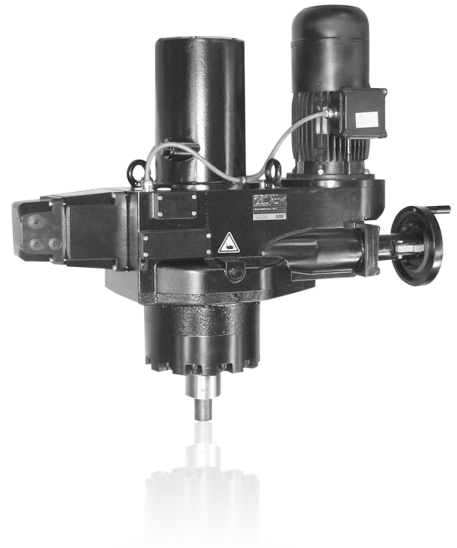


SPL/RSD100-EN

RSD100 (Contrac) Electric Linear Actuators

For continuous positioning,
rated force 100 kN (22500 lbf)



Power and productivity
for a better world™



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1 Actuator identification

To identify the actuator version, refer to the name plate located on the actuator housing.

1.1 Name plate on the RSD actuator

1	Antrieb / Actuator: CONTRAC		
2	F-Nr./No	NL	
3	F =	Jahr/Year	CE
4	t =	IP 66, NEMA 4X	
5	s = min...max...	v =mm/s	
6	Öl / Oil:		
7	Elektronik/Electronics		
8			
9			
10			
ABB Automation D-32425 Minden Made in Germany			

M10389

Fig. 1: Name plate on the RSD actuator

- 1 Full name of model |
- 2 Serial no. / NL no. (no. of non-list version)¹ |
- 3 Rated force / Year of manufacture |
- 4 Permissible ambient temperature / Degree of protection / CE mark |
- 5 Min./max. stroke / Max. operating speed / Heater (option) |
- 6 Filled oil type | 7 Associated Contrac electronic unit |
- 8 Blank | 9 Blank | 10 Blank for customer-specific information

IMPORTANT (NOTE)

- ¹ The numbers following the letters "NL" indicate a non-standard design. This number must be provided with the information from the name plate to ensure proper delivery of spare parts (material numbers may vary).

2 Name plate specifications for spare parts orders

2.1 Information from actuator name plate

When placing spare parts orders, the information relating to items 1 and 2 must always be provided in accordance with the actuator name plate.

2.2 Information from motor name plate

When ordering spare parts for the motor, it is important to pay attention to the motor series, as there are internal differences between the various series. Two different motor series are used with the Contrac actuators.

2.3 Motor type identification

2.3.1 Series 1 motor

CE	Typ	MCS 71 BA
	Sach.-Nr.	764973
	Motor-Nr.	42269.09C/001

1 2 3 4

M10064

Fig. 2: Name plate for series 1 motor

- 1 Production order | 2 Year | 3 ABB index | 4 Consecutive no.

Distinguishing features:

- Name plate design
- Plugs in brake cover

2.3.2 Series 2 motor

CE	MCS 71 BA 764973 D	
	0864960006 001H	

1 2 3 4 5

M10065

Fig. 3: Name plate for series 2 motor

- 1 Production order | 2 Consecutive no. | 3 Year | 4 Month | 5 Production information

Distinguishing feature:

