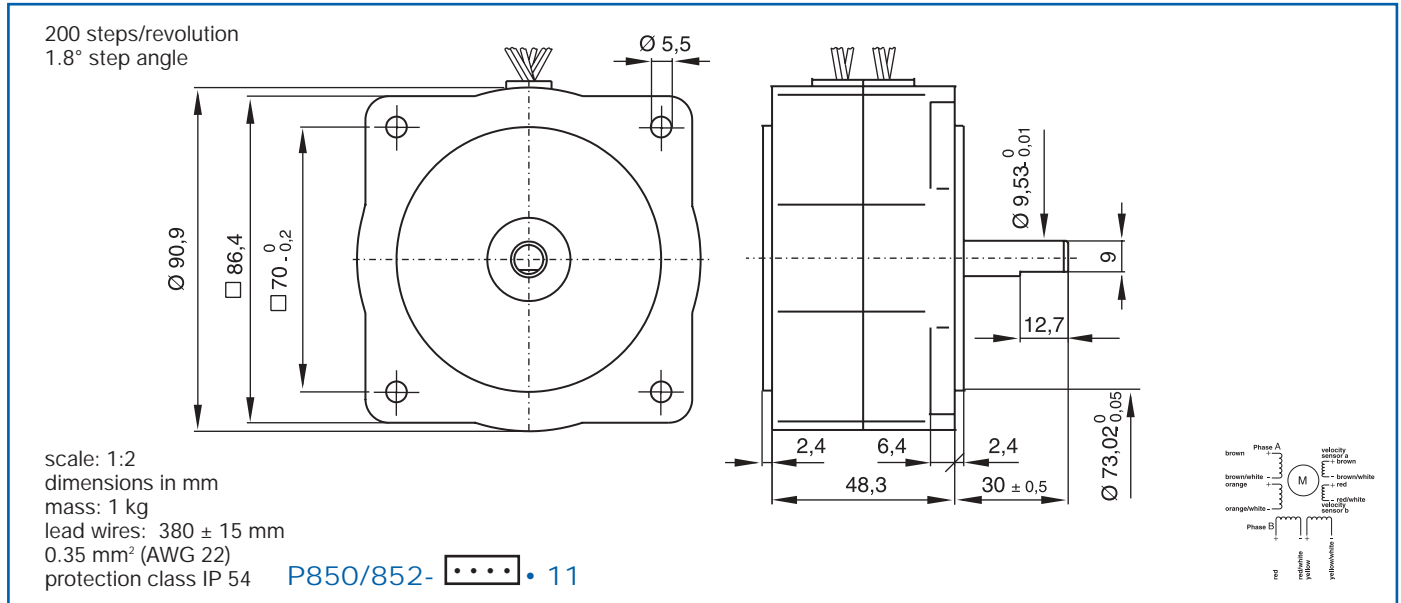


# Turbo Disc™ P850/P 852

# Stepper motor

P850 Suitable for microstep operation/P852 recommended for half-/full step mode



## Windings available



P850 P852

C C B B

coils in series typ coils in parallel typ coils in series typ coils in parallel typ

### Coil dependent parameters

		typ	typ	typ	typ
1 Phase resistance	ohm	2.6	0.65	0.97	0.24
2 Phase inductance (1 kHz)	mH	6.4	1.6	3.2	0.8
3 Nominal phase current (2 ph. on)	A	1.8	3.6	2.3	4.6
4 Nominal phase current (1 ph. on)	A	2.5	5	3.2	6.4
5 Back-EMF amplitude	V/kst/s	9.6	4.8	10.4	5.1

### Coil independent parameters

		min	typ	max
<b>Torque parameters</b>				
typ				
6 Holding torque (nominal current)	mNm (oz-in)	780 (1110)/1060 (150)		
7 Holding torque (2 x nominal current) <sup>1)</sup>	mNm (oz-in)	1340 (190)/1880 (266)		
8 Detent torque amplitude and friction	mNm (oz-in)	28(3.9)/110 (15.6)		
<b>Thermal parameters</b>				
9 Thermal resistance coil-ambient <sup>2)</sup>	°C/W	2.6		
10 Coil temperature	°C	155		
11 Operating ambient temperature	°C	-20	+50	

