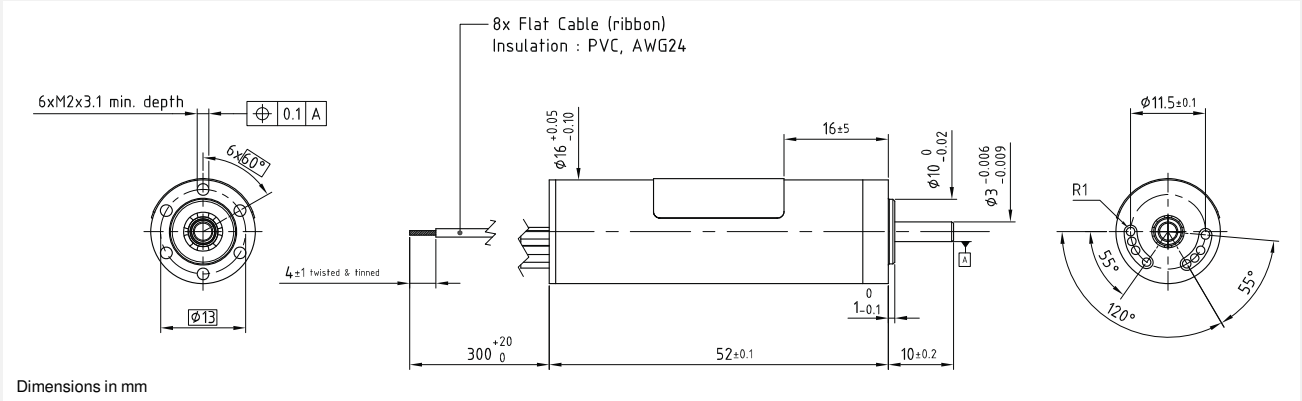
16ECP52 Ultra EC™ 2 pole Ø16mm 30 W



Dimensions in mm

16ECP52 - 8B - **

Electrical Data	**	220	112	49	
1 Nominal Voltage	U_N	24	24	24	Volt
2 Optimization Direction	-	Symetrical	Symetrical	Symetrical	-
3 No-Load Speed	n_0	6,144	12,100	27,800	rpm
4 Typical No-Load Current	I_0	19.0	41.0	134.0	mA
5 Max Continuous Mechanical Power (@25°C)	P_{max}	30.0	30.0	30.0	W
6 Max Continuous Current	$I_{e\,max}$	0.4	0.7	1.7	A
7 Max Continuous Torque	$M_{e\,max}$	13.2 (1.87)	13.5 (1.92)	13.9 (1.97)	mNm (oz-in)
8 Back EMF Constant	K_E	3.77	1.93	0.84	V/1000 rpm
9 Torque Constant	k_M	36.0	18.4	8.0	mNm/A
10 Motor Regulation	R/k^2	18.9	18.3	17.2	10^3/Nms
11 Motor Regulation	$k/R^{½}$	7.3 (1.04)	7.4 (1.05)	7.7 (1.1)	mNm/$W^{½}$ (oz-in/$W^{½}$)
12 Internal Resistance - phase to phase	R_l	24.50	6.20	1.10	ohms
13 Line to Line Resistance at Connectors	R_L	24.60	6.30	1.17	ohms
14 Inductance Phase to Phase	L	2.32	0.60	0.12	mH
15 Mechanical Time Constant	t_m	1.9	1.8	1.7	ms
16 Electrical Time Constant	t_e	0.10	0.10	0.10	ms

General Data			
17 Maximum Motor Speed	n_{max}	40,000	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)	-	34.0	N
22 Maximum Winding Temperature	-	125 (257)	°C (°F)
23 Thermal Resistance	R_{th1}/R_{th2}	3 / 18.5	°C/W
24 Thermal Time Constant	t_w	750	s
25 Weight	-	62 (2.19)	g (oz)
26 Rotor Inertia	J	1.000	$g.cm^2$
27 Hall Sensor Electrical Phasing	-	120	Electrical °

* Available without hall sensor

with hall effect sensors	
Wire	**Description**
Grey	Phase 1
Violet	Phase 2
Blue	Phase 3
Green	3.5 to 27V DC
Yellow	GND
Orange	Sensor 1
Red	Sensor 2
Brown	Sensor 3