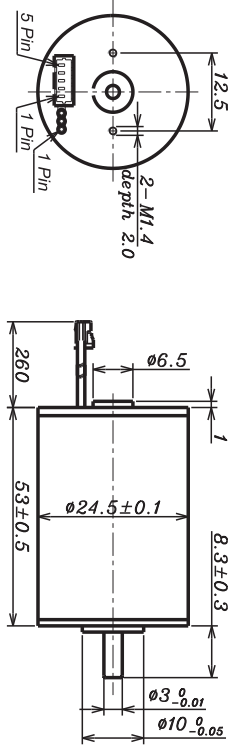




DC Brushless Motor AM-BL2453A/B Series

ASSUN MOTOR

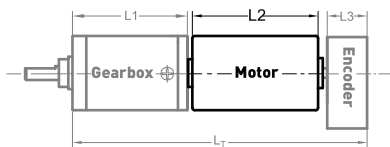
2015 edition. Specifications are subject to change without notice.



BRUSHLESS MOTOR		BALL BEARING					
MOTOR MODEL		1213	1210	1829	1813	2414	2410
NOMINAL VOLTAGE	V	12	12	18	18	24	24
NO LOAD SPEED ±12%	rpm	13010	10460	28715	12920	13625	9770
NO LOAD CURRENT Max 150%	mA	180	140	420	115	100	75
Recommend Limit for Continuous Operating	mN.m	21.1	22.3	9.4	22.2	20.0	23.8
	rpm	11582	8937	27928	11187	12320	8379
	mA	2600	2200	2000	1800	1300	1100
	W	25.6	20.9	27.5	26.0	25.8	20.9
STARTING CURRENT	mA	22222	14286	58065	12676	12632	7273
STALL TORQUE	mN.m	193	153	343	166	209	167
MAXIMUM POWER OUTPUT	W	65.6	42.0	257.5	56.0	74.6	42.7
MAXIMUM EFFICIENCY	%	83	81	84	82	83	81
TERMINAL RESISTANCE PHASE TO PHASE ±12%	Ω	0.54	0.84	0.31	1.42	1.9	3.3
INDUCTANCE (1kHz)	mH	0.055	0.092	0.02	0.14	0.23	0.45
MECHANICAL TIME CONSTANT	ms²	2.4	2.5	3.0	2.8	2.4	2.1
MOMENT OF INERTIA	gcm²	3.45	3.45	3.45	3.45	3.45	3.45
TORQUE CONSTANT	mN.m/A	8.7	10.8	5.9	13.2	16.7	23.2
SPEED CONSTANT	rpm/V	1093	880	1607	724	572	411
SPEED/TORQUE GRADIENT	rpm/mN.m	67.6	68.2	83.8	78.0	65.2	58.5
WEIGHT	g	126.7	126.8	126.7	125.7	126.3	127.5

ADDITIONAL INFORMATION			
MAXIMUM ROLLING BEARING LOADS			
AXIAL (DYNAMIX)	2.5 N	RADIAL (5MM FROM HEAD FACE)	16.0 N
PRESS-FIT FORCE	50N	L: MAX ALLOWABLE SCREW DEPTH INTO FLANGE	3.0 mm
MAXIMUM RADIAL PLAY	≤0.02mm	AXIAL PLAY:	0 (<4.0N)
MAXIMUM WINDING TEMPERATURE	85°C	AMBIENT TEMPERATURE RANGE:	-30 to 65°C

AM-BL2453A/B COMBINATION SCHEME



Recommend Gearbox:
Planetary Gearbox:
AM-22P
AM-26P

Recommend Encoder:
Encoder S: AM-EN16-S***
2~3 Channels
Encoder T: AM-EN24-T***
2~3 Channels

For more gearbox specs, see Assun Motor website.

CONNECTION (AWG26#)	TOTAL LENGTH (GEARBOX AND MOTOR): L _T = L ₁ +L ₂ + L ₃				
CABLE 1: WINDING A	L1:22P	L1:28P	L2:BL24	L3:EN16-S	L3:EN24-T
CABLE 2: WINDING B	22.4	28.4	53.0	10.7	10.0
CABLE 3: WINDING C	32.5	34.7			12.0
PLUG DEFINATION MOLEX: 51021 - 0500	25.2	41.0			
	37.5	47.3			
PLUG 1 HALL V_{CC}	42.6				
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.