

G123-825-001

BUFFER AMPLIFIER

The G123-825 Buffer Amplifier is intended to interface between the output of standard signal sources, such as a PLC or servo amplifier, and a Moog servo\proportional valve. It accepts three types of signal input and can output most of the Moog servo\proportional valve signals. It has a single pole active filter to remove noise from the input signal.

PLC ± 10 V and 4-20 mA inputs:

The G123-825 interfaces between standard PLC analog output signals of ± 10 V and 4-20 mA on the input side and the Moog valve on the output side. This solves the compatibility problem between these signals and the valve requirement.

Mechanical feedback (mfb) valve input:

The G123-825 interfaces between the current output of a servo amplifier, on one side, and a Moog valve on the other. This enables old mfb valves to be replaced by modern electrical feedback (efb) valves, without changing the servo amplifier. The buffer amplifier takes the existing servo amplifier output and converts it to an efb compatible signal.

Input filter:

The G123-825 has a filter to remove noise from the input signal. The filter time constant is switch selectable. The switch selections sum, so a large variety of time constants is available.

Outputs:

The output signals are switch selectable. They are:

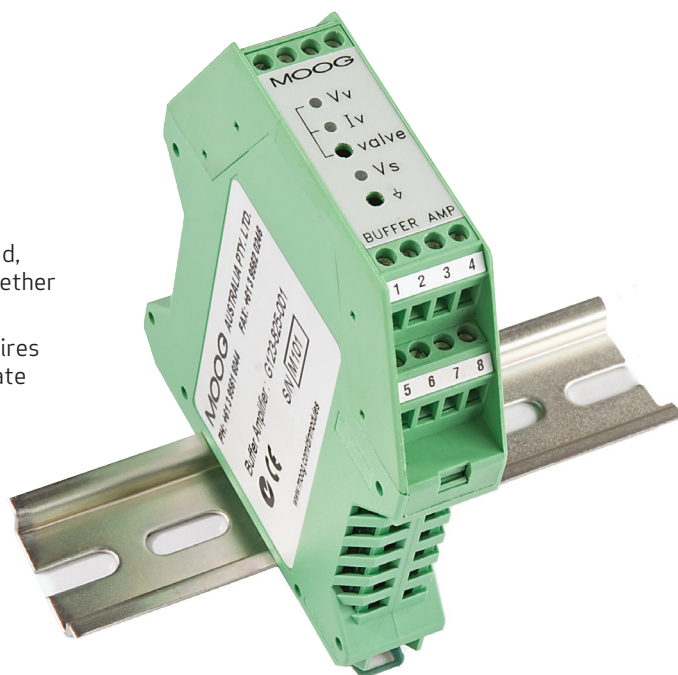
- 4 to 20 mA fixed. Suitable for efb valves
- 0 to ± 10 V fixed. Suitable for efb valves
- 0 to ± 5 to ± 100 mA switch selectable. Suitable for mfb valves. Suitable for efb valves when set to ± 10 mA

The output current selector switches can have more than one selected, so the selected values sum. For example, selecting 30 and 50 mA together gives a full scale output of ± 80 mA.

