

IntelliPack Application Notes

Performing Computation Functions with Signal Conditioners

Application

Decrease the response time and maximize the power of your DCS/PLC control system.

Solution

Use Acromag's IntelliPack modules to provide pre-processed data to your control system. Your control system will not be burdened by simple computations of determining the tank level, flow rate, signal averaging and temperature deviation control. Therefore, the system can respond faster and, at the same time, free up valuable microprocessor time which can be used for other mission-critical tasks. Your control system will provide tighter control of your process through increased responsiveness.

Observations

If your control system fails, crucial data is still available at each signal conditioner output (e.g. tank level, flow rate, mixer status, temperature deviations between the top and bottom of tank). This data can be used to help manually control your process while the main system is down.

Control system upgrades have a tendency to corrupt the algorithms used on each I/O channel for signal correction/characterization. Having the I/O signal processed in the field eliminates this possible disaster. Control system upgrades occur far more often than field signal conditioner upgrades. Pre-processing allows fine tuning at the field device without disturbing the main control algorithm.

Equipment Used

Tank Level/Volume

801T-xxx or 811T-xxxx Transmitter

Signal Control

801T-xxx or 811T-xxxx Transmitter

Chemical Reactions

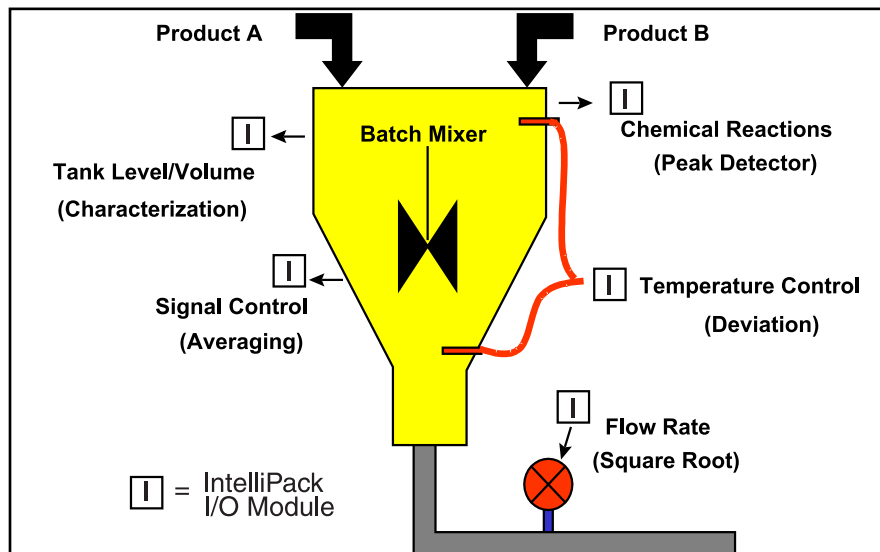
801A-xxx or 811A-xxxx Alarm

Temperature Control

822A-xxx or 832A-xxxx Alarm

Flow Rate

801T-xxx or 811T-xxxx Transmitter



Acromag IntelliPacks performing various functions on a typical process. Functions shown are standard in the IntelliPack transmitters