

10/68-2.75 EN



d0121rxa

- Electrical actuator for continuous positioning or step control
- Stallproof without the need of position or torque dependent switch-off
- Three-phase induction motor
- Robust gearing with high mechanical efficiency
- Internal rotary - linear conversion
- Hand wheel for emergency operation
- Sensors for position and temperature integrated
- Signal and power input only via separate micro processor controlled power electronics
- Voltage supply AC 115 V or AC 230 V only via power electronics

### Application

Compact actuator for the operation of final control elements with preferably linear movement. The actuator thrust rod transfers the force directly to the final control element.

A special power electronics controls the actuator. It is the interface between actuator and control system.

### Positioning:

During continuous positioning the power electronic unit varies the motor torque steplessly until the actuator force and the restoring process forces are balanced. High response sensitivity and high positioning accuracy with short positioning time ensure an excellent control quality and a long actuator life.

**Technical Data**

**Actuator**

Type	RSD 10-5,0	RSD 10-10,0	RSD 20-5,0	RSD 20-7,5
Rated force	10 kN (adjustable to 0.5; 0.75 or 1 x rated force)		20 kN (adjustable to 0.5; 0.75 or 1 x rated force)	
Starting force	1.2 x rated force (break-away force in end positions for a short time 2 x rated force)			
Rated speed [mm/s]; adjustable	0.1 ... 5.0	0.1 ... 10.0	0.1 ... 5.0	0.1 ... 7.5
Stroke	min.: 0 ... 15 mm / max. 0 ... 100 mm or min. 0 ... 50 mm / max. 0 ... 300 mm			
Weight (100 mm stroke) Weight (300 mm stroke)	approx. 57 kg approx. 82 kg			approx. 60 kg approx. 85 kg
Electronics	for field installation: type EBN 853 <sup>1)</sup> for rack installation: type EBS 852 <sup>1)</sup>			
Motor type	MCS 71 BA			MCS 80 BA
Sensors	position transmitter and temperature sensor always available			

<sup>1)</sup> data sheet EBN 853: 10/68-8.27  
data sheet EBS 852: 10/68-8.24

**General Data**

	RSD 10... / RSD 20...
Operation mode	S9 - stall proof acc. to DIN IEC 2/915/CDV
Protection class	IP 66
Humidity	≤ 95% average; (condensation not permitted)
Ambient temperature	-10° C ... +65° C or -30° C ... +50° C (optionally)
Mounting position	any position; preferably IMV 1; IMV 3; IMB 5 acc. to DIN IEC 34 ; other positions on request
Coating	2 component epoxy-resin paint (RAL 9005, black)
Anti condensation heater (optionally)	motor: energy supply directly from Contrac electronic unit signal hood: separate heating resistor; energy supply from Contrac electronic unit
Electrical connection	plug with crimp snap-in contacts or terminals connecting cable electronics - actuator optionally (see ordering information of electronics)
Voltage supply for motor and sensors	only via special electronics (see data sheet of electronics)

Plug, 24-pole, at actuator:

	Crimp contacts	Terminals (Option)
cable gauge:	motor, heater: 1.5 mm <sup>2</sup> signal: 0.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
contact surface	gold plated	motor, signal: gold plated heater: silver plated

Thread for cable gland

Tapped hole	Optional adapter*	
M20 x 1.5 (2x)	PG 16 (2x)	NPT 1/2" (2x)
M25 x 1.5 (1x)	PG 21 (1x)	NPT 3/4" (1x)

