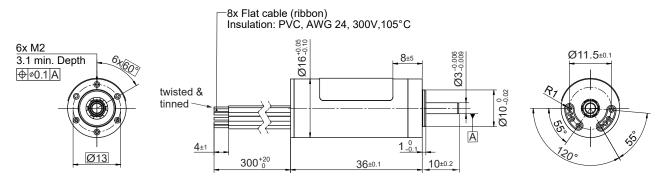
16ECS36 Ultra EC™

Ø 16 mm • 2-pole • 40 W



Dimensions in mm.

Electrical Data	Symbol	16ECS36-8B-xxx.01			11:4
		108	68	49	Unit
1 Nominal Voltage	U _N	24	24	24	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	Symmetrical	-
3 No Load Speed	n _o	29,000	45,900	63,100	rpm
4 Typical No Load Current	I _o	50	80	110	mA
5 Max Continuous Mechanical Power (@25°C)	P _{max}	39.5	39.5	39.5	W
6 Max Continuous Current	l _{e max}	0.9	1.6	2.3	Α
7 Max Continuous Torque	M _{e max}	7.1 (1)	7.9 (1.11)	8.2 (1.16)	mNm (oz-in)
8 Back EMF Constant	k _E	0.8	0.51	0.37	V/1000 rpm
9 Torque Constant	k _M	7.7	4.85	3.5	mNm/A
10 Motor Regulation	R/k ²	69.2	56.2	52	10 ³ /Nms
11 Motor Regulation	k/R½	3.8 (0.54)	4.2 (0.59)	4.4 (0.61)	mNm/W ^{1/2} (oz-in/W ^{1/2})
12 Internal Resistance - phase to phase	R _i	4.05	1.32	0.65	ohms
13 Line to Line Resistance at Connectors	R_L	4.13	1.37	0.70	ohms
14 Inductance Phase to Phase	L	0.32	0.13	0.07	mH
15 Mechanical Time Constant	τ_{m}	3.8	3.1	2.9	ms
16 Electrical Time Constant	$\tau_{\rm e}$	0.08	0.09	0.1	ms

General Data					
17 Maximum Motor Speed	n _{max}	73,000	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}	3.5 / 17	°C/W		
24 Thermal Time Constant	$\tau_{\rm w}$	580	S		
25 Weight	-	41 (1.45)	g (oz)		
26 Rotor Inertia	J	0.6	g-cm ²		
27 Hall Sensor Electrical Phasing*	-	120	Electrical °		

^{*}Available without hall sensor

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

