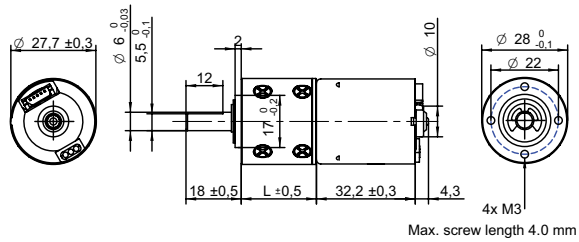
PBT2832-24 | Ø 28 mm | BRUSHLESS DC PLANETARY GEAR MOTOR

DRAWING (mm)
EXTERNAL DRIVER



Max. screw length 4.0 mm

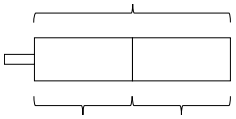
PHOTO

MODEL NO. DESIGNATION

PBT2832 - VOLTAGE - GEAR RATIO

Example: PBT2832-24-4

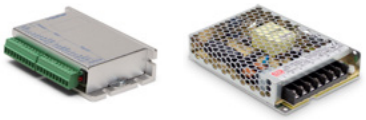
GEAR MOTOR



GEARBOX BLDC* MOTOR

*BRUSHLESS DC

OPTIONS DRIVERS AND 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	2.5	3.1	7.7	10	15	19	24	33	47	65	74	98^	98^	98^	98^
Nominal speed	rpm	1200	960	340	250	180	140	94	67	48	34	25	18	9	7	5
Peak torque	Ncm	59	59	88	88	120	120	180	180	240	240	290	290	290	290	290
Nominal power	W	3.1	3.1	2.8	2.8	2.8	2.8	2.4	2.4	2.4	2.4	2.0	2.0	2.0	2.0	2.0
Gearbox efficiency	%	80	80	70	70	70	70	60	60	60	60	50	50	50	50	50
Gearbox length | L	mm	24.5	24.5	30.9	30.9	30.9	30.9	37.3	37.3	37.3	37.3	43.7	43.7	43.7	43.7	43.7
Weight	g	140	140	150	150	150	150	160	160	160	160	180	180	180	180	180

GEAR MOTOR COMBINED DATA			C
Service life	hrs	5000	
Performance tolerances	%	± 15	
Operating temperature	°C	-10 to 60	●
IP rating		IP30	
Manufacturing standard		ISO9001 | ISO 14001 | IATF 16949	
Compliance		RoHS and REACH	
Label CE | UL		CE no | UL no	

GEARBOX SHAFT DATA			C
Radial play | thrust play	mm	≤ 0.05 | ≤ 0.3	
Shaft axial load	N	25	
Radial load	N	34	
Press fit force max.	N	98	
Backlash no load	°	≤ 2.5	
Bearing type | shaft material		Ball bearing | AISI 1144	
Motor pinion material | shape		Steel | straight	●

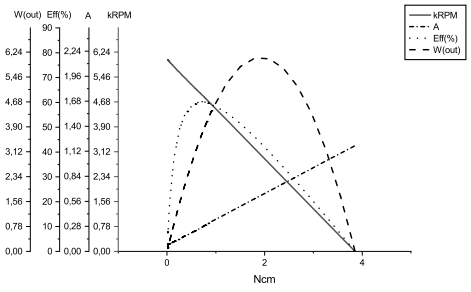
GEARBOX-SPECIFIC DATA			C
Material gear stage		Ratio 5:1 sintered steel	●
Material > 5:1 ratio / stage		POM first + sintered steel	●
Assembly front bell	mm	Maximum screw depth 4.0	

BRUSHLESS DC MOTOR DATA			C
Brushless DC motor model: Transmotec BT2832-24			
Driver type		External	
Nominal voltage	V	24	
Commutator (hall) voltage	V	3.3~5	
No load speed	rpm	6000	
No load current	mA	62	
Nominal speed	rpm	4800	●
Nominal torque	mNm	7.9	
Nominal current	A	0.30	
Start/Stall torque	mNm	38.	
Start/Stall current	A	1.2	
Max. efficiency	%	56	
Nominal power	W	3.9	
Terminal resistance	Ω	19	
Terminal inductance	mH	7	
Torque constant	mNm/A	33	
Speed constant	rpm/V	250	
Speed/ torque gradient	rpm/mNm	610	
Rotor inertia	gcm²	14~18	

BRUSHLESS DC MOTOR OTHER DATA			C
Number of pole pairs		2	
Number of phases		3	
Max. winding temperature	°C	150	
Motor insulation class		A	
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		UL10368 26AWG 300V 105°C	●
Housing material		SECD-0 0.7T	
Magnet material		Bonding NdFeB	
Rotor balancing grade		G6.3	

GEAR MOTOR RANGE STANDARD AVAILABILITY			
Nominal voltage	V	12 | 24	*See seperate data sheet*
Nominal power	W	1.6 - 39	*See seperate data sheet*
Diameter	mm	28 - 42	*See seperate data sheet*

BRUSHLESS DC MOTOR DATA DIAGRAM



CABLE AND PIN CONFIGURATION EXTERNAL DRIVER C

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

ACCESSORIES

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

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