

Windings available from stock		□□□	... - 012 ●	... - 004 ●	... - 004 ●	... - 0.7 ●								
			coils in series	coils in series	coils in parallel	coils in parallel								
COIL DEPENDENT PARAMETERS			min	typ	max	min	typ	max	min	typ	max			
1	Phase resistance	ohm	24	27	29	8	8.8	9.5	2	2.2	2.4	0.3	0.34	0.38
2	Phase inductance (1 kHz)	mH	64			20			5			0.7		
3	Nominal phase current (2 ph. on)	A	0.4			0.7			1.4			3.7		
4	Nominal phase current (1 ph. on)	A	0.56			1			2			5.2		
5	Back-EMF amplitude	V/kst/s	17	21	25	10	12	14	5	6	7	1.8	2.3	2.8
COIL INDEPENDENT PARAMETERS ⁽¹⁾						min			typ			max		
Torque parameters														
6	Holding torque (nominal current)	mNm (oz-in)				174 (24.6)			205 (29)			236 (33.4)		
7	Holding torque (twice nominal current) ⁽²⁾	mNm (oz-in)				306 (43.3)			360 (51)			414 (58.6)		
8	Detent torque amplitude and friction	mNm (oz-in)				14 (2)			28 (4)			40 (5.7)		
Thermal parameters														
9	Thermal resistance coil-ambient ⁽³⁾	°C/W							7.3					
10	Coil temperature	°C										130		
11	Operating ambient temperature	°C				-20						50		
Angular accuracy														
12	Absolute accuracy (2 ph. on full-step mode)	% full-step							±3			±5		
Mechanical parameters														
13	Rotor inertia	kgm ² · 10 ⁻⁷							12					
14	Radial load ⁽⁴⁾	N										20		
15	Axial load ⁽⁵⁾	N										30		
16	Radial shaft play (5 N)	µm							10			25		
17	Axial shaft play (5 N)	µm							10			25		
Other parameters														
18	Test voltage (1 min)	V _{RMS}							500					
19	Natural resonance frequency (nominal current)	Hz							330					
20	Electrical time constant	ms							2.3					
21	Angular acceleration (nominal current)	rad/s ²							171000					
22	Power rate (nominal current)	kW/s							35					

¹⁾ Bipolar driver

²⁾ The maximum coil temperature must be respected

³⁾ Motor unmounted

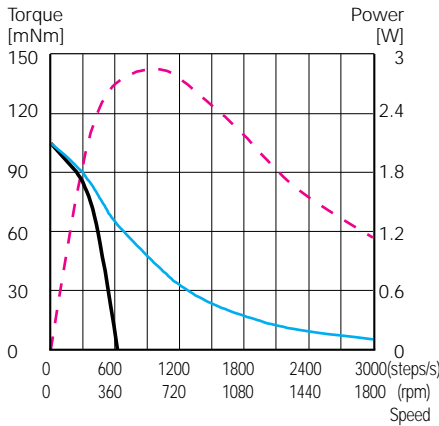
⁴⁾ Load applied at 12 mm from mounting face

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

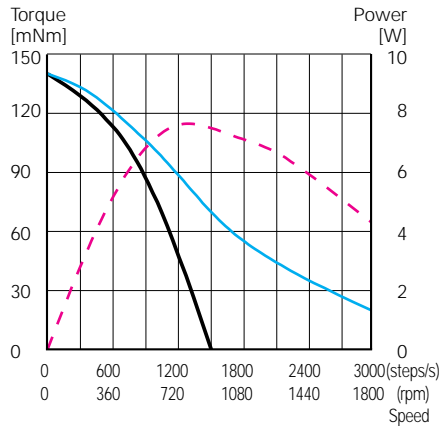
The P532 motor is also available from stock with the RG1/9 and K40 gearboxes (p. 101, 102).

Particular versions include options such as special shafts (hollow shaft), other gearboxes (R32, R40), optical encoders and so forth.

