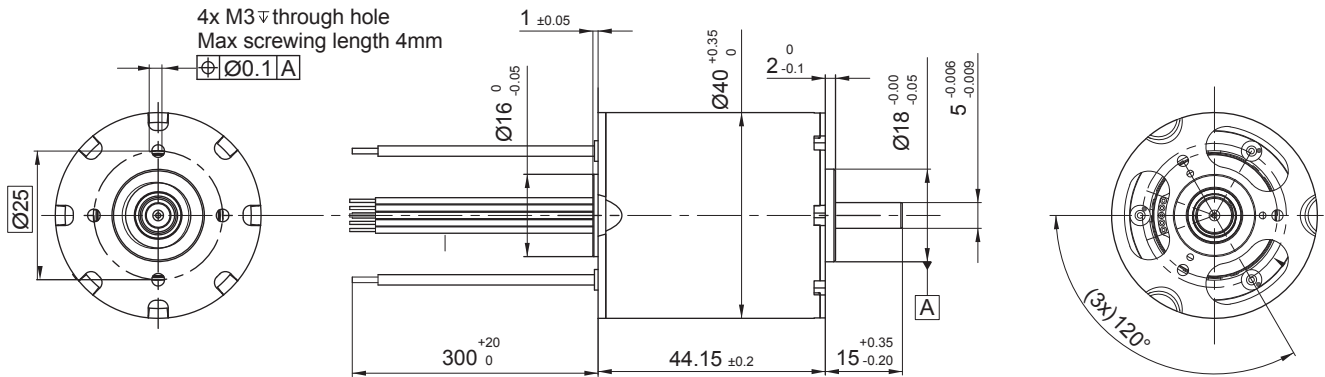


40ECP44

Ø 40mm • 4-pole • 150W



Dimensions in mm

Electrical Data	Symbol	40ECP44 8 XX		Unit
		7	10	
1 Nominal Voltage	U_N	18	18	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	-
3 No Load Speed	n_0	26'500	18'300	rpm
4 Typical No Load Current	I_0	1'410	770	mA
5 Max. Continuous Mechanical Power (@25°C)	P_{max}	150	150	W
6 Max. Continuous Current	$I_{e,max}$	18.85	13.2	A
7 Max. Continuous Torque	$M_{e,max}$	120 (17)	120 (17)	mNm (oz-in)
8 Back EMF Constant	k_E	0.67	0.95	V/1000 rpm
9 Torque Constant	k_M	6.38 (0.9)	9.11 (1.29)	mNm/A
10 Motor Regulation	R/k^2	0.639	0.63	10 ³ /Nms
11 Motor Regulation	$k/R^{1/2}$	39.5 (5.6)	40 (5.66)	mNm/W ^{1/2} (oz-in/W ^{1/2})
12 Internal Resistance - phase to phase	R_i	0.026	0.052	ohms
13 Line to Line Resistance at Connectors	R_L	0.04	0.066	ohms
14 Inductance Phase to Phase	L	0.005	0.01	mH
15 Mechanical Time Constant	τ_m	4.1	4.12	ms
16 Electrical Time Constant	τ_e	0.2	0.2	ms

General Data				
17 Maximum Motor Speed	n_{max}	30'000		rpm
18 Ambient Working Temperature Range	-	-30 to +100 (-22 to +212)		°C (°F)
19 Ambient Storage Temperature Range	-	-40 to +100 (-40 to +212)		°C (°F)
20 Ball Bearings Preload	-	16 (3.6)		N (lb)
21 Axial Static Force w/o Shaft Support (max)	-	134 (30)		N (lb)
22 Maximum Winding Temperature	-	125 (257)		°C (°F)
23 Thermal Resistance	R_{th}	1 / 5.4		°C/W
24 Thermal Time Constant	τ_w	1'019		s
25 Weight	-	230 (8.11)		g (oz)
26 Rotor Inertia	J	64 (906)		g-cm ²
27 Hall Sensor Electrical Phasing*	-	120		Electrical °

*Also available without Hall sensors

Wire	Description
Gray	Phase 1 (AWG 18)
Violet	Phase 2 (AWG 18)
Blue	Phase 3 (AWG 18)
Green	VDC (AWG 26)
Yellow	GND (AWG 26)
Orange	Hall Sensor 1 (AWG 26)
Red	Hall Sensor 2 (AWG 26)
Brown	Hall Sensor 3 (AWG 26)

