

- Micro processor controlled power electronic unit with integrated frequency converter
- Voltage supply AC 115 V or AC 230 V
- Conventional signal interface (0/4 ... 20 mA / 24 V)
- Digital communication via RS 232 and HART
- PROFIBUS DP
- Additional functions such as process controller, maintenance computer, programmable characteristics
- Housing with high protection class IP 66
- Torque and speed variation
- Continuous positioning
- Simple installation and commissioning
- Simple configuration and parameter setting via graphical user interface
- High response sensitivity
- Reliable at short positioning time



The concept

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 positioning accuracy ensure an excellent control quality and a long actuator life.

Technical data

Supply voltage (Standard actuators)	AC 115 V (94 V ... 130 V) or AC 230 V (190 V ... 260 V); 47.5 ... 63 Hz; 1Ph		
Supply voltage (Ex - actuators)	AC 115 V (94 V ... 127 V) or AC 230 V (190 V ... 253V); 47.5 ... 63 Hz; 1Ph		
Current at electronic unit [A] (AC 115 V / AC 230 V)		$I_{max.}$ (115 V)	$I_{max.}$ (230 V)
	RHD(E)250	1.8 A	0.9 A
	RHD(E)500-10	2.2 A	1.1 A
	RHD(E)800-10	5.0 A	2.5 A
	RHD(E)1250-12	5.0 A	2.5 A
	RHD(E)2500-25	5.0 A	2.5 A
	RHD(E)4000-40	5.8 A	2.7 A
	RHD(E)8000-80	5.0 A	2.5 A
	RSD(E)10-5,5	2.2 A	1.1 A
	RSD(E)10-10,0	3.6 A	1.8 A
	RSD(E)20-5,0	3.6 A	1.8 A
	RSD(E)20-7,5	4.8 A	2.4 A
	RSD(E)50-3,0	5.0 A	2.5 A
	RSD(E)100-1,5	5.0 A	2.5 A
	RSD200-0,7	5.0 A	2.5 A
		$I_{pos.}$ (115 V + 230 V) approx. 40 ... 50% of $I_{max.}$	
External fuse	16 A; slow		
Analogue input*	0 / 4 ... 20 mA		
Analogue output*	0 / 4 ... 20 mA, galvanically isolated		
3 digital input*, BE1 ... BE3	digital 0: -3V ... + 5 V or open, galvanically isolated digital 1: +12 V ...+ 35 V, galvanically isolated		
3 digital output *, BA1 ... BA3	relay contact potential free, max. 60 V; 150 mA		
Digital communication	RS 232 for commissioning and service, optionally FSK / HART® or PROFIBUS DP		
Standard settings	behaviour in 0/100% end position:	keeps position with rated torque / force	
	set point function:	linear, set point = position value	
	set point input:	4 ... 20 mA	
	function selection:	positioner, parameter: set point	
	actual value:	4 ... 20 mA	
	digital input:	BE 1 M/A selection; BE 2 / BE 3 manual interaction+/-	
	digital output:	BA 1 ready for operation; BA 2/3 end position signal 0/100%	
	positioning loop monitoring:	not activated for standard activated always activated for actuators in explosion proof design	
Voltage output U_V	24 V, 15 mA, galvanically isolated ; e. g. for scanning of external contacts		
Transmitte (optionally)	supply for 2-wire transmitter with activated controller in Contrac		
Individual settings	see data sheet 68-2.40 or upon request		

