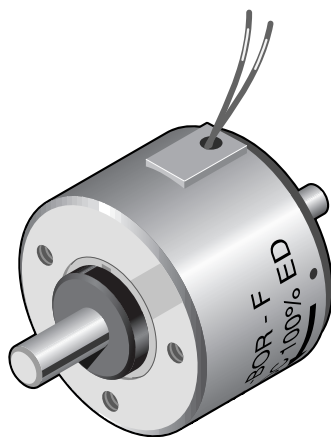


## D7 Series Rotary Solenoid

| Voltage rating     | V DC   | 24   |      |      |      |       | 205   |      |      |      |      | V DC   | Voltage rating     |
|--------------------|--------|------|------|------|------|-------|-------|------|------|------|------|--------|--------------------|
| ED* LK             | %      | 100  | 37   | 23   | 14   | 5     | 100   | 36   | 23   | 14   | 5    | %      | ED* LK             |
| Current rating     | A      | 0,82 | 2,10 | 3,20 | 4,90 | 12,60 | 0,10  | 0,23 | 0,36 | 0,55 | 1,40 | A      | Current rating     |
| Nominal resistance | Ω      | 29,2 | 11,6 | 7,6  | 4,9  | 1,9   | 1.988 | 843  | 544  | 355  | 146  | Ω      | Nominal resistance |
| D 72, 25°          | MA Ncm | 35,5 | 55,0 | 65,0 | 72,0 | 89,0  | 32,0  | 51,0 | 60,0 | 70,0 | 86,0 | Ncm MA | D 72, 25°          |
|                    | ME Ncm | 48,0 | 64,0 | 73,0 | 80,0 | 89,0  | 47,0  | 61,0 | 70,0 | 75,0 | 88,0 | Ncm ME |                    |
| D 73, 35°          | MA Ncm | 28,0 | 48,0 | 57,0 | 65,0 | 81,0  | 26,0  | 44,0 | 51,0 | 62,0 | 80,0 | Ncm MA | D 73, 35°          |
|                    | ME Ncm | 43,0 | 56,0 | 60,0 | 63,0 | 67,0  | 41,5  | 53,0 | 58,0 | 62,0 | 66,0 | Ncm ME |                    |
| D 74, 45°          | MA Ncm | 23,0 | 41,0 | 50,0 | 58,0 | 75,0  | 21,0  | 37,0 | 46,0 | 54,0 | 73,0 | Ncm MA | D 74, 45°          |
|                    | ME Ncm | 40,0 | 50,0 | 54,0 | 56,0 | 58,0  | 38,0  | 49,0 | 52,0 | 55,0 | 58,0 | Ncm ME |                    |
| D 76, 65°          | MA Ncm | 13,5 | 26,0 | 34,0 | 42,0 | 60,0  | 12,0  | 24,0 | 31,0 | 38,0 | 57,0 | Ncm MA | D 76, 65°          |
|                    | ME Ncm | 34,0 | 42,0 | 44,0 | 44,0 | 42,0  | 33,0  | 40,5 | 45,0 | 44,0 | 42,0 | Ncm ME |                    |
| D 79, 95°          | MA Ncm | 6,2  | 15,0 | 21,5 | 27,0 | 42,0  | 5,6   | 13,0 | 18,5 | 25,0 | 41,0 | Ncm MA | D 79, 95°          |
|                    | ME Ncm | 26,0 | 30,0 | 30,0 | 30,0 | 25,0  | 25,0  | 29,5 | 30,0 | 30,0 | 25,0 | Ncm ME |                    |

\* By using a cooling surface  $\geq 900 \text{ cm}^2$ , 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)

