

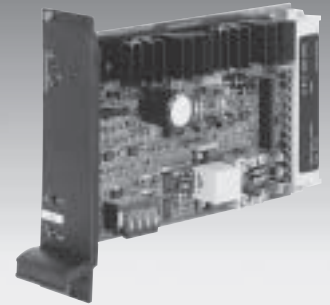
Electric amplifier for proportional cartridge throttle valves

RE 30055/09.05

1/6

Type VT-VRPA1-527-2X/V0/2/2V

Unit series 2X



List of contents

Contents

Features	
Ordering data	
Preferred types	
Front panel	
Circuit diagram with pin assignment	
Technical data	
Unit dimensions	

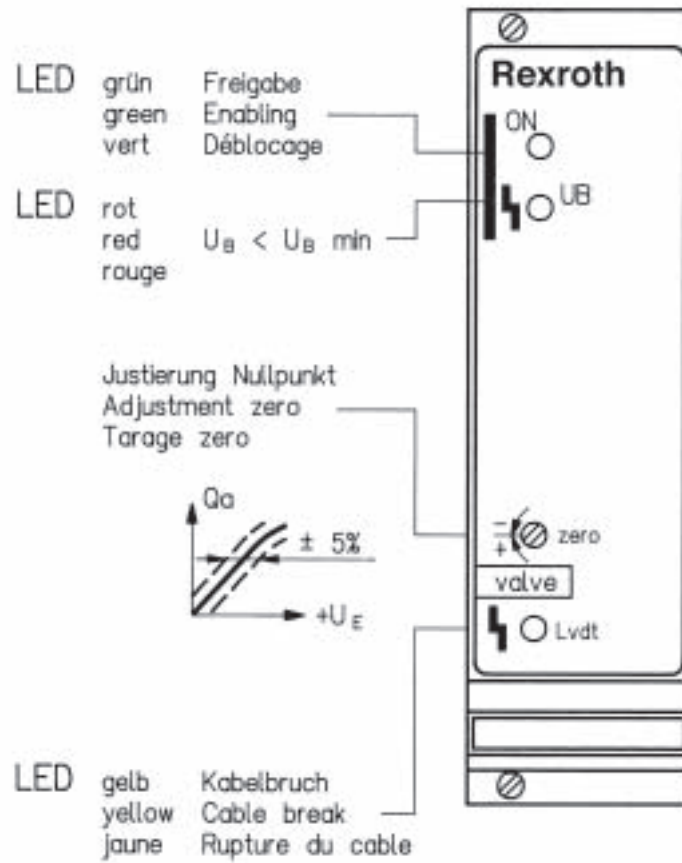
Features

Page	
1	– Analog amplifier in Europe card format for installation in 19" rack
2	– Closed-loop controlled output stage
2	– Enabling input
3	– Outputs short-circuit-proof
4	– Adjustment possibilities – valve zero
5	– Open-circuit detection for feedback signal cable
6	– Closed-loop position control with PID action

