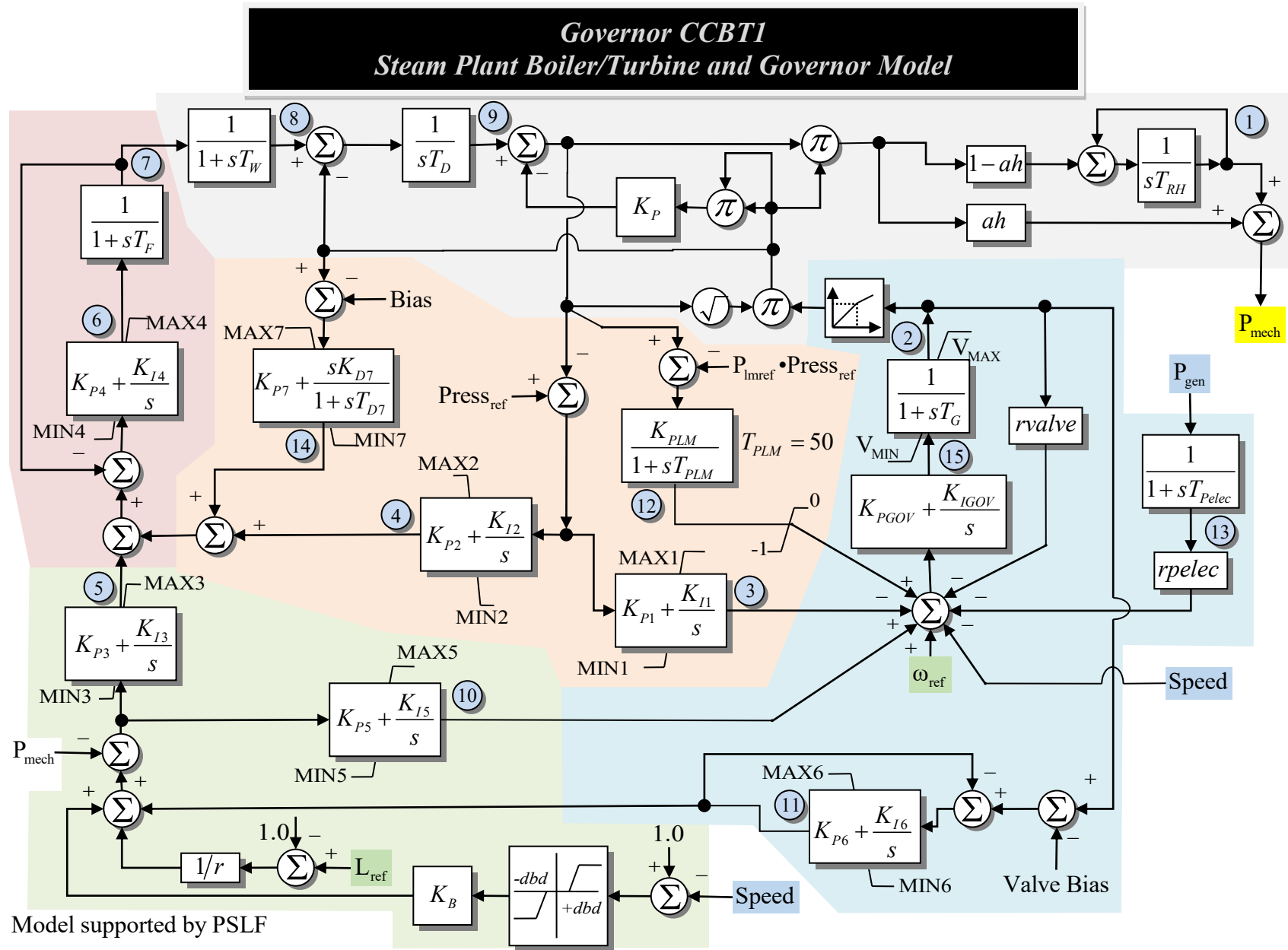


Governor CCBT1



Model supported by PSLF

Proportional-integral blocks 1-6 also have rate limits not shown in the block diagram

Parameters:

