



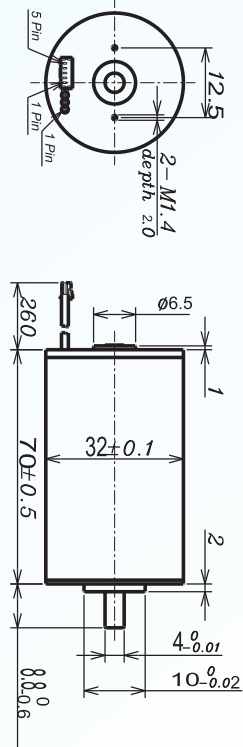
# DC Brushless Motor AM-BL3270A/B Series

ASSUN MOTOR

2015 edition. Specifications are subject to change without notice.

## BRUSHLESS MOTOR

## BALL BEARING

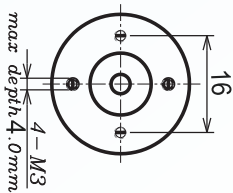


MOTOR MODEL		1210	1207	2412	2409	3611	3609
NOMINAL VOLTAGE	V	12	12	24	24	36	36
NO LOAD SPEED $\pm 12\%$	rpm	9794	6529	11523	8904	10882	9182
NO LOAD CURRENT Max 150%	mA	355	192	190	127	94	80
Recommend Limit for Continuous Operating	mN.m	40.3	52.8	36.0	48.2	44.4	49.4
	rpm	9081	5676	10927	8140	10184	8425
	A	3.8	3.20	2.0	2.00	1.50	1.40
	W	38.33	31.38	41.20	41.09	47.37	43.60
STARTING CURRENT	mA	52174	24490	38710	23301	23377	16981
STALL TORQUE	mN.m	610	430	770	600	738	636
MAXIMUM POWER OUTPUT	W	156.5	73.5	232.3	139.8	210.4	152.8
MAXIMUM EFFICIENCY	%	84	83	86	86	88	87
TERMINAL RESISTANCE PHASE TO PHASE $\pm 12\%$	$\Omega$	0.23	0.49	0.62	1.03	1.54	2.12
MECHANICAL TIME CONSTANT	ms	2.57	2.43	2.40	2.38	2.36	2.31
MOMENT OF INERTIA	gcm <sup>2</sup>	15.3	15.3	15.3	15.3	15.3	15.3
TORQUE CONSTANT	mN.m/A	11.7	17.55	19.89	25.74	31.59	37.44
SPEED CONSTANT	rpm/V	816	544	480	371	302	255
SPEED/TORQUE GRADIENT	rpm/mN.m	16	15.2	15.0	14.8	14.7	14.4
WEIGHT	g	280	280	280	280	280	280

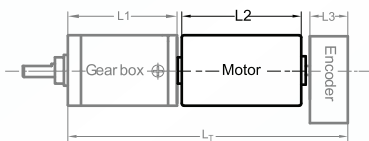
## ADDITIONAL INFORMATION

### MAXIMUM ROLLING BEARING LOADS

AXIAL (DYNAMIX)	6 N	RADIAL ( 5MM FROM HEAD FACE)	28 N
PRESS-FIT FORCE	110 N	L: MAX ALLOWABLE SCREW DEPTH INTO FLANGE	4.0 mm
MAXIMUM RADIAL PLAY	$\leq 0.02\text{mm}$	AXIAL PLAY:	0 (<6.0N)
MAXIMUM WINDING TEMPERATURE	85°C	AMBIENT TEMPERATURE RANGE:	-30 to 65°C



### AM-BL3270A/B COMBINATION SCHEME



Recommend Gearbox:  
Planetary Gearbox:  
AM-36P  
AM-45P

Recommend Encoder:  
Encoder S: AM-EN22-S\*\*\*  
2~3 Channels  
Encoder T: AM-EN36-T\*\*\*  
2~3 Channels

For more gearbox specs, see Assun Motor website.

CONNECTION (AWG22#)	TOTAL LENGTH (GEARBOX AND MOTOR): $L_T = L_1 + L_2 + L_3$				
	L1:36P	L1:45P	L2:BL36	L3:EN22-S	L3:EN36-T
CABLE 1: WINDING A					
CABLE 2: WINDING B	34.1	38.6	70.0	10.7	10.0
CABLE 3: WINDING C	42.7	49.4			12.0
PLUG DEFINATION MOLEX: 51021 - 0500	51.3	60.2			
	59.9	71.0			
PLUG 1: HALL $V_{CC}$					
PLUG 2: HALL GND					
PLUG 3: HALL A					
PLUG 4: HALL B					
PLUG 5: HALL C					

## REMARKS

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

Motor Data Tested at 25°. Motor operation exceeds continuous limits of operating range will compromise the life of the device.

ASSUN MOTOR

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