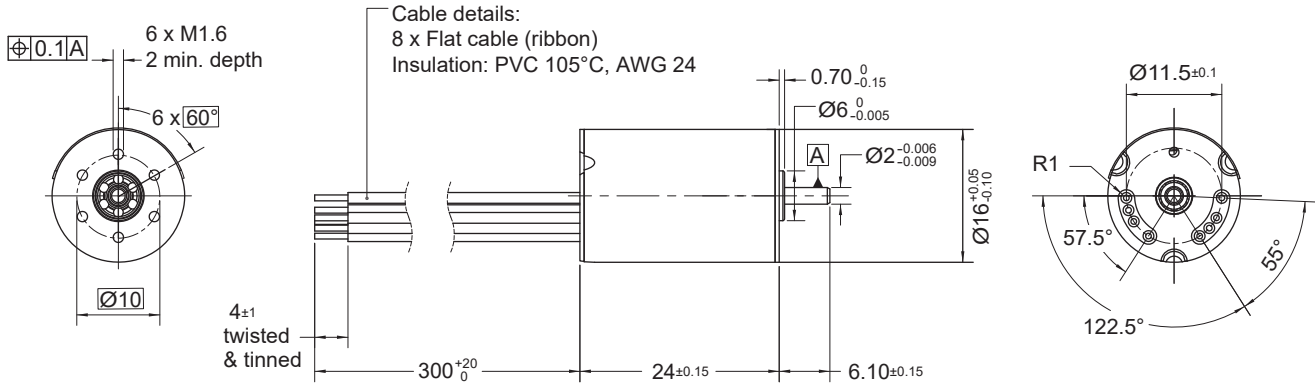


16ECP24

Ø16 mm • 2-pole • 6.8 W



Dimensions in mm.

Electrical Data	Symbol	16ECP 24 8B xxx		Unit
		87	128	
1 Nominal Voltage	$U_n$	12	15	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	-
3 No-Load Speed	$n_0$	17'600	14'900	rpm
4 No-Load Current, Typical	$I_0$	66	43	mA
5 Continuous Mechanical Power, Max (@25°C)	$P_{max}$	6.8	6.8	W
6 Continuous Current, Max	$I_{e max}$	0.6	0.4	A
7 Continuous Torque, Max	$M_{e max}$	4 (0.57)	4 (0.57)	mNm (oz-in)
8 Torque Constant	$k_M$	6.29 (0.89)	9.29 (1.32)	mNm/A (oz-in/A)
9 Motor Regulation	$R/k^2$	151.8	156.3	10 <sup>3</sup> /Nms
10 Line to Line Resistance	$R_L$	6.1	13.6	-
11 Inductance - Phase to Phase	$L$	0.26	0.57	mH
12 Internal Resistance - Phase to Phase	$R_i$	6	13.5	ohms
13 Back EMF Constant	$k_E$	0.66	0.97	V/1000 rpm
14 Mechanical Time Constant	$T_m$	5.5	5.6	ms
15 Electrical Time Constant	$T_e$	0.04	0.04	ms

General Data				
16 Motor Speed, Max	$n_{e max}$		20'000	rpm
17 Ambient Operating Temperature Range	-		-30 to +100 (-22 to +212)	°C (°F)
18 Ambient Storage Temperature Range	-		-40 to +100 (-40 to +212)	°C (°F)
19 Ball Bearings Preload	-		3.3	N
20 Axial Static Force w/o Shaft Support, Max	-		20 (4.5)	N (lbs)
21 Winding Temperature, Max	-		125 (257)	°C (°F)
22 Thermal Resistance (slotless)	$R_1/R_2$		5.2 / 24	°C/W
23 Thermal Time Constant	$T_w$		390	s
24 Rotor Inertia	$J$		0.36 (1968)	gcm <sup>2</sup> (oz-in-sec <sup>2</sup> 10 <sup>-6</sup> )
25 Hall Sensor Electrical Phasing*	-		120	Electrical °
26 Weight	-		31 (1.09)	g (oz)

\*Also available without Hall sensor

Wire	Description
Gray	Phase 1
Violet	Phase 2
Blue	Phase 3
Green	3.5 to 24V DC
Yellow	GND
Orange	Sensor 1
Red	Sensor 2
Brown	Sensor 3
with hall effect sensor	