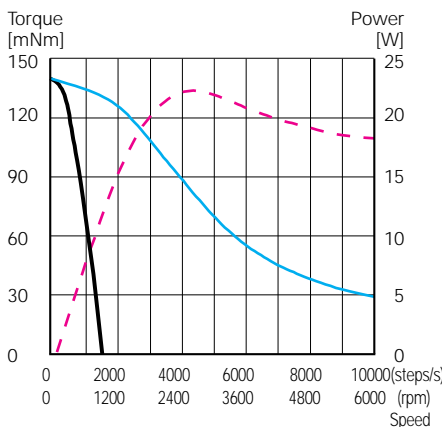
P532-258-004
Coils in series
escap® ELD-200
33Ω series resistor, 24V



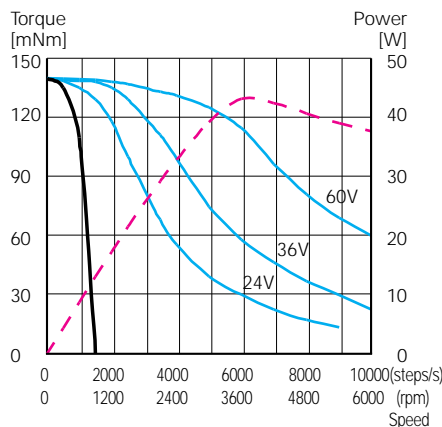
P532-258-012
Coils in series
escap® ELD-200
39Ω series resistor, 36V



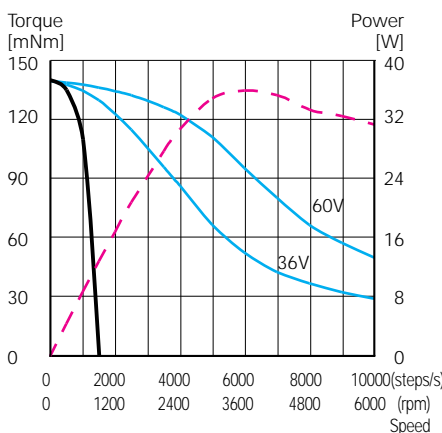
P532-258-004
Coils in parallel
escap® EDM-453, 34V, 2A



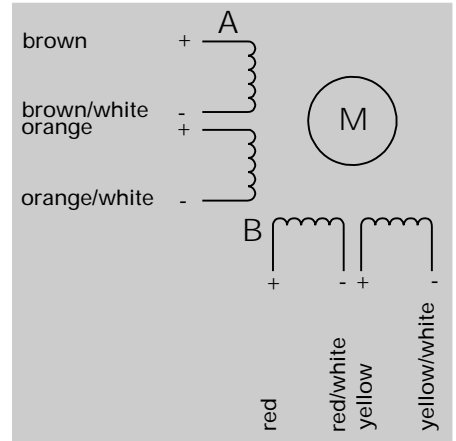
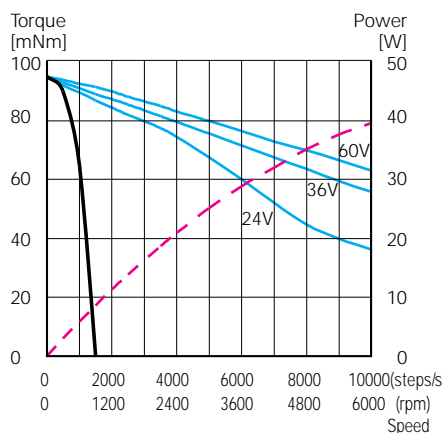
P532-258-004
Coils in parallel
escap® ESD-1200, I = 2A



P532-258-0.7
Coils in series
escap® ESD-1300, I = 2.4A



P532-258-0.7
Coils in parallel
escap® ESD-1300, I = 3A



Motor connections

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

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.
Pull-in is measured with a load inertia equal to the rotor inertia.
The following escap® drive circuits are recommended with the P532 motor, depending on the drive mode and the dynamic performance required: ELD-200, EDM-453, ESD-1200, ESD-1300.
Please refer to page 108 and 109 for more information on terminology and definitions.