Mobile P-I Servoamplifier
G122-826

Description

The G122-826-001 is a general purpose, user configurable P-I servoamplifier with a power supply input filter suitable for automotive use. It can also be used in industrial applications, where its unique features make it particularly useful. Selector switches inside the amplifier enable proportional control, integral control or both to be selected. Many aspects of the amplifier’s characteristics can be adjusted with front panel trim pots or selected with internal switches. This enables one amplifier to be used in many different applications.

The servoamplifier employs analog electronics. It accepts three single ended input signals. A frequency to voltage converter and a differential analogue auxiliary amplifier enable signals to be pre-conditioned before being connected to the servoamplifier inputs.

Features

- P-I or P & I control
- User friendly front panel with LEDs and test points
- Three single ended inputs, one scalable
- Differential input auxiliary amplifier with zero and gain
- Frequency to voltage converter
- Optional non-linear block
- Optional dual gain amplifier
- Optional feedback derivative term
- Dither
- Step push button
- Automotive supply
- Compact DIN rail housing
- CE marked

Specifications

Function: P, I or P & I, switch selectable
Input 1: Scaled to 100V max with switch selectable lag of 55ms
Input 2: Plug-in resistor, 100k Ohms nominal, ±10V
Input 3: Fixed 100k Ohms, ±10V
Input 4: Direct to output amp, ±10V gives ±100% valve drive
Rin – 10k Ohms
Auxiliary amp: Differential 4-20mA or ±10V, switch selectable,
±15V max input
Rin – 100k Ohms, ±10V
Rin – 240 Ohms, 4-20mA
Zero – ±10V
Gain – 1 to 10
F to V: TTL or open collector input, switch selectable
Input threshold – 2.3V
TTL input resistance – 10k Ohms
OC pull up – 10k Ohms to +15V
Full scale output – 8.0V
Full scale ranges – 380 and 1600Hz

Variable
supply:
±12V @ ±20mA max

±15V output:
±10mA max

Error amp:
Unity gain
Bias – ±15% valve drive

Proportional
amp gain:
1 to 20

Integrator gain:
1 to 45 per second

Output amp:
Switch selectable voltage or current, single ended output, return to ground
V. ±10V, minimum load = 200 Ohms
I. ±5, 10, 20, 30mA to a maximum of ±50mA
Max load = \( \frac{11V}{1(Amp)} \) – 39 Ohms

Step push button:
– 50% valve drive

Valve supply:
Pin 14, 300mA max

Front Panel
Indicators:
Vs, internal supply – green
Valve drive positive – red
negative – green
F–V pick up – yellow
Operating Details

Switch selections
- Input 1 lag on or off
- Auxiliary amp input 4-20mA or ±10V
- F to V converter range
- Proportional control, integral control or both
- Integrator limit
- Output current or voltage
- Output current level
- Dither on or off

Plug-in resistors
- Input 2 RD = 100k for ±10V
- Feedback derivative term RC = not loaded
- Proportional gain range RE = 100k for 1 to 20 range
- Auxiliary amp gain range RB = 10k for 1 to 10 range
- Auxiliary amp 4-20mA RA = 240R

Internet Data
For detailed Application Notes and the latest version of this Data Sheet please refer to the Moog website www.moog.com/dinmodules