

Command value and ramp card

RE 30289/07.12

1/6

Type VT-SWKA2-5-...

Component series 1X

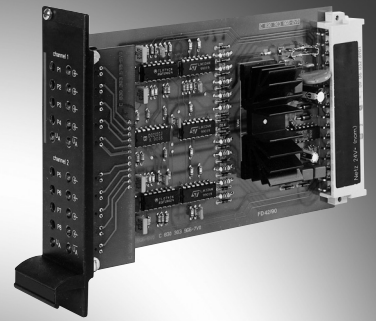


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5	Notice:
6	The photo is an example configuration.
6	The delivered product differs from the figure.

Features

Ordering code, accessories

VT-SWKA2-5

-1X/V0/

0

Command value and ramp card

0 =

No option

V0 =

Customer version
Catalog version

1X =

Component series 10 to 19
(10 to 19: Unchanged technical data
and pin assignment)

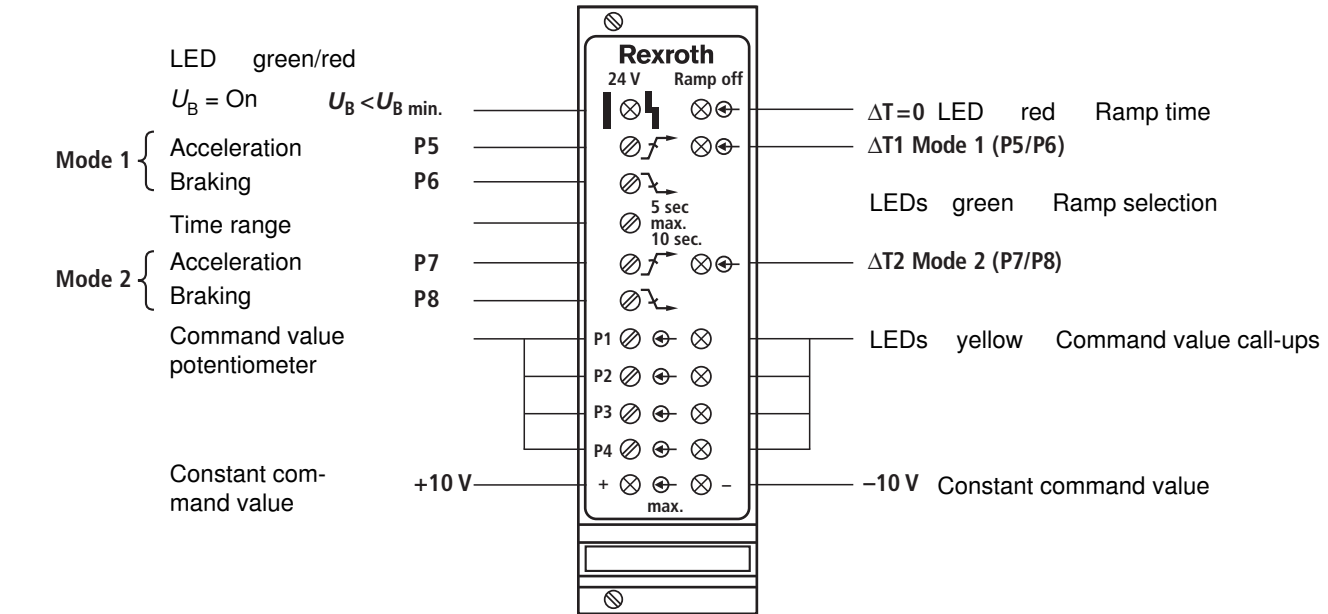
Preferred types

Amplifier type	Material number
VT-SWKA2-5-1X/V0/0	0811405094

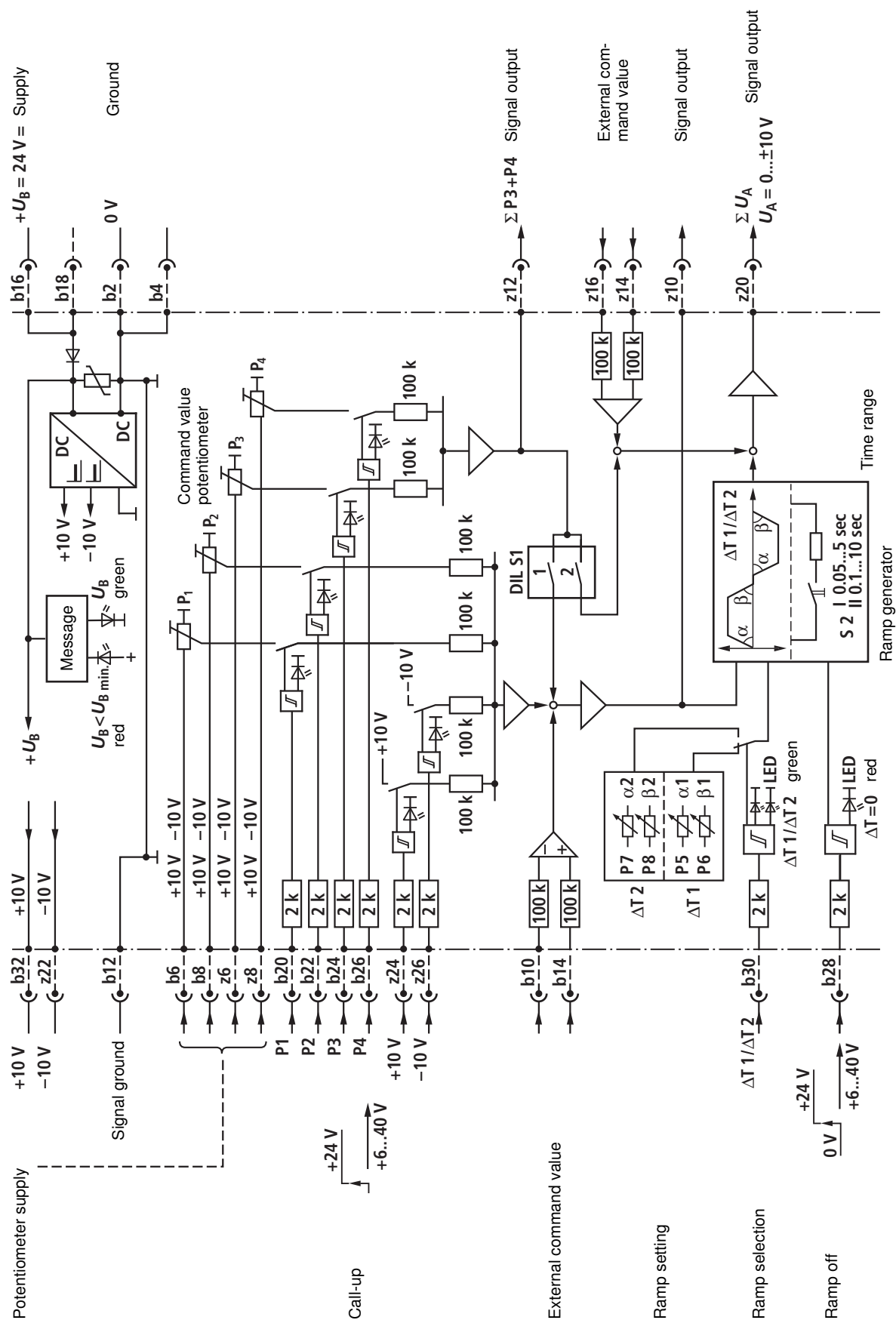
Suitable card holder:

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

Front plate



Block diagram with pin assignment



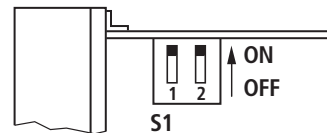
Technical data (For applications outside these parameters, please consult us!)

