

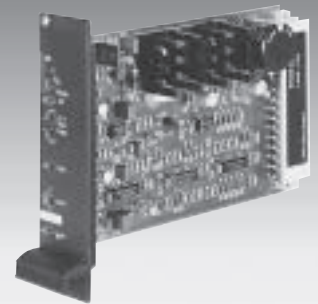
# Electric amplifiers for proportional valves

RE 30109/07.05

1/6

Type VT-VSPA1

Unit series 1X



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## Features

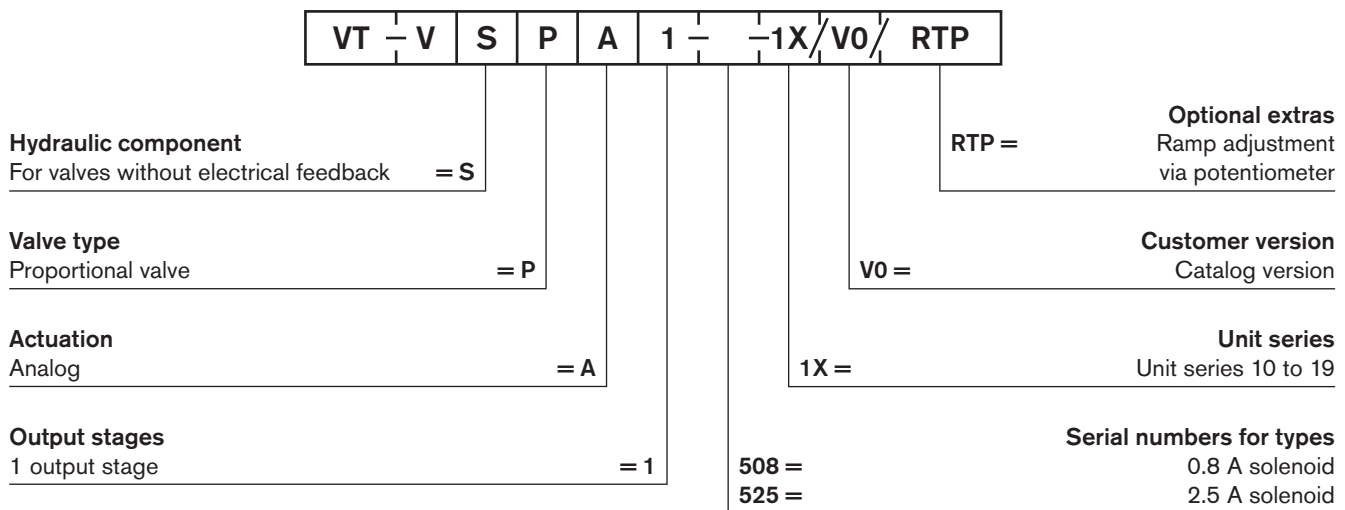
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1	– Analog amplifier in Europe card format for installation in 19" subrack
2	– Differential input for setpoint voltage 0...+10 V
2	– Ramp generator with separate adjustment for up and down
3	– Zero potentiometer
4	– Closed-loop-controlled output stage
5	– LED display:
6	• Voltage supply
	• On standby
	• Ramp "Off"
	• Solenoid current $I_M = 0$

### Testing and service equipment

- Test box type VT-PE-TB1, see RE 30063
- Test adapter type VT-PA-3, see RE 30070

## Ordering data



## Preferred types

Type	Material Number	For valve types
VT-VSPA1-525-10/V0/RTP	0 811 405 079	see valve group A
VT-VSPA1-508-10/V0/RTP	0 811 405 081	see valve group B