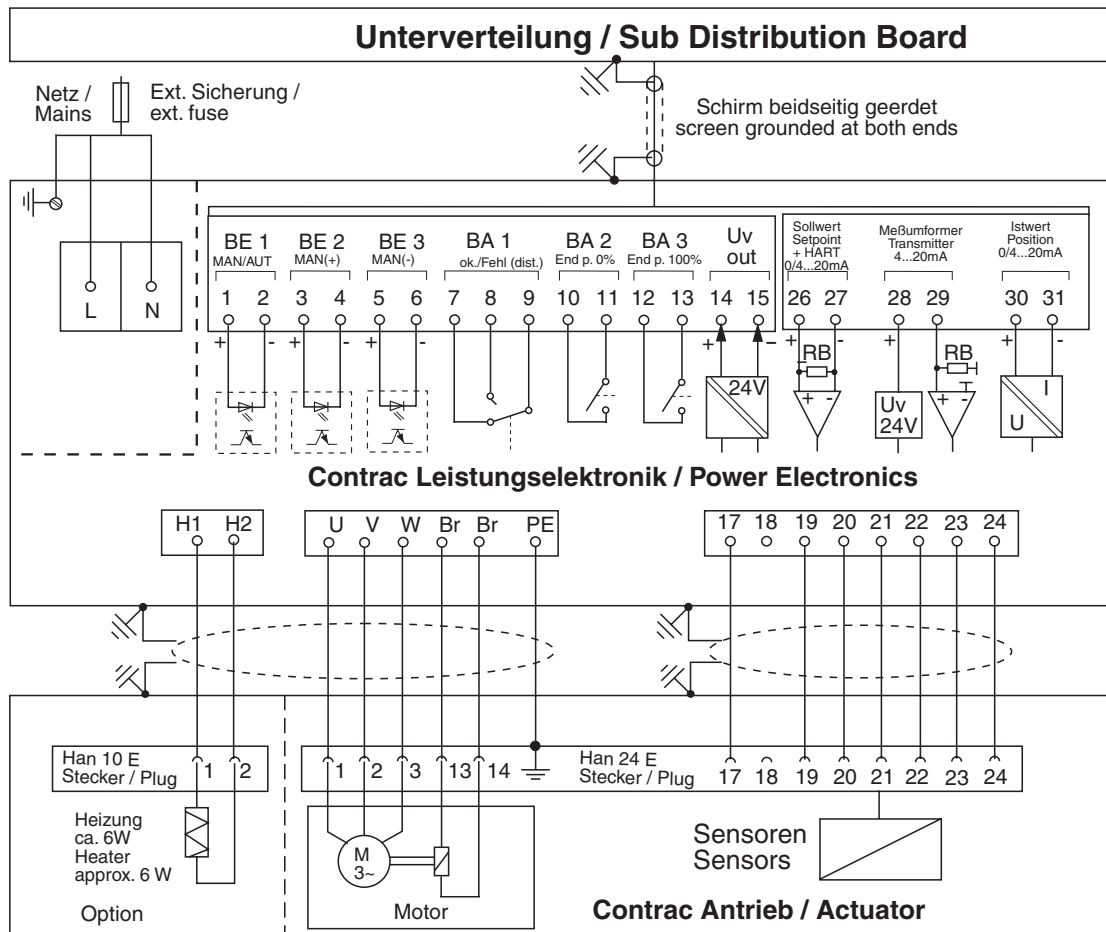
\*Adapters for PG or NPT only available if additionally ordered.

**Technical Data**

**Electrical connection RSD 10 / RSD 20**

The electrical connection is done via a plug at the actuator and via terminals at the electronics.  
 Electrical connection: standard; analogue / binary

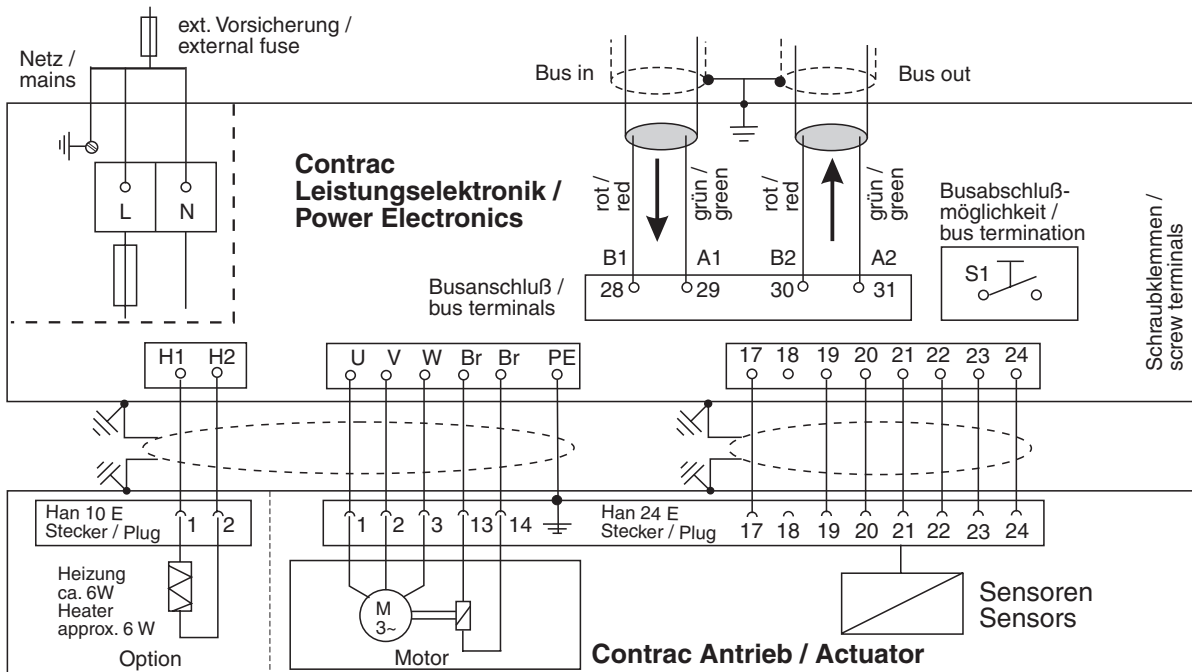
one-sided screening  
 in following wiring possible



