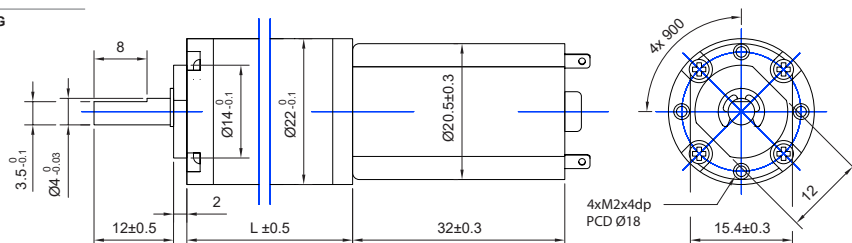
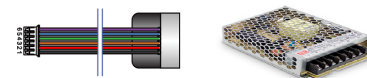


DRAWING
(mm)

PHOTO



OPTIONS ENCODERS AND POWER SUPPLIES



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

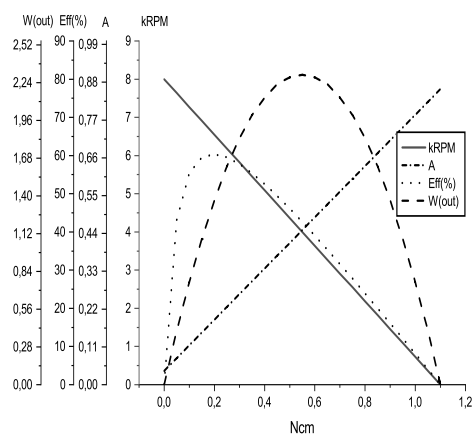
PD1230 - VOLTAGE - REDUCTION - B - F - E - C

● 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^	
Nominal speed	rpm	1450	470	405	348	127	109	93.0	79.0	64.0	34.0	29.0	25.0	22.0	19.0	15.5	9.5	7.4	6.0	4.6	3.8
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^	
Mechanical power	W	0.920	0.728	0.730	0.740	0.545	0.545	0.546	0.537	0.542	0.368	0.373	0.322	0.283	0.245	0.200	0.117	0.091	0.074	0.057	0.047
Efficiency gear head	%	80	70	70	70	60	60	60	60	60	50	50	50	50	50	50	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	
Weight	g	58	62	62	62	66	66	66	66	81	91	91	91	91	91	91	96	96	96	96	

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 ≤ 0.2		Material gear stage	Ratio 1:4 steel		●
Performance tolerances	% ± 15			Shaft axial load	N	5.9		Material > 1:4 ratio / stage	POM first + steel		●
Operating temperature	-10....+60 °C		●	Radial load	N	9.8		Direction of rotation	CCW or CW by reversed V polarity		
IP code	30			Press fit force max.	N	49		Assembly front bell	mm	Maximum screw depth 4.0	
Manufacturing standard	ISO9001 ISO 14001 TS16949			Backlash no load	°	≤ 3					
Compliance	RoHS and REACH			Bearing type shaft material		Sleeve bearing AISI 1144					
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 (24V separate data sheet)	●
No load speed	rpm	8000	
Nominal speed	rpm	6560	
Nominal torque	Ncm	0.198	
Nominal current	A	≤ 0.19	
Nominal mechanical power	W	1.36	
Stall torque	Ncm	1.10	
Starting current	A	0.86	
Motor commutation		Carbon brush	●
Motor rotor stator		Iron rotor Ferrit magnet	
Varistor emc	V	13	●
Capacitor emc	No		
Resistance	ohm	13.5	
Inductance	mH	7.5	
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		