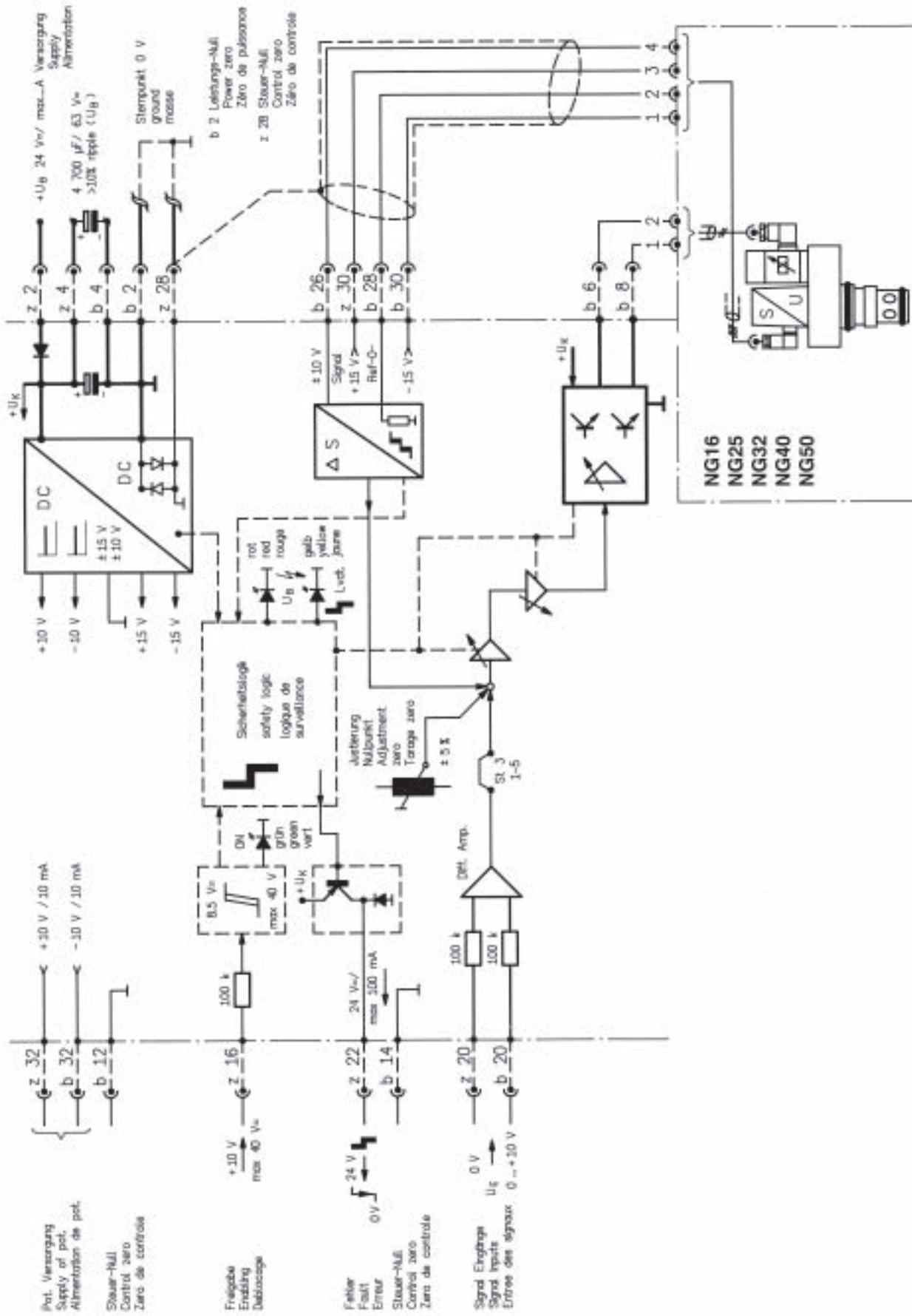
Testing and service equipment

- Test box type VT-PE-TB2, see RE 30064
- Test adapter type VT-PA-3, see RE 30070

