
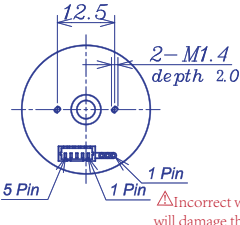
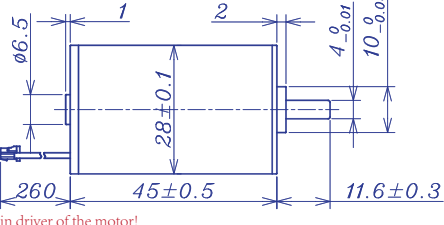
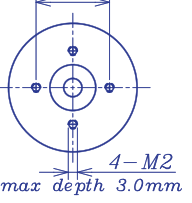


AM-BD2845AN Series

⚠️ Incorrect wiring will damage the built-in driver of the motor!

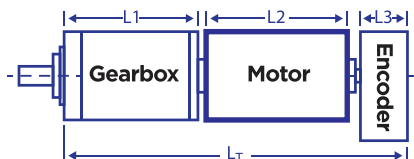
		Brushless Motor				Ball Bearings			
Motor Model		1203	1215	1210	1813	1810	2412	2409	
Nominal voltage		V	12	12	12	18	18	24	24
No load speed ±12%		rpm	3300	14800	10000	12520	9680	11680	9080
No load current Max 150%		mA	55	300	190	170	120	120	85
Recommend limit for continuous operating	Max cont. torque	mN.m	25.2	20.7	26.2	23.8	26.0	24.1	27.9
	Rated Speed	rpm	2122	13760	8814	11502	8580	10608	7909
	Rated Current	mA	800	3000	2500	1920	1600	1360	1200
	Rated Power	W	5.6	29.9	24.2	28.7	23.4	26.8	23.1
Starting current		mA	2143	38710	19672	21687	13139	13636	8727
Stall torque		mN.m	71	21	221	293	229	263	216
Maximum power output		W	6.1	114.3	57.9	96.1	58.0	80.4	51.3
Maximum Efficiency		%	71	83	81	83	82	82	81
Operating Range		V	10~28	10~28	10~28	10~28	10~28	10~28	10~28
Type of Current			Controlled	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
Mechanical time constant		ms	3.0	3.3	2.9	2.8	2.7	2.9	2.7
Moment of inertia		gcm ²	6.19	6.19	6.19	6.19	6.19	6.19	6.19
Torque constant		mN.m/A	33.8	7.7	11.3	13.6	17.6	19.4	25.0
Speed constant		rpm/V	282	1243	841	701	543	491	382
Speed/torque gradient		rpm/mN.m	46.7	50.2	45.2	42.7	42.3	44.4	42.0
Weight		g	138.8	138.8	138.7	139.1	140.1	138.4	139.2

ADDITIONAL INFORMATION

Motor thermal resistance:	10.2 K/W	Motor thermal time constant:	822 S
Axial (dynamic):	4.0 N	Radial (5mm from mounting face):	16.0 N
Press-fit force (static):	50 N	Max allowable screw depth into flange:	3.0 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play:	0 (<4.0N)
Maximum winding temperature:	85°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	4 mm	Standard rear shaft length "L":	0/3.7/5.5 mm

Connection (AWG 22#)	Total Length: L _T =L1+L2+L3				
	L1:28GP	L1:32GP	L2:BD28	L3:EN16S	L3:EN16T
Cable 1: Red +Vcc	25.9	25.9	45.0	10.7	12.0
Cable 2: Blue GND	33.1	35.9			
Plug definition (AWG 28#) Molex: 51021-0500	40.3	44.4			
Plug 1: Red GND					
Plug 2: Black FG Pulse					
Plug 3: Yellow CW/CCW					
Plug 4: Red PWM					
Plug 5: Blue Brake					

AM-BD2845AN Combination Scheme



Recommended Gearbox:

Planetary Gearbox:
AM-28GP
AM-32GP

Recommended Encoder:

Encoder S: AM-EN161S***
2~3 Channels
Encoder T: AM-EN161T***
2~3 Channels

For more combination specs, visit Assun Motor website.

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.

Download datasheet: <https://assunmotor.com/documents-download>