- Name plate design

3 Motor, complete (motor series 1 and 2)

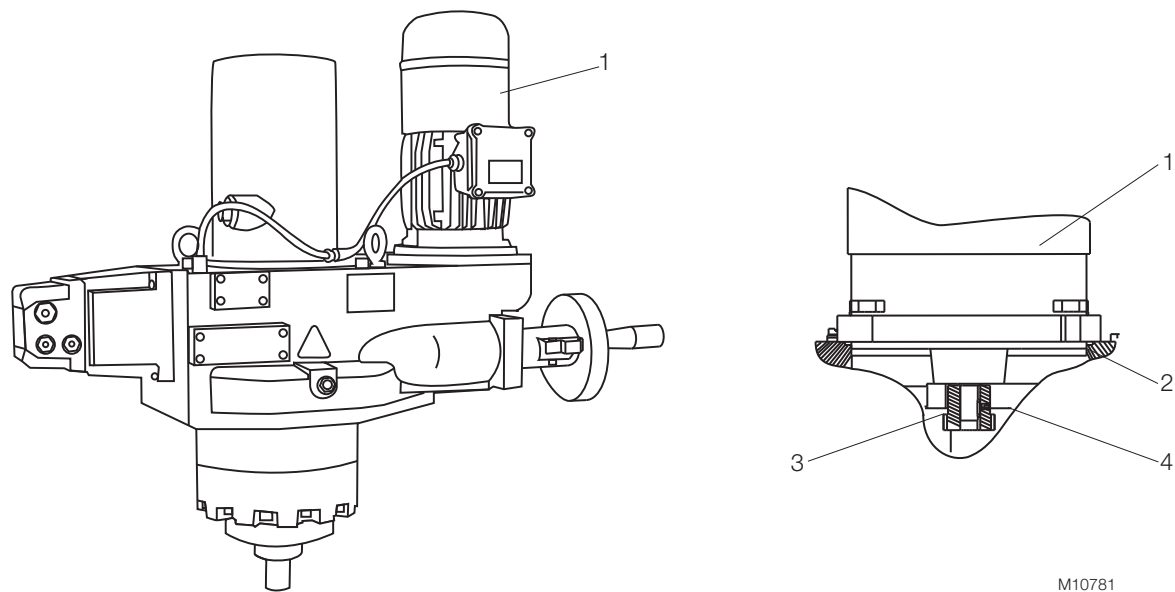
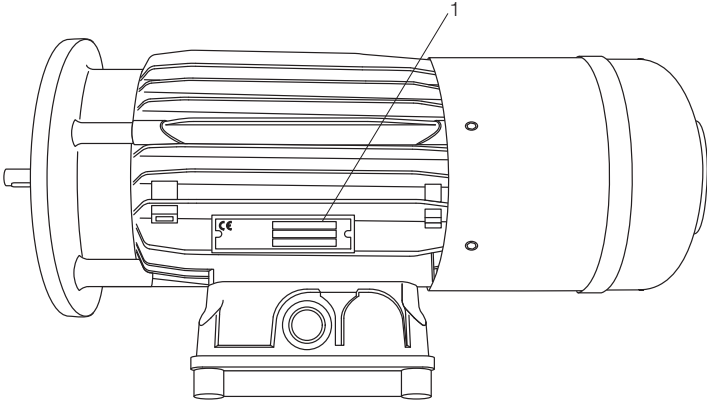


Fig. 4: Linear actuator

Number	For actuator	Name of part	Order number	Weight kg (lb)	Price (€)
1	RSD100 – 1.5	Motor MC 90 BA — For standard temperature range ¹	746 498		
	RSD100 – 10.0	Motor MC 112 BA — For standard temperature range ¹	746 500		
2	RSD100 – 1.5	O-Ring 126,67 x 2,62 — For standard temperature range ¹	651 847		
	RSD100 – 10.0	O-Ring 177,47 x 2,62 — For standard temperature range ¹			
3	RSD100 – 1.5	Motor pinion z=29 module 90	284 554		
	RSD100 – 10.0	Motor pinion module 112	323 369		
4	RSD100 – 1.5	Threaded pin M6 x 10	192 667		
	RSD100 – 10.0	Motor pinion fixture			

1 Standard temperature range: -10 ... 65 °C (15 ... 150 °F) / -30 ... 50 °C (-20 ... 130 °F)

4 Motor spare parts - Series 1



M10783

Fig. 5: Motor series 1 (illustrations may differ from actual installation)
1 Name plate

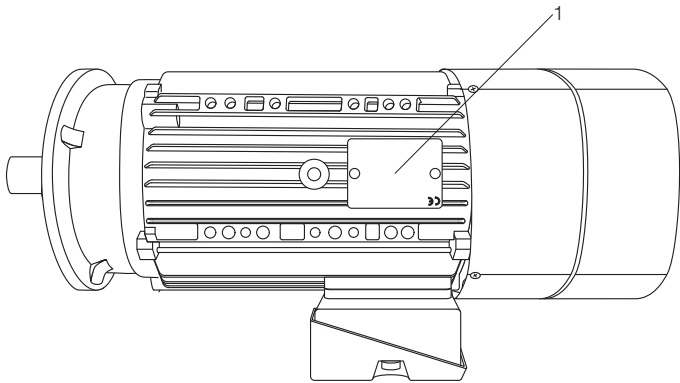
Number	For actuator	Name of part	Order number	Weight kg (lb)	Price (€)
	RSD100-1.5	Motor MC 90 BA	(746 498) ⁵		
		For standard temperature range ¹			
		— Motor kit ²	8 689 356		
		— Brake kit ³	8 689 350		
	RSD100-10.0	— Terminal box kit ⁴	8 689 330		
		Motor MC 112 BA	(746 500) ⁵		
		For standard temperature range ¹			
		— Motor kit ²	8 689 360		
		— Brake kit ³	8 689 354		
		— Terminal box kit ⁴	8 689 332		

