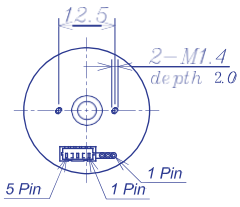
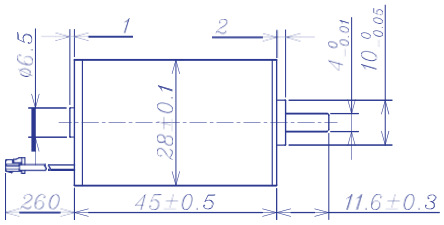
DC BRUSHLESS MOTOR

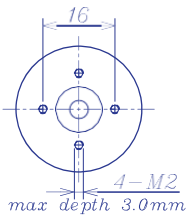
STANDARD SERIES

ASSUN
DRIVING THE FUTURE

AM-BL2845AN Series







		Brushless Motor		Ball Bearings			
Motor Model		1215	1210	1813	1810	2412	2409
Nominal voltage	V	12	12	18	18	24	24
No load speed ±12%	rpm	14800	10000	12520	9680	11680	9080
No load current Max 150%	mA	300	190	170	120	120	85
Recommend limit for continuous operating — Max cont. torque	mN.m	28.4	34.2	30.4	33.1	28.8	35.4
Recommend limit for continuous operating — Rated Speed	rpm	13374	8455	11222	8282	10401	7593
Recommend limit for continuous operating — Rated Current	mA	4000	3200	2400	2000	1600	1500
Recommend limit for continuous operating — Rated Power	W	39.8	30.2	35.7	28.7	31.4	28.1
Starting current	mA	60000	19672	21687	13139	13636	8727
Stall torque	mN.m	295	221	293	229	263	216
Maximum power output	W	114.3	57.9	96.1	58.0	80.4	51.3
Maximum Efficiency	%	83	81	83	82	82	81
Terminal resistance ±12%	Ω	0.31	0.61	0.83	1.37	1.76	2.75
Inductance (1KHz)	mH	0.034	0.086	0.126	0.22	0.27	0.46
Mechanical time constant	ms	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
Torque constant	mN.m/A	7.7	11.3	13.6	17.6	19.4	25.0
Speed constant	rpm/V	1243	841	701	543	491	382
Speed/torque gradient	rpm/mN.m	50.2	45.2	42.7	42.3	44.4	42.0
Weight	g	138.8	138.7	139.1	140.1	138.4	139.2

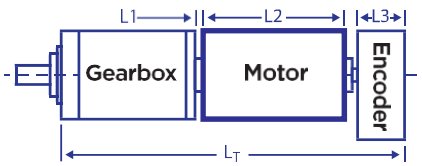
ADDITIONAL INFORMATION

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):	110 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

C onne ction (AWG 22#)	Total Length: L_T=L1+L2+L3				
Cable 1:Yellow Winding A	L1:28GP	L1:32GP	L2:BL28	L3:EN16S	L3:EN16T
Cable 2:Red Winding B	25.9	27.4	45.0	10.7	12.0
Cable 3: Blue Winding C	33.1	35.9			
Plug de finition (AWG 28#) Molex:51021-0500	40.3	44.4			
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					

Remarks: Client can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

AM-BL2845AN Combiniation 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.

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