

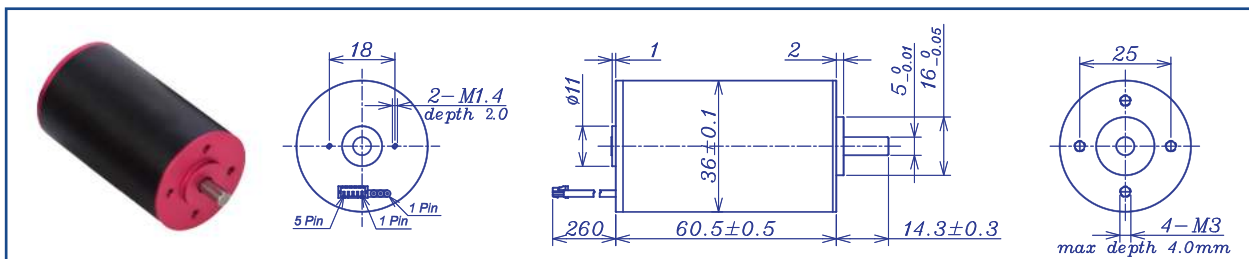
DC BRUSHLESS MOTOR

HIGH TEMPERATURE SERIES

ASSUN

DRIVING THE FUTURE

AM-BL3660AE Series



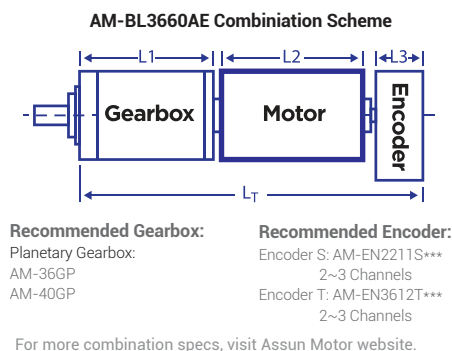
		Brushless Motor			Ball Bearings			
Motor Model		1211	1209	2413	2410	3612	3610	
Nominal voltage	V	12	12	24	24	36	36	
No load speed $\pm 12\%$	rpm	11200	8840	12500	10200	12300	10450	
No load current Max 150%	mA	320	230	220	165	120	105	
Recommend limit for continuous operating	Max cont. torque	mN.m	70.0	74.4	70.8	74.5	74.6	78.4
	Rated Speed	rpm	9909	7504	11403	8974	11123	9262
	Rated Current	mA	7200	6000	4100	3500	2800	2500
	Rated Power	W	72.7	58.5	84.5	70.0	86.9	76.0
Starting current	mA	60000	38710	44444	27907	28125	21176	
Stall torque	mN.m	607	496	807	620	779	690	
Maximum power output	W	178.1	114.8	264.0	165.5	251.0	188.7	
Maximum Efficiency	%	86	85	85	85	87	86	
Terminal resistance $\pm 12\%$	Ω	0.2	0.31	0.54	0.86	1.28	1.7	
Inductance (1KHz)	mH	0.027	0.051	0.11	0.17	0.27	0.38	
Mechanical time constant	ms	3.2	3.1	2.7	2.9	2.8	2.7	
Moment of inertia	gcm ²	16.75	16.75	16.75	16.75	16.75	16.75	
Torque constant	mN.m/A	10.2	12.9	18.2	22.3	27.8	32.7	
Speed constant	rpm/V	938	741	523	428	343	292	
Speed/torque gradient	rpm/mN.m	18.4	17.8	15.5	16.5	15.8	15.2	
Weight	g	325.8	325.9	326.8	326.9	326.5	327.5	

ADDITIONAL INFORMATION

Motor thermal resistance:	6.9K/W	Motor thermal time constant:	1188S
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:	5 mm	Standard rear shaft length "L":	0/3.7/5.5 mm

Connection (AWG 20#)	Total Length: $L_T = L_1 + L_2 + L_3$				
	L1:36GP	L1:40GP	L2:BL36	L3:EN22S	L3:EN36T
Cable 1: Yellow Winding A	39.6	46.8	60.5	10.7	12.0
Cable 2: Red Winding B	48.6	58.3			
Cable 3: Blue Winding C	57.6	69.8			
Plug definition (AWG 28#) Molex: 51021-0500					
Plug 1: Red Hall 3~16V					
Plug 2: Black Hall GND					
Plug 3: Yellow Hall A					
Plug 4: Red Hall B					
Plug 5: Blue Hall C					

Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.



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.

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