



## MODEL P650A ANALOG DAMPENER (FILTER)

The Compass Instruments P650A analog dampener (filter) is used to perfectly average and smooth 4-20 milliamp signals

Positive displacement pumps cause pressure surges, turbulent flow can cause wide variations in flow meter outputs, vibration can add noise to load cell data, and even long cable runs are susceptible to induced noise. These problems can cause controllers to act in undesirable ways, make displayed data difficult to read, and produce charts and data log information that is unacceptable.

All that is easily fixed by passing the 4-20 milliamp data through this filter.

## **24VDC POWER SUPPLY** TYPICAL APPLICATION P650A Pressure 8 4-20 mA SIGNAL 1 transmitter on **ANALOG** the discharge 4-20 mA Display, **DAMPENER** 24VDC XMTR POWER 2 side of a Controller, (ACTIVE 7 Positive Data Logger, COMMON \* FILTER) 3 Etc. displacement pump.

\* Common is not needed with 2 wire transmitters



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We use A/D converters with lots of bits to give us high resolution, but often most accuracy is lost due to unstable signals. It's often not that the signals are incorrect, but that they do not show us what we really want to see. Positive displacement pumps produce pulsating pressure, pipe tees, elbows, and other obstructions produce flow that appears unstable, and vibrations can create all sorts of noise on load cell outputs and level transmitters.

We look at our super accurate pressure gages, flow display, and level instrumentation and often only see a blur. Data logging and any kind of charts are difficult to interpret. Even our controllers sometimes hunt because of a spike in the feedback signals.

Various software algorithms have been devised to overcome these problems, often only resulting in insufficient filtering or in lengthy signal delays that interfere with proper system functions.

Using an analog filter to smooth an analog signal is more effective and creates a more accurate, true representation of the average data with less signal delay.

The results are stable data displays, data logging that will not leave one guessing, and smooth closed loop control from an accurate signal without excessive delays.

What ever is causing your 4-20 milliamp signal to be less than perfect, even noise from parallel cables, this analog filter will do it's job and clean up your data.

IF YOU HAVE AN APPLICATION WITH AN UNSTABLE 4-20 MA SIGNAL, WE CHALLENGE YOU TO TEST THIS UNIT ON YOUR SYSTEM. WE BELIEVE WHEN YOU SEE THE DIFFERENCE, THE RESULT WILL BE WORTH MORE THAN A THOUSAND DESCRIPTIVE WORDS.

Works equally well with two wire loop powered transmitters and three wire transmitters. Cost is \$ 370.00 each.