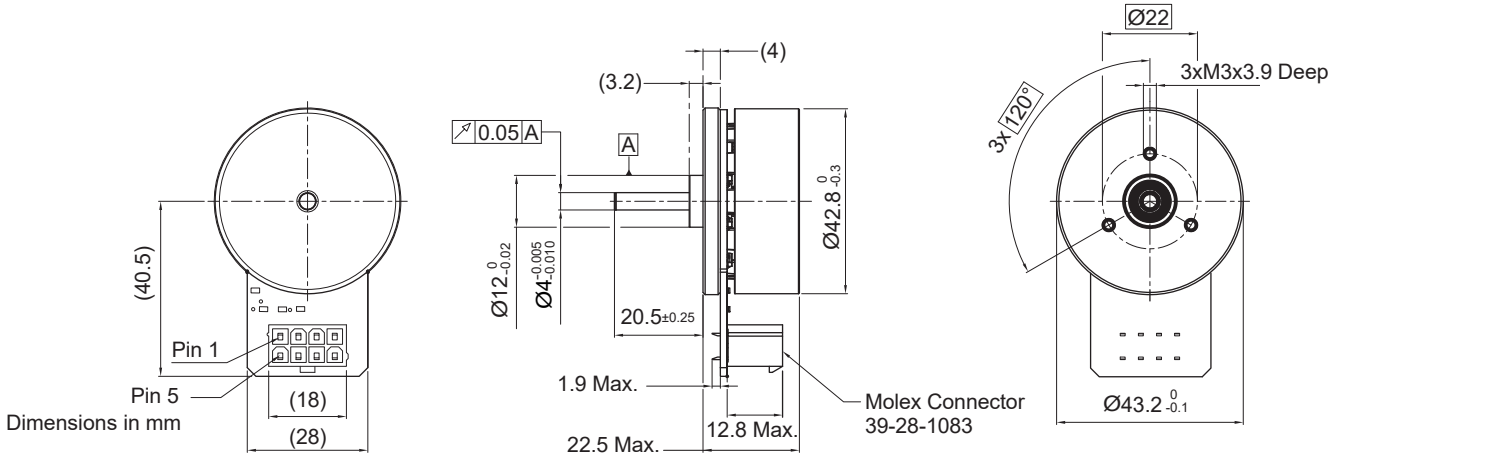


45ECF

Ø 45 mm • 16-pole • 50 W



Electrical Data	Symbol	45ECF22-8B-25 .01	Unit
1 Nominal Voltage	$U_N$	24	Volt
2 Optimization Direction	-	Symmetrical	-
3 No Load Speed	$n_0$	6'310	rpm
4 Typical No Load Current	$I_0$	230	mA
5 Max. Continuous Mechanical Power (@25°C)	$P_{max}$	50	W
6 Max. Continuous Current	$I_{e max}$	2.5	A
7 Max. Continuous Torque	$M_{e max}$	91 (12.9)	mNm (oz-in)
8 Back EMF Constant	$k_E$	3.76	V/1000 rpm
9 Torque Constant	$k_M$	35.95 (5.09)	mNm/A
10 Motor Regulation	$R/k^2$	0.63	$10^3/Nms$
11 Motor Regulation	$k/R^{1/2}$	40.2 (5.7)	$mNm/W^{1/2}$ (oz-in/ $W^{1/2}$ )
12 Internal Resistance - phase to phase	$R_1$	0.8	ohms
13 Line to Line Resistance at Connectors	$R_L$	0.82	ohms
14 Inductance Phase to Phase	$L$	0.5	mH
15 Mechanical Time Constant	$\tau_m$	8.6	ms
16 Electrical Time Constant	$\tau_e$	0.61	ms

General Data			
17 Maximum Motor Speed	$n_{max}$	10'000	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	-	15 (4)	N (lbs)
21 Axial Static Force w/o Shaft Support (max)	-	53 (12)	N (lbs)
22 Maximum Winding Temperature	-	125 (257)	°C (°F)
23 Thermal Resistance	$R_{th}$	10	°C/W
24 Thermal Time Constant	$\tau_w$	109	s
25 Weight	-	130 (4.59)	g (oz)
26 Rotor Inertia	$J$	135 (1911)	$g\text{-cm}^2 \cdot 10^{-4}$ (oz-in-sec <sup>2</sup> $10^{-6}$ )
27 Hall Sensor Electrical Phasing*	-	120	Electrical °

\*Also available without Hall sensors

Wire	Description
Pin 1	Sensor 1
Pin 2	Sensor 2
Pin 3	4.5 to 18 Vdc
Pin 4	Phase 3
Pin 5	Sensor 3
Pin 6	GND
Pin 7	Phase 1
Pin 8	Phase 2

with hall effect sensor

