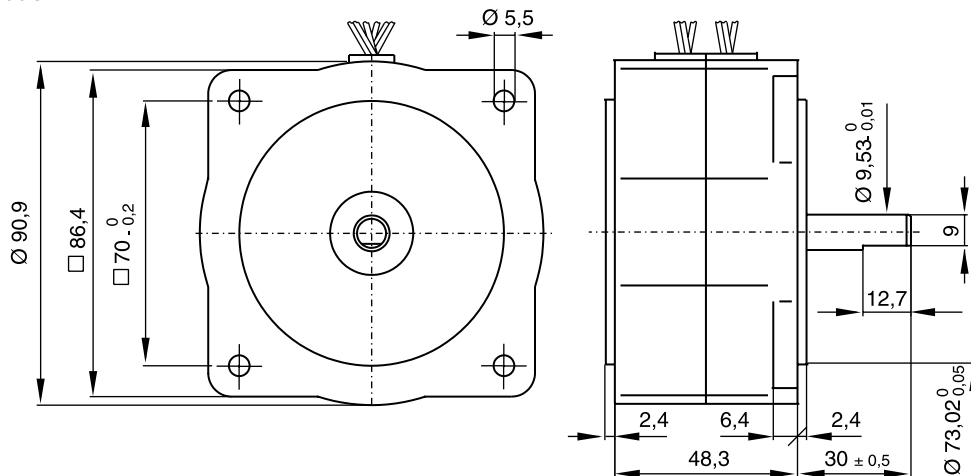


200 steps/revolution
1.8° step angle



scale: 1/2

dimensions in mm

mass: 1 kg

lead wires: 380 ± 15 mm

0.35 mm² (AWG 22) protection class IP 54

P852-508 - [•••] • 11

Windings available

	[•••]	C		B	
		coils in series	coils in parallel	coils in series	coils in parallel
Coil dependent parameters		typ	typ	typ	typ
1 Phase resistance	ohm	1.7	0.43	0.97	0.24
2 Phase inductance (1 kHz)	mH	5	1.25	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	13.3	6.7	10.4	5.1

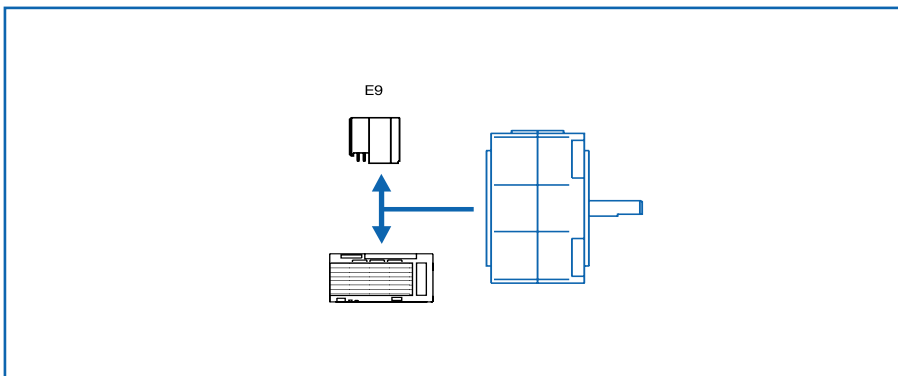
Coil independent parameters ¹⁾

Torque parameters		min	typ	max
6 Holding torque (nominal current)	mNm (oz-in)	900 (127)	1060 (150)	1220 (173)
7 Holding torque (2 x nominal current) ²⁾	mNm (oz-in)	1600 (226)	1880 (266)	2160 (306)
8 Detent torque amplitude and friction	mNm (oz-in)		110 (15.6)	130 (18.4)
Thermal parameters			2.6	
9 Thermal resistance coil-ambient ³⁾	°C/W			
Angular accuracy			±3	±5
10 Absolute accuracy (2 ph. on full-step mode)	% full-steps			
Mechanical parameters			130	
11 Rotor inertia	kgm ² · 10 ⁻⁷			
Other parameters			320	
12 Natural resonance frequency (nominal current)	Hz			
13 Electrical time constant	ms		3.1	
14 Angular acceleration (nominal current)	rad/s ²		81 000	

- Max. rated coil temperature: 155°C
- Recom. ambient temperature range: -20°C to +50°C

- Radial shaft play (44N): 25 µm
- Axial shaft play (66N): 25 µm
- Max. radial load⁴⁾: 44N
- Max. axial load⁵⁾: 66N

- Test voltage (1 min): 500 V_{RMS}
- "Power rate" (nominal current): 86 kW/s



¹⁾ Bipolar driver.

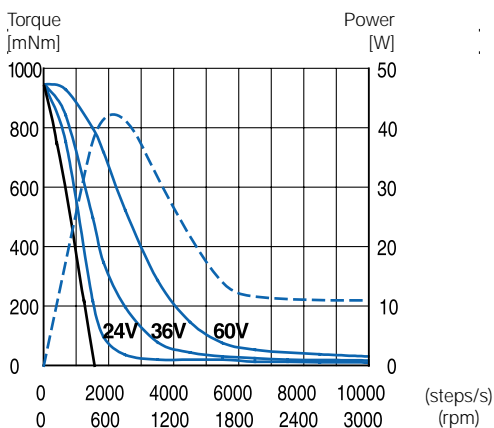
²⁾ The maximum coil temperature must be respected.

