



Application Guideline

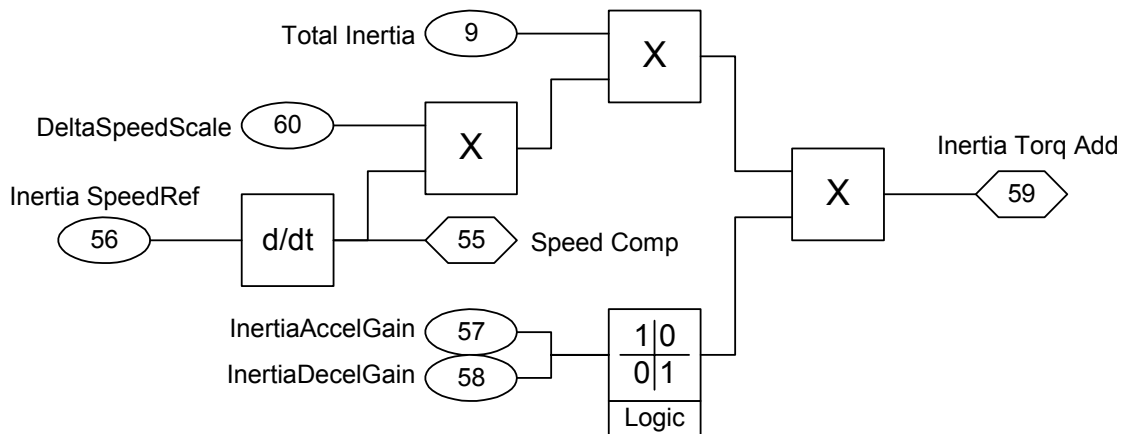
Inertia Compensation for Changing Diameters

Description

This document serves as a supplement to the PowerFlex 700S Users Manual (20D-UM001) addressing the delta speed scaling function of the PowerFlex 700S inertia compensation circuit. Please refer to the Users Manual for details on the inertia compensation circuit and parameters.

Technical Information

Parameter 60 [DeltaSpeedScale] is a new parameter added to the PowerFlex 700S in firmware revision 1.14. This parameter is part of the inertia compensation circuit, and scales the delta speed as a multiplier after the $\Delta n/\Delta t$ (delta speed/delta time) calculation.



This function could be used to scale the inertia calculation based on changes of roll diameter. If the speed reference to the drive is scaled for line speed at core diameter and not scaled per actual diameter [Speed Comp] P55 would be in error. This configuration may be used if the user wishes to use the independent jog speeds built in the drive. [Speed Comp] must be scaled to reflect the actual rotational speed. To do this, the user should write the value of diameter build up ratio {core diameter / actual diameter} to [DeltaSpeedScale] P60. This will generate a build up ratio to core diameter. The diameter build up ratio must also be written to [Speed Ref scale] P38.