

AM-BL2845BF Series

		Brushless Motor			Ball Bearings			
Motor Model		1210	1208	1810	1808	2410	2408	
Nominal voltage	V	12	12	18	18	24	24	
No load speed ±12%	rpm	10370	7930	10111	7995	10370	8171	
No load current Max 150%	mA	417	333	278	222	208	167	
Recommend limit for continuous operating	Max cont. torque	mN.m	61.69	61.66	59.87	64.03	59.49	65.44
	Rated Speed	rpm	9126	6684	8916	6801	9217	6996
	Rated Current	mA	6000	4600	3800	3200	2900	2500
	Rated Power	W	58.96	43.16	55.90	45.60	57.43	47.94
Starting current	mA	50000	29268	32143	21429	26087	17391	
Stall torque	mN.m	553	523	546	455	577	488	
Maximum power output	W	150.0	87.8	144.6	96.4	156.5	104.3	
Maximum Efficiency	%	83	80	82	81	83	81	
Terminal resistance ±12%	Ω	0.24	0.41	0.56	0.84	0.92	1.38	
Inductance (1KHz)	mH							
Mechanical time constant	ms	2.28	2.28	2.25	2.11	2.19	2.03	
Moment of inertia	gcm ²	11.6	11.6	11.6	11.6	11.6	11.6	
Torque constant	mN.m/A	11.06	14.45	17.00	21.50	22.10	28.05	
Speed constant	rpm/V	864	661	562	444	432	340	
Speed/torque gradient	rpm/mN.m	22.8	20.8	20.3	19.7	26.2	20.1	
Weight	g	180	180	180	180	180	180	

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:	3.0mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play:	0 (<4.0N)
Maximum winding temperature:	155°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 =L ₁ +L ₂ +L ₃				
Cable	Winding	L1:28GP	L1:32GP	L2:BL28	L3:EN16S	L3:EN16T
Cable 1: Yellow	Winding A	25.9	27.4	45.0	10.7	12.0
Cable 2: Red	Winding B	33.1	35.9			
Cable 3: Blue	Winding C	40.3	44.4			
Plug definition (AWG 28#) Molex: 51021-0500						
Plug 1: Red	Hall 3~16V					
Plug 2: Black	Hall GND					
Plug 3: Yellow	Hall A					
Plug 4: Red	Hall B					
Plug 5: Blue	Hall C					

AM-BL2845BF Combination Scheme

Recommended Gearbox:
Planetary Gearbox:
AM-28GP
AM-32GP

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>