

D9 Series Rotary Solenoid

Voltage rating	V DC	24					205					V DC	Voltage rating
ED* LK	%	100	46	36	22	14	100	37	18	11	5	%	ED* LK
Current rating	A	1,35	2,70	3,40	5,30	8,30	0,161	0,381	0,768	1,19	2,42	A	Current rating
Nominal resistance	Ω	17,7	8,9	7,0	4,5	2,9	1.272	538	267	172	84,6	Ω	Nominal resistance
D 92, 25°	MA Ncm	88	125	138	160	175	79	125	160	177	204	Ncm	MA D 92, 25°
	ME Ncm	125	155	163	182	195	117	152	182	198	220	Ncm	ME
D 93, 35°	MA Ncm	71	104	116	137	154	61	104	137	157	184	Ncm	MA D 93, 35°
	ME Ncm	112	138	147	160	168	106	138	160	168	170	Ncm	ME
D 94, 45°	MA Ncm	53	86	98	119	137	46	86	119	140	167	Ncm	MA D 94, 45°
	ME Ncm	108	130	136	145	150	102	130	145	150	150	Ncm	ME
D 96, 65°	MA Ncm	31	52	62	83	100	26	52	83	105	125	Ncm	MA D 96, 65°
	ME Ncm	97	112	117	122	123	91	112	122	123	115	Ncm	ME
D 99, 95°	MA Ncm	13	22	27	37	46	11	22	37	48	63	Ncm	MA D 99, 95°
	ME Ncm	72	83	85	87	86	68	82	87	85	78	Ncm	ME

* By using a cooling surface $\geq 1600 \text{ cm}^2$, the permissible duty cycle can be extended up to 1.7x normal rating

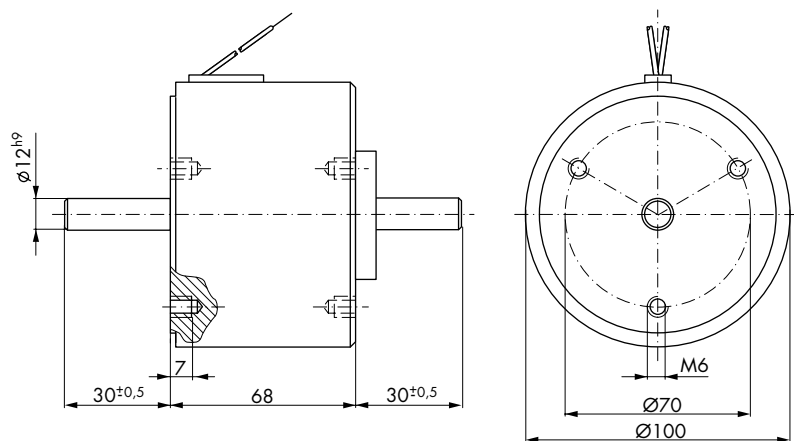
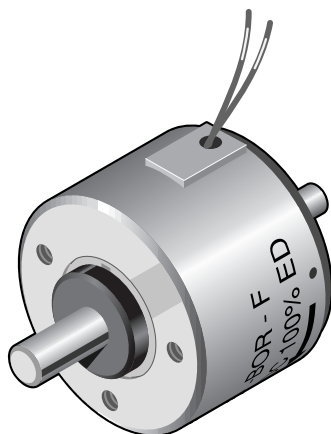
MA = Initial torque
ME = End torque (5° before end of rotary angle)

Coil terminals: - Flying leads
- Solder terminal box (6.3 DIN 46247)

Weight: appr. 3800 g
Dyn. moment of inertia (rotational mass): appr. $47 \cdot 10^{-6} \text{ kg m}^2$
Time constant: appr. 20–100 ms

All solenoids with MA > 18 Ncm are available with spring return, with a rating of MR = 15.0 Ncm approximately.

The operational voltage of 205 V DC results from rectifying 230 V AC with a bridge rectifier.