*Analogue/digital input/output not available with communication via profibus DP

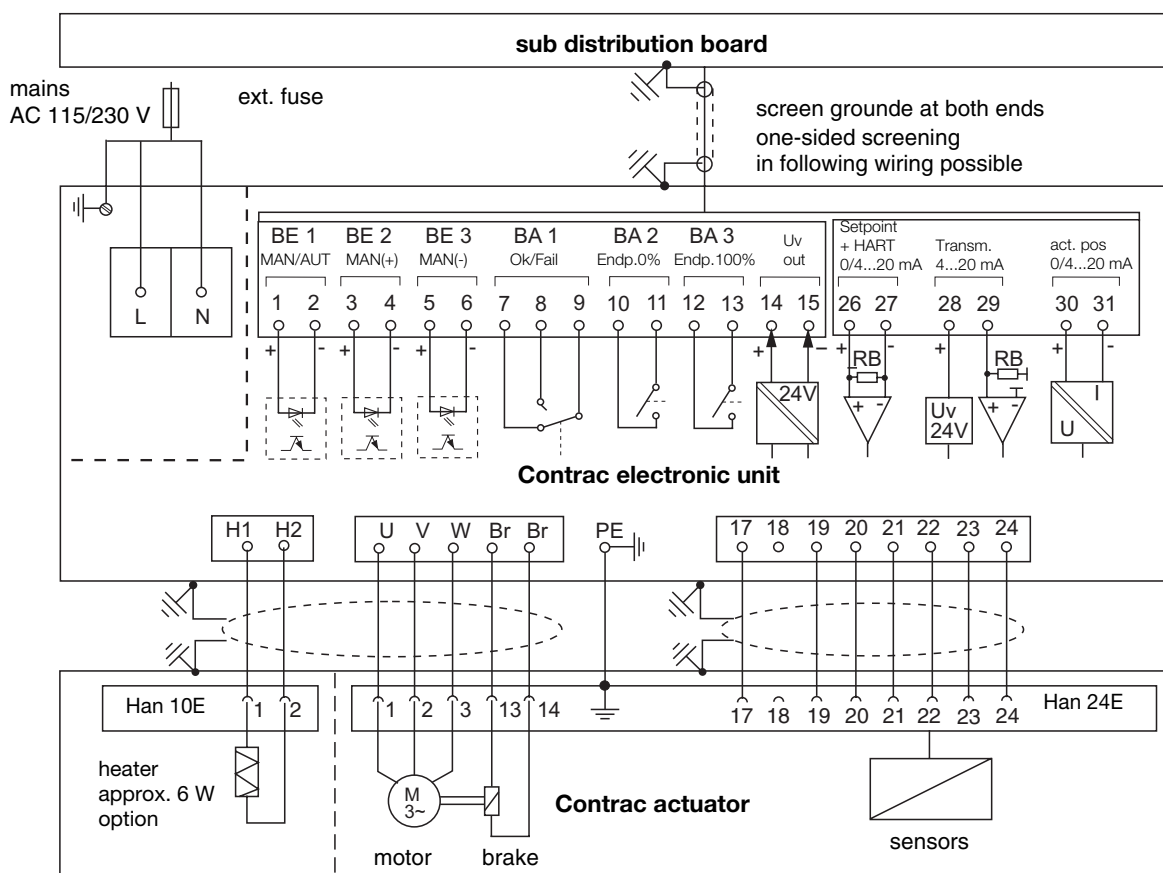
General Data

Protection class	IP 66
Humidity	≤ 95% average; condensation not permitted
Ambient temperature	-25° C ... +55° C
Mounting position	at vertical support; cable glands at the left hand side
Coating	2 component epoxy-resin paint (RAL 9005, black)
Cable connection between actuator and electronic unit	max. cable length between actuator and electronic unit 100 m optionally 5 m, 10m or 20 m; with plug for connection to the actuator no plug for explosion-proof actuators (RSDE... / RHDE...)
Weight; approx.	11 kg

