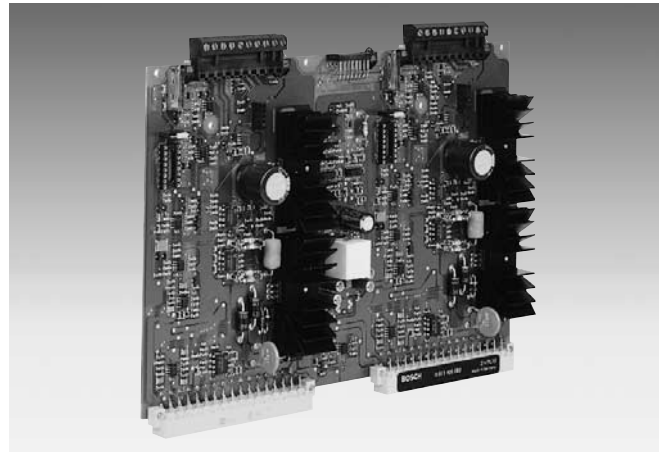


RE 30 049/11.02

Electric amplifiers
Type VT-KRRA2

Series 2X



Type VT-KRRA2

List of contents**Contents**

Features	
Ordering data	
Preferred types	
Function	
Block diagram	
Technical data	
Device dimensions	
Double connector block	

Page

1
2
2
2
3
4
5
6

Features

- Suitable for actuating directly operated servo solenoid valves (type 4WRPH, series 2X)
- Double card for simultaneous operation of two NG 6/NG 10 servo solenoid valves
- Output stage with closed-loop control
- Enabling input
- Short-circuit-proof outputs
- Adjustment possibilities: valve zero
- Open-circuit detection for feedback signal cable



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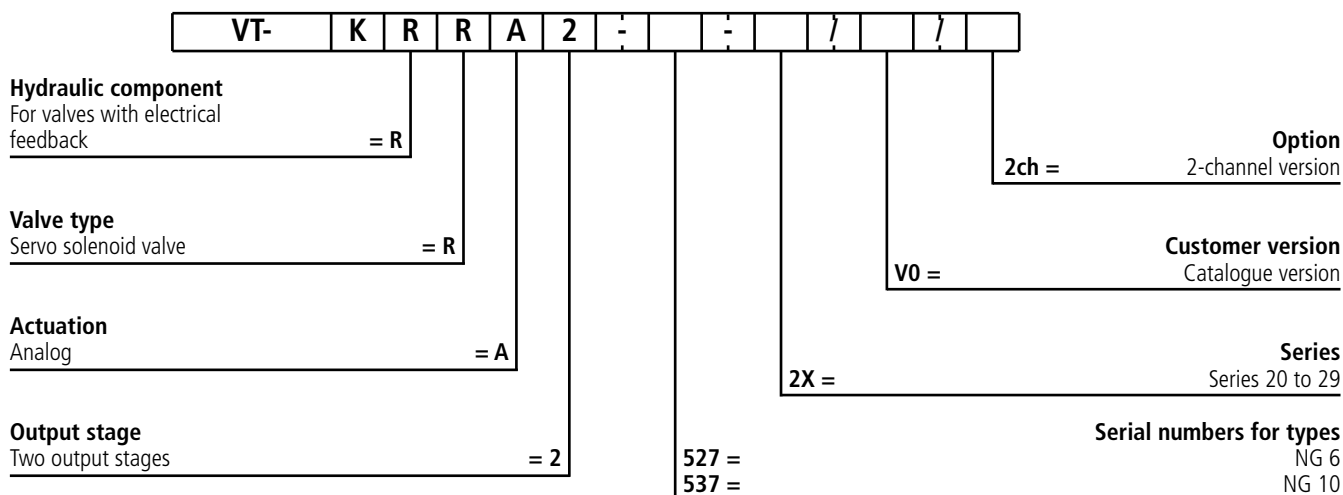
by Bosch Rexroth AG, Industrial Hydraulics, D-97813 Lohr am Main

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We must reserve the right to make changes on the grounds of continual product development. No liability can be accepted for incomplete or inaccurate information.

Ordering data



Preferred types (available at short notice)

Material no.	Type VT-KRRA2	For valve types
0 811 405 083	VT-KRRA2-527-20/V0/2ch	4WRPH 6 ... L-2X
0 811 405 082	VT-KRRA2-537-20/V0	4WRPH 10 ... L-2X

Function

Applications

Synchronous running in presses and forming machines, 2-axis control systems in machine tools.

Plug connectors

- 2 x DIN 41 612, 32-pin for low-power signals (setpoint, enable, etc.).
- Screw-type plug connectors to the valve and for power supply on front (ST 4, 5 and ST 9, 10) supplied.

Measurement taps

IC sockets on front for checking measurements and for inputting signals.

