

MERCOID DIGITAL PRESSURE SWITCHES 4-20 mA signal (NEW) mercury free

The (Mercoïd) digital pressure switches (with the use of a PLC) offer the advantages of recording event history, as well as tonnage rates that can be calculated according to system performance. This device fits in existing simple control panels replacing the Mercoïd DA31 153 pressure switches.

CALCULATED TONNAGES

Average pressure over the last hour, day or week, also can give a calculated tonnage moved by the system, predicting when bins/silos will be full. Momentary rates can be calculated with a programmed formula to suit the particular system.

LINE CONDITION

Pressure per Ton will give a system efficiency, and will indicate condition of the existing system, worn holes in the line, poor feeder condition, will indicate more pressure per ton. System testing and recalibration will be required, for accurate results.

Free running (empty line) pressure is always a good indicator of conveying line condition, which can and should be recorded and mapped weekly.

ICING

Free line pressure will also show if icing is building in the line during winter months- as well as at what temperatures; indicating when icing is becoming more common.

FOREIGN OBJECTS

Minor blockages in the line will show up as slight changes in line pressure, as well as a record of a real time event, like some one throwing a 2x4 in your line...

MOTOR RESTARTS

Restarts on a blower motor, if the line is plugged will be recorded and will indicate how many times the motor was restarted before it overheated.

SURGE CONTROL / BINS

A graph of peaks and valleys in the recorded daily pressure reading can be averaged (RMS) as work done (everything under the graphed line) smoothening out the spikes requires a surge bin, conveyor or other device to control the infeed. The use of VFD's on conveyors to control infeed can also be qualified, and calibrated according to pressure recordings of the system, comparing before and after the changes or adjustments.

PURGING A LINE FOR SWITCHING

Switching with a diverter valve can be timed according to when the line pressure drops to free running pressure (Line empties out), rather than a timed delay, reducing down time required for a switch. The same for end of the day shut down, why wait for a 5 minute delay, when (at 100 feet/second) 15 seconds will be enough.

PATTERNS

Repeating events can indicate a cycle of material build up, at the infeed of the conveying system, which can then be identified and eliminated.

SEQUENCING

Digital Mercoïd switches can still control infeed rates as well as shut down to protect the blower for system plugs, with the new digital information alarms can be preset to warn of a impending stoppage of infeed, as well as several separate control settings can be programmed for different legs of a pneumatic conveying system, based on the layout of each leg after the diverter valve.

WATER INJECTION (wood chips only)

Minimum amount of water required can be automatically controlled by pressure readings; water injection can be turned off automatically when line runs empty, or when low volumes of chips are conveyed.