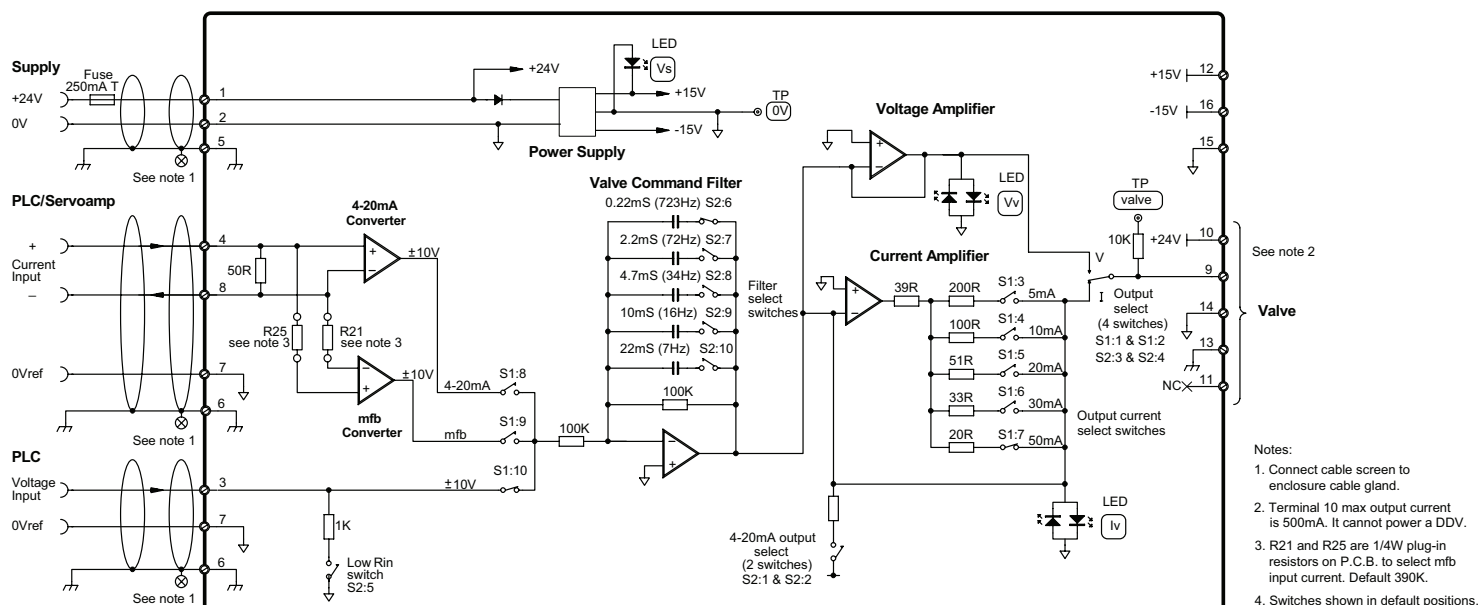
The buffer amplifier is housed in a compact DIN rail housing and requires a 24 VDC supply. Front panel test points and valve drive LEDs facilitate commissioning and trouble shooting.

ADVANTAGES

- Switch selectable input signals
- Switch selectable outputs signals to suit most Moog valves
- Switch selectable input filter
- Vv and Iv LED valve drive indicators
- Valve drive signal test point
- Compact DIN rail mounting
- 24 VDC supply
- CE marked



BLOCK WIRING DIAGRAM



SPECIFICATIONS

Signal input	4 to 20 mA 0 to ± 100 mA 0 to ± 10 V
Current signal input	Terminals 4 to 8. 50 Ohm
Voltage signal input	Terminal 3. 100 k Ohm or 1 k Ohm with low Rin selected.
Valve drive outputs	0 to ± 10 V @ 1 k Ohm min load 4 to 20 mA @ 500 Ohm max load 0 to ± 100 mA max max load = $\left(\frac{11 \text{ V}}{I(\text{Amp})} - 39 \right)$ Ohm where I is valve current switch selection in Amps.
Valve drive current selections	± 5 , 10, 20, 30 & 50 mA
Valve drive test point	Zo = 10 k Ohm
Vv LED	Maximum illumination at ± 10 V. + = red - = green
Iv LED	Maximum illumination at ± 5 mA to ± 100 mA. + = red - = green

Moog has offices around the world. For more information or the office nearest you, contact us online.

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DIN Buffer Amplifier
Moog Aust/PDF/0211

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.

Vs LED	Internal supply, OK = green
Valve filter type	Active, single pole
Valve filter corner frequency selections	7, 16, 34, 72 & 723 Hz, $\pm 10\%$
Supply	Terminal 1 24 V nominal, 22 to 28 V 65 mA @ 24 V, no output current 170 mA @ 100 mA output current
Recommended supply protection	M205, 250 mA T (slow blow) fuse compliant with IEC 127-2 sheet 3.
± 15 V output	Terminals 12 and 16, $\pm (110 \text{ mA} - \text{max valve current})$
Terminal 10 max current	500 mA. If terminal 10 is used to power a proportional valve, the terminal 1 supply fuse should be increased to cater for the extra current.
Mounting	DIN rail
Class of protection	IP 20
Temperature	0 to 40°C (32 to 104°F)
Dimensions	100 mm (4 ins.) W 108 mm (4 1/4 ins.) H 22.5 mm (7/8 ins.) D
Weight	120 g (4.2 oz.)
CE mark	EN50081.1 emission EN50082.2 immunity
C tick	AS4251.1 emission

ORDERING INFORMATION

Buffer Amplifier G123-825-001

Delivery includes Buffer Amp, DIN fuse holder, 2 x M205 250 mA T fuses and a 4 page application note.

MOOG