- 1 Standard temperature range: -10 ... 65 °C (15 ... 150 °F) / -30 ... 50 °C (-20 ... 130 °F)
- 2 The motor kit consists of the following: shaft sealing ring, ball bearings, O-rings, terminal box gaskets, holding bolts, and small parts (information required from motor name plate, see "Information from motor name plate").
- 3 The brake kit consists of the following: brake coil, brake disk, brake pinion, terminal box gaskets, and small parts (information required from motor name plate, see "Information from motor name plate").
- 4 The terminal box kit consists of the following: terminal box, terminal box cover, terminal box gaskets, junction plate, and small parts (information required from motor name plate, see "Information from motor name plate").
- 5 The numbers in brackets are the order numbers for the complete motors, see page 4.

IMPORTANT (NOTE)

The service kits contain all the parts required for the relevant repair or maintenance work. Consequently, if all the kits for a particular motor type are ordered, some materials may be provided more than once.

5 Motor spare parts - Series 2



M10784

Fig. 6: Motor series 2 (illustrations may differ from actual installation)

1 Name plate

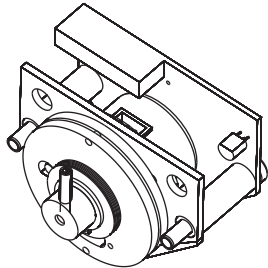
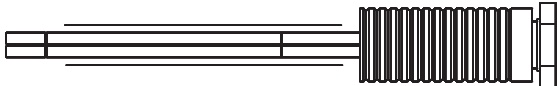
Number	For actuator	Name of part	Order number	Weight kg (lb)	Price (€)
	RSD100-1.5	Motor MC 90 BA For standard temperature range ¹	(746 498) ⁵		
		— Motor kit ²	8 689 357		
		— Brake kit ³	8 689 351		
		— Terminal box kit ⁴	8 689 359		

- 1 Standard temperature range: -10 ... 65 °C (15 ... 150 °F) / -30 ... 50 °C (-20 ... 130 °F)
- 2 The motor kit consists of the following: shaft sealing ring, ball bearings, O-rings, terminal box gaskets, holding bolts, and small parts (information required from motor name plate, see "Information from motor name plate").
- 3 The brake kit consists of the following: brake coil, brake disk, brake pinion, terminal box gaskets, and small parts (information required from motor name plate, see "Information from motor name plate").
- 4 The terminal box kit consists of the following: terminal box, terminal box cover, terminal box gaskets, junction plate, and small parts (information required from motor name plate, see "Information from motor name plate").
- 5 The numbers in brackets are the order numbers for the complete motors.

IMPORTANT (NOTE)

The service kits contain all the parts required for the relevant repair or maintenance work. Consequently, if all the kits for a particular motor type are ordered, some materials may be provided more than once.

6 Position sensor and heater

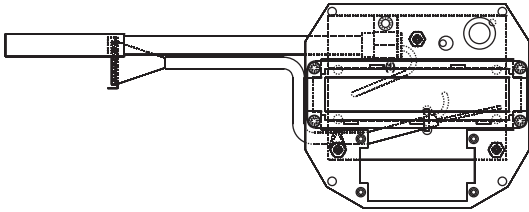
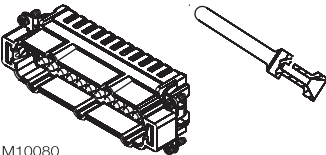
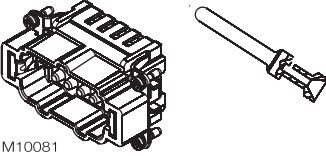
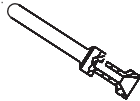
Number	Name of part	Order number	Weight kg (lb)	Price (€)
	Position sensor, complete (potentiometer with electronics) ² — Standard temperature range ¹  M10075	764 975		
	Anti-condensation heater, complete (heater element, pigtail leads) ³  M10076	9 280 081		