Electrical Connection EBN853

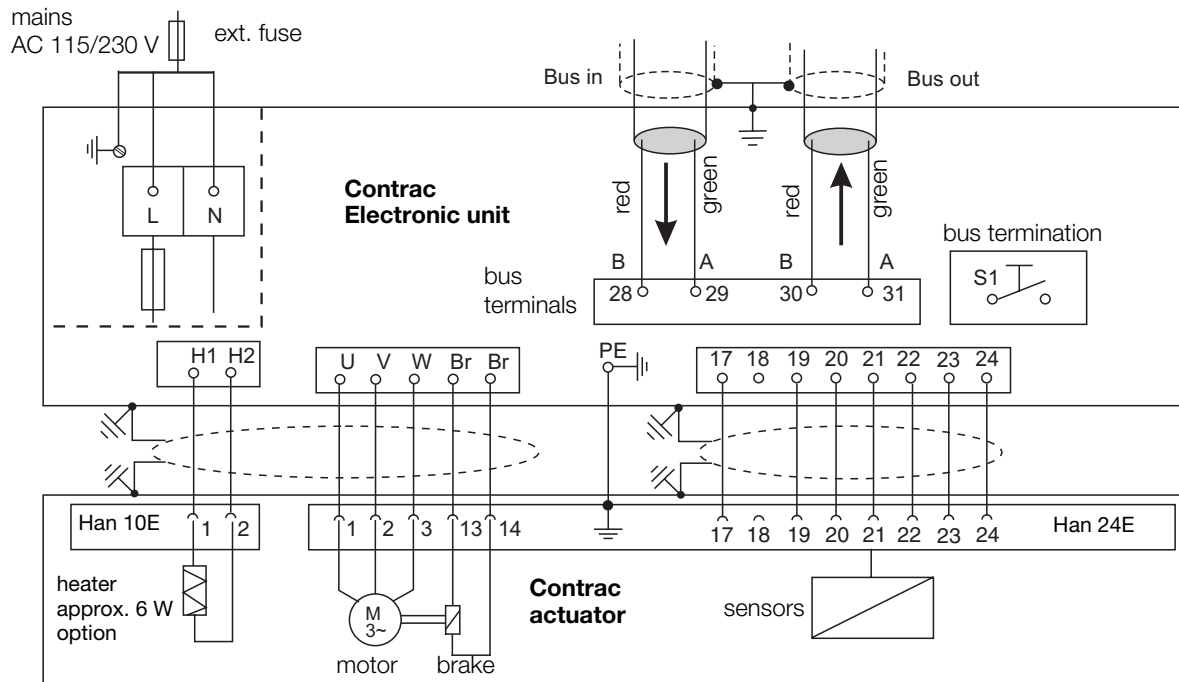
The electrical connection is done via a plug at the actuator and via terminals at the electronics.

