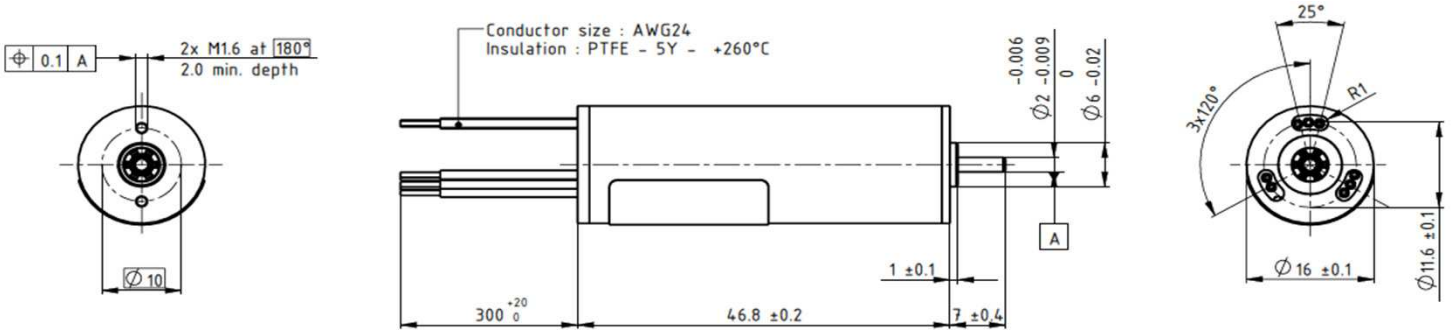

16BHL 8B - **

Electrical Data	**	L	
1 Nominal Voltage	U_N	12	Volt
2 Optimization direction	-	Symmetrical	-
3 No-Load Speed	n_0	21,600	rpm
4 Typical no-load current	I_0	120.0	mA
5 Max continuous mechanical power (@ 25°C)	P_{max}	27.0	W
6 Max continuous current	$I_{e\ max}$	2.3	A
7 Max continuous torque	$M_{e\ max}$	12.1 (1.72)	mNm (oz-in)
8 Back EMF Constant	K_E	0.54	V/1000 rpm
9 Torque Constant	k_M	5.2	mNm/A
10 Motor regulation	R/k^2	28.8	10^3/Nms
11 Motor regulation	$k/R^{½}$	5.9 (0.84)	mNm/$W^{½}$ (oz-in/$W^{½}$)
12 Internal resistance - phase to phase	R_I	0.78	ohms
13 Line to line resistance at connectors	R_L	0.78	ohms
14 Inductance phase to phase	L	0.06	mH
15 Mechanical Time Constant	t_m	2.7	ms
16 Electrical Time Constant	t_e	0.08	ms
General Data			
17 Maximum motor speed	n_{max}	98,000	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	-	2.0	N
21 Axial static force without shaft support (max)	-	25.0	N
22 Maximum winding temperature	-	125 (257)	°C (°F)
23 Thermal Resistance	R_{th}	17.0	°C/W
24 Thermal time constant	t_w	750	s
25 Weight	-	59 (2.08)	g (oz)
26 Rotor Inertia	J	0.950	$g.cm^2$
27 Hall sensor electrical phasing	-	120	Electrical °

16BHL - 8B - ** - 01
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