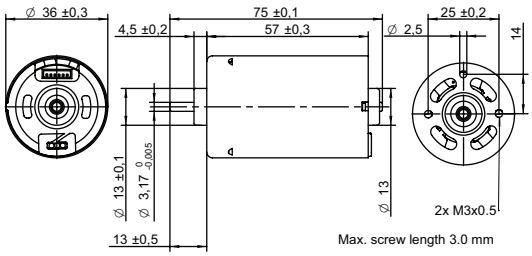
BT3657 | Ø 36 mm | BRUSHLESS DC MOTOR WITH EXTERNAL DRIVER

DRAWING (mm)



PHOTO

OPTIONS POWER SUPPLIES

● C = Customizations are offered on demand even for smaller quantities. Typical customizations indicated with green dot at column end. Please contact us for any customization request.

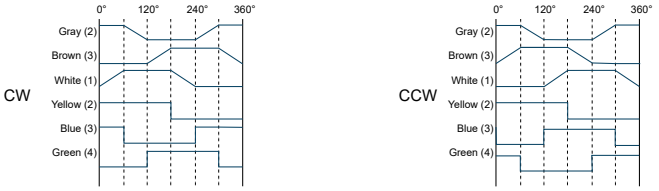
MOTOR TYPE

Brushless DC motor with integrated open loop speed control driver.

MOTOR DATA		12V	24V	C
Nominal voltage	V	12	24	
Commutator (hall) voltage	V	3.3~5	3.3~5	
No load speed	rpm	6000		
No load current	mA	280	160	
Nominal speed	rpm	5400	5400	●
Nominal torque	mNm	30	35	
Nominal current	A	1.9	1.1	
Start/Stall torque	mNm	260	310	
Start/Stall current	A	14	8.4	
Max. efficiency	%	78	80	
Nominal mechanical power	W	20	18	
Terminal resistance	Ω	0.6	1.8	
Terminal inductance	mH	0.4	1.4	
Torque constant	mNm/A	190	380	
Speed constant	rpm/V	500	250	
Speed/ torque gradient	rpm/mNm	180	160	
Rotor inertia	gcm²	48~51	52~61	

MECHANICAL DATA				C
Bearing type		Ball bearing		●
Axial play	mm	0.64	0.71	
Bearing radial clearence	µm	12		
Max. axial load (dynamic)	N	4.9		
Max. force for press fits (static)	N	13		

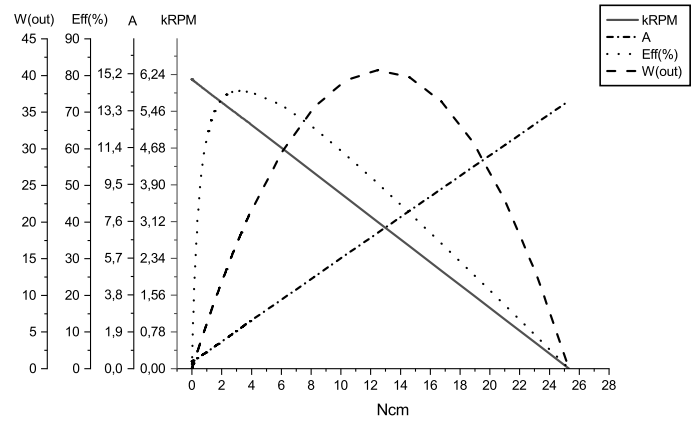
COMMUTATION SEQUENCE



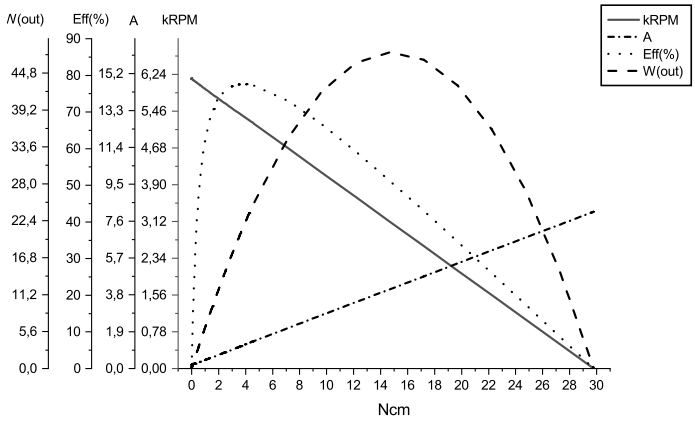
OTHER SPECIFICATIONS		12V	24V	C
Number of pole pairs		2		
Number of phases		3		
Weight of motor	g	230	240	
Typical noise level	dBA	37	38	
Ambient temperature	°C	-40 to +80		
Max. winding temperature	°C	150		
Motor insulation class		A		
IP rating		IP40		
Slot pole pairs		6S4P		
Rotor magnet		BNM-8		
Hall sensors and power harness length	mm	160 ± 10		●
Power harness end connector		XHP-3		●
Power harness		UL3132 20AWG 300V 150°C		●
Hall sensors harness end connector		ZHR-5		●
Hall sensors harness		UL10368 26AWG 300V 105°C		●
Shaft length from flange	mm	13		●
Shaft diameter ø	mm	3.17		
Housing material		SECD-0 1.0T		
Shaft material		S70C		
Magnet material		Bonding NdFeB		
Rotor balancing grade		G6.3		
Service life	hrs	5000		
Manufacturing standard		ISO9001 | TS16949		

CABLE AND PIN CONFIGURATION				C
1	Brown	Power harness	Motor phase V (HB)	
2	White	Power harness	Motor phase W (HC)	
3	Grey	Power harness	Motor phase U (HA)	
4	Black	Hall harness	Hall sensor GND	
5	Green	Hall harness	Hall sensor signal HA	
6	Blue	Hall harness	Hall sensor signal HB	
7	Yellow	Hall harness	Hall sensor signal HC	
8	Red	Hall harness	Hall sensor VCC	

MOTOR DATA DIAGRAM 12V



MOTOR DATA DIAGRAM 24V



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