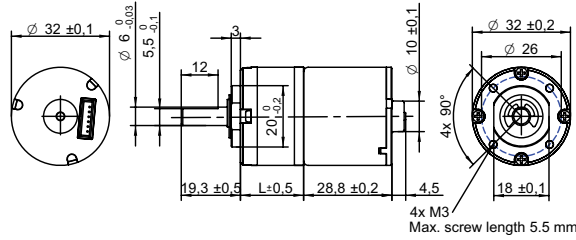


PBT13229-12 | Ø 32 mm | BRUSHLESS DC PLANETARY GEAR MOTOR



DRAWING (mm) INTERNAL DRIVER



PHOTO

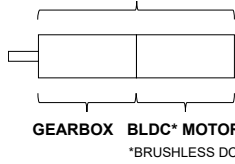


MODEL NO. DESIGNATION

PBT13229 - VOLTAGE - GEAR RATIO

Example: PBT13229-12-4

GEAR MOTOR



OPTIONS POWER SUPPLIES



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

GEAR MOTOR DATA														C		
Gear ratio		4:1	5:1	14:1	19:1	27:1	35:1	51:1	71:1	100:1	139:1	189:1	264:1	516:1	721:1	939:1
Nominal torque ^ gearbox limit	Ncm	2.3	2.8	6.9	9.4	13	17	22	30	42	59	67	93	120^	120^	120^
Nominal speed	rpm	1200	970	350	260	180	140	95	68	49	35	26	18	9	7	5
Peak torque	Ncm	59	59	120	120	180	180	240	240	290	290	350	350	350	350	350
Nominal power	W	2.9	2.9	2.5	2.5	2.5	2.5	2.2	2.2	2.2	2.2	1.8	1.8	1.8	1.8	1.8
Gearbox efficiency	%	80	80	70	70	70	70	60	60	60	60	50	50	50	50	50
Gearbox length L	mm	20.6	20.6	27	27	27	27	33.4	33.4	33.4	33.4	39.8	39.8	39.8	39.8	39.8
Weight	g	180	180	200	200	200	200	220	220	220	220	250	250	250	250	250

GEAR MOTOR COMBINED DATA			C	GEARBOX SHAFT DATA			C	GEARBOX-SPECIFIC DATA			C
Service life	hrs	5000		Radial play thrust play	mm	≤ 0.05 ≤ 0.3		Material gear stage	Ratio 5:1 sintered steel		●
Performance tolerances	%	± 15		Shaft axial load	N	25		Material > 5:1 ratio / stage	POM first + sintered steel		●
Operating temperature	°C	-10 to 60	●	Radial load	N	34		Direction of rotation	CCW or CW by reversed DIR polarity		
IP rating		IP30		Press fit force max.	N	98		Assembly front bell	mm	Maximum screw depth 5.5	
Manufacturing standard		ISO9001 ISO 14001 IATF 16949		Backlash no load	°	≤ 2.5					
Compliance		RoHS and REACH		Bearing type shaft material		Ball bearing AISI 1144					
Label CE UL		CE no UL no		Motor pinion material shape		Steel straight	●				

BRUSHLESS DC MOTOR DATA			C	BRUSHLESS DC MOTOR OTHER DATA			C	GEAR MOTOR RANGE STANDARD AVAILABILITY			
Brushless DC motor model: Transmotec BT3229-12-I				Number of pole pairs		3		Nominal voltage	V	12 24	See separate data sheet
Driver type		Internal		Number of phases		3		Nominal power	W	1.5 - 41	See separate data sheet
Nominal voltage	V	12		Max. winding temperature	°C	150		Diameter	mm	28 - 42	See separate data sheet
No load speed	rpm	6000		Motor insulation class		A		BRUSHLESS DC MOTOR DATA DIAGRAM			
No load current	mA	72		Slot pole pairs		9S6P					
Nominal speed	rpm	4900	●	Rotor magnet		BNM-6					
Nominal torque	mNm	7.1		Control and power harness length	mm	120 ± 10	●				
Nominal current	A	0.4		Control and power harness end connector		A1501H00-6P	●				
Start/Stall torque	mNm	43		Control and power harness		UL1007 26AWG 300V 80°C	●				
Start/Stall current	A	2.2		Connector on motor body		JST:B6B-ZR					
Max. efficiency	%	71		Housing material		SECD-0 1.0T					
Nominal power	W	3.6		Magnet material		Bonding NdFeB					
Terminal resistance	Ω	4.2		Rotor balancing grade		G6.3					
Terminal inductance	mH	1.2									
Torque constant	mNm/A	20									
Speed constant	rpm/V	500									
Speed/torque gradient	rpm/mNm	690									
Rotor inertia	gcm ²	19-24									

ACCESSORIES		
Power supplies LRS	V	3.3 - 48 See separate data sheet

CABLE AND PIN CONFIGURATION INTERNAL DRIVER			C
Red	Vcc	Supply voltage 12 V 24 V	
Black	GND	0 V	
Yellow	DIR	Motor direction. Open DIR:CCW DIR connect to GND: CW	
Blue	PWM	Speed control. PWM 20 kHz 5V. Full speed, connects to GND, PWM, HI/LO, 0/100	
White	Enable	Enable control. Open: motor runs Connect to GND: motor stops	