Displays

For open circuit, enable and undervoltage.

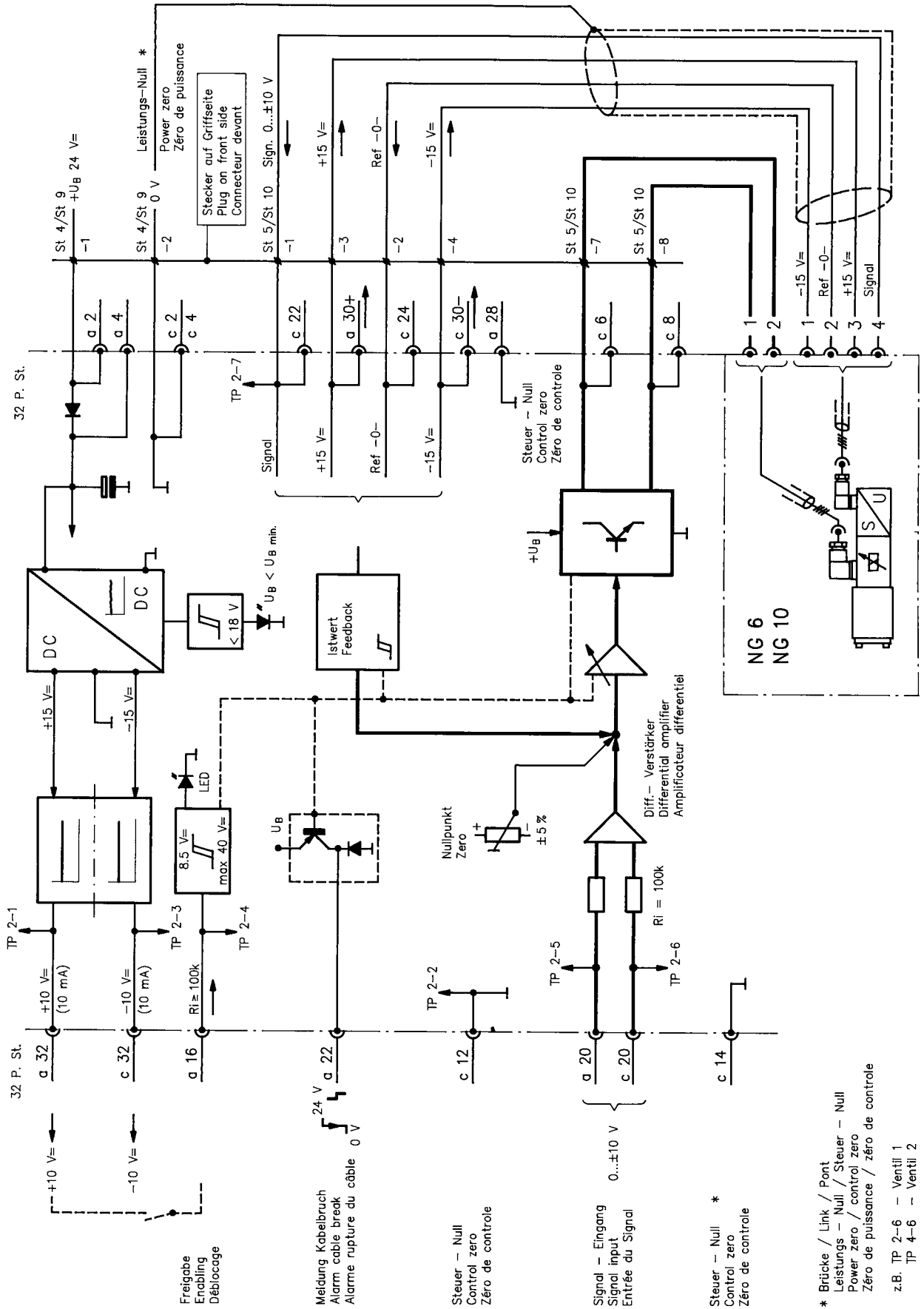
DC voltage regulation (DC/DC converter)

For supplying power to setpoint generators and position transducers and internal common supply for both channels.

Guide frame

The double connector block 1 834 486 002 (see page 6) is suitable for this P.C.B.

Block diagram with terminal assignment



Technical data (For device applications beyond the stated values, please consult us!)

