

BLDC 36 P16A / 12 V



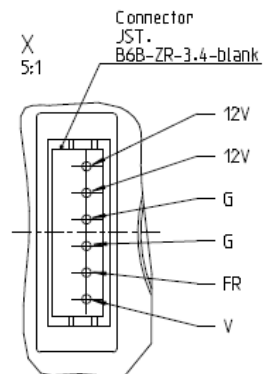
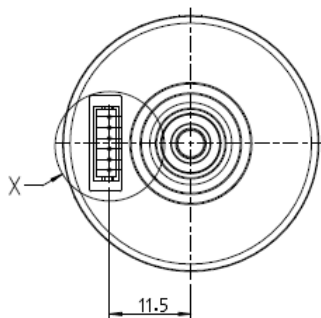
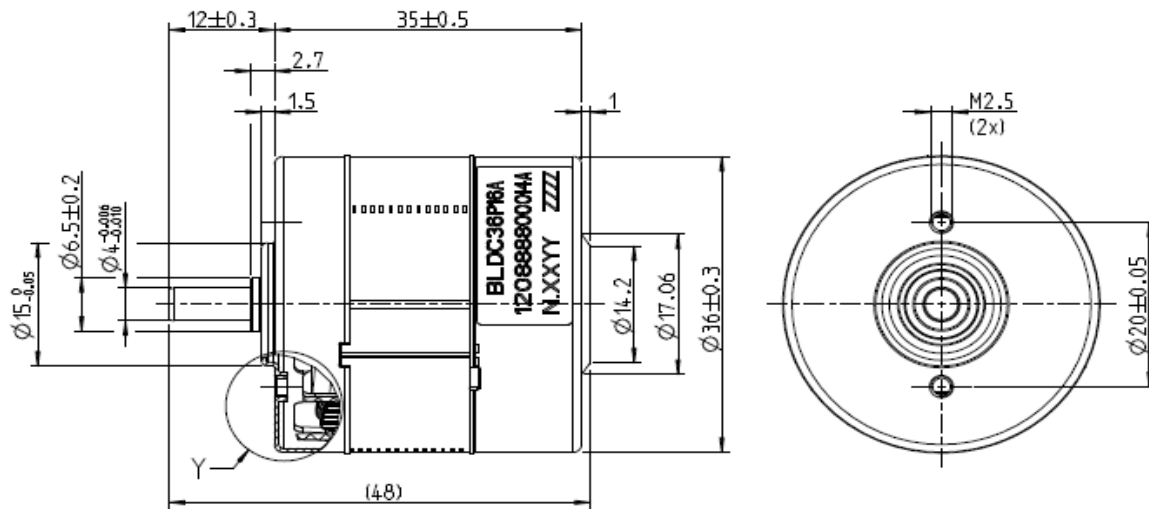
1	Parameter	Symbol	Unit	Value		
				Min.	Nominal	Max.
Parameters at 23°C ambient temperature and rated conditions in new condition with block commutation (if not defined differently)						
1.1	Output Power	P _{out}	W		11	
1.2	Rated voltage	U	V		12	
1.3	No load speed	n ₀	min ⁻¹		2.340	
1.4	No load current	I ₀	A		0,08	
1.5	Rated speed	n	min-1		1.550	
1.6	Rated torque	T	mNm		69	
1.7	Rated current	I I ₁ , I ₂ , I ₃	A		1,2	
1.8	Stall torque	T _s	mNm			
1.9	Stall current	I _s	A			
1.10	Max. stall torque	T _{smax}	mNm		291	
1.11	Max. stall current	I _{smax}	A		6,1	
1.12	Maximum efficiency	η _{max}	%		82	
1.13	Cogging Torque	T _{cog}	mNm			
1.14	Friction Torque	T _{fr}	mNm			
1.15	Winding resistance phase-phase	R _{ph-ph20}	Ohm		1,98	
1.16	Winding inductance phase-phase	L _{ph-ph}	mH		0,8	
1.17	BEMF	k _e	mVs / rad		48	
1.18	BEMF after Lifetime	k _{e life}	mVs / rad			
1.19	Torque constant	k _T	mNm / A		48	
1.20	Characteristic curves increase	Δn/ΔT	min-1 / mNm			
1.21	Mechanical start-up time constant	τ _m	ms		1,8	
1.22	Electric time constant	τ _e	ms			
1.23	Rotor moment of inertia	J	gcm ²		20,8	
2 Thermal Data						
2.1	Thermal resistance winding- air	R _{th}	K/W		11	
2.2	Thermal time constant of winding	τ _{wdg}	s			
2.3	Operating temperature range		°C	-20		85
2.4	Max. permissible winding temperature		°C			115
3 Mechanical Data						
3.1	Preload of Ball Bearings	F _{Preload}	N			
3.2	Bearing lifetime	L ₁₀	h		15.000	
4 Additional Data						
4.1	Motor weight	m	kg		0,132	
4.2	Number of pole pairs	p				
4.3	Number of phases / cabling type (Y/ Δ)				3	
4.4	Position sensor system				Hall	
4.5	Operating voltage range for position sensor	U _{cc}	V	5		18
4.6	IP-protection class				IP 20	
4.7	Insulation Class					

PMDM GmbH
 Precision Motors Deutsche Minebea GMBH
 Auf Herdenen 10
 78052 Villingen-Schwenningen / Germany
 Tel +49-(0)7721-997-195
www.pmdm.de



13.11.2008

5 Outline Dimensions



Interface:

1 pin for digital or serial input and / or output
 Direction H/L (0 / 5 VDC)
 or controllable via serial interface

Speed related frequency can be read via the same line

6 Integrated Drive Electronics		Symbol	Unit	min	nominal	max
6.1	Supply Voltage	V_{cc}	V	5	12	18
6.2	Phase current	I Ph	A		3	5
6.3	Control				PWM	
6.4	Position Sensor				Hall IC	
6.5	Interface					