

Electrical Part-Turn Actuator RHD8000 (Contract)

For continuous positioning,
rated torque 8000 Nm

- Electrical actuator for continuous positioning or step control
- Stall proof without the need of position or torque dependent switch-off
- Three-phase induction motor
- Robust gearing with high mechanical efficiency
- Adjustable mechanical limit stops for defined operating range
- Hand wheel for emergency operation
- Sensors for position and temperature integrated
- Signal and power input only via micro processor controlled power electronics
- Voltage supply AC 115 V or AC 230 V only via power electronics



The concept

Compact actuator for the operation of final control elements with preferably 90° rotary movement such as flaps, cocks etc. The torque is transferred via a lever / linkage bar assembly.

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

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	RHD8000-12	RHD8000-80
Rated torque [Nm]	8000 (0.5; 0.75 or 1x rated torque adjustable)	
Starting torque	1.2 x rated torque (break-away torque in end positions for a short time 2 x rated torque)	
Rated time for 90° (rated speed)	12 s... 900 s (rapid-traverse mode with servo motor: max. 10s/90°)	80 s... 900 s
Operating speed; adjustable	7.5°/s...0.1°/s (rapid-traverse mode with servo motor: max. 9°/s)	1.125°/s...0.1°/s
Operating angle	typically 90 ° (min. 35°; max. 270°); see instructions for limited operating angle if the actuator is equipped with lever and limit stop	
Weight; approx.	710 kg	725 kg
Associated electronic unit For field installation For rack installation	EBN861 ¹⁾ EBS862 ¹⁾	EBN853 ¹⁾ EBS852 ¹⁾
Motor	MC 112 BA	MC 90 BA
Sensors	Position transmitter and temperature sensor always available	

¹⁾ data sheet EBN853: 10/68-8.27
¹⁾ data sheet EBS852: 10/68-8.24

¹⁾ data sheet EBN861: 10/68-8.22
¹⁾ data sheet EBS862: 10/68-8.25

General data

	RHD8000
Operating 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 -25° C... +55° C
Mounting position	any position; preferably IMB 3 acc. to IEC 34
Coating	2 component epoxy (RAL 9005; black)
Anti condensation heater	optionally (supplied by electronic unit)
Power supply for motor and sensors	only via Contrac electronic unit (see data sheet of the electronic unit)
Electrical connection	plug with crimp snap-in contacts or terminals connecting cable electronics - actuator optionally (see ordering information of electronics)

Plug 24-pole at actuator

	Crimp pins	Terminals (Option)
cable gauge:	motor, heater: 1.5 mm ² signals: 0.5 mm ²	2.5 mm ²
contact surface	gold plated	motor, signals: gold plated heater: silver plated

Tapped holes for cable glands

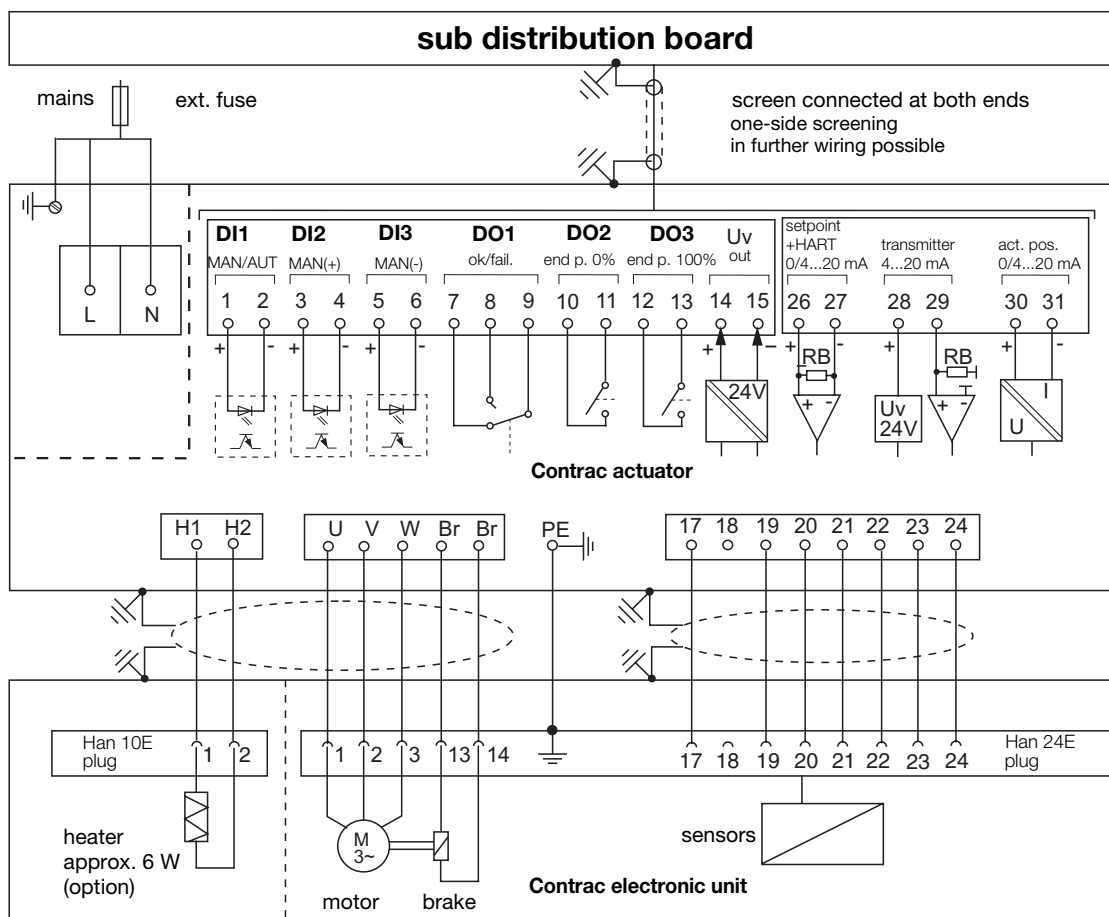
tapped holes for cables	optional adapters*	
M20 x 1.5 (2x)	PG 16 (2x)	NPT 1/2" (2x)
M25 x 1.5 (1x)	PG 21 (1x)	NPT 3/4" (1x)

