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

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

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\* Based on the

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

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\*)

FUNCTION\_BLOCK RAMP

VAR\_INPUT

RUN : BOOL ; (\* 0 - track X0, 1 - ramp to/track X1 \*)

X0,X1 : REAL ;

TR : TIME ; (\* Ramp duration \*)

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

END\_VAR

VAR\_OUTPUT

BUSY : BOOL ; (\* BUSY = 1 during ramping period \*)

XOUT : REAL := 0.0 ;

END\_VAR

VAR XI : REAL ; (\* Initial value \*)

T : TIME := T#0s; (\* Elapsed time of ramp \*)

END\_VAR

BUSY := RUN ;

IF RUN THEN

IF T >= TR THEN BUSY := 0 ; XOUT := X1 ;

ELSE XOUT := XI + (X1-XI) \* TIME\_TO\_REAL(T)

/ TIME\_TO\_REAL(TR) ;

T := T + CYCLE ;

END\_IF ;

ELSE XOUT := X0 ; XI := X0 ; T := t#0s ;

END\_IF ;

END\_FUNCTION\_BLOCK