Supply voltage U_B at b16 – b18 and b2 – b4	Nominal 24 V = Battery voltage 21...40 V, Rectified alternating voltage $U_{eff} = 21...28$ V (one-phase, full-wave rectifier)
Max. current consumption	mA 350
Command value preparation	– 2 internal, fixed command values: +10 V and –10 V, can be called via digital signals (+24 V) at z24 and z26 (e.g. use as input command values) – 4 internal, variable command values: Adjustable via potentiometers P1...P4 on the front plate Supply from internal, stabilized voltage source b32 = +10 V and/or z22 = –10 V (can in each case be loaded with 100 mA) Command value call-up via digital signals (+24 V) at the terminals b20, b22, b24 and b26 – 1 input for external command value specification: Designed as differential amplifier Input voltage 0...±10 V at terminals b10 and b14 Input impedance $R_i = 100$ kΩ – 1 input for external command value specification: Designed as differential amplifier Input voltage 0...±10 V at terminals z14 and z16 Input impedance $R_i = 100$ kΩ Additional command value input without ramp function, can be added to the ramp command value as bypass signal
Ramp generation	– Selection of two ramp time ranges $t_1 = 0.05...5$ s, $t_2 = 0.1...10$ s – Separate ramps which can be adjusted at potentiometers for acceleration α_1, α_2 (P5 and P7) and braking β_1, β_2 (P6 and P8) – Selection of two ramp time combinations α_1, β_1 or α_2, β_2. Selection via digital signal (+24 V) at terminal b30 High level (+24 V) $\triangleq \alpha_2, \beta_2$ (P7/P8), low level (0 V) and/or open input $\triangleq \alpha_1, \beta_1$ (P5/P6) – Automatic quadrant recognition of the ramps for positive and negative command values – "Ramps Off" control with digital signal (+24 V) at b28 High level (+24 V) $\triangleq$ ramp Off, low level (0 V) and/or open input $\triangleq$ with ramps
Signal outputs	– Main output (z20), signal ground (b12) – Additional output (z12) total command value from P3 and P4 without ramp control, see block diagram – Additional output (z10) total command value without ramp control. Is formed from Σ P1...P4 and external command value b10/b14. Can be measured as input signal for ramp generator – Every output can be loaded with 10 mA (load = 10 kΩ)
Digital inputs (control inputs)	– Signal voltage $U_E = +6...+40$ V, $U_{E\text{ nom.}} = +24$ V High signal $\geq +6$ V, low signal $\leq +6$ V Input impedance $R_i = 2$ kΩ (input current approx. 10...15 mA)
Displays/messages (see page 2)	– LED displays for active command values P1...P4 and/or fixed command values +10 V and –10 V – LED display for ramp combination (α_1, β_1) or (α_2, β_2) – LED display with "Ramp Off" mode – LED operating messages with 2-color LED green: Operating voltage $U_B = \text{On}$ red: Operating voltage too small
Format of the printed circuit board	mm (100 x 160 x ca. 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 0.33 kg

Applications

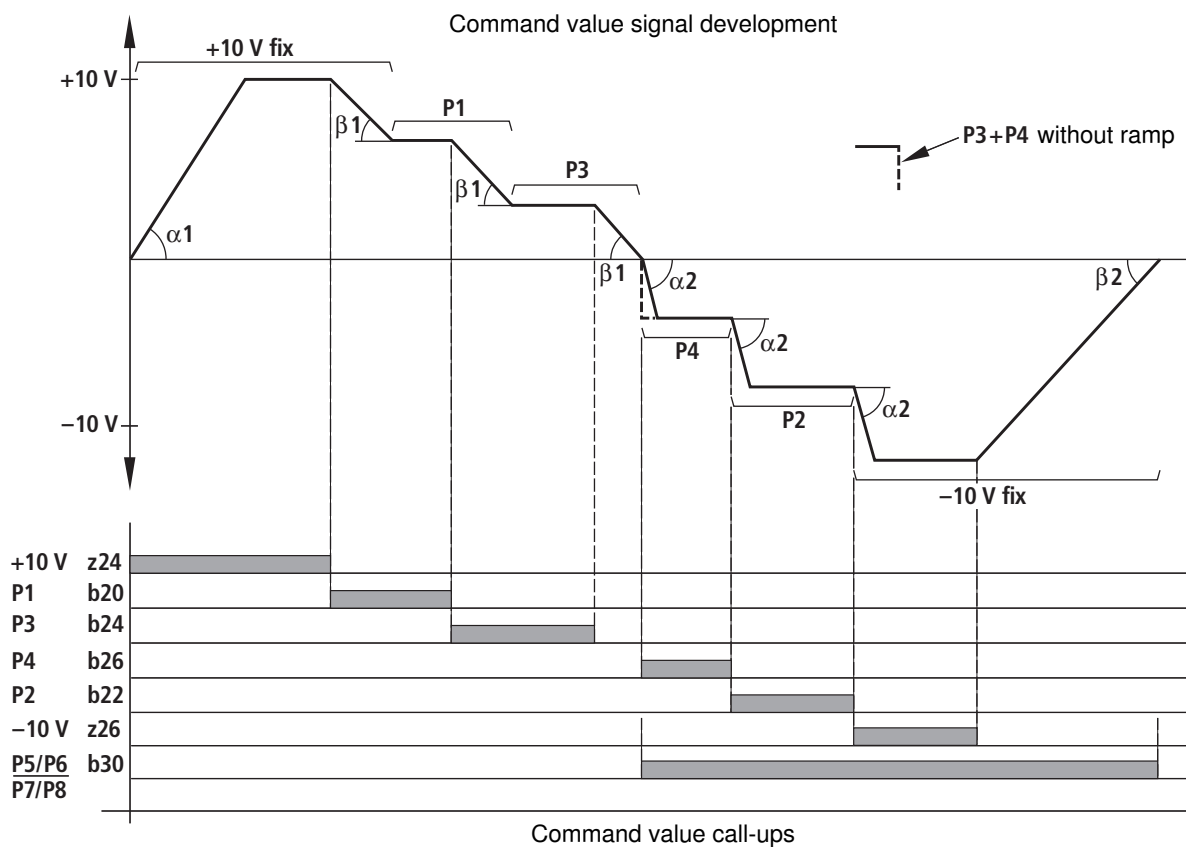
1. Preparation and call-up of signal voltages $U_E = 0...±10\text{ V}$.
2. Generation of voltage ramps
 $t = 0.05...10\text{ s}$ via potentiometer settings on the front side.
3. By means of the DIL switch S1, the command values P3/P4 can be connected with or without ramp function.