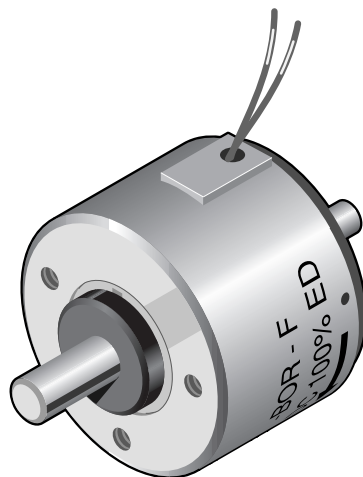
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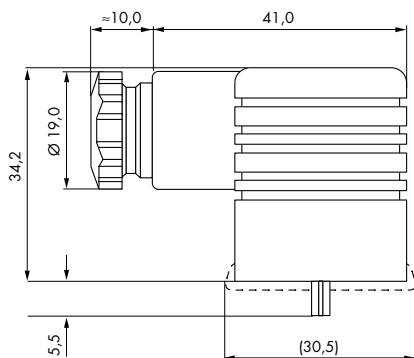
D9 Series Ordering Information

D	9	3	-ROR-	- N -	24 V DC	100 % ED	Order specifications
D							Rotary solenoids
	9						
							Angular travel
		2					25°
		3					35°
		4					45°
		6					65°
		9					95°
			-ROR-				Shaft and rotation options
							Coil terminals
				F			Flying leads (20 cm standard length)
				N			Terminal box ³⁾
							Nominal voltage
					24		Standard voltage
					205		(connected to 230 V AC with Si-bridge rectifier)
						100 % ED	Perm. duty cycle under air cooled conditions (LK)

³⁾ Suits push-on connector 6.3 DIN 46247 and plug-in socket No. Z801.



Insulation class: B (max. permissible temperature = 130 °C)
Test voltage: 2500 V (eff)
(D 2: 1500 eff)
Accessories: Plug-in socket Z801



Plug-in socket Z801
Screw joint PG 9
for lead diameter 4.5 - 7 mm

Plug-in socket Z811
Screw joint PG 11
for lead diameter 6 - 9 mm
Plug-in socket with built in Si-bridge rectifier



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D9 Series Shaft & Rotation Options

Shaft designs

The following types of rotary solenoids are available.
Resulting in the following abbreviations for ordering:

1. letter

Direction of rotation (facing the output shaft)

- L** anti-clockwise rotation
- R** clockwise rotation
- B** shaft extensions both ends

2. letter

Centering shoulder

- O** standard type without mounting ring
- R** optional
- L** optional

3. letter

Return spring – the torque exerted by the spring is to be subtracted from the torque values given in the data sheets

- L** on the anti-clockwise shaft end
- R** on the clockwise shaft end
- O** no return spring fitted
- B** both sides

Example 1

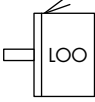
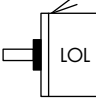
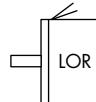
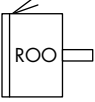
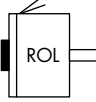
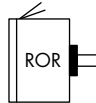
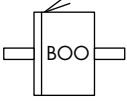
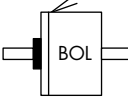
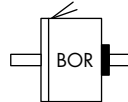
anti-clockwise rotation, no return spring, standard shaft length
LOO -

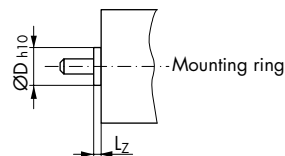
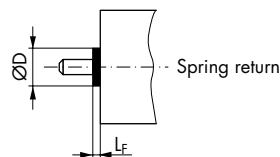
Example 2

shaft extensions on both ends, return spring on anti-clockwise rotation end
BOL -

Spring return arrangement
(with protection cap)

Mounting ring

Normal	Spring return
	
	
	
	
	
	



Dimensions in mm	Solenoid size
	D9
Ø D	32,0
L _F	8,0
Ø D _{h10}	28,0
L _Z	4,5

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