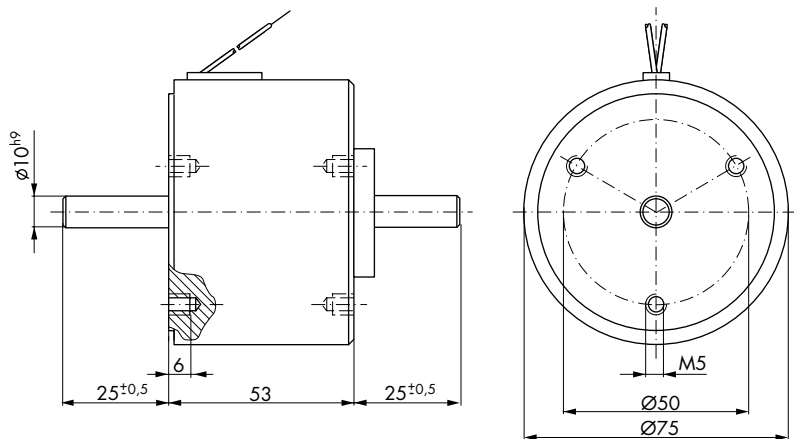


Coil terminals: - Flying leads  
- Solder terminal box (6.3 DIN 46247)

Weight: appr. 1400 g  
Dyn. moment of inertia (rotational mass): appr.  $11 \cdot 10^{-6} \text{ kg m}^2$   
Time constant: appr. 13–60 ms

All solenoids with MA > 9.5 Ncm are available with spring return, with a rating of MR = 8.0 Ncm approximately.

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



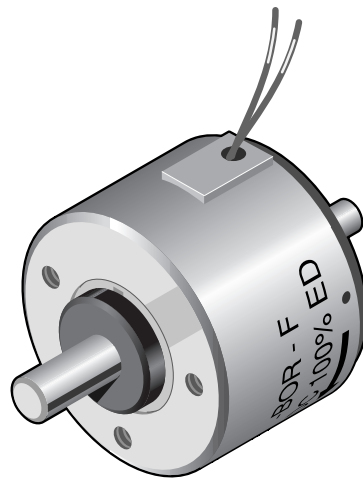
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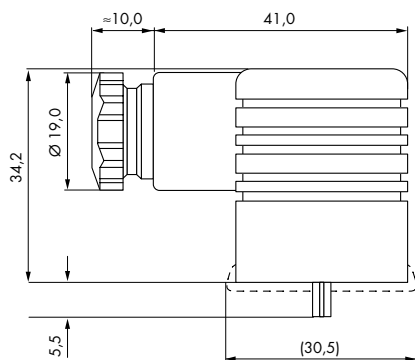
## D7 Series Ordering Information

| D | 7 | 3 | -ROR- | - N - | 24 V DC | 100 % ED | Order specifications                              |
|---|---|---|-------|-------|---------|----------|---|
| D |   |   |       |       |         |          | Rotary solenoids                                  |
|   | 7 |   |       |       |         |          |   |
|   |   |   |       |       |         |          | 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 <sup>3)</sup>                        |
|   |   |   |       |       |         |          |   |
|   |   |   |       |       |         |          | 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) |

<sup>3)</sup> 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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## D7 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

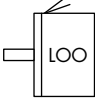
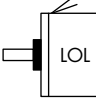
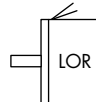
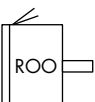
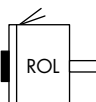
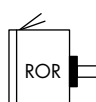
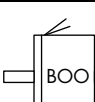
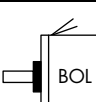
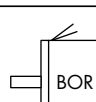
anti-clockwise rotation, no return spring, standard shaft length  
**LOO** -

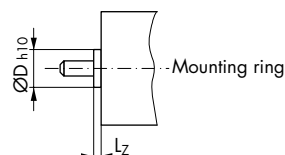
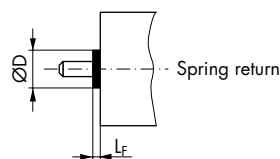
#### Example 2

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 |
|--------------------|---------------|
|                    | D7            |
| Ø D                | 32,0          |
| L <sub>F</sub>     | 8,0           |
| Ø D <sub>h10</sub> | 28,0          |
| L <sub>Z</sub>     | 4,5           |

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