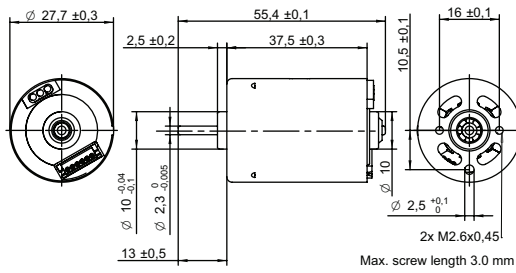


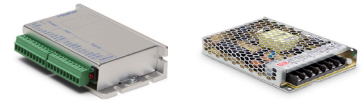
DRAWING (mm)



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	BT2838-12	BT2838-24	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	54	44
Nominal speed	rpm	5100	5300 ●
Nominal torque	mNm	6.6	7.4
Nominal current	A	0.4	0.3
Start/Stall torque	mNm	40	52
Start/Stall current	A	2.1	1.4
Max. efficiency	%	72	72
Nominal power	W	3.5	4.1
Terminal resistance	Ω	3.1	13
Terminal inductance	mH	1.2	4.9
Torque constant	mNm/A	19	38
Speed constant	rpm/V	500	250
Speed/ torque gradient	rpm/mNm	770	720
Rotor inertia	gcm <sup>2</sup>	14~17	50~58

MECHANICAL DATA

Mechanical Data	Value	C
Bearing type	Ball bearing	●
Axial play	mm	0
Bearing radial clearance	μm	10
Max. axial load (dynamic)	N	3.2
Max. force for press fits (static)	N	4.9

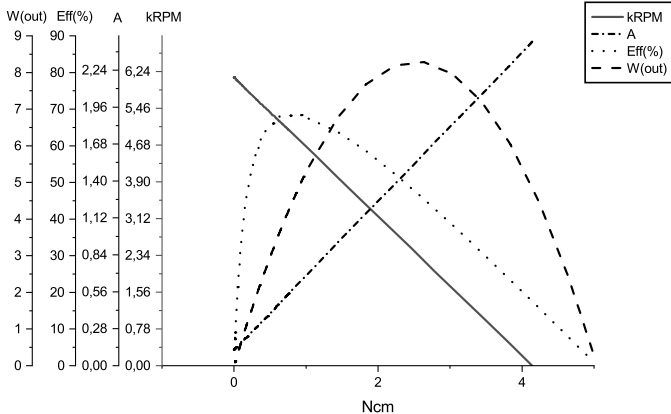
OTHER SPECIFICATIONS

Other Specifications	BT2838-12	BT2838-24	C
Number of pole pairs	2		
Number of phases	3		
Weight	g	71	70
Typical noise level	dBA	38	37
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			KR1500 MX1.5mm ●
Hall sensors harness			UL1007 26AWG 300V 80°C ●
Shaft length from flange	mm	13	●
Shaft diameter Ø	mm	2.3	
Housing material			SECD-0 0.7T
Shaft material			SUS420 J2
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	Grey	HU	Green	
V	White	HV	Blue	
W	Brown	HW	Yellow	
		+5V	Red	
		GND	Black	

MOTOR DATA DIAGRAM 12V



MOTOR DATA DIAGRAM 24V

