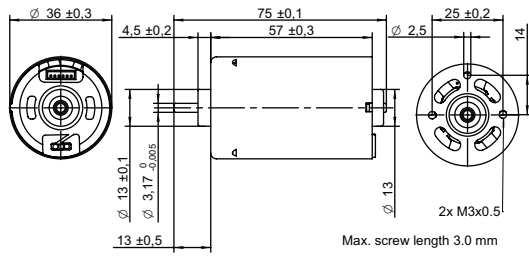


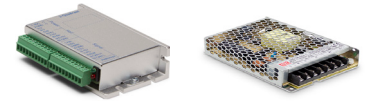
DRAWING (mm)



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

3-Phase, 120-degree, brushless DC Motor with integrated hall sensors.

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 power	W	17	20	
Terminal resistance	Ω	0.6	1.8	
Terminal inductance	mH	0.4	1.4	
Torque constant	mNm/A	19	38	
Speed constant	rpm/V	500	250	
Speed/ torque gradient	rpm/mNm	180	160	
Rotor inertia	gcm ²	48~51	52~61	

MECHANICAL DATA

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

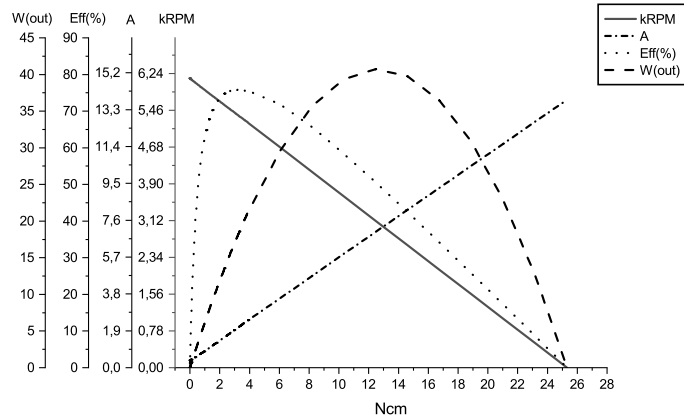
OTHER SPECIFICATIONS

		12V	24V	C
Number of pole pairs		2		
Number of phases		3		
Weight of motor	g	230	240	
Typical noise level	dBA	37	38	
Operating 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 EXTERNAL DRIVER

Power		Hall		C
Phase	Cable color	Phase	Cable color	
U	White	HU	Green	
V	Brown	HV	Blue	
W	Grey	HW	Yellow	
		+5V	Red	
		GND	Black	

MOTOR DATA DIAGRAM 12V



MOTOR DATA DIAGRAM 24V