* adapter for PG or NPT thread only available if additionally ordered

Electrical connection RHD 8000

Electrical connection: Standard; analog, digital

The electrical connection is done via a plug at the actuator and via terminals at the electronics



r00350x1

For further information about electronic units for mounting rack see instruction 42-68-821 and data sheet 10/68-8.23.

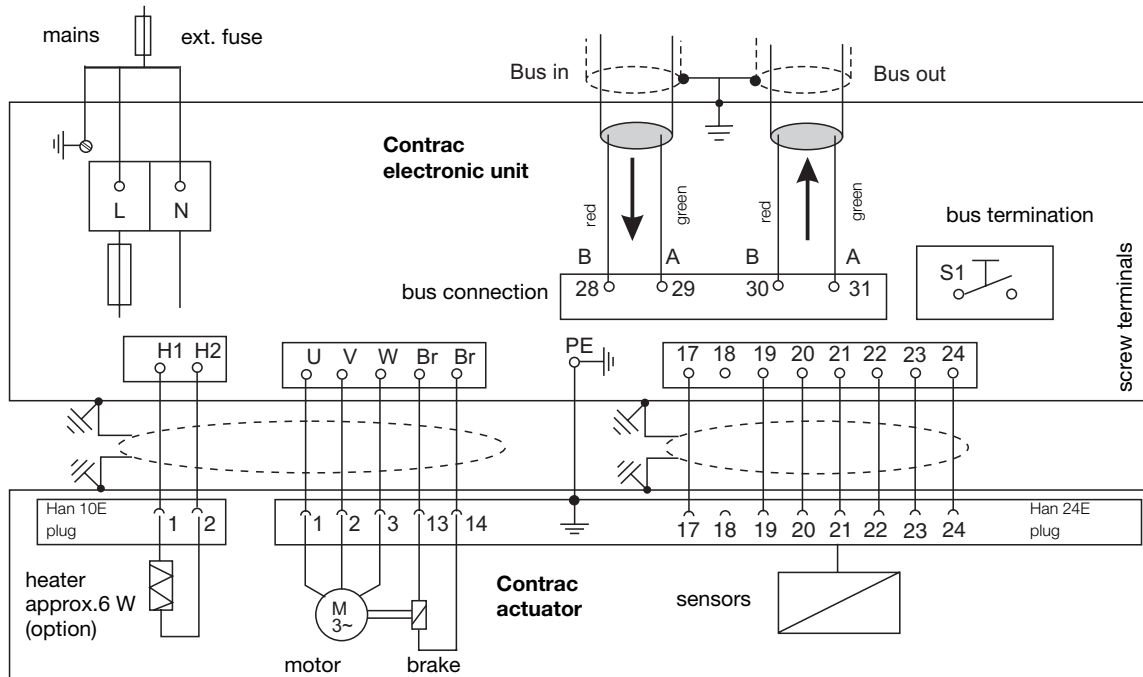
Electrical Part-Turn Actuator RHD8000 (Contrac)

