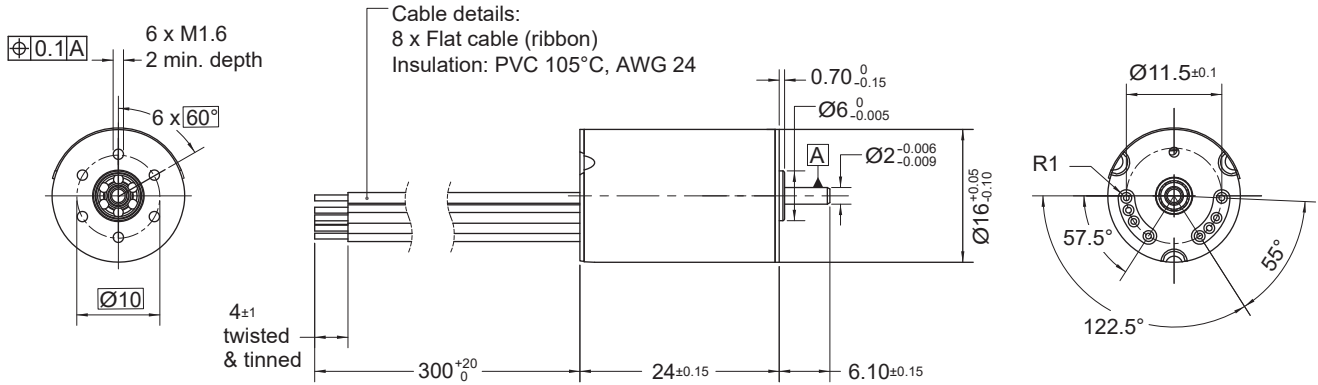


16ECP24

Ø16 mm • 2-pole • 6.8 W



Dimensions in mm

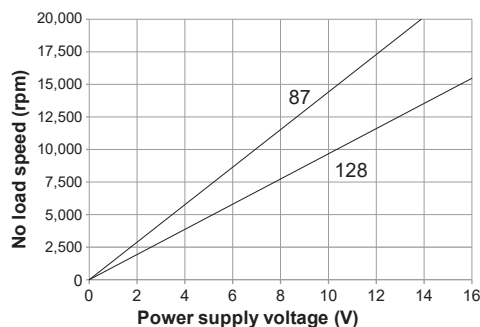
Electrical Data	Symbol	16ECP 24 8B xxx		Unit
		87	128	
1 Nominal Voltage	$U_N$	12	15	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	-
3 No Load Speed	$n_0$	17,600	14,900	rpm
4 Typical No Load Current	$I_0$	66	43	mA
5 Max. Continuous Mechanical Power (@25°C)	$P_{max}$	6.8	6.8	W
6 Max. Continuous Current	$I_{e,max}$	0.6	0.4	A
7 Max. Continuous Torque	$M_{e,max}$	4 (0.57)	4 (0.57)	mNm (oz-in)
8 Back EMF Constant	$k_E$	0.66	0.97	V/1000 rpm
9 Torque Constant	$k_M$	6.29 (0.89)	9.29 (1.32)	mNm/A
10 Motor Regulation	$R/k^2$	151.8	156.3	$10^3/Nms$
11 Motor Regulation	$k/R^{1/2}$	2.57 (0.36)	2.53 (0.36)	mNm/W <sup>1/2</sup> (oz-in/W <sup>1/2</sup> )
12 Internal Resistance - phase to phase	$R_I$	6.1	13.6	ohms
13 Line to Line Resistance at Connectors	$R_L$	0.26	0.57	ohms
14 Inductance Phase to Phase	$L$	6	13.5	mH
15 Mechanical Time Constant	$\tau_m$	5.5	5.6	ms
16 Electrical Time Constant	$\tau_e$	0.04	0.04	ms

General Data				
17 Maximum Motor Speed	$n_{max}$	20,000		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	-	3.3		N
21 Axial Static Force w/o Shaft Support (max)	-	20 (4.5)		N
22 Maximum Winding Temperature	-	125 (257)		°C (°F)
23 Thermal Resistance	$R_{th}$	5.2 / 24		°C/W
24 Thermal Time Constant	$\tau_w$	390		s
25 Weight	-	31 (1.09)		g (oz)
26 Rotor Inertia	$J$	0.36 (1968)		g-cm <sup>2</sup>
27 Hall Sensor Electrical Phasing*	-	120		Electrical °

\*Also available without Hall sensors

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	

No load speed for each coil



Max. continuous operation at 25°C