DIL S1. __		Ramp
.1	.2	.P3/P4
1	0	↗ EIN/ON
0	1	↘ AUS/OFF

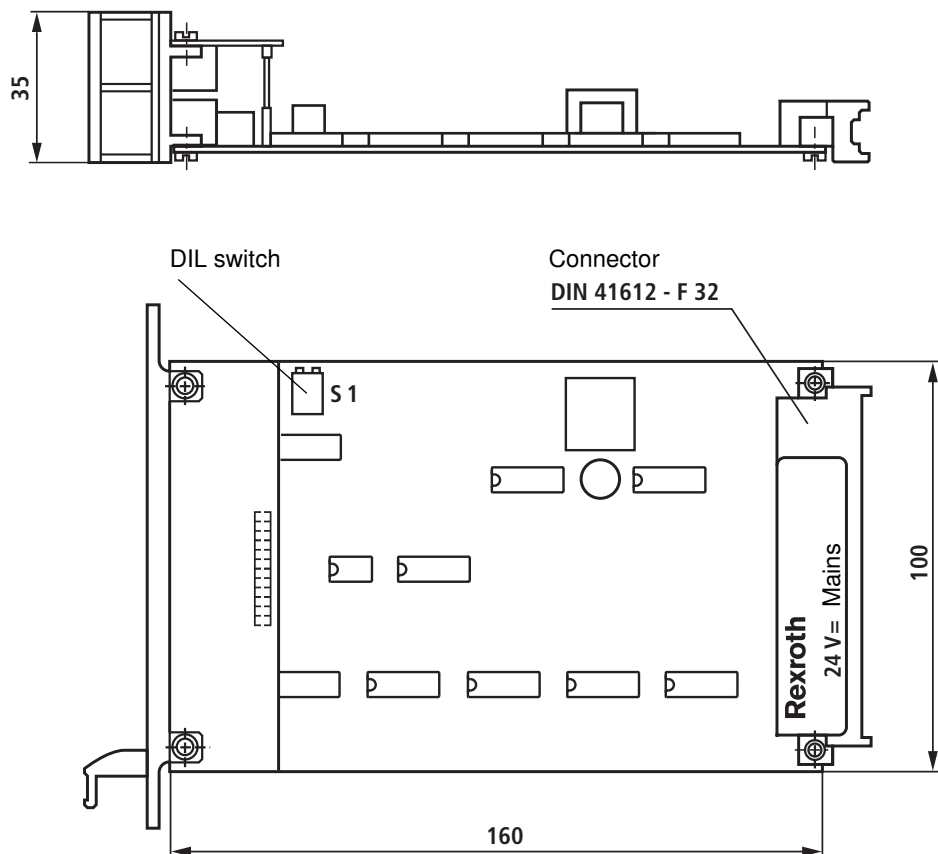


Command value run program

Example



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.

Notes

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Notes
