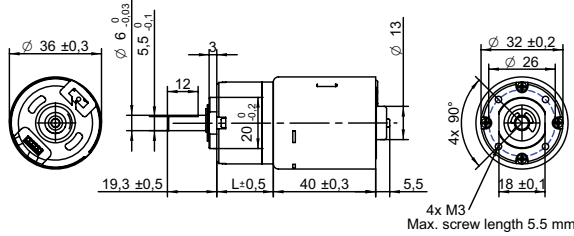


DRAWING (mm)
EXTERNAL DRIVER



PHOTO

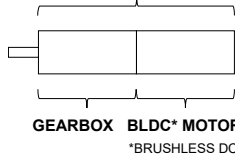


MODEL NO. DESIGNATION

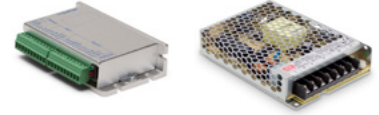


Example: PBT3640-12-4

GEAR MOTOR



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	6.6	8.3	20	28	39	51	63	78^	98^	98^	120^	120^	120^	120^	120^	
Nominal speed	rpm	1200	980	350	260	180	140	96	69	49	35	26	19	9	7	5	
Peak torque	Ncm	59	59	120	120	180	180	240	240	290	290	350	350	350	350	350	
Nominal power	W	8.5	8.5	7.4	7.4	7.4	7.4	6.4	6.4	6.4	6.4	5.3	5.3	5.3	5.3	5.3	
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	250	250	270	270	270	270	300	300	300	300	320	320	320	320	320	

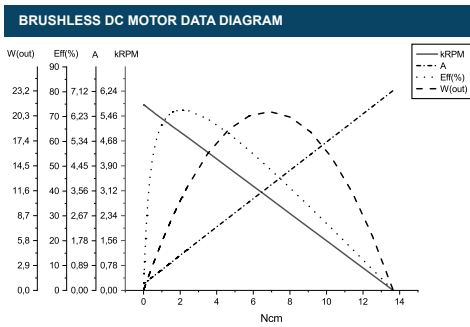
GEAR MOTOR COMBINED DATA				C	GEARBOX SHAFT DATA				C	GEARBOX-SPECIFIC DATA				C
Service life	hrs	5000			Radial play thrust play	mm	≤ 0.05 ≤ 0.3			Material gear stage	Ratio 5:1 sintered steel		●	
Performance tolerances	%	± 15			Shaft axial load	N	29			Material > 5:1 ratio / stage	POM first + sintered steel		●	
Operating temperature	°C	-10 to 60	●		Radial load	N	79			Assembly front bell	mm	Maximum screw depth 5.5		
IP rating		IP30			Press fit force max.	N	150							
Manufacturing standard		ISO9001 ISO 14001 IATF 16949			Backlash no load	°	≤ 3							
Compliance		RoHS and REACH			Bearing type shaft material		Ball bearing SCM435							
Label CE UL		CE no UL no			Motor pinion material shape		Steel straight	●						

BRUSHLESS DC MOTOR DATA				C
Brushless DC motor model: Transmotec BT3640-12				
Driver type		External		
Nominal voltage	V	12		
Commutator (hall) voltage	V	3.3-5		
No load speed	rpm	6000		
No load current	mA	220		
Nominal speed	rpm	4900	●	
Nominal torque	mNm	21		
Nominal current	A	1.3		
Start/Stall torque	mNm	130		
Start/Stall current	A	6.9		
Max. efficiency	%	72		
Nominal power	W	11		
Terminal resistance	Ω	1.1		
Terminal inductance	mH	0.7		
Torque constant	mNm/A	20		
Speed constant	rpm/V	500		
Speed/ torque gradient	rpm/mNm	240		
Rotor inertia	gcm ²	27-33		

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	155 ± 10	●	
Power harness end connector		A2502X-03P	●	
Power harness		UL3132 20AWG 300V 150°C	●	
Hall sensors harness end connector		KR1500 MX1.5mm	●	
Hall sensors harness		UL10368 26AWG 300V 105°C	●	
Housing material		SECD-0 1.0T		
Magnet material		Bonding NdFeB		
Rotor balancing grade		G6.3		

CABLE AND PIN CONFIGURATION EXTERNAL DRIVER						C
Power			Hall			
Phase	Cable color		Phase	Cable color		
U	White		HU	Green		
V	Brown		HV	Blue		
W	Grey		HW	Yellow		
			+5V	Red		
			GND	Black		

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



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