For standard actuators; analog / digital



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

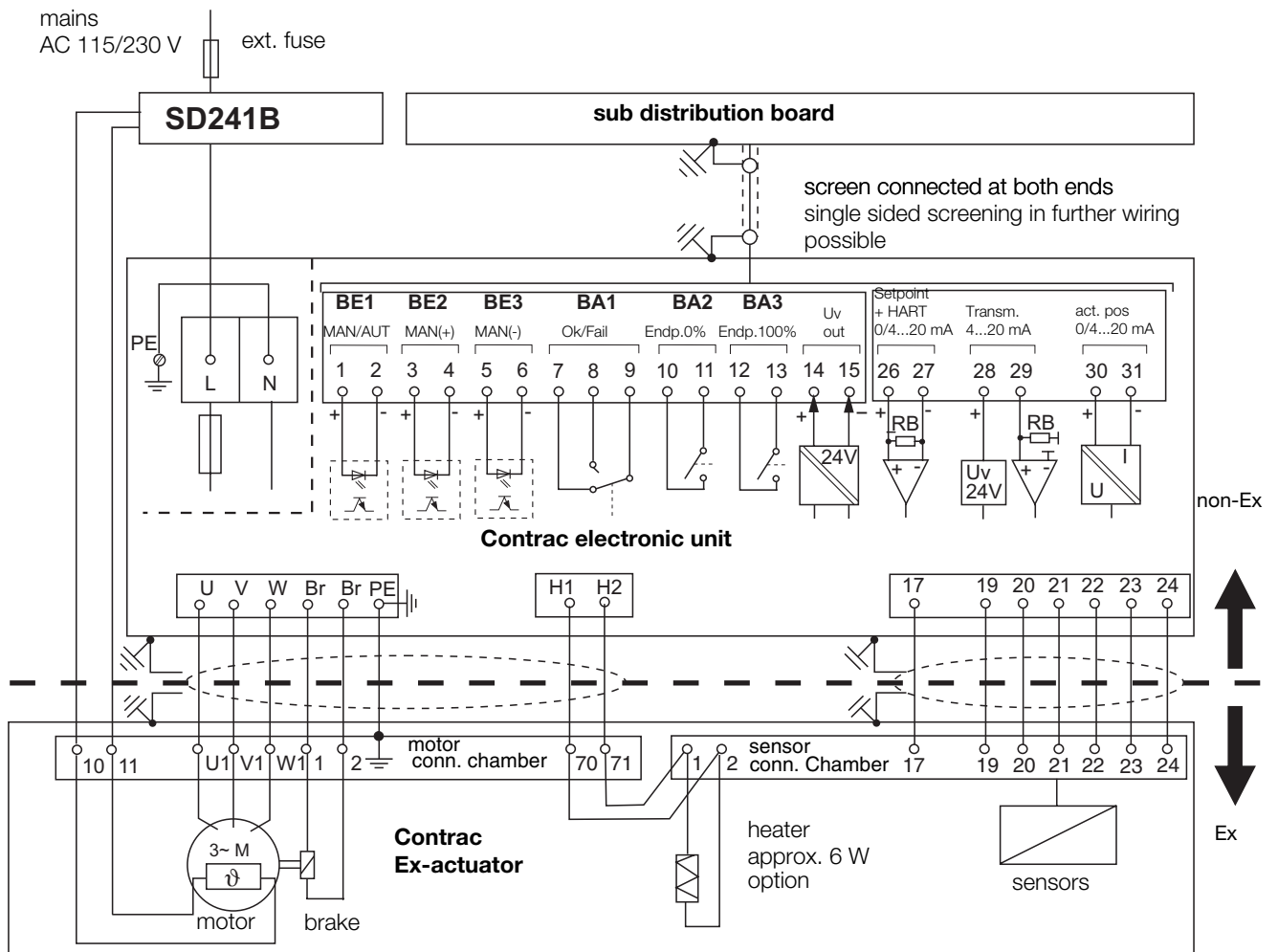
For standard actuators; PROFIBUS DP