³⁾ Motor mounted to an aluminium plate 20 x 20 x 1.3 cm.

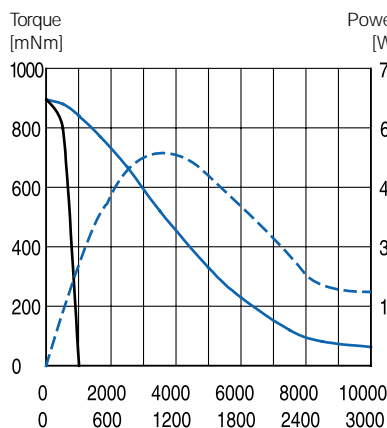
⁴⁾ Load applied at 12 mm from mounting face.

⁵⁾ Shaft must be supported for press-fitting a pulley or pinion.

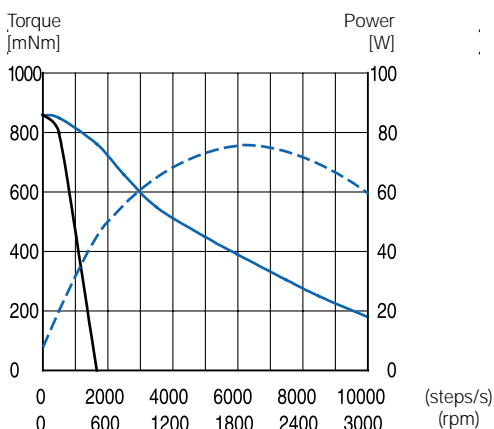
P852-508-C
Coils in series
escap® ESD-1300



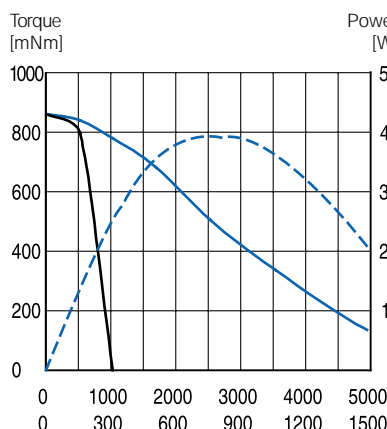
P852-508-C
Coils in parallel
escap® EDB-909,
U = 50V



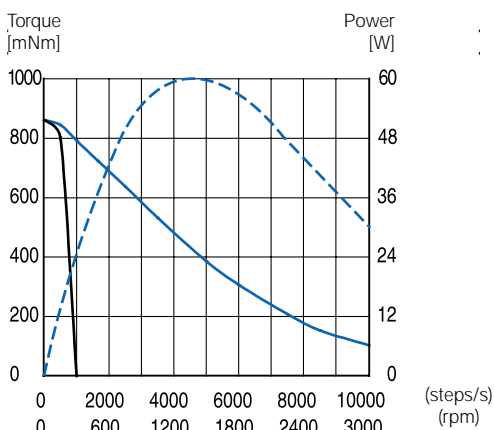
P852-508-C
Coils in parallel
escap® EDB-909,
U = 70V



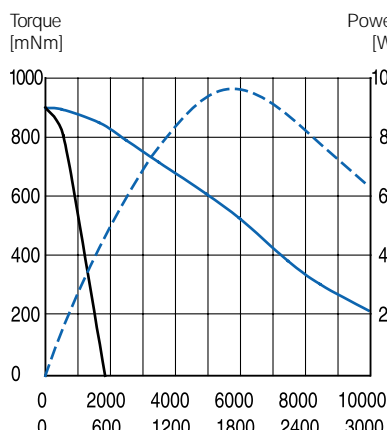
P852-508-B
Coils in parallel
escap® EDB-909,
U = 25V



P852-508-B
Coils in parallel
escap® EDB-909,
U = 50V

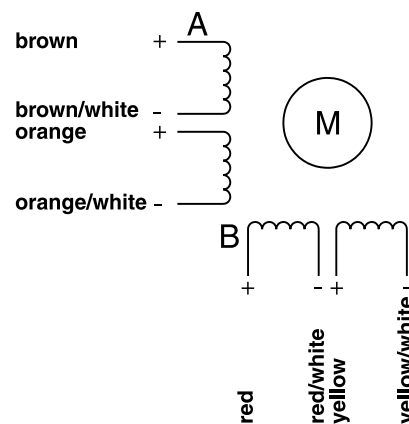


P852-508-B
Coils in parallel
escap® EDB-909,
U = 70V



— Pull-in range
— Pull-out range
- - - Power output

Pull-in is measured with a load inertia equal to the rotor inertia.



Motor connections

Executions available from stock :

- P852-508-B • 11 see drawing
- P852-508-B • 11 & E9

This motor is also available with the coil C • 11 or with the coils B or C (exec. • 00) and double shaft

Particular versions include options such as special shafts (hollow shaft) and so forth.

Notes

The low inertia, extended pull-in range, high peak speed and boost torque capability of this motor are benefits for fast incremental motion.

The speed scale is indicated in full-steps/s for all drive modes.

The motor is driven in half-steps unless otherwise specified.

The motor is energised with nominal current unless otherwise specified.

The following escap® drive circuits are recommended with the P852 motor, depending on the drive mode and the dynamic performance required: ESD-1300, EDB-909.

Availability: see enclosed document at the end of the catalogue

Specifications subject to change without prior notice