For continuous positioning, rated torque 8000 Nm

10/68-1.61 EN

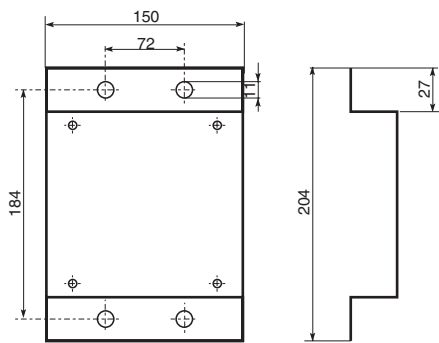
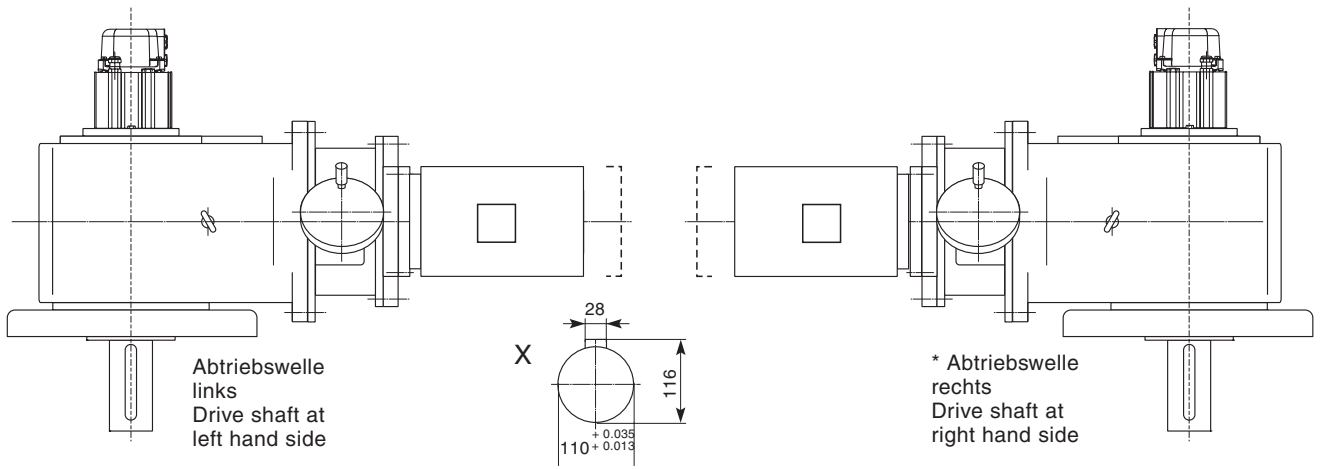
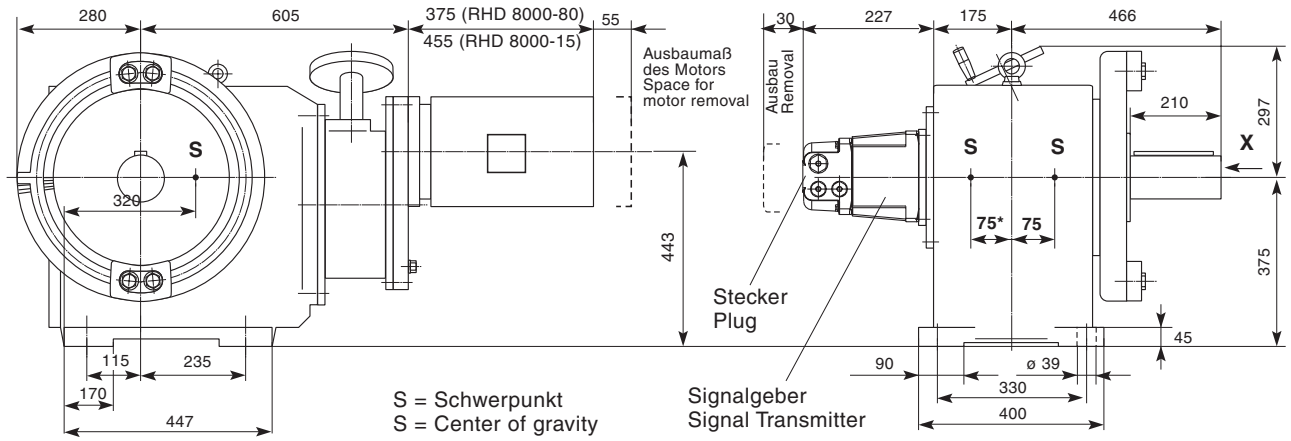
Electrical connection: PROFIBUS DP

The electrical connection is done via a plug at the actuator and via terminals at the electronics



r00010x1

Dimensions (Actuator)



r00235x2

ABB has Sales & Customer Support expertise in over 100 countries worldwide.

www.abb.com/instrumentation

The Company's policy is one of continuous product improvement and the right is reserved to modify the information contained herein without notice.

Printed in the Fed. Rep. of Germany (11.05)

© ABB 2005



ABB Ltd.

Salterbeck Trading Estate
Workington, Cumbria
CA14 5DS
UK
Tel: +44 (0)1946 830 611
Fax: +44 (0)1946 832 661

ABB Inc.

125 E. County Line Road
Warminster, PA 18974
USA
Tel: +1 215 674 6000
Fax: +1 215 674 7183

ABB Automation Products GmbH

Schillerstr. 72
32425 Minden
Germany
Tel: +49 551 905-534
Fax: +49 551 905-555
CCC-support.deapr@de.abb.com