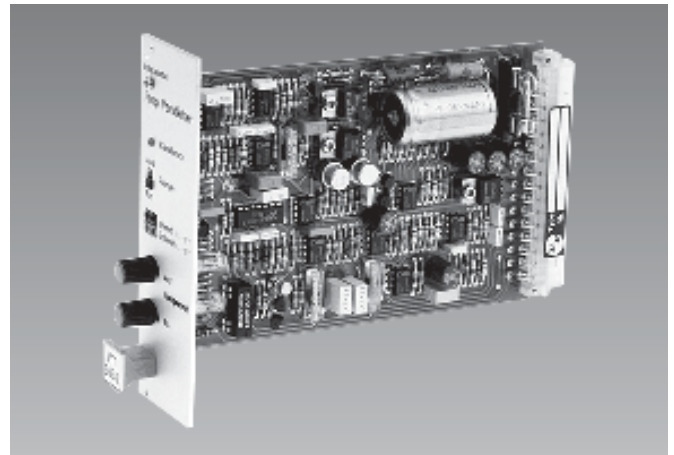


RE 29 957/07.03

Replaces: 06.90

**Electronic Amplifier
Type VT 5036
for Setting the Output Flow
of Axial Piston Pumps A10VSO**

Series 1X



F-87018

Type VT 5036 S 1X

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Features

- Amplifier VT 5036 S1X is used for setting the output flow of axial piston pumps type A10VSO.
- Smoothing circuit
- Voltage stabilisation
- Self pulsing output stages
- Oscillator and demodulator for inductive positional feedback
- PD regulator
- 1 relay for ramp "off"
- Ramp generator
- Summator
- Cable break detector with LED indicator
- Differential amplifier input

Suitable card holders are:

