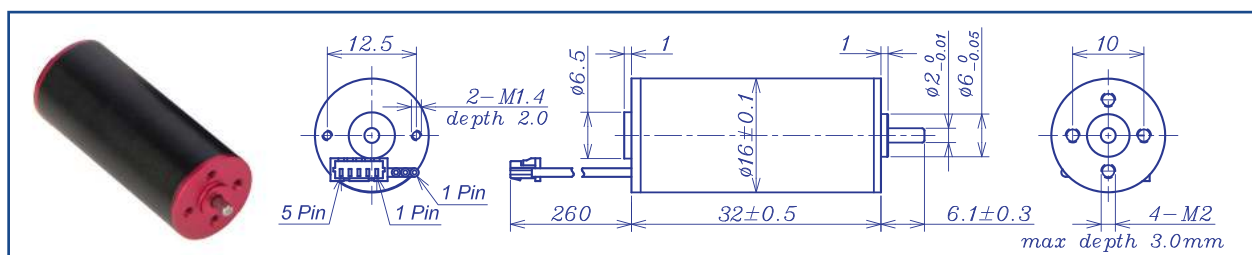


## AM-BL1632AN Series

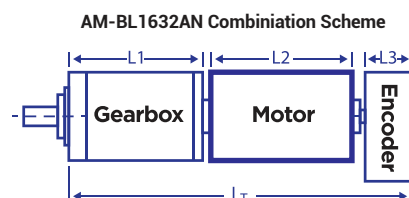


		Brushless Motor		Ball Bearings				
Motor Model			1220	1214	1827	1817	2420	2416
Nominal voltage		V	12	12	18	18	24	24
No load speed ±12%		rpm	19822	13840	26874	17253	19613	16063
No load current Max±50%		mA	85	60	77	49	42	35
Recommend limit for continuous operating	Max cont. torque	mN.m	3.0	3.2	2.2	3.1	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	5.26	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 ±12%		Ω	3.04	6.38	3.76	8.78	12.06	17.5
Inductance (1KHz)		mH	0	0	0	0	0	0
Mechanical time constant		ms	2.73	2.79	2.76	2.65	2.65	2.58
Moment of inertia		gcm <sup>2</sup>	0.3	0.3	0.3	0.3	0.3	0.3
Torque constant		mN.m/A	5.78	8.28	6.40	9.96	11.69	14.27
Speed constant		rpm/V	1652	1153	1493	958	843.5	820.9
Speed/torque gradient		rpm/mN.m	868.6	888.7	877.7	844.7	254.0	232.0
Weight		g	32.6	32.6	32.6	32.6	32.6	32.6

### ADDITIONAL INFORMATION

Motor thermal resistance:	22.5 K/W	Motor thermal time constant:	407 S
Axial (dynamic):	1.5 N	Radial (5mm from mounting face):	6.0 N
Press-fit force (static):	40 N	Max allowable screw depth into flange:	3.0 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play:	0 (<2.0N)
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	2 mm	Standard rear shaft length "L":	0/3.7/5.5 mm

Connection (AWG 26#)		Total Length: L <sub>T</sub> =L <sub>1</sub> +L <sub>2</sub> +L <sub>3</sub>				
Cable 1: Yellow	Winding A	L1:16GP	L1:20GP	L2:BL16	L3:EN16S	L3:EN16T
Cable 2: Red	Winding B	15.9	18.8	32.0	10.7	12.0
Cable 3: Blue	Winding C	29.6	23.6			
Plug definition (AWG 28#) Molex:51021-0500		23.3	28.4			
Plug 1: Red	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					



**Recommended Gearbox:**  
Planetary Gearbox:  
AM-16GP  
AM-20GP

**Recommended Encoder:**  
Encoder S: AM-EN1611S\*\*\*  
2~3 Channels  
Encoder T: AM-EN1612T\*\*\*  
2~3 Channels

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>