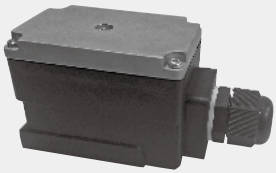
6.18

Plug-in amplifier

Type VT-SSPA1

Analog amplifier for controlling proportional valves
(pressure and directional valves)
without position control.



Contents

Features

- Differential input
- Ramp time adjustable (60ms...5s)
- Sensitivity, valve zero point, dither frequency adjustable
- Operating voltage 24V

Function and configuration

The active connector is used for controlling proportional valves without position control. It is directly attached to the solenoid plug of the valve. Theconnection cable on the control side (U_B, command value) is led through a gland fitting and connected. An LED signals the available supply voltage. Depending on the type of the active connector, the command value is specified as voltage 0...10V or as current 4...20mA.

The command value can be adjusted with regard to zero point and sensitivity. In case of voltage specification, a differential input is available. Apart from that, the command value can be led via a ramp. In order to allow for adjustment to special applications, thedither amplitude was designed variably. Upon delivery, the dither amplitude has already been set to a perfect value so that another adjustment is only necessary in the above-mentioned special cases.

Ordering code, accessories

VT	–	S	S	P	A	1	–	–	L2X	/	V0	/

Design :
Plug-in amplifier =S

Hydraulic component for valves without electrical feedback = S

Valve type : Proportional valve = P

Control Analog =A

Output stages: 1 output stage =1

Control
0 = Voltage 0...10 V
I = Current 4...20 mA

Customer version
V0 = Catalog version

Component series L20 to L29
L2X= (L20 to L29: Unchanged technical data and pin assignment)

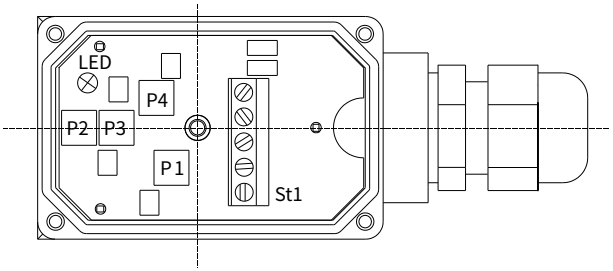
Serial number for types:
508= 0.8A solenoid
516= 1.6A solenoid
525= 2.5A solenoid

Technical data

Supply voltage nom. 24V =	Solenoid2.5A	Battery voltage 10.2...31V Rectified voltage 10.2...27V
	Solenoid1.6A	Battery voltage 18...31V Rectified voltage 18...27V
	Solenoid0.8A	Battery voltage 21...31V Rectified voltage 21...27V
	Residual ripple	< $2V_{SS}$
Power consumption max.	Va	55 (see valve data)
Command value		0...10V
		4...20mA
Output		I_{max}=2.5A(rectangular voltage, pulse-modulated) I_{max}=0.8A(rectangular voltage, pulse-modulated) I_{max}=1.6A(rectangular voltage, pulse-modulated)
Ramp time		60ms...5s
Dither frequency range	Hz	95...340
Zero point calibration range		See characteristic curves
Sensitivity adjustment range		
Special features		LED (green): Supply voltage is available, Clocked output stage, Fast energization for short actuating times, Adjustments via trimming potentiometer.
Protection class		IP 65, in plugged condition
Electro-magnetic compatibility tested according to		EN 61000-6-2: 2002-08 EN 61000-6-3: 2002-08
Design		Connector housing
Connections	– Solenoid – U_B, command value	DIN 43650 Cable 5×0.75mm^2, shielded incl. PE
Ambient temperature	° C	-20...+70
Storage temperature range	° C	-20...+85
Weight	m	0.23kg

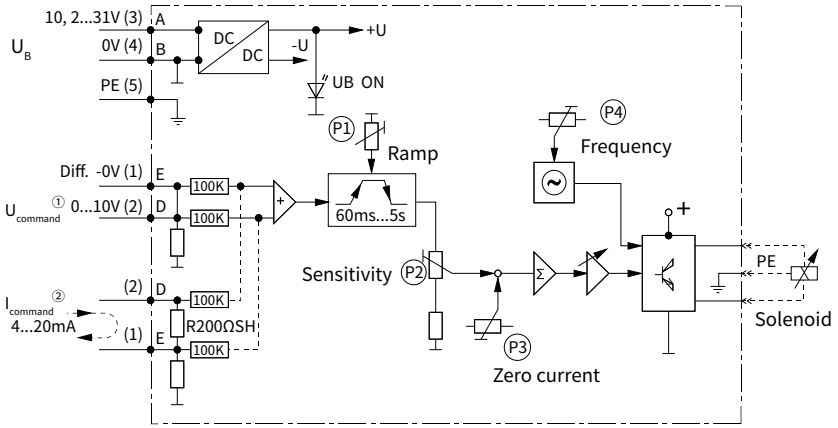
Valve with external trigger electronics

Connections and adjustment



P1 – Ramp time
P2 – Sensitivity
P3 – Zero point
P4 – Dither frequency
St 1 – Connection terminal
LED – Display U_B

