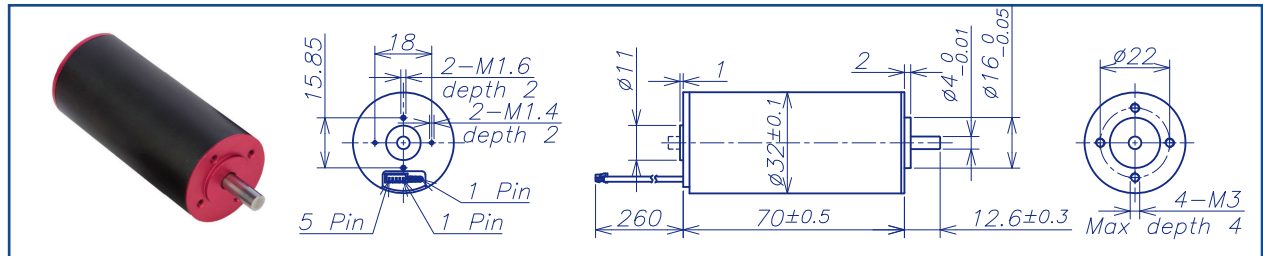


DC BRUSHLESS MOTOR
HIGH TEMPERATURE SERIES



AM-BL3270AE Series



Motor Model	Brushless Motor			Ball Bearings			
		1210	1207	2412	2409	3611	3609
Nominal voltage	V	12	12	24	24	36	36
No load speed ±12%	rpm	9794	6529	11523	8904	10882	9182
No load current Max 150%	mA	355	192	190	127	94	80
Recommend limit for continuous operating	Max cont. torque	mN.m	64.4	75.0	65.5	73.5	71.5
	Rated Speed	rpm	8746	5371	10533	7800	9804
	Rated Current	mA	5900	4500	3500	3000	2400
	Rated Power	W	59.0	42.2	72.3	60.1	74.5
Starting current	mA	52174	24490	38710	23301	23377	16981
Stall torque	mN.m	602	423	762	593	733	630
Maximum power output	W	154.4	72.3	230.0	138.3	208.7	151.4
Maximum Efficiency	%	84	83	86	56	88	87
Terminal resistance ±12%	Ω	0.23	0.49	0.62	1.03	1.54	2.12
Inductance (1KHz)	mH	N/A	0.09	0.12	0.2	0.285	0.21
Mechanical time constant	ms	2.6	2.5	2.4	2.4	2.4	2.3
Moment of inertia	gcm ²	15.3	15.3	15.3	15.3	15.3	15.3
Torque constant	mN.m/A	11.6	17.4	19.8	25.6	31.5	37.3
Speed constant	rpm/V	822	548	482	373	303	256
Speed/torque gradient	rpm/mN.m	16.3	15.4	15.1	15.0	14.9	14.6
Weight	g	280	280	280	280	280	280

ADDITIONAL INFORMATION							
Motor thermal resistance:	7.0 K/W			Motor thermal time constant:	1163 S		
Axial (dynamic):	6.0 N			Radial (5mm from mounting face):	28.0 N		
Press-fit force (static):	110N			Max allowable screw depth into flange:	4.0 mm		
Maximum radial play (5mm from mounting face):	≤0.02 mm			Axial play:	0 (<6.0N)		
Maximum winding temperature:	125°C			Ambient temperature range:	-30 to 65°C		
Standard rear shaft diameter:	4 mm			Standard rear shaft length "L":	0/3.7/5.5 mm		
Connection (AWG 20#)	Total Length: $L_T = L_1 + L_2 + L_3$						
Cable 1: Yellow Winding A	L1:32GP	L1:36GP	L2:BL32	L3:EN22S	L3:EN24T		
Cable 2: Red Winding B	27.4	39.6	70.0	10.7	12.0		
Cable 3: Blue Winding C	35.9	48.6					
Plug definition (AWG 28#) Molex: 51021-0500	44.4	57.6					
Plug 1: Brown Hall 3~16V							
Plug 2: Black Hall GND							
Plug 3: Yellow Hall A	Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.						
Plug 4: Red Hall B							
Plug 5: Blue Hall C							
				AM-BL3270AE Combination Scheme 			
				Recommended Gearbox: Planetary Gearbox: AM-32GP AM-36GP			
				Recommended Encoder: Encoder S: AM-EN2211S*** 2~3 Channels Encoder T: AM-EN2412T*** 2~3 Channels			
For more combination specs, visit Assun Motor website.							

Motor data tested at 25°C. Motor operation exceeding continuous limits will reduce life or result in damage.
At elevated ambient temperatures, load current must be reduced.

Download datasheet: <https://assunmotor.com/documents-download>

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