

Dimensions in mm.

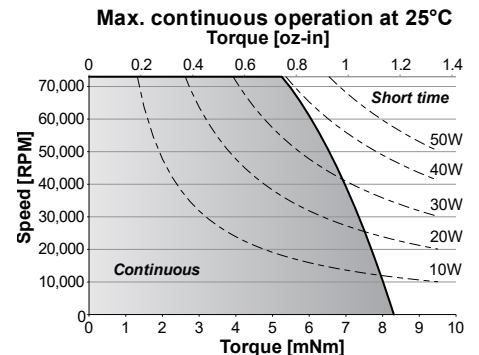
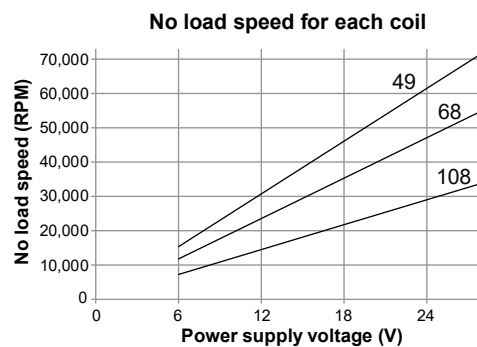
Electrical Data	Symbol	16ECS36-8B-xxx.01			Unit
		108	68	49	
1 Nominal Voltage	$U_N$	24	24	24	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	Symmetrical	-
3 No Load Speed	$n_0$	29,000	45,900	63,100	rpm
4 Typical No Load Current	$I_0$	50	80	110	mA
5 Max Continuous Mechanical Power (@25°C)	$P_{max}$	39.5	39.5	39.5	W
6 Max Continuous Current	$I_{e,max}$	0.9	1.6	2.3	A
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 <sup>3</sup> /Nms
11 Motor Regulation	$k/R^{1/2}$	3.8 (0.54)	4.2 (0.59)	4.4 (0.61)	mNm/W <sup>1/2</sup> (oz-in/W <sup>1/2</sup> )
12 Internal Resistance - phase to phase	$R_l$	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	$\tau_m$	3.8	3.1	2.9	ms
16 Electrical Time Constant	$\tau_e$	0.08	0.09	0.1	ms

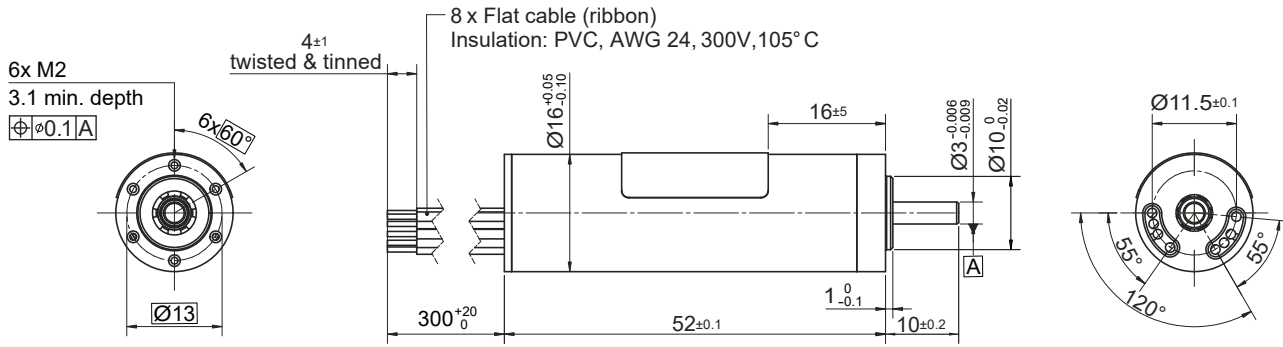
General Data					
17 Maximum Motor Speed	$n_{max}$	73,000			rpm
18 Ambient Working Temperature Range	-	-30 to + 100 (-22 to + 212)			°C (°F)
19 Ambient Storage Temperature Range	-	-40 to + 100 (-40 to + 212)			°C (°F)
20 Ball Bearings Preload	-	5.3			N
21 Axial Static Force w/o Shaft Support (max)	-	34			N
22 Maximum Winding Temperature	-	125 (257)			°C (°F)
23 Thermal Resistance	$R_{th}$	3.5 / 17			°C/W
24 Thermal Time Constant	$\tau_w$	580			s
25 Weight	-	41 (1.45)			g (oz)
26 Rotor Inertia	$J$	0.6			g-cm <sup>2</sup>
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





Dimensions in mm.

Electrical Data	Symbol	16ECS52-8B-xxx.01			Unit
		49	30	21	
1 Nominal Voltage	$U_N$	24	24	24	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	Symmetrical	-
3 No Load Speed	$n_0$	27,800	45,400	66,380	rpm
4 Typical No Load Current	$I_0$	85	135	240	mA
5 Max Continuous Mechanical Power (@25°C)	$P_{max}$	62	62	62	W
6 Max Continuous Current	$I_{e,max}$	2	3.2	4.6	A
7 Max Continuous Torque	$M_{e,max}$	16.1 (2.28)	15.9 (2.25)	15.8 (2.23)	mNm (oz-in)
8 Back EMF Constant	$k_E$	0.84	0.52	0.36	V/1000 rpm
9 Torque Constant	$k_M$	7.99	4.93	3.45	mNm/A
10 Motor Regulation	$R/k^2$	15.35	15.6	15.9	10 <sup>3</sup> /Nms
11 Motor Regulation	$k/R^{1/2}$	8.1 (1.15)	8 (1.13)	7.9 (1.11)	mNm/W <sup>1/2</sup> (oz-in/W <sup>1/2</sup> )
12 Internal Resistance - phase to phase	$R_i$	0.98	0.38	0.19	ohms
13 Line to Line Resistance at Connectors	$R_L$	1.06	0.43	0.24	ohms
14 Inductance Phase to Phase	$L$	0.12	0.02	0.01	mH
15 Mechanical Time Constant	$\tau_m$	1.5	1.6	1.6	ms
16 Electrical Time Constant	$\tau_e$	0.12	0.06	0.05	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 / 15	°C/W
24 Thermal Time Constant	$\tau_w$		750	s
25 Weight	-		62 (2.19)	g (oz)
26 Rotor Inertia	$J$		1	g-cm <sup>2</sup>
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

