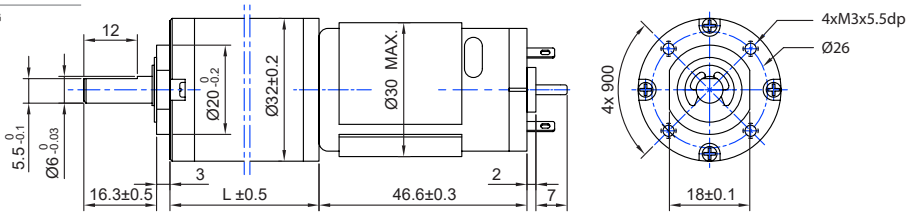
PD3246 | Ø 32 mm | 24V | planetary brush dc gear motor

DRAWING (mm)



PHOTO

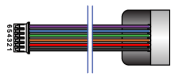
MODEL NO. DESIGNATION EXAMPLE

1 - 2 - 3 - 4

PD1230	-	VOLTAGE	-	REDUCTION	-	B	-	F	-	E	-	C

1 = empty → sleeve bearing
1B = ball bearing
2F = emc filter varistor / capacitor
3E = magnetic encoder
4 = empty → no encoder rear cover cap
4C = magnetic encoder rear cover cap

OPTIONS ENCODERS AND 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

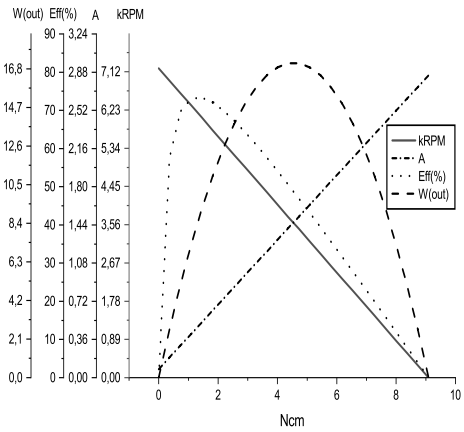
GEAR MOTOR DATA															C
Gear reduction		1:5	1:14	1:19	1:27	1:35	1:51	1:71	1:100	1:139	1:189	1:264	1:516	1:721	1:939	
Nominal torque | ^ gear box limit	mNm	53.0	117.7	166.7	235.4	304.0	392.3	539.4	647	981	1177	1177	1177	1177	1177	
Nominal speed	rpm	1170	445	320	229	176	121	87	60	45.0	34.0	25.0	13.0	9.6	7.2	
Peak torque | ^ gear box limit	mNm	588	1177	1177	1765	1765	2354	2354	2942	2942	3530	3530	3530	3530	3530	
Mechanical power	W	5.204	3.849	3.921	3.961	3.933	2.990	2.956	2.447	2.780	2.101	1.545	0.803	0.593	0.445	
Efficiency gear head	%	80	70	70	70	70	60	60	60	60	50	50	50	50	50	
Length gear box = L	mm	20.6	27.0	27.0	27.0	27.0	33.4	33.4	33.4	33.4	39.8	39.8	39.8	39.8	39.8	
Weight	g	211	231	231	231	231	256	256	256	256	282	282	282	282	282	

GEAR MOTOR COMBINED DATA			C
Service life brush wear		500 h continous operation	●
Performance tolerances	%	± 15	
Operating temperature		-10-...+60 °C	●
IP code		20	
Manufacturing standard		ISO9001 | ISO 14001 | TS16949	
Compliance		RoHS and REACH	
Label CE | UL		CE no | UL no	

GEAR BOX SHAFT DATA			C
Radial play | thrust play	mm	≤ 0.05 | ≤ 0.3	
Shaft axial load	N	24.5	
Radial load	N	34.3	
Press fit force max.	N	98.1	
Backlash no load	°	≤ 2.5	
Bearing type | shaft material		Ball bearing | AISI 1144	
Motor pinion material | shape		Steel | straight	●

GEAR BOX SPECIFIC DATA			C
Material gear stage		Ratio 1:5 sintered steel	●
Material > 1:5 ratio / stage		POM first + sintered steel	●
Direction of rotation		CCW or CW by reversed V polarity	
Assembly front bell	mm	Maximum screw depth 4.0	

24 VOLT MOTOR PERFORMANCE GRAPH



MOTOR SPECIFIC DATA			C
Nominal voltage	V	24 (12 V separate data sheet)	●
No load speed	rpm	7200	
Nominal speed	rpm	6160	
Nominal torque	Ncm	1.27	
Nominal current	A	≤ 0.08	
Nominal mechanical power	W	8.5	
Stall torque	Ncm	9.09	
Starting current	A	2.85	
Motor commutation		Carbon brush	●
Motor rotor | stator		Iron rotor | Ferrit magnet	
Varistor emc	V	26-38	●
Capacitor emc	V	24	
Resistance	ohm	8.77	
Inductance	mH	4.1	
Insulation class		F	●

GEAR MOTOR RANGE STANDARD AVAILABILITY			
Nominal voltage	V	2.4 - 24	separate data sheet
Nominal mechanical power	W	0.023 - 25	separate data sheet
Diameter	mm	12 - 42	separate data sheet
Feedback encoder		Hall | Optical	see below

ACCESSORIES			
Power supplies LRS	V	3.3 - 48	separte data sheet

ENCODER OPTIONS	MAGNETIC HALL SENSOR	OPTICAL SENSOR	C
Pulses per revolution	7 x 2	(100 | 200 | 256 | 360 | 400 | 500) x 2	●
Channels | phase shift	2 | 90° ±(1/6)T		
Encoder rear cover	Cover cap in ABS plastic	Zink alloy	
Sensor technical data	Refer externally to brand and part UTC-SK1816		
Size	Ø 30 x 12.1	D19+4.5 x W30 x H40 mm	
Harness connector	JST PHR-6 P=2-6P	JST SMR-05V	●
Harness cable	UL1007 AWG24 100 mm	UL2464 AWG24x4C 195 mm	●
Connection	BLK M- | RED M+ | BRN Vcc | GRN GND | BLU A | VIO B	RED Vcc | GRN GND | BLK A | WHT B	
Supply voltage Vcc	min.3.5 ref - max. 20 V	5 ±10% V	
Supply Current Ice	Vcc 20V open output | min. - ref. 5 max. 10 mA		
Open collector output	Requires external output resistors		
Output current / channel		± 20 mA	

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