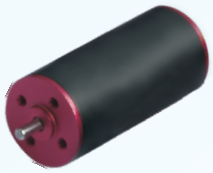
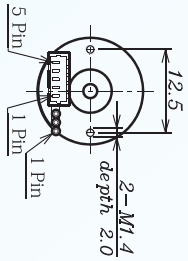
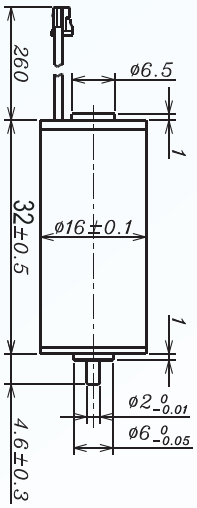


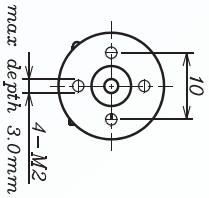
DC Brushless Motor
AM-BL1632A/B Series

ASSUN MOTOR

2015 edition. Specifications are subject to change without notice.







BRUSHLESS MOTOR — BALL BEARING

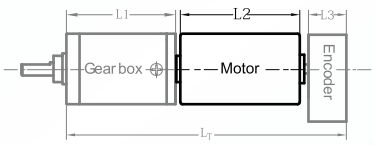
MOTOR MODEL			1220	1214	1827	1817	2420	2426
NOMINAL VOLTAGE		V	12	12	18	18	24	24
NO LOAD SPEED ±12%		rpm	19822	13840	26874	17253	19613	16063
NO LOAD CURRENT Max 150%		mA	85	60	77	49	42	35
Recommend Limit for Continuous Operating	MAX CONT. TORQUE	mN.m	3.0	3.2	2.2	3.1	2.8	3.1
	RATED SPEED	rpm	16809	10528	24516	14233	16854	13135
	RATED CURRENT	mA	600	450	420	360	280	250
	RATED POWER	W	5.24	3.56	5.63	4.61	4.91	4.22
STARTING CURRENT		mA	3947	1881	4787	2050	1990	1371
STALL TORQUE		mN.m	23	16	31	20	23	20
MAXIMUM POWER OUTPUT		W	11.8	5.6	21.5	9.2	11.9	8.2
MAXIMUM EFFICIENCY		%	73	67	76	71	73	71
TERMINAL RESISTANCE PHASE TO PHASE ±12%		Ω	3.04	6.38	3.76	8.78	12.06	17.50
MECHANICAL TIME CONSTANT		ms	2.73	2.79	2.76	2.65	2.65	2.58
MOMENT OF INERTIA		gcm²	0.3	0.3	0.3	0.3	0.3	0.3
TORQUE CONTANT		mN.m/A	5.78	8.28	6.40	9.96	11.69	14.27
SPEED CONSTANT		rpm/V	1652	1153	1493	958	817	669
SPEED/TORQUE GRADIENT		rpm/mN.m	868.6	888.7	877.7	844.7	843.5	820.9
WEIGHT		g	32.6	32.6	32.6	32.6	32.6	32.6

ADDITIONAL INFORMATION

MAXIMUM ROLLING BEARING LOADS

AXIAL (DYNAMIX)	1.5 N	RADIAL (5MM FROM HEAD FACE)	6.0 N
PRESS-FIT FORCE (STATIC)	40 N	L: MAX ALLOWABLE SCREW DEPTH INTO FLANGE	3.0 mm
MAXIMUM RADIAL PLAY	≤0.02mm	AXIAL PLAY	0 (<2.0N)
MAXIMUM WINDING TEMPERATURE	85°C	AMBIENT TEMPERATURE RANGE	-30 to 65°C

AM-BL1640A/B COMBINATION SCHEME



Recommend Gearbox:
Planetary Gearbox:
AM-16P

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

For more gearbox specs, see Assun Motor website.

CONNECTION (AWG26#)
CABLE 1: WINDING A
CABLE 1: WINDING B
CABLE 1: WINDING C
PLUG DEFINATION MOLEX: 51021 - 0500
PLUG 1 HALL V_{CC}
PLUG 2 HALL GND
PLUG 3 HALL A
PLUG 4 HALL B
PLUG 5 HALL C

TOTAL LENGTH (GEARBOX AND MOTOR): $L_T=L_1+L_2+L_3$			
L1:16P	L2:BL16	L3:EN16-S	L3:EN16-T
17.9	40.0	10.7	10.0
21.8			12.0
25.2			
28.6			
32.0			

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.