### Angular accuracy

12 Absolute accuracy (2 ph. on full-step mode)	% full-step	±3	±6
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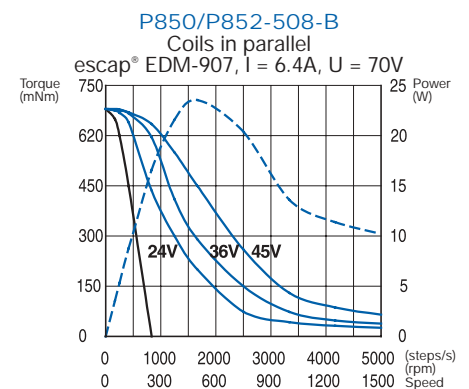
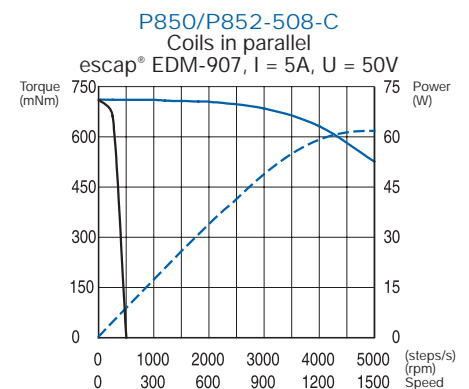
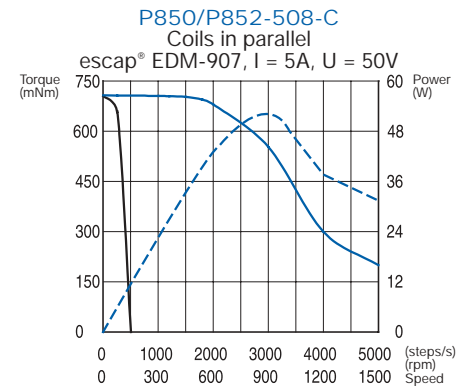
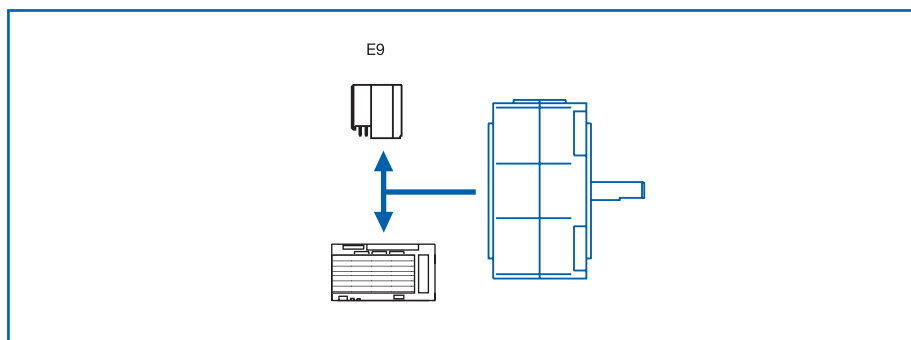
### Mechanical parameters

13 Rotor inertia	kgm <sup>2</sup> ·10 <sup>-7</sup>	150
14 Radial load	N	44
15 Axial load <sup>3)</sup>	N	66
16 Radial shaft play (20N)	µm	25
17 Axial shaft play (30N)	µm	25

<sup>1)</sup> The maximum coil temperature must be respected

<sup>2)</sup> Motor unmounted

<sup>3)</sup> Load applied at 12 mm from mounting face



— Pull-in range  
— Pull-out range  
- - - Power output  
Pull-in is measured with a load inertia equal to the rotor inertia.