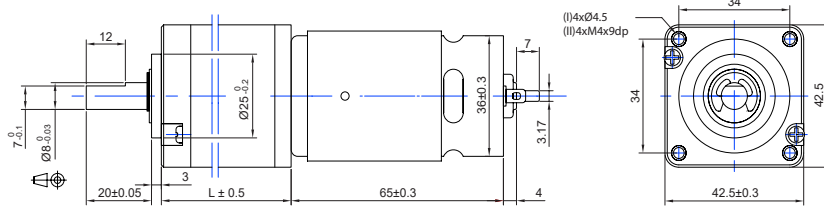


DRAWING (mm)



PHOTO



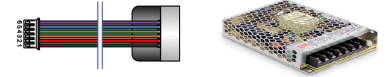
MODEL NO. DESIGNATION EXAMPLE



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

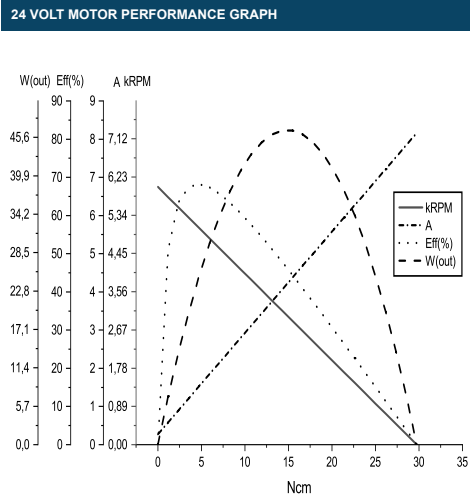
OPTIONS ENCODERS AND POWER SUPPLIES



● 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															
		1:4	1:14	1:17	1:24	1:49	1:61	1:84	1:104	1:144	1:212	1:294	1:504	1:624	1:720	1:864	
Nominal torque ^ gear box limit	mNm	98.1	294.2	353.0	509.9	902.2	1079	1471	1863	1961	2452	2452 ^A	2942 ^A	2942 ^A	2942 ^A	2942 ^A	
Nominal speed	rpm	1250	363	293	212	103	83.5	60.5	49.0	38.0	25.4	18.9	11.2	8.8	8.0	8.8	
Peak torque ^ gear box limit	mNm	1177	2354	2354 ^A	2354 ^A	4413	4413 ^A	4413 ^A	5884	5884 ^A	7355	7355 ^A	8826	8826 ^A	8826 ^A	8826 ^A	
Mechanical power	W	10.297	7.849	7.603	7.946	5.854	5.675	5.607	5.752	4.695	3.269	2.433	1.730	1.359	1.236	1.359	
Efficiency gear head	%	80	70	70	70	60	60	60	60	60	50	50	50	50	50	50	
Length gear box = L	mm	26.2	33.0	33.0	33.0	39.8	39.8	39.8	39.8	39.8	46.5	46.5	46.5	46.5	46.5	46.5	
Weight	g	456	516	516	516	571	571	571	571	571	626	626	626	626	626	626	

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 1:4 sintered steel	●
Performance tolerances	% ± 15		Shaft axial load	N 29.4		Material > 1:4 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	10		Press fit force max.	N 147.1		Assembly front bell	mm Maximum screw depth 9.0	
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	●			



MOTOR SPECIFIC DATA		C
Nominal voltage	V 24 (12 V separate data sheet)	●
No load speed	rpm 6000	
Nominal speed	rpm 5250	
Nominal torque	Ncm 2.74	
Nominal current	A ≤ 0.9	
Nominal mechanical power	W 15.56	
Stall torque	Ncm 29.74	
Starting current	A 8.16	
Motor commutation	Carbon brush	●
Motor rotor stator	Iron rotor Ferrit magnet	
Varistor emc	V 27-45	●
Capacitor emc	V 24	
Resistance	ohm 2.98	
Inductance	mH 2.5	
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

ENCODER OPTIONS	MAGNETIC HALL SENSOR	OPTICAL SENSOR	C
Pulses per revolution	14 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 42.5 x 15.5 mm		
Harness connector	JST PHR-4 P=2-4P	Molex 09-50-3021 P=2-6P	JST SMR-05V ●
Harness cable	UL1007 AWG26 100 mm	UL1007 AWG18 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