Trate	Turbine rating, MW
data	data : Type of data input 0=User Entries; 1=Boiler Follows Unit; 2=Coordinate Unit; 3=Turbine Follow Unit
rvalve	rvalve : Governor Permanent droop, valve position feedback, p.u.
rpelec	rpelec : Governor Permanent droop, electrical power feedback, p.u.
tpelec	tpelec : Electrical Power Transducer time constant, sec.
tg	tg : Governor time constant, sec.
kpgov	kpgov : Governor control proportional gain, p.u.
kigov	kigov : Governor control integral gain, p.u.
vmax	vmax : Maximum governor control output, p.u.
vmin	vmin : Minimum governor control output, p.u.
ah	ah : Turbine high pressure power fraction
trh	trh : Reheater time constant, sec.
ref	ref : Boiler or turbine controller reference
kp1	kp1 : Turbine/pressure controller proportional gain
ki1	ki1 : Turbine/pressure controller reset gain
max1	max1 : Turbine/pressure controller maximum output, p.u.
min1	min1 : Turbine/pressure controller minimum output, p.u.
rmax1	rmax1 : Turbine/pressure controller rate limit, p.u.
rmin1	rmin1 : Turbine/pressure controller rate limit, p.u.
kp2	kp2 : Boiler/pressure controller proportional gain
ki2	ki2 : Boiler/pressure controller reset gain
max2	max2 : Boiler/pressure controller maximum output, p.u.
min2	min2 : Boiler/pressure controller minimum output, p.u.
rmax2	rmax2 : Boiler/pressure controller rate limit, p.u.
rmin2	rmin2 : Boiler/pressure controller rate limit, p.u.
kp3	kp3 : Boiler/load controller proportional gain
ki3	ki3 : Boiler/load controller reset gain
max3	max3 : Boiler/load controller maximum output, p.u.
min3	min3 : Boiler/load controller minimum output, p.u.
rmax3	rmax3 : Boiler/load controller rate limit, pu
rmin3	rmin3 : Boiler/load controller rate limit, pu
kp4	kp4 : Boiler/fuel controller proportional gain
ki4	ki4 : Boiler/fuel controller reset gain
max4	max4 : Boiler/fuel controller maximum output, p.u.
min4	min4 : Boiler/fuel controller minimum output, p.u.
rmax4	rmax4 : Boiler/fuel controller rate limit, p.u.
rmin4	rmin4 : Boiler/fuel controller rate limit, p.u.
kp5	kp5 : Turbine/load controller proportional gain
ki5	ki5 : Turbine/load controller reset gain
max5	max5 : Turbine/load controller maximum output, p.u.

min5	min5 : Turbine/load controller minimum output, p.u.
rmax5	rmax5 : Turbine/load controller rate limit, p.u.
rmin5	rmin5 : Turbine/load controller rate limit, p.u.
kp6	kp6 : Load/turbine controller proportional gain
ki6	ki6 : Load/turbine controller reset gain
max6	max6 : Load/turbine controller maximum output, p.u.
min6	min6 : Load/turbine controller minimum output, p.u.
rmax6	rmax6 : Load/turbine controller rate limit, p.u.
rmin6	rmin6 : Load/turbine controller rate limit, p.u.
kp7	kp7 : Steam flow feedforward controller proportional gain
kd7	kd7 : Steam flow feedforward controller reset gain
max7	max7 : Steam flow feedforward controller maximum output, p.u.
min7	min7 : Steam flow feedforward controller minimum output, p.u.
td7	td7 : Steam flow feedforward controller rate limit, p.u.
kplm	kplm : Low steam pressure limiter gain, p.u.
plmref	plmref : Low steam pressure limiter reference, p.u.
tf	tf : Fuel system time constant, sec.
tw	tw : Boiler steam generation time constant, sec.
td	td : Boiler drum time constant, sec.
kp	kp : Superheater pressure drop factor, p.u./p.u.
kb	kb : Frequency error gain, p.u./p.u.
dbd	dbd : Frequency dead-band, p.u.
flag	flag : Control input flag
dref	dref : Required change in MW load for load ramp, MW
t1	t1 : Starting time for the load ramp, sec.
t2	t2 : Finishing time for the load ramp, sec.
gv1	gv1 : Break point for governor valve characteristic, p.u.
gvb1	gvb1 : Break point for governor value characteristic, p.u./p.u.
p0	p0 : Pressure reference at zero load, p.u.
h1	h1 : First break point for pressure reference characteristic, p.u.
p1	p1 : First break point for pressure reference characteristic, p.u.
h2	h2 : Second break point for pressure reference characteristic, p.u.
p2	p2 : Second break point for pressure reference characteristic, p.u.