r00010x1

For Ex- actuators; analog / digital

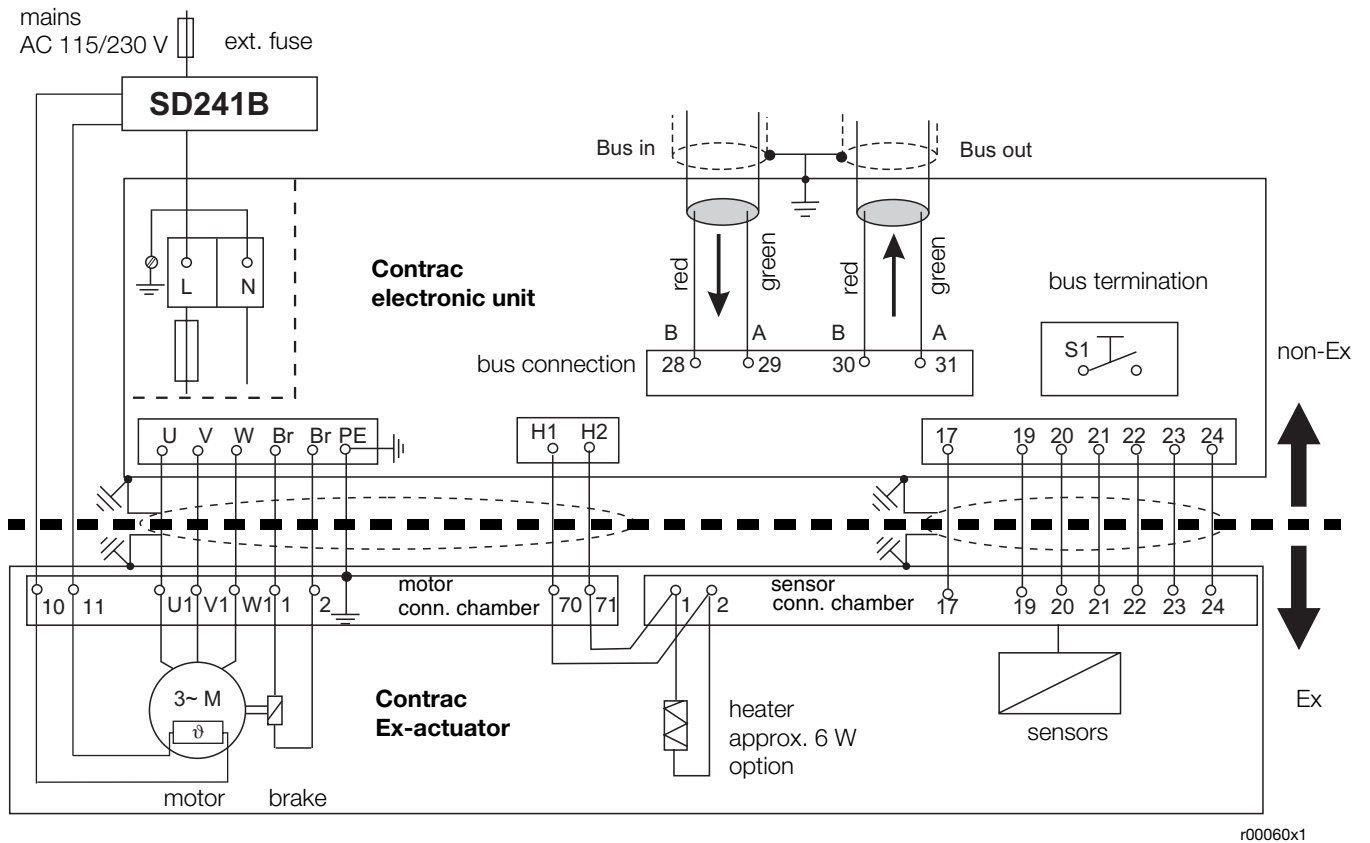
The electrical connection is done via terminals at the electronics and the actuator



