FUNCTION\_BLOCK LAG1

VAR\_INPUT

RUN : BOOL ; (\* 1 = run, 0 = reset \*)

XIN : REAL ; (\* Input variable \*)

TAU : TIME ; (\* Filter time constant \*)

CYCLE : TIME ; (\* Sampling time interval \*)

END\_VAR

VAR\_OUTPUT XOUT : REAL ; END\_VAR (\* Filtered output \*)

VAR K : REAL ; (\* Smoothing constant, 0.0<=K<1.0 \*)

END\_VAR

IF RUN THEN XOUT := XOUT + K \* (XIN - XOUT) ;

ELSE XOUT := XIN ;

K := TIME\_TO\_REAL(CYCLE) / TIME\_TO\_REAL(CYCLE + TAU) ;

END\_IF ;

END\_FUNCTION\_BLOCK