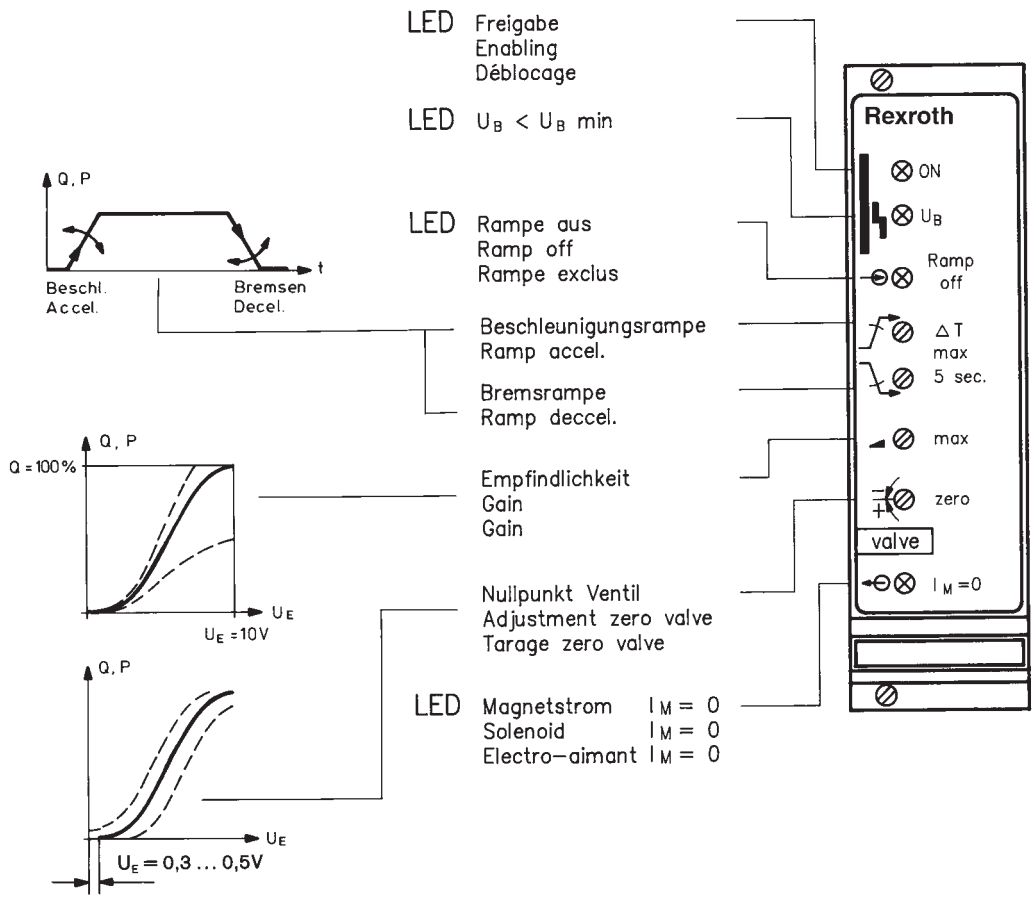
### Valve group A

DBETX-...-25  
 DBE6X-...-25  
 DRE6X-...-25  
 DBE10Z-...-25  
 DRE10Z-...-25  
 2FREX6  
 2FREX10  
 3FREX6  
 3FREX10  
 4WRBA..EA