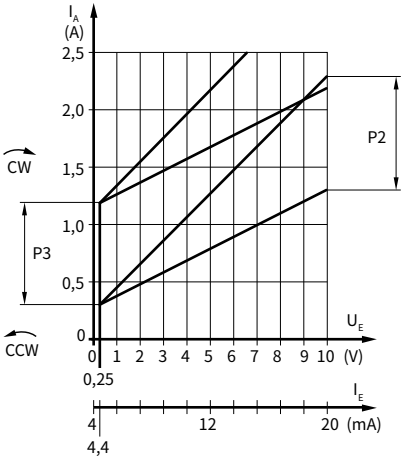
Block diagram and pin assignment

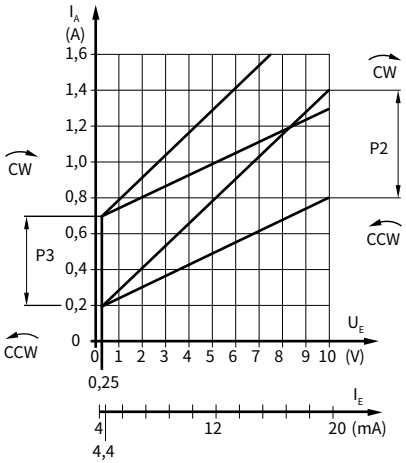


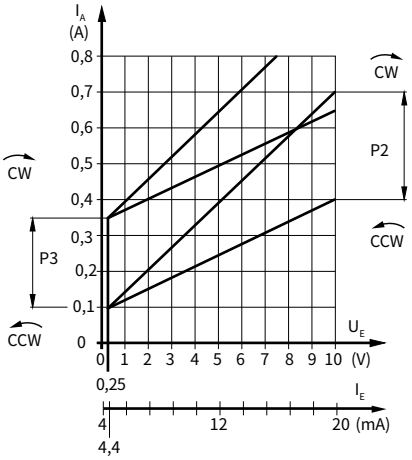
① Version with 0...+10V signal
② Version with 4...20mA signal

Characteristic curves

Commissioning and adjustment



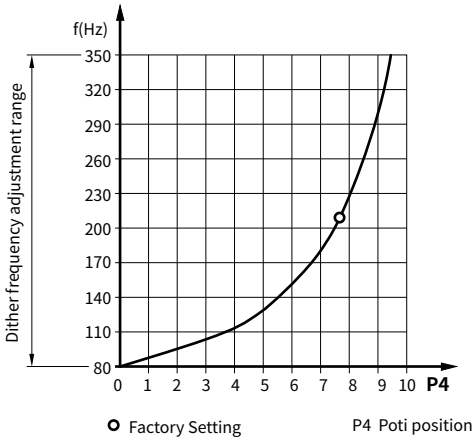




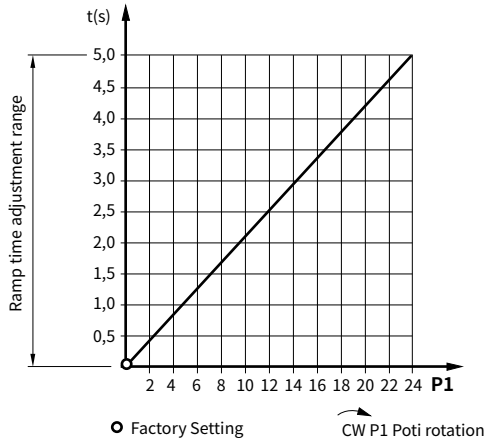
P2 Sensitivity range
P3 Zero current range

Characteristic curves

Commissioning and adjustment



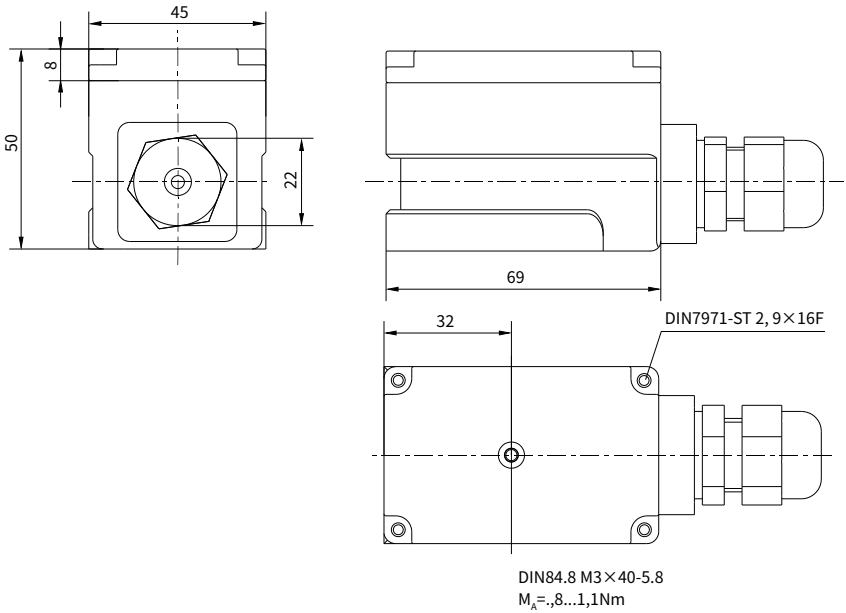
1.Dither frequency adjustment
→ Poti P4.
The dither frequency has already been correctly adjusted upon delivery.
For special applications, correction may be necessary.



2. Ramp time adjustment (accelerations and braking)
→ Poti P1

Unit dimensions

(dimensions in mm)



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