1 Standard temperature range: -10 ... 65 °C (15 ... 150 °F) / -30 ... 50 °C (-20 ... 130 °F)

2 Connection cable included in complete cable set (see 7 "Actuator wiring (internal)").

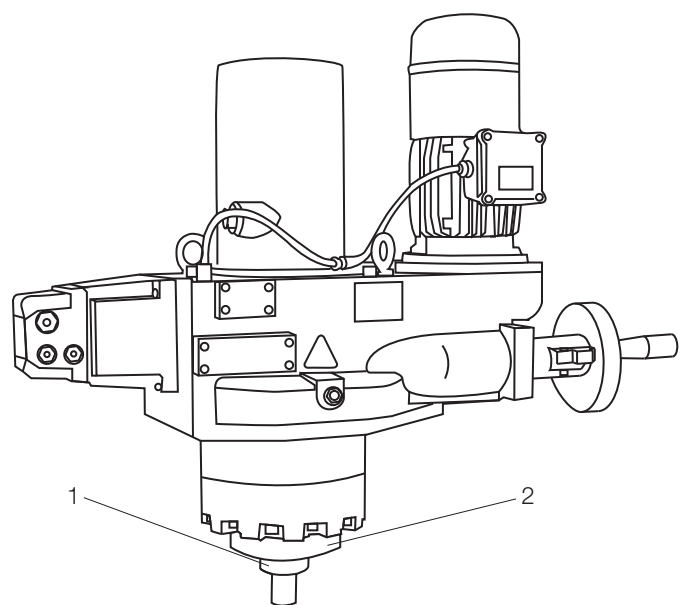
3 The necessary crimp pins are an integral part of the 10-pin plug insert for the heater.

7 Actuator wiring (internal)

Number	Name of part	Order number	Weight kg (lb)	Price (€)
	Cable set, complete¹ — Wiring between plug, motor, and sensor  M10082	9 280 106		
	Plug insert, 24-pin² — Crimp technology (including crimp pins)  M10080	8 689 244		
	Plug insert for heater, 10-pin² — Crimp technology (including crimp pins for heater element)  M10081	9 287 271		
	Set of crimp pins for wiring into the plug inserts 24-pin and 10-pin  M10123 — For motor, heater (pack of 10) — For position sensor (pack of 20)	8 689 248		

1 The cable set consists of a supporting plate, plug insert, cable set for position sensor, and motor connecting cable.
2 Mounting on the supporting plate supplied with the cable set, complete. During mounting, make sure that the mounting position is correct.

8 External limit stop and protective pot



M10778

Fig. 7: External limit stop and protective pot

Number	Name of part	Order number	Weight kg (lb)	Price (€)
1	External limit stop (including screws)	8 689 414		
2	Protective pot ¹ — Cover to provide protection while the actuator thrust rod is in operation	8 689 419		

1 As standard with year of manufacture 2010 or later. Can also be refitted to older actuators once the flange of the pushing unit has been modified.

9 Gasket sets and handwheel drive

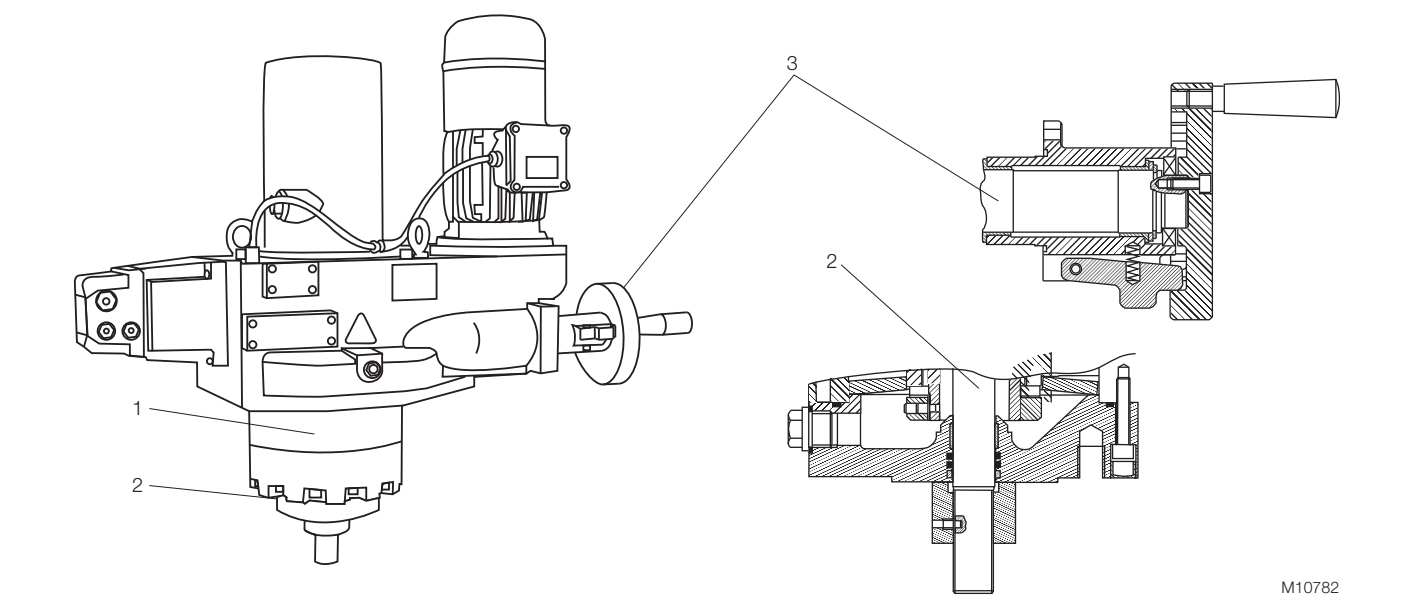
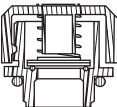


