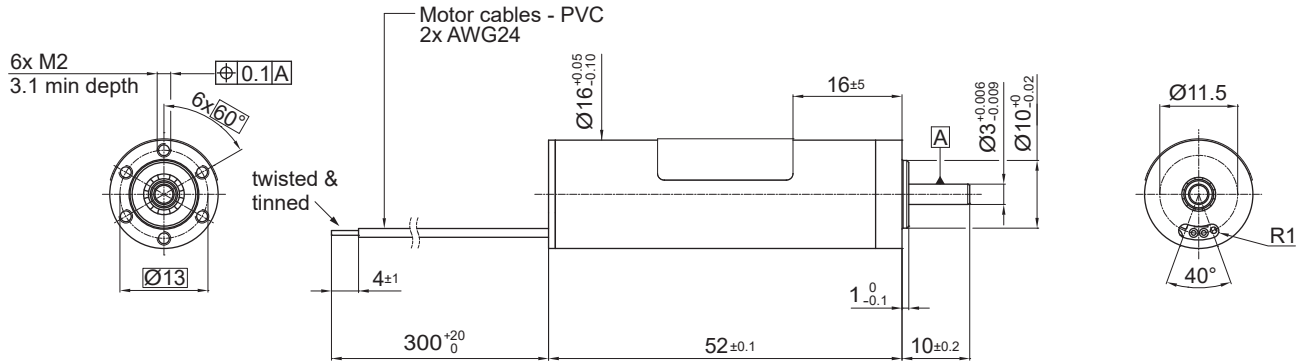


16ECP52 2-Wire Ultra EC™

Ø 16 mm • 2-pole • 19 W



Dimensions in mm

Electrical Data	Symbol	16ECP52-2A-**			Unit
		49	112	220	
1 Nominal Voltage	U_N	12	12	12	Volt
2 Optimization Direction	-	CW	CW	CW	-
3 No Load Speed	n_0	14,100	5,900	3,070	rpm
4 Typical No Load Current	I_0	120	35	15	mA
5 Max Continuous Mechanical Power (@25°C)	P_{max}	19.3	7.3	2.1	W
6 Max Continuous Current	$I_{e,max}$	1.70	0.72	0.39	A
7 Max Continuous Torque	$M_{e,max}$	13.4 (1.9)	13.9 (1.97)	13.93 (1.98)	mNm (oz-in)
8 Back EMF Constant	k_E	0.88	2.11	3.95	V/1000 rpm
9 Torque Constant	k_M	7.99	19.2	35.99	mNm/A
10 Motor Regulation	R/k^2	15.35	16.68	18.94	10 ³ /Nms
11 Motor Regulation	$k/R^{1/2}$	8 (1.15)	7.7 (1.1)	7.2 (1.03)	mNm/W ^{1/2} (oz-in/W ^{1/2})
12 Internal Resistance - phase to phase	R_l	0.98	6.15	24.53	ohms
13 Line to Line Resistance at Connectors	R_L	NA	NA	NA	ohms
14 Inductance Phase to Phase	L	0.12	0.60	2.32	mH
15 Mechanical Time Constant	τ_m	1.5	1.7	1.9	ms
16 Electrical Time Constant	τ_e	0.12	0.1	0.1	ms

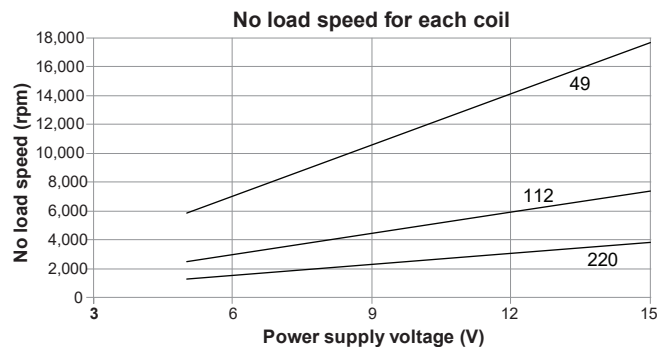
General Data					
17 Maximum Motor Speed	n_{max}	15,900	7,000	4,000	rpm
18 Ambient Working Temperature Range	-		-30 to +100 (-22 to +212)		°C (°F)
19 Ambient Storage Temperature Range	-		-40 to +100 (-40 to +212)		°C (°F)
20 Ball Bearings Preload	-		5.3		N
21 Axial Static Force w/o Shaft Support (max)	-		34		N
22 Maximum Winding Temperature	-		125 (257)		°C (°F)
23 Thermal Resistance	R_{th}		3 / 15		°C/W
24 Thermal Time Constant	τ_w		759		s
25 Weight	-		62 (2.19)		g (oz)
26 Rotor Inertia	J		1		g-cm ²
27 Hall Sensor Electrical Phasing	-		NA		Electrical °

Wire	Description
Red	5 to 15V DC
Black	GND

A reverse polarity will damage the electronics permanently

PWM not allowed on power supply

When ordering, please choose CW or CCW for rotation direction seen from shaft output side



Power curves on following page