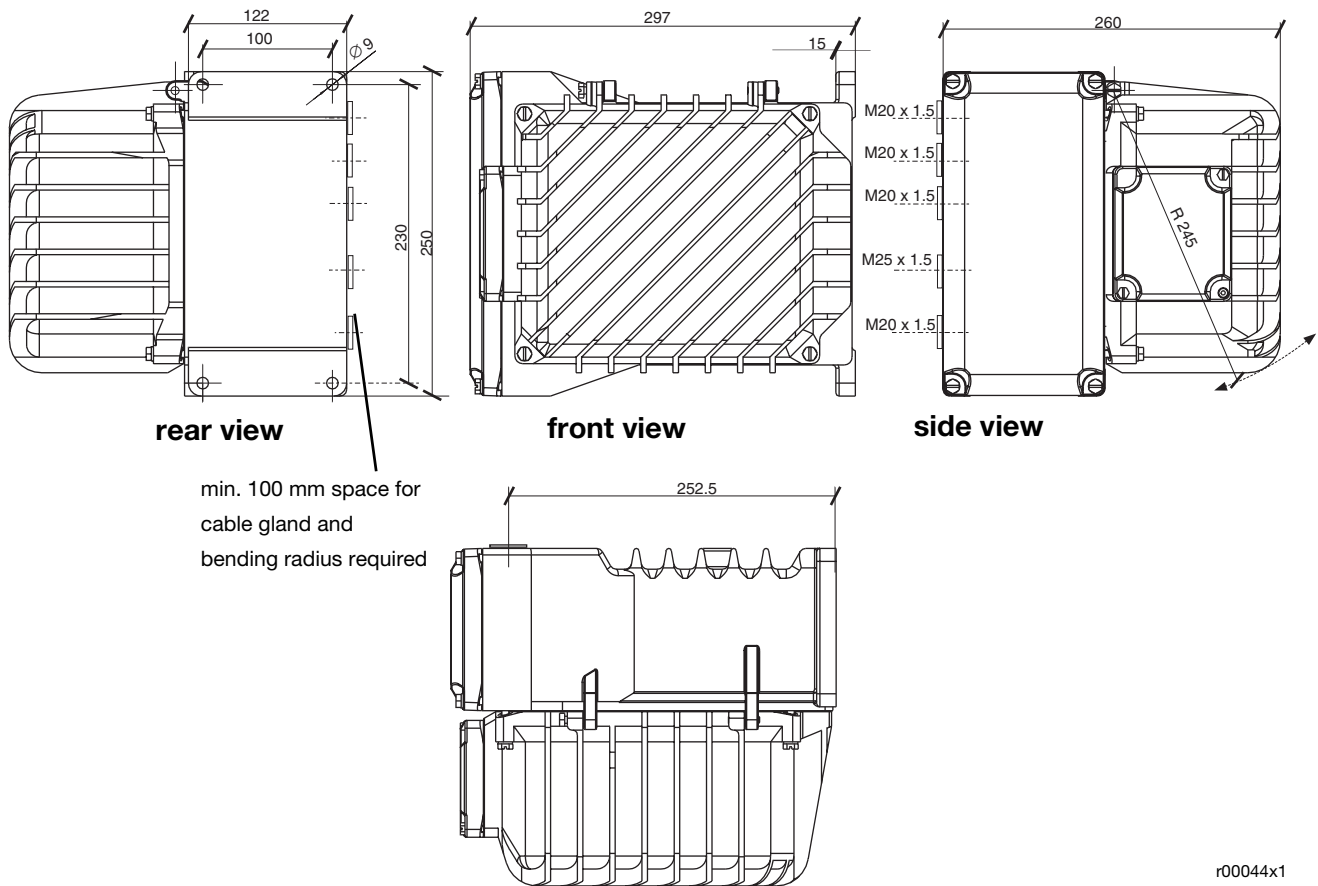
r00013x1

For Ex- actuators; PROFIBUS DP

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



Dimensions



r00044x1

* adapter for PG or NPT thread to be additionally ordered

Max. cable gauge		
mains; motor	solid wire:	6 mm ²
	flexible:	4 mm ²
signal	solid wire:	4 mm ²
	flexible:	2,5 mm ²

Tap holes for cable gland			
	metric	optional adapters for*	
mains	1 x M20 x 1,5	1 x PG 16	1 x NPT 1/2"
signal	3 x M20 x 1,5	3 x PG 16	3 x NPT 1/2
motor	1 x M25 x 1,5	1 x PG 21	1 x NPT 1/4"

Ordering information (standard actuators)

For Linear Actuators		Force	Speed	Stroke	Catalog No.	Code		
RSD10-5,0/100	10 kN	5.0 mm/s	100 mm	V68853-	2 0 5 0			
RSD10-5,0/300	10 kN	5.0 mm/s	300 mm	V68853-	9 1 5 0			
RSD10-10,0/100	10 kN	10.0 mm/s	100 mm	V68853-	2 0 5 1			
RSD10-10,0/300	10 kN	10.0 mm/s	300 mm	V68853-	9 1 5 1			
RSD20-5,0/100	20 kN	5.0 mm/s	100 mm	V68853-	2 0 5 2			
RSD20-5,0/300	20 kN	5.0 mm/s	300 mm	V68853-	9 1 5 2			
RSD20-7,5/100	20 kN	7.5 mm/s	100 mm	V68853-	2 0 5 3			
RSD20-7,5/300	20 kN	7.5 mm/s	300 mm	V68853-	9 1 5 3			
RSD50-3,0/120	50 kN	5.0 mm/s	120 mm	V68853-	3 0 5 4			
RSD50-3,0/300	50 kN	5.0 mm/s	300 mm	V68853-	9 1 5 4			
RSD100-1,5/150	100 kN	1.5 mm/s	150 mm	V68853-	2 1 5 5			
RSD100-1,5/300	100 kN	1.5 mm/s	300 mm	V68853-	9 1 5 5			
RSD200-0,7/180	200 kN	0.7 mm/s	180 mm	V68853-	5 4 5 6			
RSD200-0,7/300	200 kN	0.7 mm/s	300 mm	V68853-	9 1 5 6			
For Part-Turn Actuators		Torque	Speed					
RHD250-10	250 Nm	9.0 °/s		V68853-	0 1 0 3			
RHD500-10	500 Nm	9.0 °/s		V68853-	0 1 0 4			
RHD800-10	800 Nm	9.0 °/s		V68853-	0 1 0 5			
RHD1250-12	1250 Nm	7.5 °/s		V68853-	0 1 0 6			
RHD2500-25	2500 Nm	3.5 °/s		V68853-	0 1 0 7			
RHD4000-40	4000 Nm	2.25 °/s		V68853-	0 1 0 8			
RHD8000-80	8000 Nm	1.25 °/s		V68853-	0 1 0 9			
Special features of Electronic Unit								
Select at least one feature per group								
Supply voltage		AC 230 V 1 Ph			380			
		AC 115 V 1 Ph			381			
Frequency		50 Hz			382			
		60 Hz			383			
Digital communication		RS 232			384			
		RS 232 + HART			385			
		PROFIBUS DP			386			
Electrical connection to actuator		without cable (plug at actuator)			335			
		with 5 m cable end and 24-pole plug			690			
		with 10 m cable end and 24-pole plug			691			
		with 20 m cable end and 24-pole plug			692			
Standard settings for electronic unit (see techn. data)					390			
Customer specific settings for Electronic Unit (see data sheet 10/68-2.40 EN)					391			

