Gen6.0 Hunziker PRU/InFeed Comms Version 2

3/5/2013
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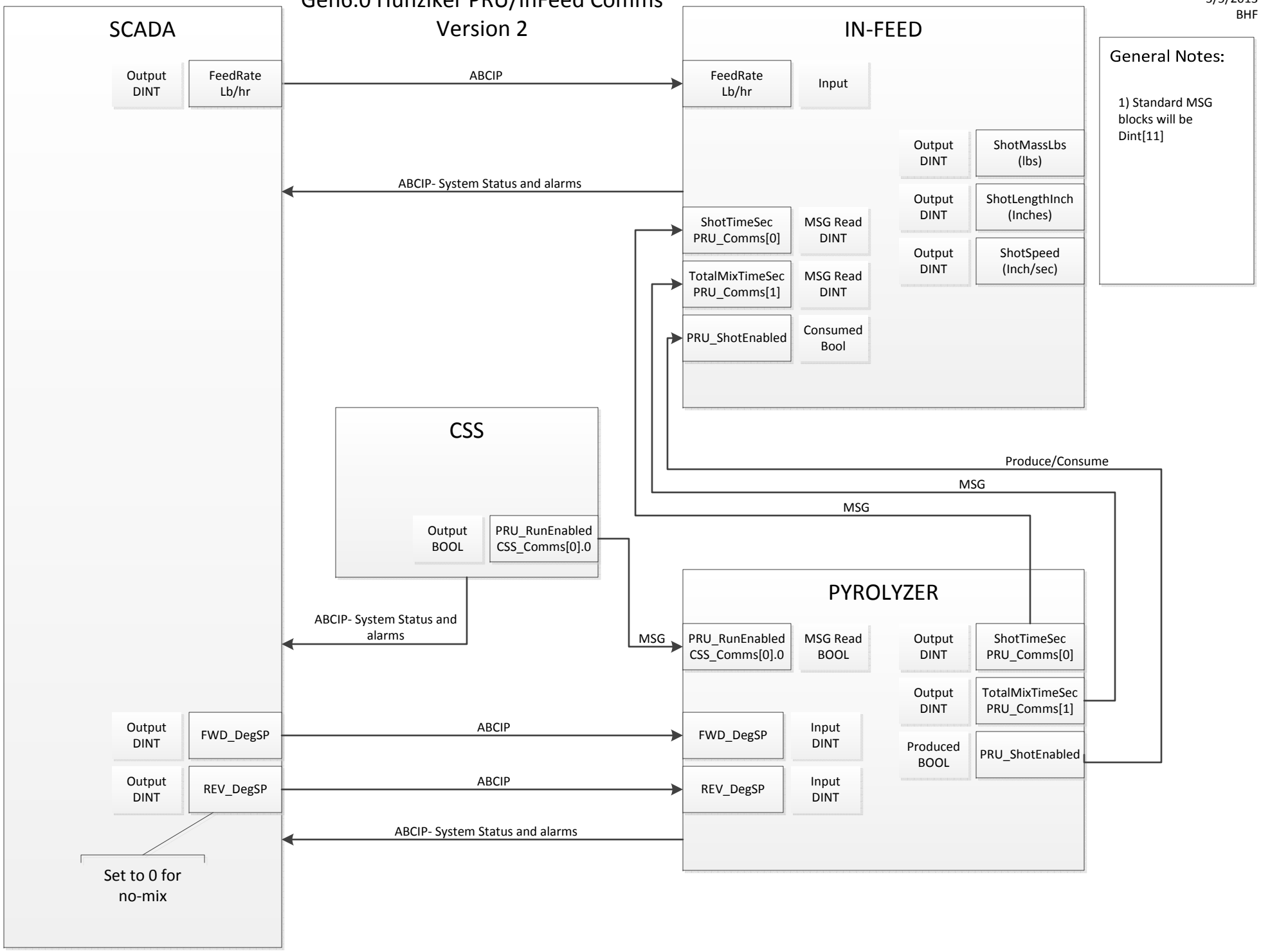

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Gen6.0 Hunziker PRU/InFeed Comms
Version 2

Definition of Terms:

1) Tag Source
    - Input
    - Output
2) Tag Types:
    - BOOLEAN
    - DINT
3) Communication Types:
    - ABCIP
    - MSG
    - Produce/Consume
4) Tag Naming Standards
    - CamelCase
    - Use of Underscores
4) Process Variables
    - FeedRate = User set-point to define the total mass of raw materials through the system (units of pounds/hour)
    - FWD_DegSP = User set-point to define the number of forward rotations of the pyrolyzer screws (units of degrees)
    - REV_DegSP = User set-point to define the number of reverse rotations of the pyrolyzer screws (units of degrees)
        - the standard values should be between 150^{o} and 180^{o}.
        - to define a “no mix” function, set REV_DegSP = 0^{o}
    - PRU_RunEnabled = This is the master enable from the CSS that enables heating in the pyrolyzer (synonymous with “ECOOL” or “PRU_RUN_DISABLE”)
    - ShotTimeSec = PRU-calculated variable defining the timeslice for each shot (units of seconds).
        - This is a function of: FWD_DegSP, REV_DegSP, VFD Speed, Gearbox Ratio
        - with REV_DegSP = 0 defines a no-mix condition, essentially making the ShotTimeSec approach infinity.
        - ShotTimeSec max should be 999999
    - TotalMixTimeSec = PRU-calculated variable defining the total mix cycle time (units of seconds)
        - This is a function of: FWD_DegSP, REV_DegSP, VFD Speed, Accel Time, Decel Time, Gearbox Ratio
        - with REV_DegSP = 0 defines a no-mix condition, essentially making the TotalMixTimeSec approach infinity.
        - TotalMixTimeSec max should be 999999
    - PRU_ShotEnabled = on/off conditions that tells the InFeed systems when feed process is allowed. To maximize the feed timing, this tag will utilize produce/consume comms
    - ShotMassLbs = InFeed-calculated variable defining the pounds of raw material in each shot (units of pounds)
        - This is a function of: FeedRate and TotalMixTime
        - In a no-mix condition, the ShotMassLbs should be the maximum allowable mass per shot (based on the mechanical/instrumentation limitiations)
    - ShotLengthInch = This is an InFeed measured value (units of inches)
        - After the raw material is loaded and compressed, the shot plunger needs to measure the shot height at a pre-defined compression measurement
        - Possible measurements: hydraulic pressure or positioner deceleration
    - ShotSpeed = this is an InFeed calculated variable defining the velocity to add the compressed shot into the PRU
        - This is a function of ShotTimeSec
        - in the case of the no-mix condition, the shot time will be defined by FeedRate