

Electric amplifiers

RE 30109/07.12
Replaces: 07.05

1/6

Type VT-VSPA1-5...-1X/V0/RTP

Component series 1X

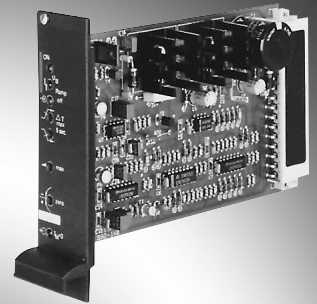


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Features

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1	– Suitable for controlling direct operated proportional valves without electrical feedback
2	– Analog amplifiers in Europe format for installation in 19 " racks
2	– Differential input for command value voltage 0...+10 V
3	– Ramp generator up and down can be set separately
4	– Zero point potentiometer
5	– Controlled output stage
5	– LED display: • Supply voltage • Ready for operation • Ramp "Off" • Solenoid current $I_M = 0$

Notice:

The photo is an example configuration.
The delivered product differs from the figure.

Ordering code, accessories

VT-	V	S	P	A	1	-	-1X/V0/RTP
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Hydraulic component
 For valves without electrical feedback = S

Valve type
 Proportional valve = P

Control
 Analog = A

Output stages
 1 output stage = 1

RTP =

V0 =

1X =

508 =
 525 =

Options
 Ramp setting
 via potentiometer
 Customer version
 Catalog version
 Component series 10 to 19
 (10 to 19: Unchanged technical data
 and pin assignment)
 Serial number for types
 0.8 A solenoid
 2.5 A solenoid

Preferred types

Amplifier type	Material number	For proportional valves, direct operated, without electrical feedback
VT-VSPA1-525-10/V0/RTP	0811405079	DBETX-1X...-25...
		DBE6X-1X...-25...
		3(2)FREX...-1X...-25...
VT-VSPA1-508-10/V0/RTP	0811405081	DBETX-1X...-8...
		DRE10Z-1X...-8...
		DRE6X-1X...-8...
		DBE6X-1X...-8...
		DBE10Z-1X...-8...

Suitable card holder:

- Open card holder VT 3002-1-2X/32F (see data sheet 29928).
Only for control cabinet installation.

Front plate

LED Enable

LED $U_B < U_{B \text{ min.}}$

LED Ramp off

Acceleration ramp

Braking ramp

Sensitivity

Zero point valve

Solenoid current

Rexroth

ON

UB

Ramp off

$\Delta T \text{ max. 5 sec}$

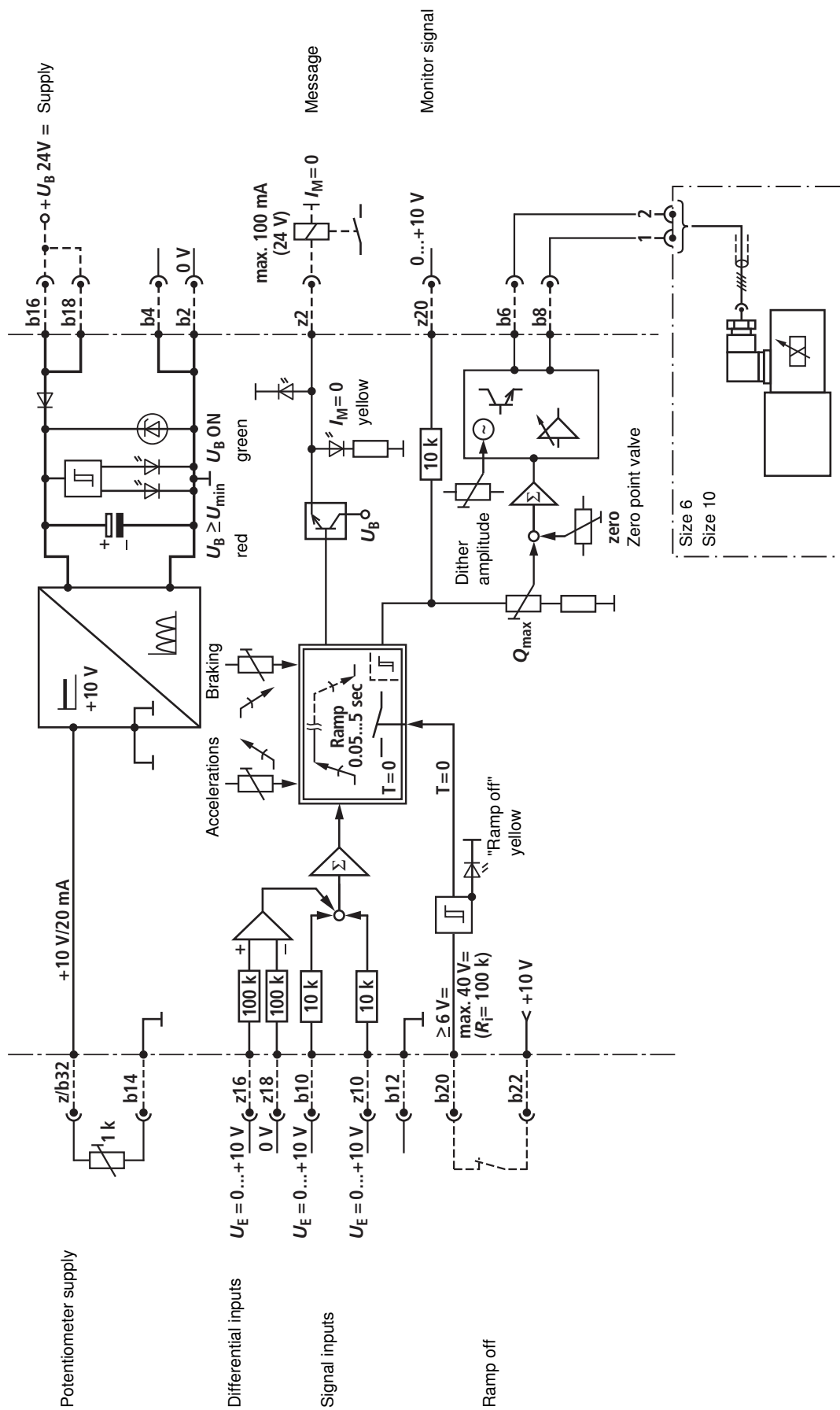
max.

zero

valve

$I_M = 0$

Block diagram with pin assignment



Technical data (For applications outside these parameters, please consult us!)