- VT 3002-1X see RE 29 916
- VT 1516-1X see RE 29 915
- VT 1700-1X see RE 29 917

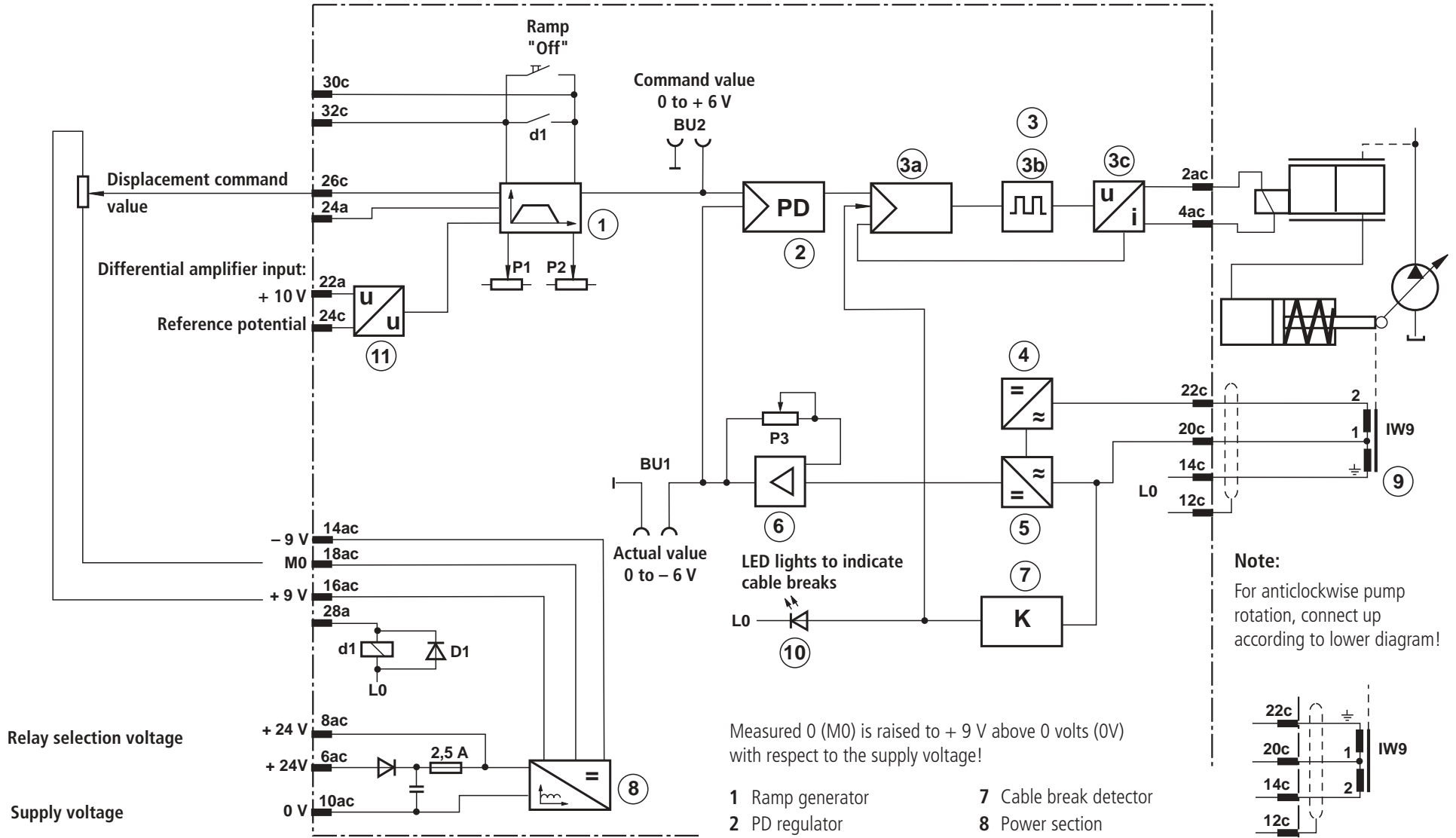


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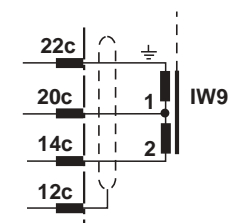
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Technical data (For applications outside these stated values, please consult us!)

Power supply Full bridge rectification 3-phase bridge rectification	U_{eff}:	24 V \pm 10 % 28 V to 35 V
Regulated voltage	U:	\pm 9 V with centre tapping
Max. load of regulated voltage	R:	\geq 500 Ω
Max. load resistance of selenoid	R:	12 Ω
Max. output current	I_{max}:	700 mA
Output current at rest	I:	approx. 400 mA
Power requirements	P:	20 VA
Oscillator frequency	f:	\sim 2,5 kHz
Frequency (output stage)	f:	250 Hz
Fuse	I_{f}:	2,5 Ampere M
Perm. ambient temperature	t:	0 to 50 $^{\circ}\text{C}$
Dimensions		100x160 mm EUROPA-Format to DIN 41 494
Space required	Conductor side Component side	1 division 7 divisions 1 div. \triangleq 5,08 mm
Weight	m:	0,15 kg



Note:
For anticlockwise pump rotation, connect up according to lower diagram!

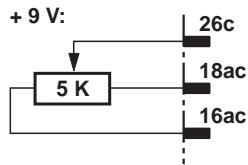


P1 = Ramp time "up" P3 = Gain
P2 = Ramp time "down" d1 = Relay selection

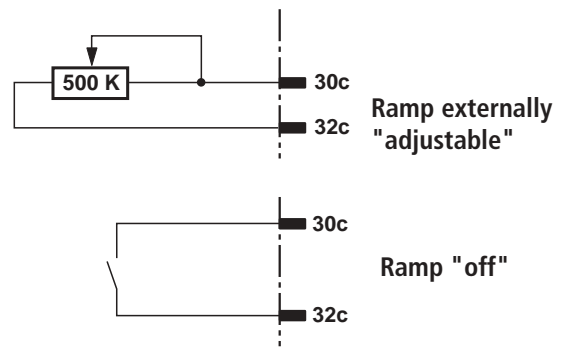
Measured 0 (M0) is raised to + 9 V above 0 volts (0V) with respect to the supply voltage!

- 1 Ramp generator
- 2 PD regulator
- 3 Pulsed output stage
- 4 Oscillator
- 5 De-modulator
- 6 Matching amplifier
- 7 Cable break detector
- 8 Power section
- 9 Positional transducer
- 10 Cable break LED
- 11 Differential amplifier

External command level potentiometer



External ramp time potentiometer



Note:

When using an external ramp time potentiometer in the internal ramp time potentiometer must be set to maximum!

Functional Description

Amplifier type VT 3056 S1X has 4 command level inputs referred to potential M0, and one differential amplifier input (terminals 22a and 24c).

One command level input may have a maximum voltage of + 9 V. The second command level input has a maximum voltage of + 6 V.

The + 9 V command level input can be connected directly to the measured voltage + 9 V of the power supply section (8), or via an external command level potentiometer.

If the command level voltage comes from an external source, the differential amplifier input (11) must be used. When using the differential amplifier input (11) it is important to ensure that the two signal lines are connected or separated simultaneously from the inputs when signalling the command level voltage.

The ramp generator (1) converts a stepped input signal into a slowly rising or falling output signal. The ramp generator forms a slowly rising or falling output signal from a stepped input signal. The rise and fall times (gradient) of the output signal is settable at potentiometers P1 and P2.

The ramp time can achieve a maximum value of 5 s over the full voltage range (from 0 to ± 6 V, measured at the command value test points). If a smaller command value that ± 9 V is applied to the input of the ramp generator (1), the ramp time will be shortened.