Fig. 8: Gasket sets and handwheel drive

Number	Name of part	Order number	Weight kg (lb)	Price (€)
1	Gasket set, complete ² — Standard temperature range ¹	8 689 230		
2	Thrust rod seal ³ — Standard temperature range ¹	8 689 231		
3	Handwheel drive (repair / maintenance set) ⁴ — Standard temperature range ¹	8 689 217		
	Vent plug — Standard  M10088	192 026		
	— With valve  M10089	764 423		
	— Cu sealing ring (for vent plug)	591 063		

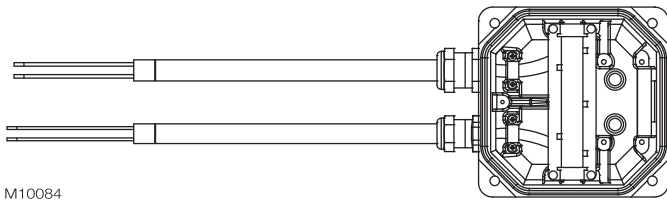
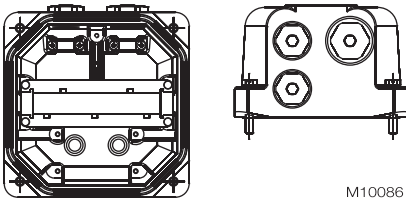
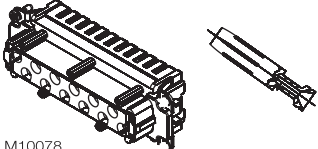
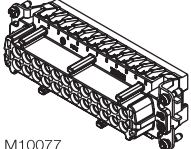
1 Standard temperature range: -10 ... 65 °C (15 ... 150 °F) / -30 ... 50 °C (-20 ... 130 °F)

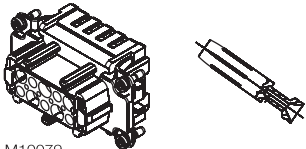
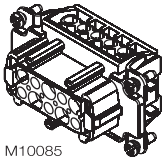
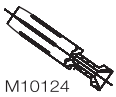
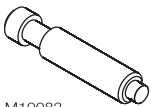
2 The gasket set consists of the following: all O-rings, sealing rings, and gaskets including motor o-ring, split ring bearing, sealing elements, and screws for the thrust unit and the handwheel drive.

3 The thrust rod seal consists of the following: scraper ring, sealing and o-rings, split ring bearing, and screws.

4 The repair and maintenance set consists of the following: cone grip, sealing ring, O-ring, and screws.

10 Connection cable and plug (external, actuator-electronic unit)

Number	Name of part	Order number	Weight kg (lb)	Price (€)
	Universal plug, 24-pin, complete with cable for connection to the power electronic unit (crimp technology)^{1, 5}  M10084 — Cable length: 5 meters — Cable length: 10 meters — Cable length: 20 meters	9 287 290 9 287 291 9 287 292		
	Universal plug, 24-pin, complete^{2, 3, 4, 5}  M10086 — Crimp technology — Screwed connection	9 287 234 9 287 236		
	Plug insert, 24-pin⁴ — Crimp technology (including crimp sockets)  M10078 — Screwed connection  M10077	8 689 245 8 689 247		

Number	Name of part	Order number	Weight kg (lb)	Price (€)
	Plug insert, 10-pin, for heater ^{4, 5} – Crimp technology (including crimp sockets)  M10079 – Screwed connection  M10085	9 287 237 9 287 238		
	Set of crimp sockets, for wiring / connection in universal plug, plug insert (24-pin and 10-pin)  M10124 – For motor, heater (pack of 10) – For position sensor (pack of 20)	8 689 246		
	Coding pin, red, for coding the universal plugs (24-pin) ⁶  M10083	685 311		

1 Universal plug with two cables connected on the plug side:

Cable 1 = 8 x 1.5 mm² for motor, brake, PE (optional for heater)

Cable 2 = 8 x 0.5 mm² for position sensor

(including cable glands, 1 x M20 x 1.5 and 1 x M25 x 1.5 as an accessories kit).