Supply voltage	Nominal 24 V = Battery voltage 21...40 V, Rectified alternating voltage $U_{\text{eff}} = 21...28 \text{ V}$ (one-phase, full-wave rectifier)
Smoothing capacitor, separately	Recommendation: Capacitor module VT 11110 (see data sheet 30750) (only necessary if the ripple of $U_B > 10\%$)
Current consumption, max. 0811405079 0811405081	1.5 A (size 6) 2.5 A (size 10) 1.25 A
Power consumption, max. 0811405079 0811405081	35 VA (size 6) 60 VA (size 10) 30 VA
Command value potentiometer	$R_L \geq 1 \text{ k}\Omega$ Supply: b/z 32, +10 V/20 mA
Input signals	b10: +10 V z10: +10 V z16: +10 V z18: Diff. 0 V } Differential input
External ramp switch-off	b20: 6...40 V = (nom. 10 V =)
Monitor signal ramp	z20: 0...10 V
Cable lengths between amplifier and valve	Solenoid cable: up to 20 m 1.5 mm ² 20 to 60 m 2.5 mm ²
Special features	Inputs and outputs short-circuit-proof Clocked output stage Fast energization for short actuating time
LED displays	yellow: Ramp OFF yellow: Solenoid current $I_M = 0$ green: U_B ON red: $U_B < U_B \text{ min}$
Valve setting time	50 ms with 100 signal step
Valve hysteresis %	< 4
Ramp times s	0.05...5
Adjustment	Zero point valve, sensitivity, ramp times, dither amplitude
Format of the printed circuit board mm	(100 x 160 x approx. 35) / (W x L x H) Europe format with front plate 7 TE
Plug-in connection	Connector DIN 41612 – F32
Ambient temperature °C	0...+70
Storage temperature range °C	-20...+70
Weight m	0.32 kg

Notice:

Power zero b2 and control zero b12 are to be bridged.

If the power supply unit is < 1 m away, directly to DIN connector.

In case of distances > 1 m, lead the control zero separately to the ground.

Adjustment of the cards

Zero point: For the adjustment, a command value $U_E \sim 300 \text{ mV}$ is specified.

Sensitivity (max.): For the adjustment, a command value $U_E = 10 \text{ V}$ is specified.

Use of ramps

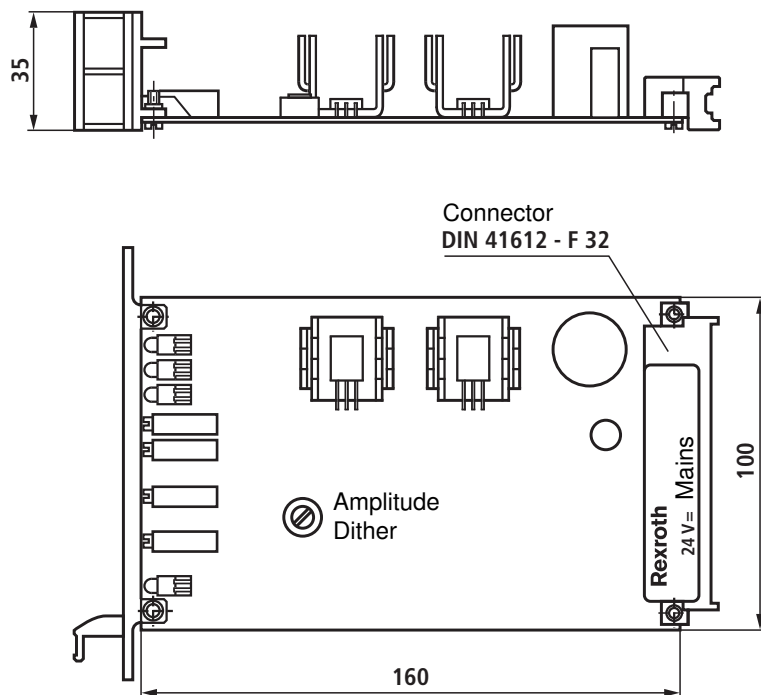
Setting of ramp UP (accelerations) and ramp DOWN (braking)
via 1 trimming potentiometer each.

Ramp ON if open at b20. **Ramp OFF** if b20 $U > 6 \text{ V}$.

With **ramp OFF**, a previously started ramp is canceled.

Transition to the signal end value is effected as step.

Device dimensions (dimensions in mm)



Project planning / maintenance instructions / additional information

- The amplifier card may only be unplugged and plugged when de-energized.
- The distance to aerial lines, radios and radar systems must be sufficient (> 1 m).
- Do not lay solenoid and signal lines near power cables.
- For signal lines and solenoid conductors, we recommend using shielded cables.
The cable shield must be connected to the control cabinet extensively and as short as possible.
- The valve solenoid must not be connected to free-wheeling diodes or other protection circuits.
- The cable lengths and cross-sections specified on page 4 must be complied with.

Notes

Notes

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Notes