The output signal of the ramp generator (1) is passed to the PD regulator (2).

The oscillator (4) converts a DC signal voltage to an alternating voltage. This signal is then passed to the inductive positional transducer.

The positional transducer (9) alters the voltage level of this alternating voltage signal dependent upon the swivel angle of the pump. This alternating voltage signal is then reconverted into a DC signal in the demodulator (5).

The level of this DC voltage is proportional to the swivel angle.

The matching amplifier (6) can be used to vary this actual value. As the output signal of the matching amplifier (6) is the actual value of the PD regulator (2), the maximum stroke can be varied by means of potentiometer P3.

The PD regulator (2) and the pulsed output stage (3), which consists of current regulator (3a), pulsed generator (3b) and the power amplifier (3c), are specially matched to the axial piston unit.

Dependent on the difference between the command and actual value, the PD regulator send out a signal which controls the self pulsing output stages (3).

The cable break detector (7) monitors the leads to the inductive positional transducer (9) and should an error occur switches off both solenoids. Simultaneously, an LED (10) on the front plate of the amplifier indicates "cable break".

Ordering code

VT 5036	S	1X / R5		*
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32 pin edge connector to DIN 41 612 form D
(for installation in an Euro card magazine and card holder) = S

series 10 to 19
(10 to 19: installation details remain unchanged) = 1X

further details in clear text

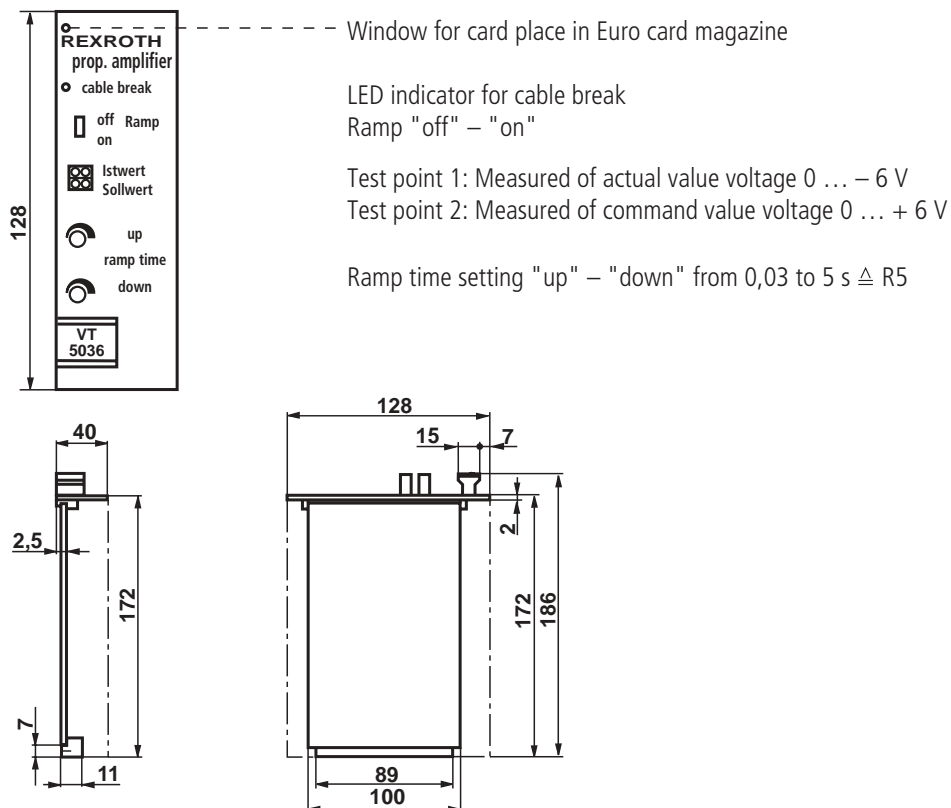
no code = German front plate
E = English front plate

R5 = ramp 5 s max.

Additional Information

- The amplifier may only be unplugged when switched off!
- Measurements to be made with a high resistance meter set on the voltage range!
- Measured (control) zero (M0) is raised + 9 V with respect to 0 V of the power supply!
- M0 may NOT be connected to 0 V at the power supply!
- The "earth" sign of the inductive positional transducer may NOT be connected to (0V) of the supply voltage!
- Radio transmitters may not be placed within 1 m of this card!
- Command level inputs may only be switched with contacts suitable for currents of > 1 mA!
- Screen all input lines. Leave one end of the screen open. Connect one end to 0 V of the supply line!
- Do not lay solenoid lines close to power lines!
- When using the internal relays, terminal 28c must be used as the power supply line!

Unit dimensions (Dimensions in mm)



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