(\* Following taken directly from the IEC 61131.3 draft standard \*)

(\*

\* An IEC 61131-3 IL and ST compiler.

\*

\* Based on the

\* FINAL DRAFT - IEC 61131-3, 2nd Ed. (2001-12-10)

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\*)

FUNCTION\_BLOCK INTEGRAL

VAR\_INPUT

RUN : BOOL ; (\* 1 = integrate, 0 = hold \*)

R1 : BOOL ; (\* Overriding reset \*)

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

X0 : REAL ; (\* Initial value \*)

CYCLE : TIME ; (\* Sampling period \*)

END\_VAR

VAR\_OUTPUT

Q : BOOL ; (\* NOT R1 \*)

XOUT : REAL ; (\* Integrated output \*)

END\_VAR

Q := NOT R1 ;

IF R1 THEN XOUT := X0 ;

ELSIF RUN THEN XOUT := XOUT + XIN \* TIME\_TO\_REAL(CYCLE);

END\_IF ;

END\_FUNCTION\_BLOCK