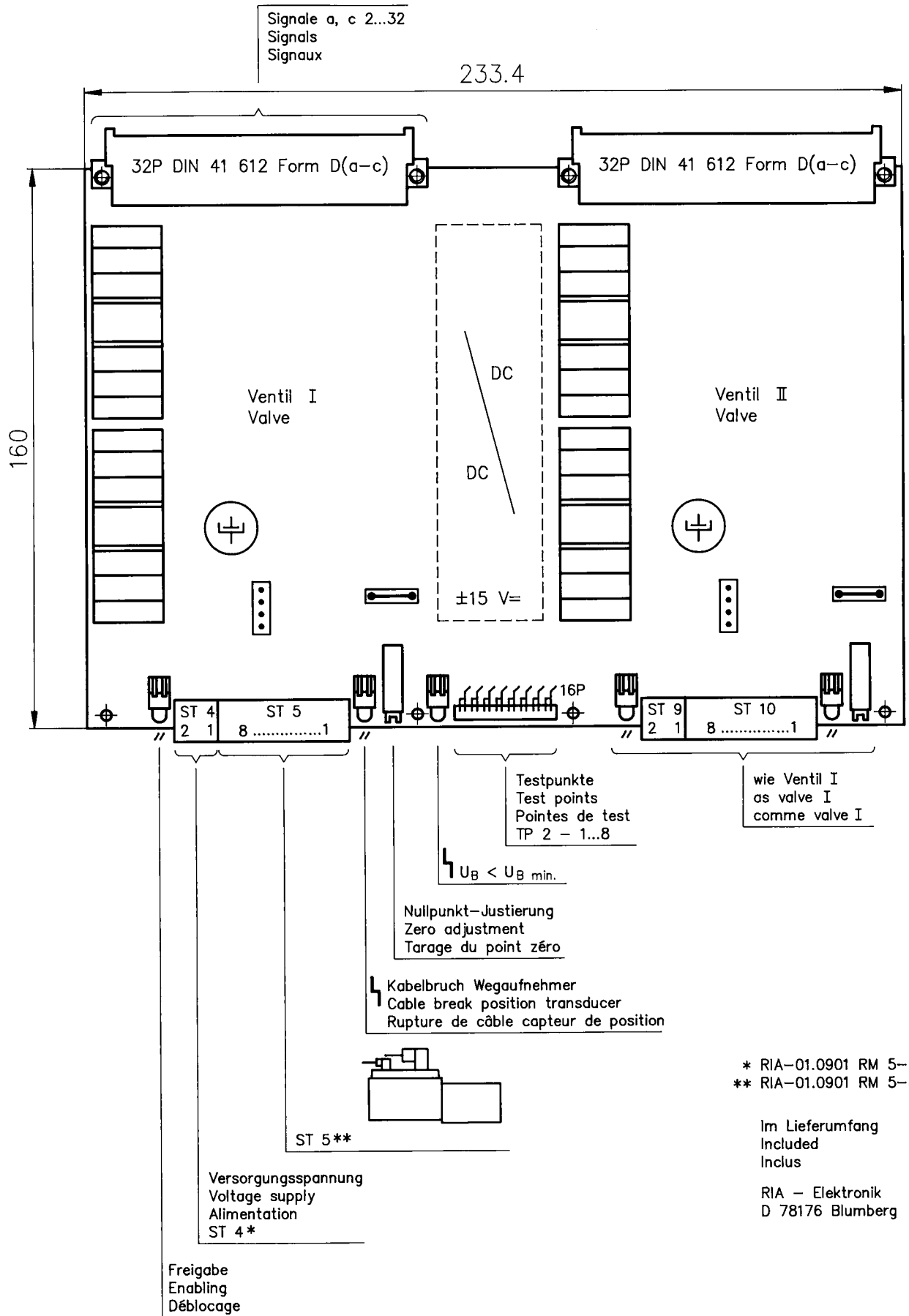
P.C.B. format		(233.4 x 160 x 30) mm (W x L x H), Europe double format
Plug connector	Signals	DIN 41 612, type D (a–c)
	Valve and supply	Screw-type plug connector on front
Ambient temperature		0 °C ... +70 °C Storage temperature min. –20 °C; max. +70 °C
Power supply U_B to ST 4 and ST 9		24 V DC nominal, Battery voltage: 21 ... 40 V, Rectified AC voltage $U_{\text{eff}} = 21 ... 28$ V (single-phase, full-wave rectification)
Undervoltage $U_B < 18$ V		LED (red) on front lights up
Current rating of P.C.B.	VT-KRRA2-527	1.5 A max. per valve, the current rating can increase to 2.5 A at min. U_B and long cable length
	VT-KRRA2-537	2.7 A max. per valve, the current rating can increase to 3.5 A at min. U_B and long cable length
Power consumption of solenoid	VT-KRRA2-527	Max. 35 VA, nominal, per valve
	VT-KRRA2-537	Max. 50 VA, nominal, per valve
Smoothing capacitor		4,700 μ F/63 V DC required if $U_B >$ ripple 10 %
Setpoint to a20/c20		0 ... ± 10 V; $R_i = 100$ k Ω (difference amplifier), overload capacity $< \pm 20$ V
Signal source		External electronic control system, reference ± 10 V from b 32, z 32
Output stage enable		To a16 $U = 8.5 ... 40$ V; $R_i = 100$ k Ω , LED (green) on front lights up
Position transducer at ST 5 and ST 10	Supply	Terminal 4: –15 V/200 mA, short-circuit-proof
	Supply	Terminal 3: +15 V/200 mA, short-circuit-proof
	Signal	Terminal 1: 0 ... ± 10 V; $R_L \geq 10$ k Ω
Reference voltage for external electronics		c32: –10 V/10 mA, short-circuit-proof
		a32: +10 V/10 mA, short-circuit-proof
Solenoid current	VT-KRRA2-527	Max. 2.9 A
	VT-KRRA2-537	Max. 3.7 A
Open circuit fault signal a22		Fault: 0 V, no fault: 24 V, max. 100 mA L: LED (yellow) on front lights up
Amplifier to valve cables		Solenoid cable: 0 ... 20 mm \varnothing 1.5 mm ² 0 ... 50 mm \varnothing 2.5 mm ²
		Position transducer: 4 x 0.5 mm ² (screened)

