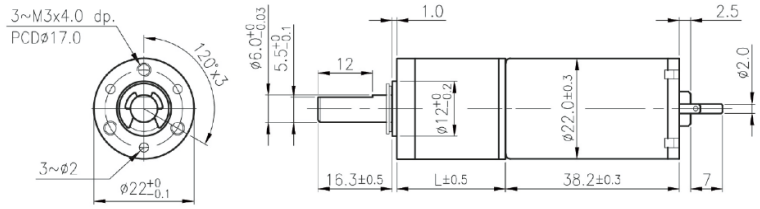
PD2238 | Ø 22mm | 12V | planetary brush dc gear motor

DRAWING (mm)



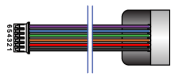
PHOTO

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	1:18	1:20	1:25	1:66	1:77	1:90	1:110	1:136	1:246	1:336	1:393	1:484	1:597	1:735	1:1079	1:1475	1:2124	1:3968	
Nominal torque | ^ gear box limit	mNm	25.5	83.4	98.1	118	265	314	363	392	392	490	490	490	490	490	490	588^	588^	588^	588^	
Nominal speed	rpm	1500	400	340	280	105	92.0	79.0	64.0	52.0	29.4	22.4	19.6	16.0	12.9	10.5	7.4	5.5	4.0	2.0	
Peak torque | ^ gear box limit	mNm	294	883	883^	883^	1177	1177^	1177^	1177^	1471	1471^	1471^	1471^	1471^	1471^	1471^	1765	1765^	1765^	1765^	
Mechanical power	W	3.213	2.451	2.451	2.422	1.752	1.819	1.806	1.582	1.071	0.757	0.577	0.505	0.412	0.332	0.270	0.183	0.136	0.099	0.049	
Efficiency gear head	%	80	70	70	70	60	60	60	60	50	50	50	50	50	50	50	40	40	40	40	
Length gear box = L	mm	23.3	29.5	29.5	29.5	35.7	35.7	35.7	35.7	41.9	41.9	41.9	41.9	41.9	41.9	41.9	48.1	48.1	48.1	48.1	
Weight	g	97	102	102	102	109	109	109	109	109	116	116	116	116	116	116	123	123	123	123	

GEAR MOTOR COMBINED DATA

		C
Service life brush wear	500 h continous operation	●
Performance tolerances %	± 15	
Operating temperature	-10-...+60 °C	●
IP code	30	
Manufacturing standard	ISO9001 | ISO 14001 | TS16949	
Compliance	RoHS and REACH	
Label CE | UL	CE no | UL no	

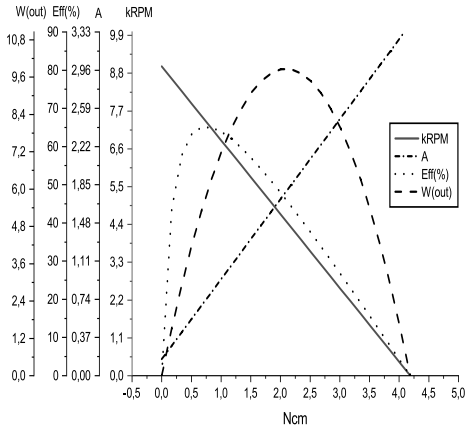
GEAR BOX SHAFT DATA

			C
Radial play | thrust play	mm	≤ 0.05 | ≤ 0.3	
Shaft axial load	N	6.9	
Radial load	N	11.8	
Press fit force max.	N	58.8	
Backlash no load	°	≤ 2.5	
Bearing type | shaft material		Ball bearing | AISI 1144	
Motor pinion material | shape		Brass | 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	

12 VOLT MOTOR PERFORMANCE GRAPH



MOTOR SPECIFIC DATA

			C
Nominal voltage	V	12 (24V separate data sheet)	●
No load speed	rpm	9000	
Nominal speed	rpm	7100	
Nominal torque	Ncm	0.68	
Nominal current	A	≤ 0.70	
Nominal mechanical power	W	5.16	
Stall torque	Ncm	4.187	
Starting current	A	3.40	
Motor commutation		Carbon brush	●
Motor rotor | stator		Iron rotor | Ferrit magnet	
Varistor emc	V	27-45	●
Capacitor emc	V	12	
Resistance	ohm	3.6	
Inductance	mH	2.3	
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	see below

ACCESSORIES

Power supplies LRS	V	3.3 - 48	separte data sheet

ENCODER OPTIONS — MAGNETIC HALL SENSOR

		C
Pulses per revolution	3 x 2	●
Channels | phase shift	2 | 90° ±(1/6)T	
Encoder rear cover	Cover cap in ABS plastic	
Sensor technical data	Refer externally to brand and part UTC-SK1816	
Size	Ø 22 x 12.6	
Harness connector	JST PHR-6 P=2-6P	●
Harness cable	UL1007 AWG24 100 mm	●
Connection	BLK M- | RED M+ | BRN Vcc | GRN GND | BLU A | VIO B	
Supply voltage Vcc	min.3.5 ref - max. 20 V	
Supply Current Ice	Vcc 20V open output | min. - ref. 5 max. 10 mA	
Open collector output	Requires external output resistors	

EU: +46 8 792 35 30
US: +1-339-234-9200
info@transmotec.com