AVL fmi.LAB - Model_CombEng

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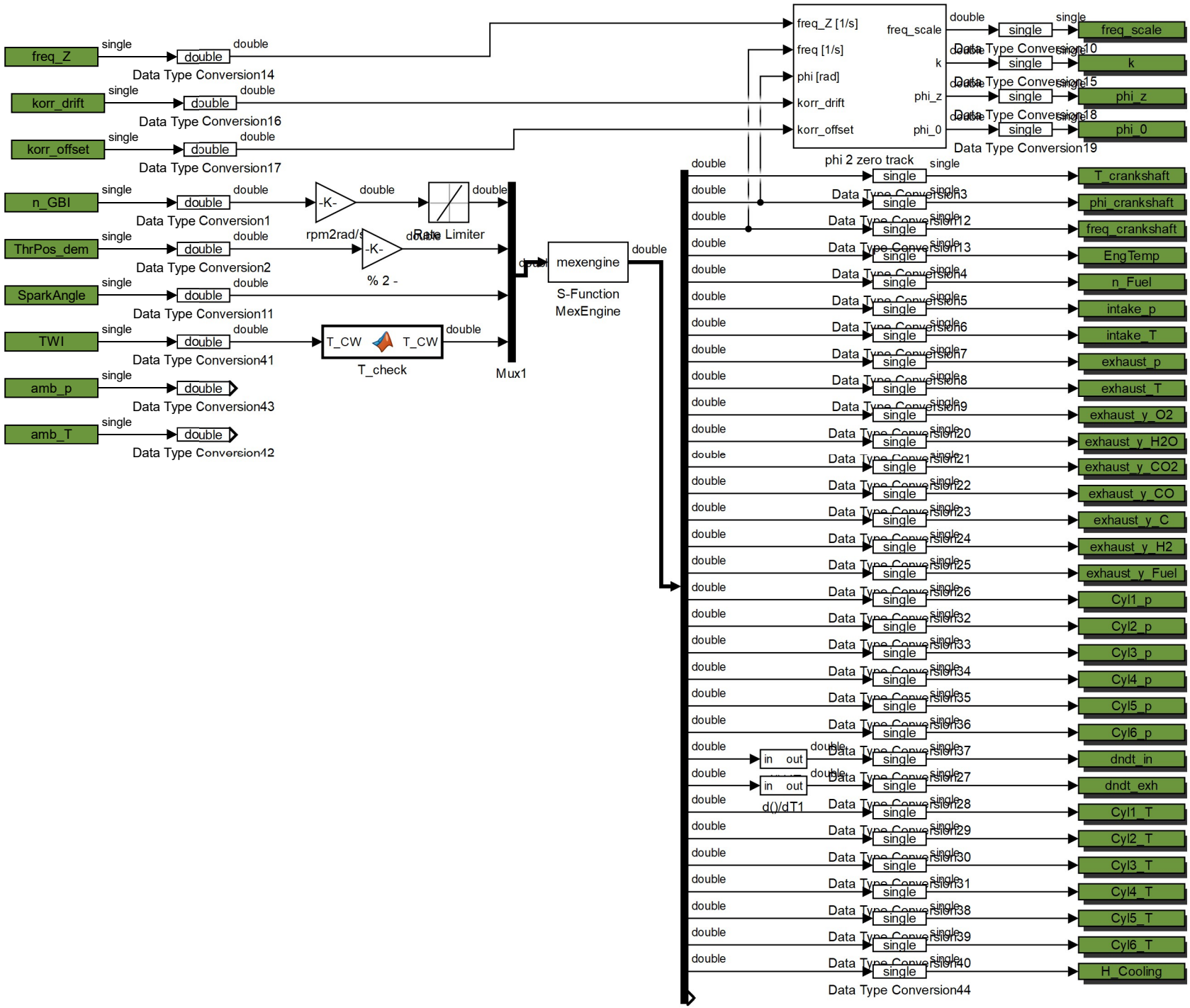
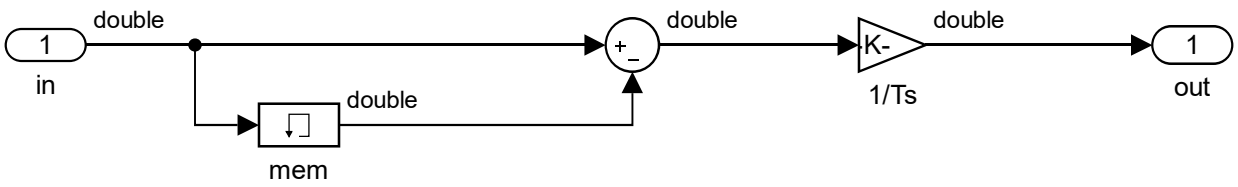
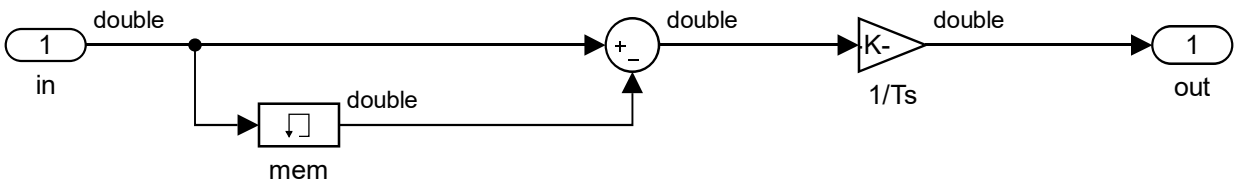
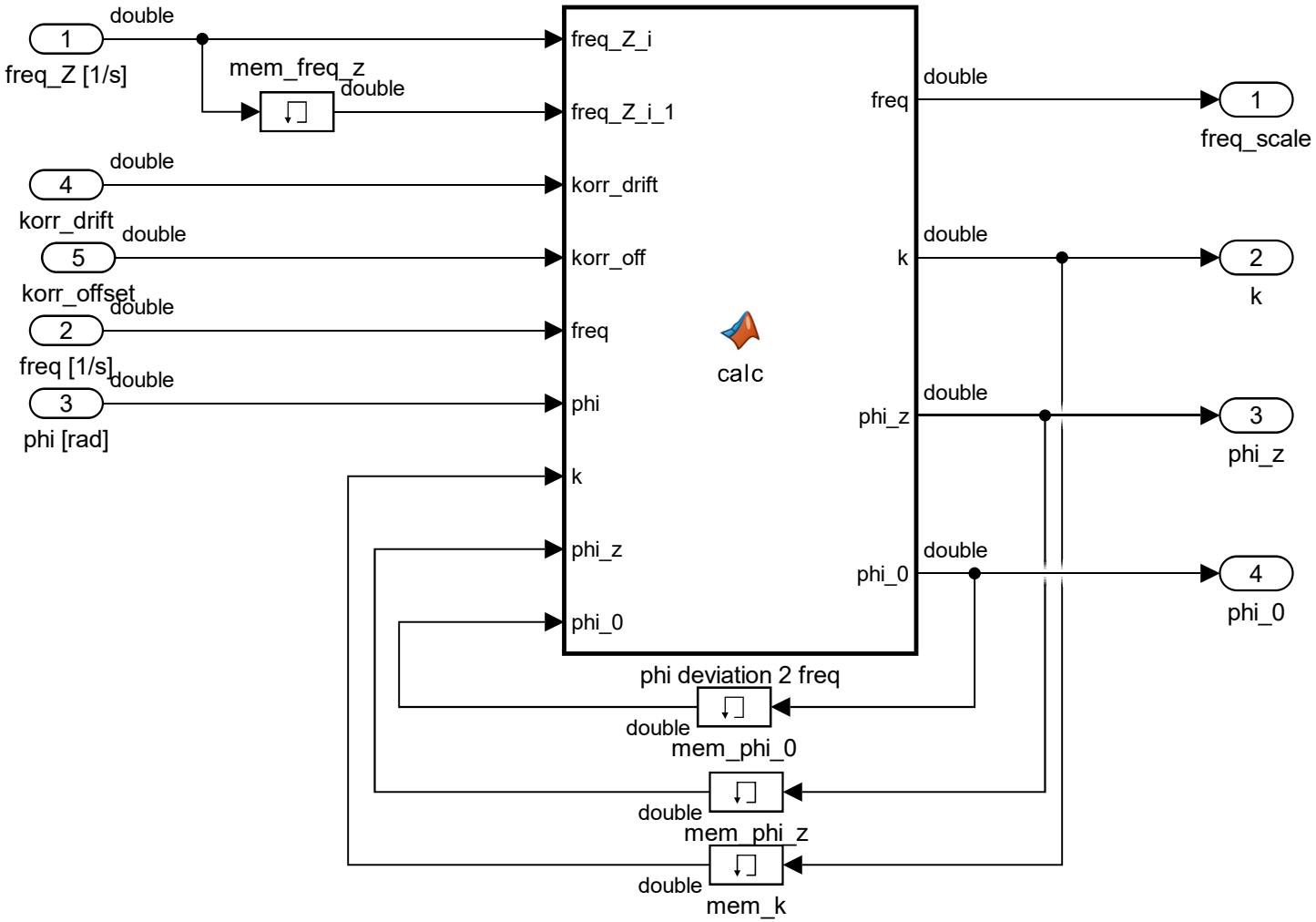


