

Governor GAST2A_AIR

Governor GAST2A_AIR Gas Turbine-Governor Model

GAST2A_AIR is the same as GAST2A model with one small difference. There are three additional parameters C_{f1} , $AirTemp$, and $AirTempNom$ which slightly modify the f_1 function

In GAST2A
$$f_1 = T_R - A_{f1}(1.0 - w_{f1}) - B_{f1}(Speed)$$

In GAST2A_AIR
$$f_1 = T_R - A_{f1}(1.0 - w_{f1}) - B_{f1}(Speed) - C_{f1}(AirTempNom - AirTemp)$$

Parameters:

W	W - governor gain (1/droop)
X	Governor lead time constant, sec
Y	Governor lag time constant, sec
Z	Governor mode: 0=ISO, 1=Droop
Etd	Etd, sec
Tcd	Tcd, sec
Trate	Turbine rating, MW
T	Time in sec
MaxLimit	Max limit on turbine rating
MinLimit	Min limit on turbine rating
Ecr	Ecr, sec
K3	Gain
A	Valve positioner
B	Valve positioner
C	Valve positioner
TauF	Time in sec
Kf	Feedback Gain
K5	Gain
K4	Gain
T3	Time in sec
T4	Time in sec
TauT	Time in sec
T5	Time in sec
Af1	Af1: coefficient of the Turbine f1 block
Bf1	Bf1: coefficient of the Turbine f1 block
Af2	Af2: coefficient of the Turbine f2 block
Bf2	Bf2: coefficient of the Turbine f2 block
Cf2	Cf2: coefficient of the Turbine f2 block
Tr	Rated temperature
K6	Minimum fuel flow, pu
Tc	Temperature control
Cf1	Cf1: coefficient of the Turbine f1 block
AirTemp	Ambient Air Temperature
AirTempNom	Nominal Ambient Air Temperature