Front panel



Circuit diagram with pin assignment



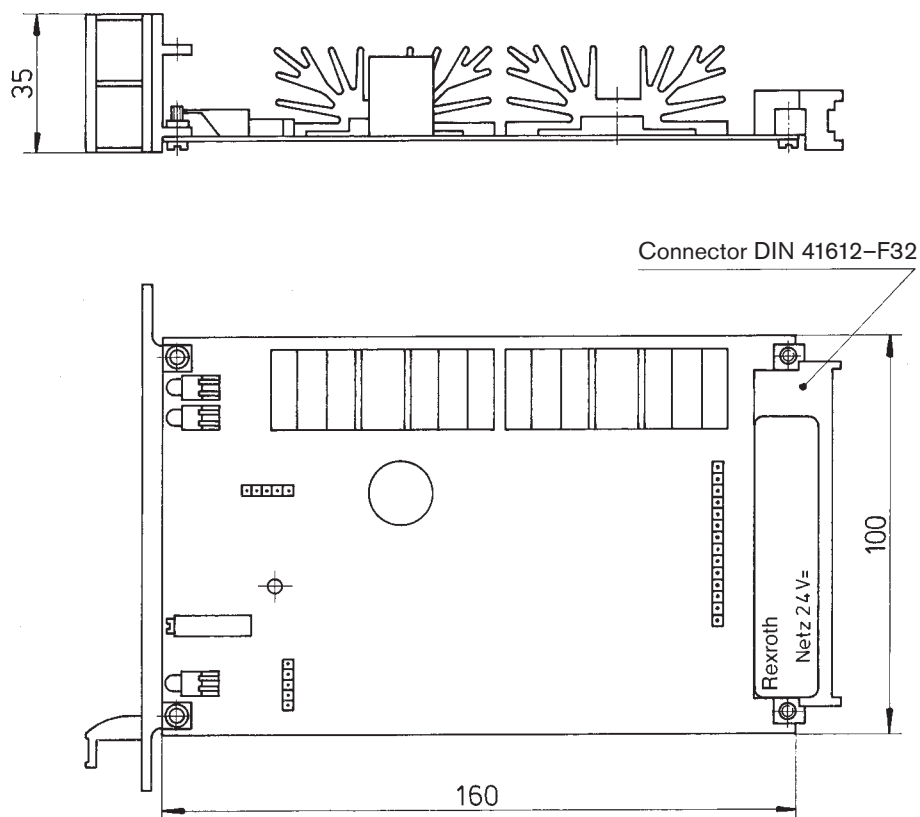
Technical data

Characteristic values		
P.C.B. format	mm	(100 x 160 x approx. 35) / (W x L x H) Europe card format with front panel (7 modular spacings)
Plug connector		DIN 41612-F32
Ambient temperature	°C	0...+70, storage temperature min. -20, max. +70
Power supply U_B at $z_2 - b_2$		Nominal 24 V DC Battery voltage 21 ...40 V, rectified AC voltage $U_{\text{eff}} = 21...28$ V (single-phase, full-wave rectification)
Smoothing capacitor, separately to b4, z4		4700 μ F/63 V DC, only required if U_B ripple > 10 %
Max. valve solenoid	A/VA	2.7/40
Current rating	A	1.5 The current rating may rise on min. U_B and if cable to control solenoid is extremely long
Power consumption (typical)	W	37
Input signal (setpoint)		b20: 0...+10 V } Differential z20: 0 V } amplifier ($R_i = 100$ k Ω)
Signal source		Potentiometer 10 k Ω Supply +10 V from z32 (10 mA) or external signal source
Output stage enable		at z16, $U = 8.5...40$ V, $R_i = 100$ k Ω , LED (green) on front panel lights up
Position transducer	Power supply	b30: -15 V (25 mA) z30: +15 V (35 mA)
	Feedback signal	b26: 0...-10 V, $R_L > 10$ k Ω
	Feedback reference	b28
Solenoid output b6 - b8	A	Clocked current regulator $I_{\text{max}} = 2.7$
Length of cables between amplifier and valve		Solenoid cable: up to 20 m 1.5 mm ² 20 to 60 m 2.5mm ² Position transducer: 4x0.5 mm ² (shielded)
Special features		Open-circuit protection for feedback signal cable Closed-loop position control with PID action Clocked output stage Rapid energizing and de-energizing for fast response times Short-circuit-proof outputs
Adjustment		Zero via trimming potentiometer $\pm 5\%$
LED displays		Green: Enable Yellow: Feedback signal open circuit Red: Under-voltage (U_B too low)
Fault signal - Feedback signal open circuit - U_B too low - ± 15 V stabilization		z22: Open collector output to $+U_K$ max. 100 mA, no fault: $+U_K$

Note

Connect power zero b2 and control zero b12, b14 or z28 separately to central ground (neutral point).

Unit dimensions (nominal dimensions in mm)



Notes

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Notes