r00009x1

**Technical Data**

Electrical connection: Option Profibus DP (not for electronics EBS ...)



r00010x1

**Order Information**

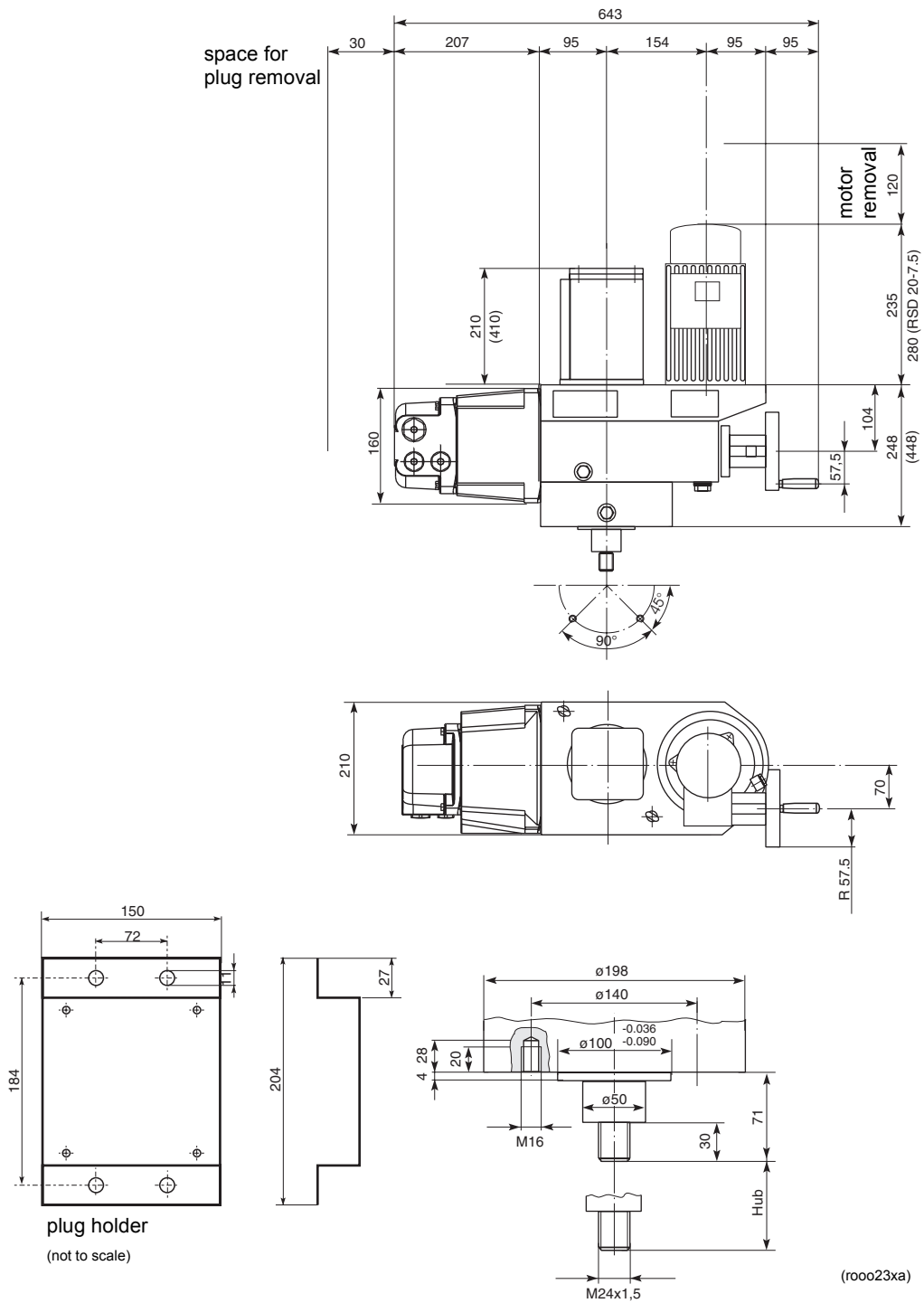
		Catalog No.			
<b>RSD 10-5,0</b> Rated stroke 100 mm Rated stroke 300 mm Rated force 10 kN (adjustable to 50%/75%/100%) Rated speed 5.0 mm/s (adjustable to 5.0 ... 0.1 mm/s)		<b>V68632</b>	1210 1610		
<b>RSD 10-10,0</b> Rated stroke 100 mm Rated stroke 300 mm Rated force 10 kN (adjustable to 50%/75%/100%) Rated speed 10.0 mm/s (adjustable to 10.0 ... 0.1 mm/s)		<b>V68632</b>	1211 1611		
<b>RSD 20-5,0</b> Rated stroke 100 mm Rated stroke 300 mm Rated force 20 kN (adjustable to 50%/75%/100%) Rated speed 5.0 mm/s (adjustable to 5.0 ... 0.1 mm/s)		<b>V68642</b>	1212 1612		
<b>RSD 20-7,5</b> Rated stroke 100 mm Rated stroke 300 mm Rated force 20 kN (adjustable to 50%/75%/100%) Rated speed 7.5 mm/s (adjustable to 7.5 ... 0.1 mm/s)		<b>V68642</b>	1213 1613		
			Code		
<b>Special actuator features</b> Select at least one feature					
Electrical connection	plug (24-pole) compl., crimped		277		
	plug (24-pole) compl., terminals		278		
	plug bottom part; covered <sup>1)</sup>		279		
Ambient temperature	-10°C ... +65°C		344		
	-30°C ... +50°C		341		
<b>Additional actuator features</b> (selection not necessarily required)					
