Block QDTV

The QDTV block calculates the heat flux to or from an external wall surface due to free and forced convection of the amient air.



Name	QDTV
Function	bs0027
Inputs	4
Outputs	1
Parameters	1 . . . [2]
Strings	0
Group	S

Inputs

1 Surface temperature of the wall T_w / °C
2 Ambient temperature T_a / °C
3 Wind speed v_w / m s^{-1}
4 Relative wind direction $v_{dir,r}$ (0 ° = normal, 90 ° = parallel)

Outputs

1 Convective heat flux from ambient air $\dot{q}_a$

Parameters

1 Model
  0 Constant value
  1 Third-power average between free and forced convection
2 Heat transfer coefficient value h_c (model 0 only)

Strings

None