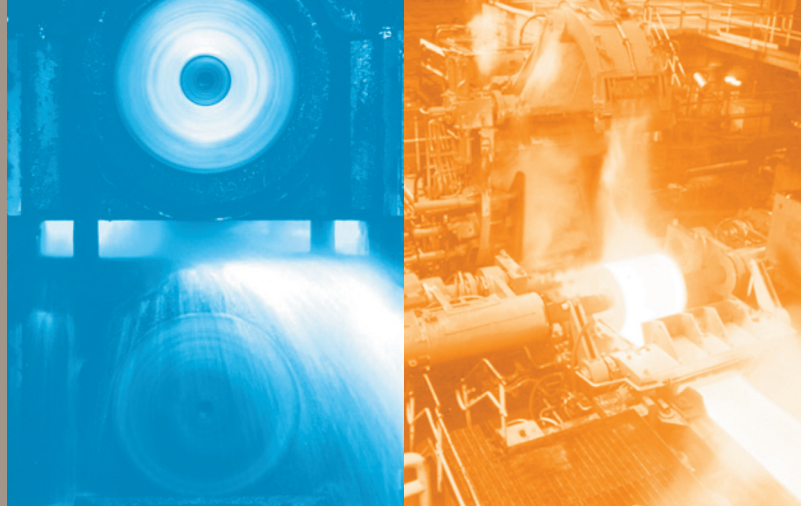


# G122-826

## MOBILE P-I SERVOAMPLIFIER



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 trimpots or selected with internal switches. This enables one amplifier to be used in many different applications.

### Inputs:

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 servo- amplifier inputs.

### Output:

The three servoamplifier input signals are summed to produce an error signal which is then amplified proportionally and also integrated. The proportional and integral signals are switched together and output as a current or voltage to drive a servovalve.

### Set up:

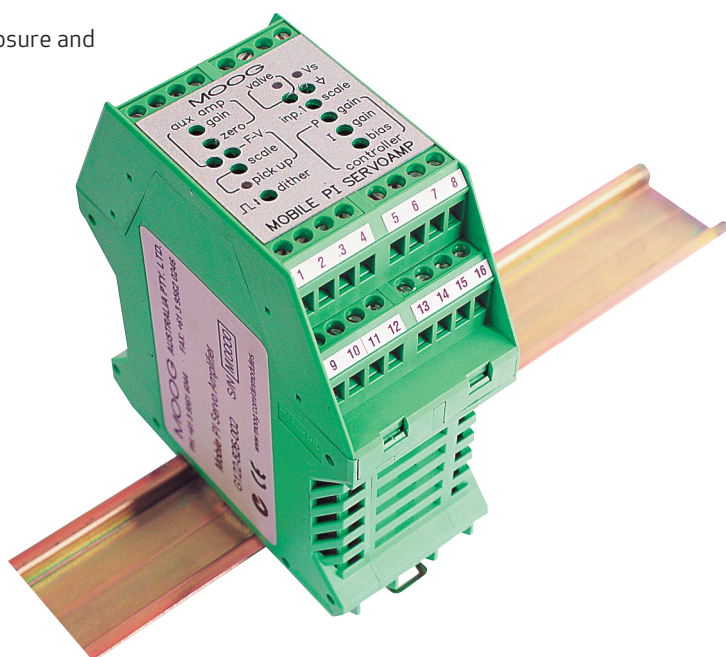
Front panel trim pots, LED indicators and test points allow fast and easy setup and aid in trouble shooting.

### Housing:

The servoamplifier is housed in a compact DIN rail mounting enclosure and operates from an automotive supply of 9V to 32V DC.

### ADVANTAGES

- 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





## SPECIFICATIONS

|                              |   |
|------------------------------|---|
| <b>Function</b>              | P, I or P & I, switch selectable  |
| <b>Input 1</b>               | Scaled to 100V max with switch selectable lag of 55ms   |
| <b>Input 2</b>               | Plug-in resistor, 100k Ohms nominal, ±10V   |
| <b>Input 3</b>               | Fixed 100k Ohms, ±10V<br>Derivative (velocity) feedback via plug-in resistor and fixed capacitor  |
| <b>Input 4</b>               | Direct to output amp, ±10V gives ±100% valve drive<br>Rin – 10k Ohms  |
| <b>Auxiliary amp</b>         | Differential 4-20mA or ±10V, switch selectable,<br>±15V max input<br>Rin – 100k Ohms, ±10V<br>Rin – 240 Ohms, 4-20mA<br>Zero – ±10V<br>Gain – 1 to 10   |
| <b>F to V</b>                | TTL or open collector input, switch selectable<br>Input threshold – 2.3V<br>TTL input resistance – 10k Ohms<br>OC pull up – 10k Ohms to +15V<br>Full scale output – 8.0V<br>Full scale ranges – 380 and 1600Hz                  |
| <b>Variable supply</b>       | ±12V @ ±20mA max  |
| <b>±15V output</b>           | ±10mA max   |
| <b>Error amp</b>             | Unity gain<br>Bias – ±15% valve drive   |
| <b>Proportional amp gain</b> | 1 to 20   |
| <b>Integrator gain</b>       | 1 to 45 per second  |
| <b>Output amp</b>            | Switch selectable voltage or current, single ended output, return to ground<br>V. ±10V, minimum load = 200 Ohms<br>I. ±5, 10, 20, 30mA to a maximum of ±50mA<br>max load = $\left(\frac{11V}{I \text{ (Amp)}} - 39\right)$ Ohms |

|                                |  |
|--------------------------------|--|
| <b>Step push button</b>        | -50% valve drive   |
| <b>Valve supply</b>            | Pin 14, 300mA max  |
| <b>Front panel indicators</b>  | Vs, internal supply – green<br>Valve drive positive – red<br>negative – green<br>F-V pick up – yellow                        |
| <b>Front panel test points</b> | Valve – ±10V (regardless of output signal selection)<br>Auxiliary amplifier output<br>F-V output<br>Signal 0V                |
| <b>Front panel trimpots</b>    | Input 1 scale<br>Error amp bias<br>P gain<br>I gain<br>Dither level<br>Auxiliary amp gain<br>Auxiliary amp zero<br>F-V scale |
| <b>Dither</b>                  | 200Hz fixed frequency<br>0 to ±10% valve drive<br>Switch selectable on/off   |
| <b>Supply</b>                  | 9V to 32V DC<br>173mA @ 13.8V and 50mA valve drive   |
| <b>Mounting</b>                | DIN rail<br>IP 20  |
| <b>Temperature</b>             | 0 to +40°C   |
| <b>Dimensions</b>              | 100W x 108H x 45D  |
| <b>Weight</b>                  | 240g   |

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DIN Mobile P-I Servoamplifier  
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## **ORDERING INFORMATION**

Mobile P-I Servoamplifier G122-826

Delivery includes Mobile P-I Servoamp, DIN fuse holder,  
2 x M205 250 mA T fuses and a 6 page application note.

This technical data is based on current available information and is subject to change at any time by Moog. Specifications for specific systems or applications may vary.

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