Additional ordering information			
		Code	
Electrical connection thread	Set NPT adapter (joint metric / NPT thread)	680	
	Set PG adapter (joint metric / PG thread)	681	
Anti-condensation heater in actuator "ON"		359	
Identification on data label	(alphanumeric, max. 32 characters)	295	
Data table with US units		253	
F. No. of associated actuator on data label of electronic unit		297	
Factory certificate 2.1 acc. to EN 10204		291	
Certificate B acc. to EN 10204		292	
Operating instruction	(specify total quantity required, 1 copy without extra charge)		
	German (no specification for 1 copy)	Z1D	
	English (always state Code-No.)	Z1E	

Ordering information (Ex-actuators)

For Linear Actuator	Force	Speed	Stroke	Catalog No.	Code		
RSDE10-5,0/100	10 kN	5.0 mm/s	100 mm	V68853- 2 0 7 6			
RSDE10-5,0/300	10 kN	5.0 mm/s	300 mm	V68853- 9 1 7 6			
RSDE10-10,0/100	10 kN	10.0 mm/s	100 mm	V68853- 2 0 7 7			
RSDE10-10,0/300	10 kN	10.0 mm/s	300 mm	V68853- 9 1 7 7			
RSDE20-5,0/100	20 kN	5.0 mm/s	100 mm	V68853- 2 0 7 8			
RSDE20-5,0/300	20 kN	5.0 mm/s	300 mm	V68853- 9 1 7 8			
RSDE20-7,5/100	20 kN	7.5 mm/s	100 mm	V68853- 2 0 7 9			
RSDE20-7,5/300	20 kN	7.5 mm/s	300 mm	V68853- 9 1 7 9			
RSDE50-3,0/120	50 kN	5.0 mm/s	120 mm	V68853- 3 0 8 0			
RSDE50-3,0/300	50 kN	5.0 mm/s	300 mm	V68853- 9 1 8 0			
RSDE100-1,5/150	100 kN	1.5 mm/s	150 mm	V68853- 2 1 8 5			
RSDE100-1,5/300	100 kN	1.5 mm/s	300 mm	V68853- 9 1 8 5			

For Part-Turn Actuator	Torque	Speed	Catalog No.	Code		
RHDE250-10	250 Nm	9.0 °/s	V68853- 0 1 1 0			
RHDE500-10	500 Nm	9.0 °/s	V68853- 0 1 1 9			
RHDE800-10	800 Nm	9.0 °/s	V68853- 0 1 2 0			
RHDE1250-12	1250 Nm	7.5 °/s	V68853- 0 1 2 8			
RHDE2500-25	2500 Nm	3.5 °/s	V68853- 0 1 2 9			
RHDE4000-40	4000 Nm	2.25 °/s	V68853- 0 1 5 7			
RHDE8000-80	8000 Nm	1.25 °/s	V68853- 0 1 5 8			

Special features of Electronic Unit						
Select at least one feature per group						
Supply voltage	AC 230 V 1 Ph		380			
	AC 115 V 1 Ph		381			
Frequency	50 Hz		382			
	60 Hz		383			
Digital communication	RS 232		384			
	RS 232 + HART		385			
	PROFIBUS DP		386			
Electrical connection to actuator	without cable		335			
	with cable for motor and signals m cable length (max. 100 m)		695			
Standard settings for electronic unit (see techn. data)			390			
Customer specific settings for Electronic Unit (see data sheet 10/68-2.40 EN)			391			

Additional ordering information						
			Code			
Electrical connection thread	Set NPT adapter (joint metric / NPT thread)		680			
	Set PG adapter (joint metric / PG thread)		681			
Anti-condensation heater in actuator "ON"			359			
Identification on data label (alphanumeric, max. 32 characters)			295			
Data label with US units			253			
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German (no specification for 1 copy)			Z1D			
English (always state Code-No.)			Z1E			

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