Modified by: luschana; Model Version: 1.0.0.135; Last Modified: 23-Mär-2018 13:44:08

```
function T_CW  = calc(T_CW)
if(abs(T_CW) < 250.0)
    T_CW = 330;
end
```


1
in
double
+
_
double
K-
1/Ts
double
1
out
double
mem


1
in
double
+
_
double
K-
1/Ts
double
1
out
double
mem


1
freq_Z [1/s]
double
mem_freq_z
double
4
korr_drift
double
5
korr_offset
double
2
freq [1/s]
double
3
phi [rad]
double
freq_Z_i
freq_Z_i_1
korr_drift
korr_off
freq
phi
k
phi_z
phi_0
calc
freq
double
k
double
phi_z
double
phi_0
double
1
freq_scale
2
k
3
phi_z
4
phi_0
phi deviation 2 freq
double
mem_phi_0
double
mem_phi_z
double
mem_k

```
function [freq, k, phi_z, phi_0]  = calc(freq_Z_i, freq_Z_i_1, korr_drift, korr_off, freq, phi, k,  Ts, phi_z, phi_0)
if(abs(freq_Z_i - freq_Z_i_1) > 1e-3)
    if(phi > 2*pi) % not engine cycle but "per rotation"
       phi = phi - 2*pi;
    end
    if(phi > pi) % calibrate phi to be around 0
       phi = phi - 2*pi;
    end
    % drift
    k = k + korr_drift*(phi-phi_z)/(2*pi); % higher freq leads to higher phi offset
    % offset
    k = k - korr_off*((phi_z-phi_0)/(2*pi));
    if(abs(k-1)>0.05)
        k=sign(k)*1.05;
    end
    phi_z=phi;
    if(phi_0 > 2*pi) %init to first phi val
        phi_0=phi;
    end
end
freq = freq * k;
```