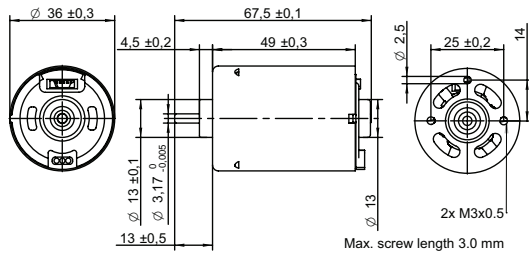


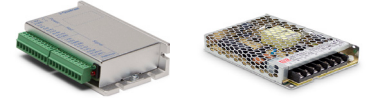
DRAWING (mm)



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		BT3649-12	BT3649-24	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	5200	5200	●
Nominal torque	mNm	29	37	
Nominal current	A	1.8	1.1	
Start/Stall torque	mNm	210	280	
Start/Stall current	A	11	7.8	
Max. efficiency	%	75	76	
Nominal power	W	16	20	
Terminal resistance	Ω	0.6	2	
Terminal inductance	mH	0.4	1.8	
Torque constant	mNm/A	19	36	
Speed constant	rpm/V	500	250	
Speed/ torque gradient	rpm/mNm	180	140	
Rotor inertia	gcm <sup>2</sup>	46~48	45~49	

MECHANICAL DATA

			C
Bearing type		Ball bearing	●
Axial play	mm	0.51	0.47
Bearing radial clearance	μm	12	
Max. axial load (dynamic)	N	4.9	
Max. force for press fits (static)	N	13	

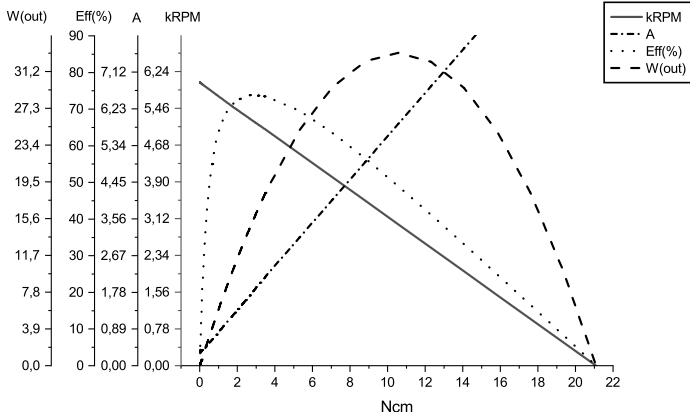
OTHER SPECIFICATIONS

	BT3649-12	BT3649-24	C
Number of pole pairs	2		
Number of phases	3		
Weight	g	200	
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	A2502X-03P		●
Power harness	UL3132 22AWG 300V 150°C		●
Hall sensors harness end connector	A1501H00-5P		●
Hall sensors harness	UL1007 26AWG 300V 80°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	h	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

