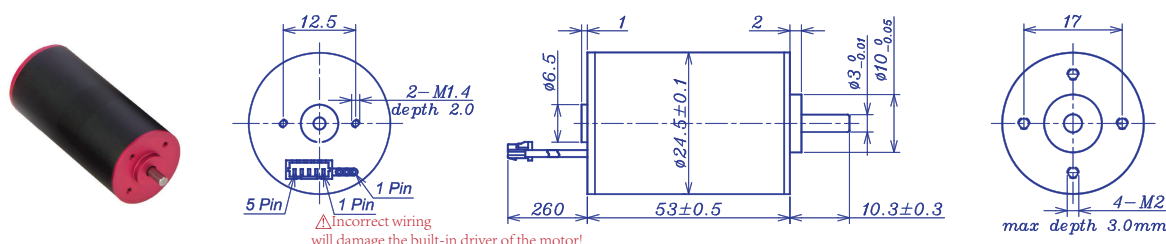


AM-BD2453AN Series



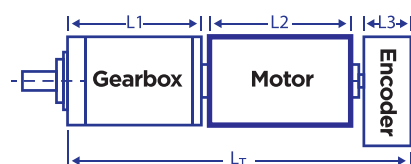
			Brushless Motor		Ball Bearings		
Motor Model			1213	1210	1813	2414	2410
Nominal voltage		V	12	12	18	24	24
No load speed	±12%	rpm	13010	10460	12920	13625	9770
No load current	Max 150%	mA	180	140	115	100	75
Recommend limit for continuous operating	Max cont. torque	mN.m	17.6	18.7	18.3	18.4	21.5
	Rated Speed	rpm	11818	9188	11495	12429	8514
	Rated Current	mA	2200	1860	1500	1200	1000
	Rated Power	W	21.8	18.0	22.0	23.9	19.1
Starting current		mA	22222	14286	12676	12632	7273
Stall torque		mN.m	193	153	166	209	167
Maximum power output		W	65.6	40.2	56.0	74.6	42.7
Maximum Efficiency		%	83	81	82	83	81
Operating Range		V	10~28	10~28	10~28	10~28	10~28
Type of Current			Controlled	Controlled	Controlled	Controlled	Controlled
Mechanical time constant		ms	2.4	2.5	2.8	2.4	2.1
Moment of inertia		gcm ²	3.45	3.45	3.45	3.45	3.45
Torque constant		mN.m/A	8.7	10.8	13.2	16.7	23.2
Speed constant		rpm/V	1093	880	724	572	411
Speed/torque gradient		rpm/mN.m	67.6	68.2	78.0	65.2	58.5
Weight		g	126.7	126.8	125.7	126.3	127.5

ADDITIONAL INFORMATION

Motor thermal resistance:	10.5 K/W	Motor thermal time constant:	768S
Axial (dynamic):	2.5 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:	3 mm	Standard rear shaft length "L":	0/3.7/5.5 mm

Connection (AWG 22#)		Total Length: $L_1=L_1+L_2+L_3$				
		L1:24GP	L1:26GP	L2:BD24	L3:EN16S	L3:EN16T
Cable 1: Red	+Vcc	24	25.7	53.0	10.7	12.0
Cable 2: Blue	GND	34.3	36			
Plug definition (AWG 28#) Molex: 51021-0500		42.8	44.5			
		51.3	53			
Plug 1: Brown	GND					
Plug 2: Black	FG Pulse	Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.				
Plug 3: Yellow	CW/CCW					
Plug 4: Red	PWM					
Plug 5: Blue	Brake					

AM-BD2453AN Combination Scheme



Recommended Gearbox:

Planetary Gearbox:

AM-24GP

AM-26GP

Recommended Encoder:

Encoder S: AM-EN1611S***

2~3 Channels

Encoder T: AM-EN1612T***

2~3 Channels

For more combination specs, visit Assun Motor website.

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>

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