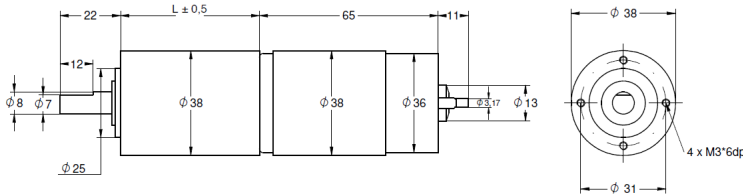


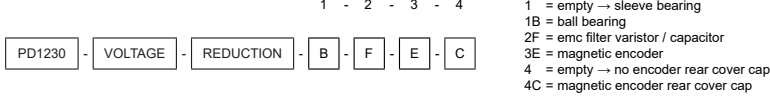
DRAWING (mm)



PHOTO



MODEL NO. DESIGNATION EXAMPLE



OPTIONS ENCODERS AND POWER SUPPLIES

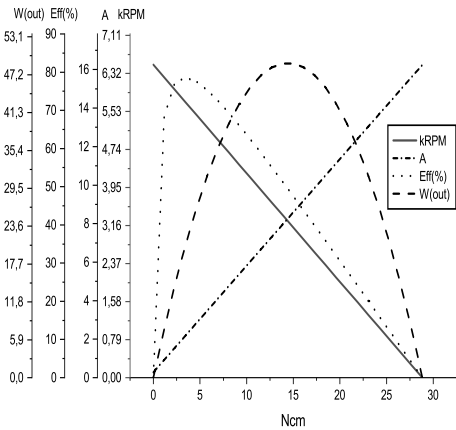


● C = customizations are offered on demand even for smaller quantities. Typical customizations indicated with green dot at column end. Please contact us for any customization request

GEAR MOTOR DATA													C
Gear reduction		1:5	1:14	1:19	1:27	1:51	1:71	1:100	1:139	1:189	1:264	1:516	1:721
Nominal torque ^ gear box limit	mNm	98.1	235.4	323.6	460.9	745.3	980.7	1471	1961	2256	2452	2942^	2942^
Nominal speed	rpm	1100	420	300	210	110	81.0	58.0	41.0	30.0	22.5	11.6	8.4
Peak torque ^ gear box limit	mNm	883	2354	2354^	2942	5296	5296^	5884	5884^	7355	7355^	8826	8826^
Mechanical power	W	9.06	7.27	7.14	7.11	5.16	5.00	5.37	5.07	3.55	2.90	1.79	1.30
Efficiency gear head	%	80	70	70	70	60	60	60	60	50	50	50	50
Length gear box = L	mm	33.1	41.8	41.8	41.8	50.5	50.5	50.5	50.5	59.2	59.2	59.2	59.2
Weight	g	413	461	461	461	509	509	509	509	557	557	557	557

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 ≤ 0.05 ≤ 0.3		Material gear stage	Ratio 1:5 sintered steel	●
Performance tolerances	% ± 15		Shaft axial load	N 29.4		Material > 1:5 ratio / stage	POM first + sintered steel	●
Operating temperature	-10...+60 °C	●	Radial load	N 78.5		Direction of rotation	CCW or CW by reversed V polarity	
IP code	40		Press fit force max.	N 147.1		Assembly front bell	mm Maximum screw depth 5.5	
Manufacturing standard	ISO9001 ISO 14001 TS16949		Backlash no load	° ≤ 3.0				
Compliance	RoHS and REACH		Bearing type shaft material	Ball bearing SCM435				
Label CE UL	CE no UL no		Motor pinion material shape	Steel straight	●			

12 VOLT MOTOR PERFORMANCE GRAPH



MOTOR SPECIFIC DATA

Nominal voltage	V 12 (24 V separate data sheet)	●
No load speed	rpm 6400	
Nominal speed	rpm 5800	
Nominal torque	Ncm 2.45	
Nominal current	A ≤ 1.6	
Nominal mechanical power	W 14.89	
Stall torque	Ncm 28.83	
Starting current	A 16.25	
Motor commutation	Carbon brush	●
Motor rotor stator	Iron rotor Ferrit magnet	
Varistor emc	V 13-18.4V	●
Capacitor emc	V 12	
Resistance	ohm 0.75	
Inductance	mH 0.68	
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	separate data sheet
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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 36 x 13.5	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