

PHOTO



MODEL NO. DESIGNATION EXAMPLE

1 - 2 - 3 - 4

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

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

OPTIONS ENCODERS AND POWER SUPPLIES

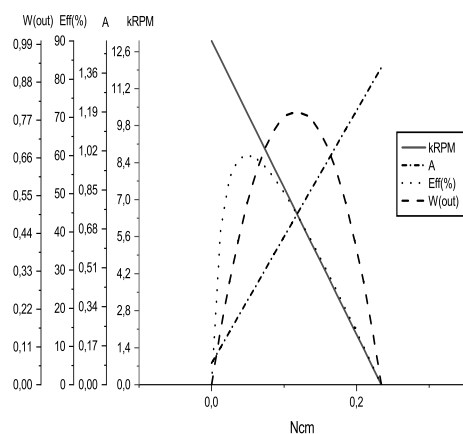


● C = customizations are offered on demand even for smaller quantities. Typical customizations indicated with green dot at column end. Please contact us for any customization request

GEAR MOTOR DATA										C
Gear reduction			1:4	1:16	1:64	1:256	1:1024	1:4096		
Nominal torque ^ gear box limit	mNm	1.9	6.4	22.6	76.5	196^	196^			
Nominal speed	rpm	2400.0	600.0	150.0	38.0	10.0	2.8			
Peak torque ^ gear box limit	mNm	235	353	471	530	588^	588^			
Mechanical power	W	0.399	0.306	0.231	0.172	0.093	0.023			
Efficiency gear head	%	85	75	65	55	45	40			
Length gear box = L	mm	10.3	13.6	16.9	20.2	23.5	26.8			
Weight	g	24.2	26.3	28.4	30.5	32.6	34.7			

GEAR MOTOR COMBINED DATA			C	GEAR BOX SHAFT DATA			C	GEAR BOX SPECIFIC DATA			C
Service life brush wear	500 h continuous operation	●		Radial play thrust play	mm	≤ 0.08 ≤ 0.2		Material gear stage	Ratio 1:4 brass	●	
Performance tolerances	% ± 15			Shaft axial load	N	4.9		Material > 1:4 ratio / stage	POM first + brass	●	
Operating temperature	-10...+60 °C	●		Radial load	N	4.9		Direction of rotation	CW or CCW by reversed V polarity		
IP code	30			Press fit force max.	N	14.7		Assembly front bell	mm	Maximum screw depth 2.5	
Manufacturing standard	ISO9001 ISO 14001 TS16949			Backlash no load	°	≤ 3					
Compliance	RoHS and REACH			Bearing type shaft material		Sleeve bearing SUS303					
Label CE UL	CE no UL no			Motor pinion material shape		Brass straight	●				

3.0 VOLT MOTOR PERFORMANCE GRAPH



MOTOR SPECIFIC DATA

Nominal voltage	V	3.0 (2.4V separate data sheet)	●
No load speed	rpm	13000	
Nominal speed	rpm	10140	
Nominal torque	Ncm	0.056	
Nominal current	A	≤ 0.39	
Nominal mechanical power	W	0.59	
Stall torque	Ncm	0.25	
Starting current	A	1.4	
Motor commutation		Metal brush	●
Motor rotor stator		Iron rotor Ferrit magnet	
Varistor emc	V	2.0 - 4.0	●
Capacitor emc		No	
Resistance	ohm	1.1 - 1.5	
Inductance	mH	0.5	
Insulation class		B	●

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	separate data sheet
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ENCODER OPTIONS		MAGNETIC HALL SENSOR		C
Pulses per revolution		3 x 2		●
Channels phase shift		2 90° ±(1/6)T		
Encoder rear cover		No cover		
Sensor technical data		Refer externally to brand and part UTC-SK1816		
Size		Ø 7 x 6 mm		
Harness connector		JST ZHR-6 P=1.5-6P		●
Harness cable		UL1061 AWG26 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		