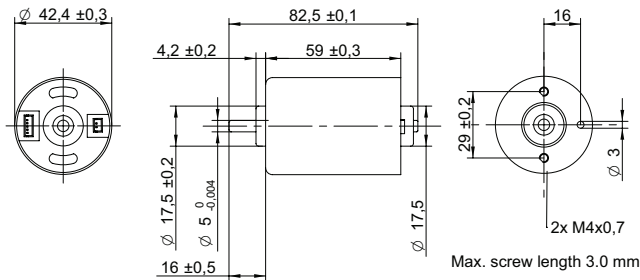


DRAWING (mm)



PHOTO



MODEL NAME DESIGNATION

BT4259 - VOLTAGE - INTEGRATED DRIVER

Example: BT4259-12-I

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 speed control driver.

MOTOR DATA		BT4259-12-I	BT4259-24-I	C
Nominal voltage	V	12	24	
No load speed	rpm	6000		
No load current	mA	510	290	
Nominal speed	rpm	4900	5300	●
Nominal torque	mNm	52	77	
Nominal current	A	3.3	2.5	
Start/Stall torque	mNm	360	580	
Start/Stall current	A	18	16	
Max. efficiency	%	70	75	
Nominal power	W	27	43	
Terminal resistance	Ω	0.4	0.9	
Terminal inductance	mH	0.2	0.6	
Torque constant	mNm/A	21	38	
Speed constant	rpm/V	500	250	
Speed/ torque gradient	rpm/mNm	95	69	
Rotor inertia	gcm ²	120~146	130~148	

OTHER SPECIFICATIONS

		BT4259-12-I	BT4259-24-I	C
Number of pole pairs		3		
Number of phases		3		
Weight	g	340	350	
Typical noise level	dBA	43	42	
Operating temperature	°C	-40 to +80		
Max. winding temperature	°C	150		
Motor insulation class		A		
IP rating		IP40		
Slot pole pairs		9S6P		
Rotor magnet		BNM-8		
Control and power harness length	mm	220 ± 10	221 ± 10	●
Control harness end connector		JST:ZHR-5		●
Control harness		UL10368 26AWG 300V 105°C		●
Power harness		UL3266 20AWG 300V 125°C		●
Power harness end connector		XH-2P		●
Shaft length from flange	mm	16		●
Shaft diameter Ø	mm	5		
Housing material		SECD-0 1.4T		
Shaft material		SUS420 J2		
Magnet material		Bonding NdFeB		
Rotor balancing grade		G6.3		
Service life	h	5000		
Manufacturing standard		ISO9001 TS16949		

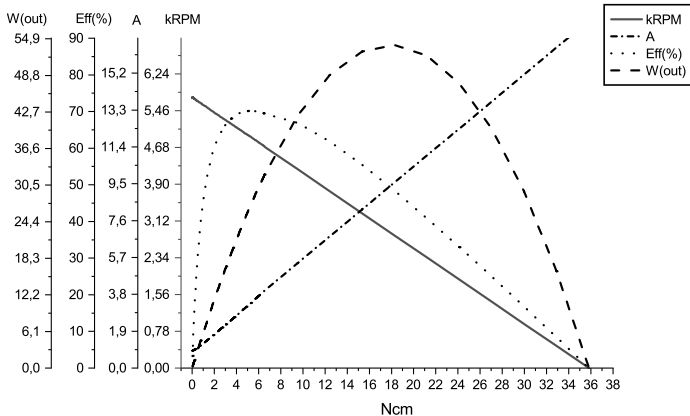
CABLE AND PIN CONFIGURATION INTERNAL DRIVER

Color	Signal	Description	C
Red	Vcc	Supply voltage 12 V 24 V	
Black	GND	0 V	
Yellow	DIR	Motor direction. Open DIR: CW DIR connect to GND: CCW	
Green	+5V out	Connect to Brown for full speed	
Blue	Encoder	Output frequency related to speed	
White	Enable	Enable control. Open: motor runs Connect to GND: motor stops	
Brown	Speed	PWM toggle between 0 to 5 V 375 Hz	

MECHANICAL DATA

			C
Bearing type		Ball bearing	●
Axial play	mm	0.61	0.58
Bearing radial clearance	µm	13	
Max. axial load (dynamic)	N	7.1	

MOTOR DATA DIAGRAM 12V



MOTOR DATA DIAGRAM 24V