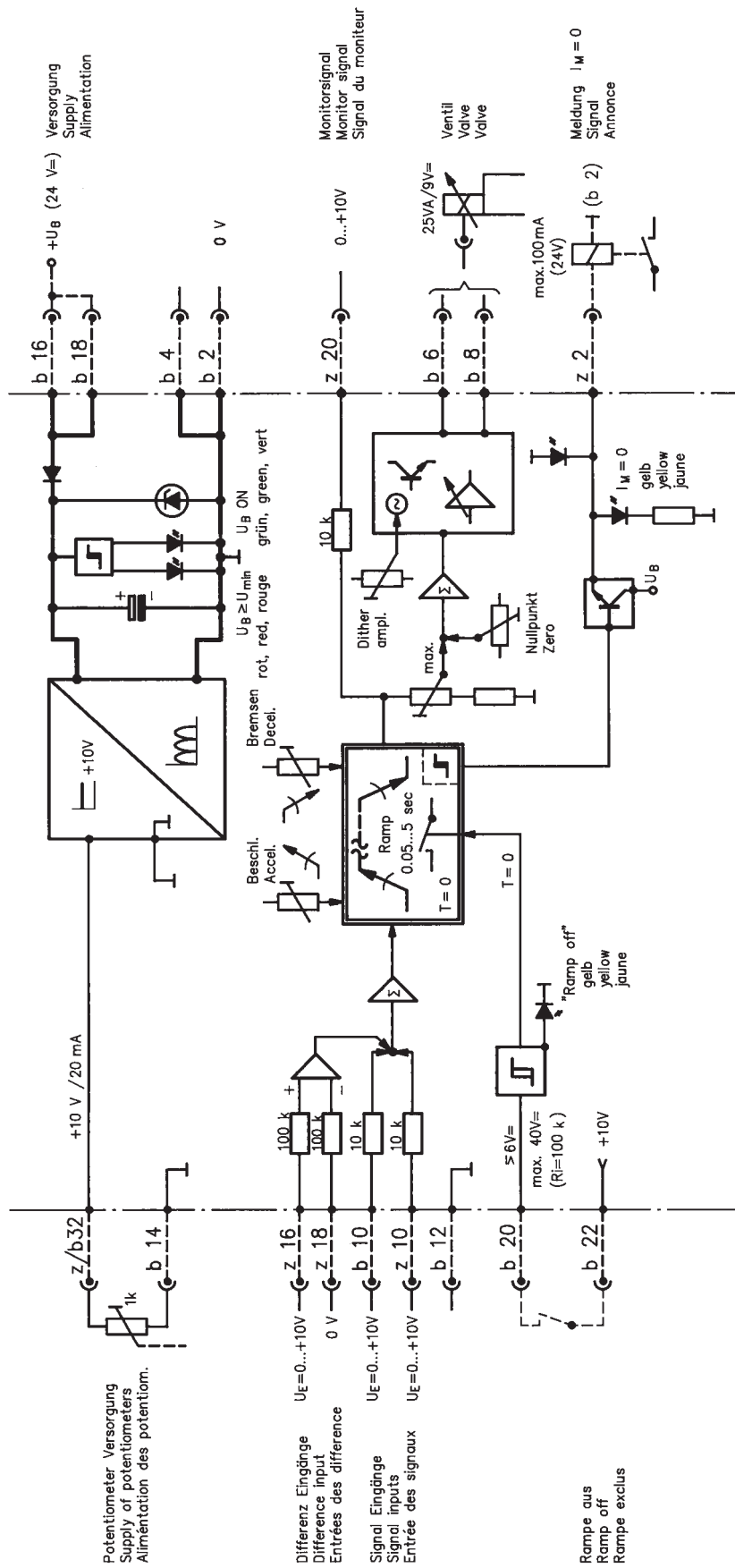
### Valve group B

DBETX-...-8  
 DBE6X-...-8  
 DRE6X-...-8  
 DBE10Z-...-8  
 DRE10Z-...-8

Front panel



## Circuit diagram with pin assignment



## Technical data

### Specifications

P.C.B. format	mm	(100 x 160 x approx. 35)/(W x L x H) Europe card format with front panel with 7 modular spacings
Plug connector		Plug DIN 41612-F32
Ambient temperature	°C	0...+70, storage temperature min. -20; max. +70
Power supply		24 V DC nominal battery voltage 21...40 V, rectified AC voltage $U_{\text{eff}} = 21...28 \text{ V}$ (single-phase, full-wave rectification)
Current rating		0811 405 079 max. 1.5 A (NG6)/max. 2.5 A (NG10) 0811 405 081 max. 1.25 A
Power consumption		0811 405 079 max. 35 VA (NG6)/max. 60 VA (NG10) 0811 405 081 max. 30 VA
Setpoint 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 } Differential z18: Diff. 0 V } input
External ramp shut-off		b20: 6...40 V= (nom. 10 V DC)
Ramp monitor signal		z20: 0...10 V
Cable lengths and cross-sections		Solenoid: < 20 m 1.5 mm <sup>2</sup> 20...50 m 2.5 mm <sup>2</sup>
Special features		Short-circuit-proof inputs and outputs Clocked output stage Rapid energizing for fast response times
LED displays		Yellow: ramp OFF Yellow: solenoid current $I_M = 0$ Green: $U_B$ ON Red: $U_B < U_B \text{ min}$
Valve response time		50 ms with 100% signal change
Valve hysteresis	%	< 4
Ramp times	s	0.05...5
Adjustment possibilities		Valve zero, sensitivity, ramp times, dither amplitude

#### Caution!

Power zero b2 and control zero b12 must be jumpered.  
If removing power pack, < 1 m directly to DIN plug.  
If removing > 1 m route control zero separately to ground.

#### Notes for calibrating the P.C.B.s

Zero: A setpoint  $U_E \sim 300 \text{ mV}$  is set as default for calibration.  
Sensitivity (max.): A setpoint  $U_E = 10 \text{ V}$  is set as default for calibration.

#### Notes on the use of ramps

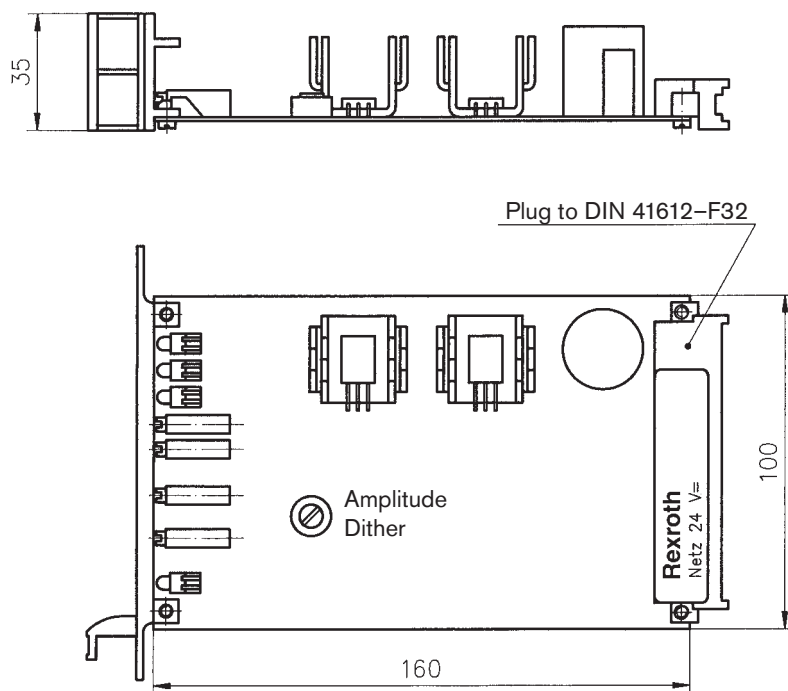
Ramp UP (accelerate) and ramp DOWN (decelerate) are each set by a trimming potentiometer.

**Ramp ON**, if b20 open. **Ramp OFF**, if b20  $U > 6 \text{ V}$ , e.g. 10 V from b22.

**Ramp OFF** interrupts a ramp in progress.

There is an abrupt transition to the final signal value.

## Unit dimensions (nominal dimensions in mm)



## Notes

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## Notes

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