2 Connector housing with sealing plugs, 2 x M20 x 1.5 and 1 x M25 x 1.5, 24-pin contact insert, crimp contacts.

3 Please order cable glands separately, see 11 "[Installation material and accessories for universal plug \(24-pin\)](#)".

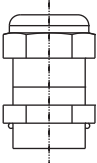
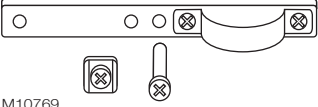
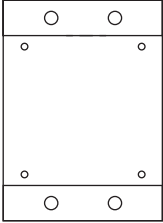
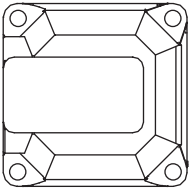
4 During mounting, make sure that the correct mounting position is used for the plug insert inside the housing.

5 The 10-pin plug insert for the heater is not included as part of the universal plug. It must be ordered separately.

6 As standard with year of manufacture 2010 or later. In order to remove or change the coding pins, the deinstallation tool for crimp contacts is required.

For details of the tool for crimp contacts, see 12 "[Special tools](#)".

11 Installation material and accessories for universal plug (24-pin)

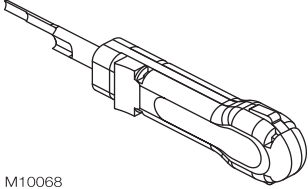
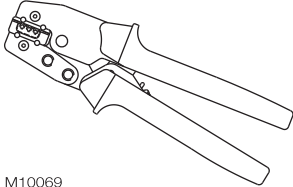
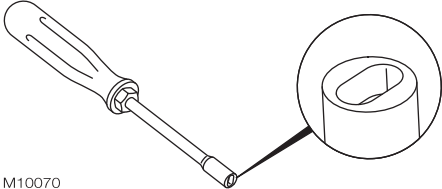
Number	Name of part	Order number	Weight kg (lb)	Price (€)
	PG adapter set, metric / PG thread — 2 x M20/PG16 and 1 x M25/PG21  M10071	9 287 253		
	NPT adapter set, metric / NPT thread — 2 x M20/NPT1/2" and 1 x M25/NPT3/4"  M10071	9 287 254		
	Cable gland — M25 x 1.5 (1 required per universal plug) — M20 x 1.5 (2 required per universal plug)  M10072	9 287 257 9 287 258		
	Strain relief device, complete ¹  M10769	8 689 404		
	Holder for universal plug, 24-pin ²  M10073	564 401		
	Protective cap for plug, 24-pin ³  M10074	9 287 242		

¹ Strain relief device for a 3rd connection cable in the universal plug

² External compartment for actuator connection plug

³ For covering the electrical patch panel on the actuator once the universal plug has been removed

12 Special tools

Number	Name of part	Order number	Weight kg (lb)	Price (€)
	Deinstallation tool for crimp contacts  M10068	8 689 366		
	Hand crimping tool  M10069	8 689 369		
	Special screwdriver, "negative slot", for releasing / securing holding bolts on motors — M 5 (MCS 71 and MCS 80) — M 6 (MC 90 and MC 100)  M10070	8 689 407 8 689 408		

13 Assignment of power electronic units

Linear actuators	Field mount			Rack installation		
	EAN823	EBN853	EBN861	EAS822	EBS852	EBS862
LME620-AI ¹	---			---		
LME620-AN	X			X		
RSD10-5.0		X			X	
RSD10-10.0		X			X	
RSD20-5.0		X			X	
RSD20-7.5		X			X	
RSD50-3.0		X			X	
RSD50-10.0			X			X
RSD100-1.5		X			X	
RSD100-10.0			X			X
RSD200-0.7		X			X	
RSD200-5.0			X			X

¹ No need for an external power electronic unit, as it has been integrated into the actuator.

X = operation possible

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available at:
www.abb.com

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