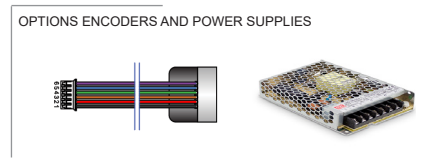


MODEL NO. DESIGNATION EXAMPLE

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



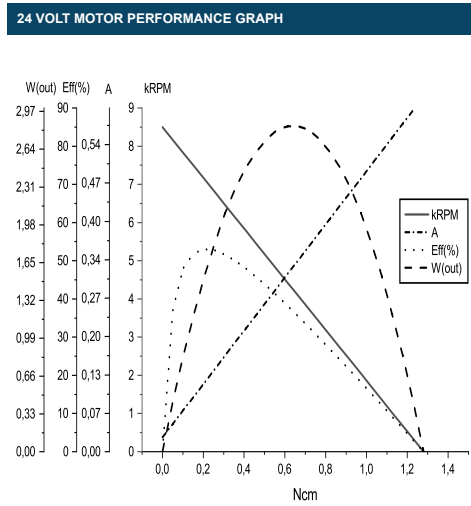
● C = customizations are offered on demand even for smaller quantities. Typical customizations indicated with green dot at column end. Please contact us for any customization request

GEAR MOTOR DATA		C																			
Gear reduction		1:4	1:14	1:16	1:19	1:53	1:62	1:72	1:84	1:104	1:198	1:231	1:270	1:316	1:370	1:455	1:742	1:1014	1:1249	1:1621	1:1996
Nominal torque ^ gear box limit	mNm	7.6	21.1	24.5	28.9	68.2	79.4	93.2	108	134	206	245^	245^	245^	245^	245^	294^	294^	294^	294^	294^
Nominal speed	rpm	1600	515	450	384	140	120	103	88	71	37	32	28	24	21	18	11	8.0	6.6	5.0	4.2
Peak torque ^ gear box limit	mNm	294	441	441^	441^	588	588^	588^	588^	588^	735	735^	735^	735^	735^	735^	883	883^	883^	883^	883^
Mechanical power	W	1.015	0.798	0.811	0.817	0.601	0.601	0.605	0.598	0.601	0.400	0.412	0.360	0.302	0.270	0.225	0.130	0.099	0.082	0.062	0.052
Efficiency gear head	%	80	70	70	70	60	60	60	60	60	50	50	50	50	50	50	40	40	40	40	40
Length gear box = L	mm	14.4	18.1	18.1	18.1	21.7	21.7	21.7	21.7	21.7	25.4	25.4	25.4	25.4	25.4	25.4	29.0	29.0	29.0	29.0	29.0
Weight	g	58	62	62	62	66	66	66	66	81	91	91	91	91	91	91	96	96	96	96	96

GEAR MOTOR COMBINED DATA		C
Service life brush wear	500 h continuous 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 ≤ 0.2	
Shaft axial load	N 5.9	
Radial load	N 9.8	
Press fit force max.	N 49	
Backlash no load	° ≤ 3	
Bearing type shaft material	Sleeve bearing AISI 1144	
Motor pinion material shape	Steel straight	●

GEAR BOX SPECIFIC DATA		C
Material gear stage	Ratio 1:4 steel	●
Material > 1:4 ratio / stage	POM first + steel	●
Direction of rotation	CCW or CW by reversed V polarity	
Assembly front bell	mm Maximum screw depth 4.0	



MOTOR SPECIFIC DATA		C
Nominal voltage	V 24 (12V separate data sheet)	●
No load speed	rpm 8500	
Nominal speed	rpm 7661	
Nominal torque	Ncm 0.213	
Nominal current	A ≤ 0.124	
Nominal mechanical power	W 1.71	
Stall torque	Ncm 1.28	
Starting current	A 0.62	
Motor commutation	Carbon brush	●
Motor rotor stator	Iron rotor Ferrit magnet	
Varistor emc	V 27	●
Capacitor emc	No	
Resistance	ohm 38.4	
Inductance	mH 22	
Insulation class	A	●

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

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 10 x 8.5 mm			
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			