Note

Power zero and control zero c14/c12 must be bridged. If their distance to the power supply is < 1 m, connect directly to DIN plug at c2/c4. Where greater distances are involved, connect control system separately to ground. Connect power supply to connectors ST 4 and ST 9.

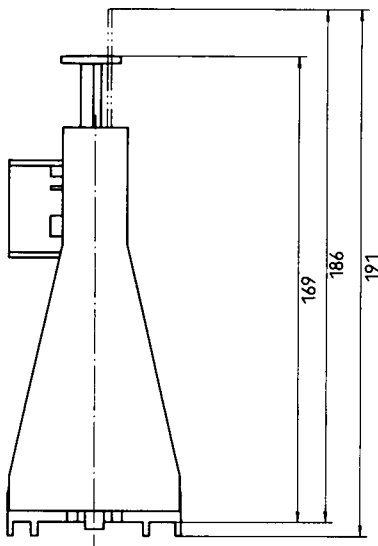
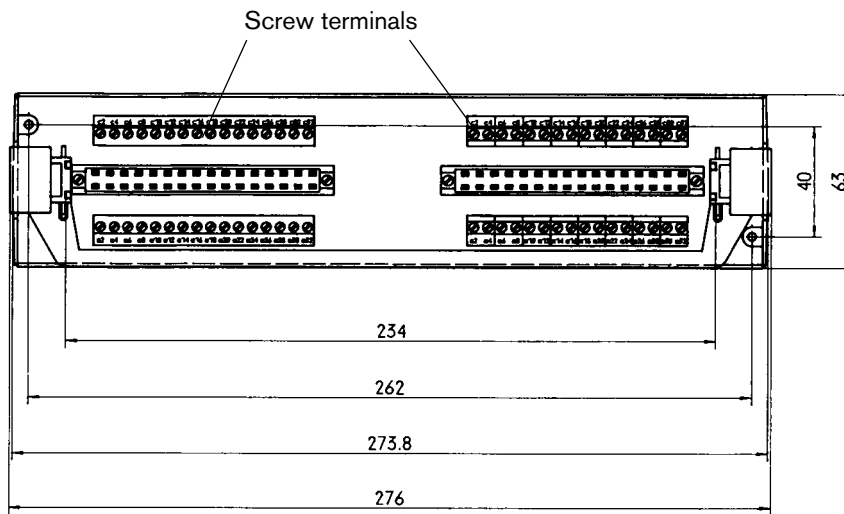
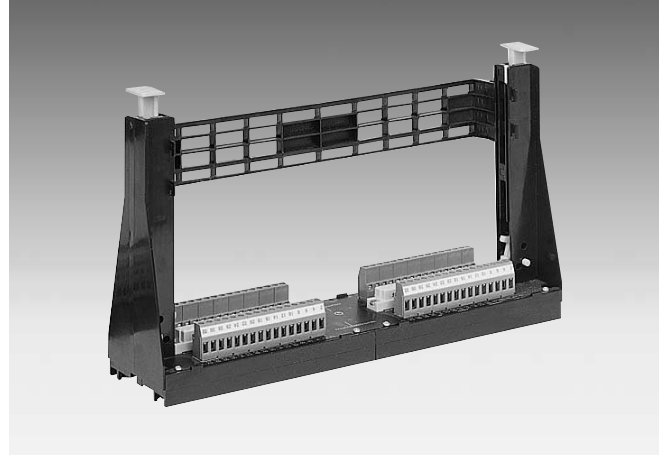
Adjustment

Zero adjustment via trimming potentiometer.



Double connector block

DIN 41 612-D32 (a-c)



Application	[kg]	Material no.
For P.C.B.'s in Europe double format, with 2 x connector strips	0.5	1 834 486 002

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