Electrical connection thread	Set NPT adapter (joint metric / NPT thread)		680		
	Set PG adapter (joint metric / PG thread)		681		
Anti condensation heater			360		
Identification on data label	(alphanumeric; max. 32 characters)		294		
Accessories	cover for male plug (24 pole)		337		
Accessories	plug holder		338		
Factory certificate 2.1 acc. to EN 10204			291		
Certificate B acc. to EN 10202			292		
Assembly with valve at ABB	(order and piece no. of valve required)		481		
Manual (give total quantity)					
German (no remark for 1 copy)			Z2D		
English (code no. always required)			Z2E		

<sup>1)</sup> female plug with cables to be ordered with electronic unit

**Attention!** Electronic unit to be ordered separately!

Dimensions

Linear Actuators RSD 10 / RSD 20





---

**ABB Ltd.**

Salterbeck Trading Estate  
Workington, Cumbria  
CA14 5DS  
UK  
Tel. +44 (0)1946 830 611  
Fax. +44 (0)1946 830 611  
<http://www.abb.com>

**ABB Inc.**

125 E. County Line Road  
Warminster, PA 18974  
USA  
Tel. +1 215 674 6000  
Fax +1 215 674 7183  
<http://www.abb.com>

**ABB Automation Products GmbH**

Schillerstraße 72  
D - 32425 Minden  
DEUTSCHLAND  
Tel. +49 571 830 - 1494  
Fax +49 571 830 - 1860  
<http://www.abb.de>

Subject to technical changes  
Printed in the Fed. Rep. of Germany  
10/68-2.75 EN 06. 02