

¿Grain Control

(Identical for both solutions)

For use in PLC for Aeration Control purposes:

Temperature data (Max, Average, Min in each silo)

Condensed Intelligent processed data

from IG-Dash Board Manager Software, For use in SCADA for overview

Silo Name (included Commodity Type)

Silo Data:

Timestamp

Control:

Weather Data: Weather Station name

Timestamp

Silo fill percentage CO2 Value **Grain Moisture**

Main Aeration Fan's ON/OFF

Roof Exhaust Fan's ON/OFF



Technical specifications:

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AERATION

FANS

Communicate via RS-485, ASCII from the PC with the iGRAIN MANAGER SOFTWARE. Communicate via LAN, Internet from PC with SQL Database. Operates in either manual or automatic mode via the automatic aeration control software.

Data transfer: RS-485 Is sent automatically with a pre-programmed time interval, (20 to 60 min). The data string may be polled from the PLC at any time via RS-485,ASCII.

Data Bus:



ALL STATUS AND CONTROL DATA



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General description

i GRAIN[®]

The iGRAIN "PLC Interface" is basically a software string that transfers "overview data" and control outputs for the aeration control to the PLC.

This can also be achieved by the new iGRAIN "Buffer SQL Database", that will make it possible to extract data from the iGrain manager software to a PLC/SCADA solution.

This has two advantages

- The control outputs of the aeration fans and roof exhaust fans goes into the general control system from where the control (START and STOP) should be done
- general control system from where the control (START and STOP) should be done.
 At the same time the important and processed monitoring data of the grain condition and weather condition, is transferred to a SCADA SYSTEM for display of useful overviews.

In this way all vital grain monitoring data is reduced and compiled into simple key data, that can be presented for use in PLC and/or the SCADA SYSTEM.

Control commands can be integrated in the control and bypassed if required according to the specific procedures set-up in the grain facility.

Communication between PLC and PC is made with LAN cable.

A communication protocol must be made and embedded in the PLC/SCADA system.

ADVANTAGES

- Integrates iGrain System with the plant MAIN CONTROL SYSTEM, PLC/SCADA
- Transfer of all processed and intelligent data
- Reduces data to operational key information