

TSU13038 \varnothing 13mm 10/15W

Motor Data		Part Numbers					
		TSU13038H06	TSU13038H09	TSU13038H12	TSU13038H18	TSU13038H24	TSU13038H36
Nominal voltage	V	6	9	12	18	24	36
No load speed	rpm	23700	23400	23000	23400	24500	25600
No load current	mA	215	185	140	121	90	84
Nominal speed	rpm	17900	18000	17400	19000	18600	20200
Max. continuous torque	mNm	5.05	5.56	5.51	5.57	5.13	5.55
Max. continuous current	A	2.33	1.70	1.23	0.91	0.63	0.49
Stall torque	mNm	22.1	27.1	26.2	29.9	25.8	33.6
Stall current	A	9.23	7.38	5.19	4.23	2.73	2.46
Max efficiency	%	71	73	73	74	74	74
Resistance (phase-phase)	Ohm	0.65	1.22	2.31	4.26	8.80	14.6
Inductance (phase-phase)	mH	0.008	0.020	0.037	0.097	0.130	0.267
Torque constant	mNm / A	2.39	3.67	5.04	7.07	9.45	13.64
Speed constant	rpm / V	3990	2600	1895	1350	1010	700
Speed/torque gradient	rpm / mNm	1084	864	869	813	940	750
Mechanical time constant ms		3.69	2.94	2.96	2.77	3.20	2.55
Rotor inertia	gcm ²	0.325	0.325	0.325	0.325	0.325	0.325

Specification		
Bearing		Ball bearing
Max speed	rpm	40000
Axial play	mm	0..0.05
Radial play		Preloaded
Max axial load (dynamic)	N	1
Max. force for press fits (static)	N	10
Max radial load (5mm from flange)	N	4
Ambient temperature	°C	-40~+100
Max winding temperature	°C	155
Thermal resistance		
Housing - Ambient	°C / W	23.0
Winding - Housing	°C / W	1.89
Thermal time constant		
Motor	s	350
Winding	s	0.48
Number of pole pairs		1
Number of phases		3
Weight	g	29

Combination

Gearbox
 PG13C
 \varnothing 13mm 0.3Nm 16:1-425:1
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Encoder
 Please contact local sales.

Option
 FPC / Cable
 With hall sensor / Sensorless

Product Overview

Slotless Brushless DC Motor

Coreless Brushed DC Motor

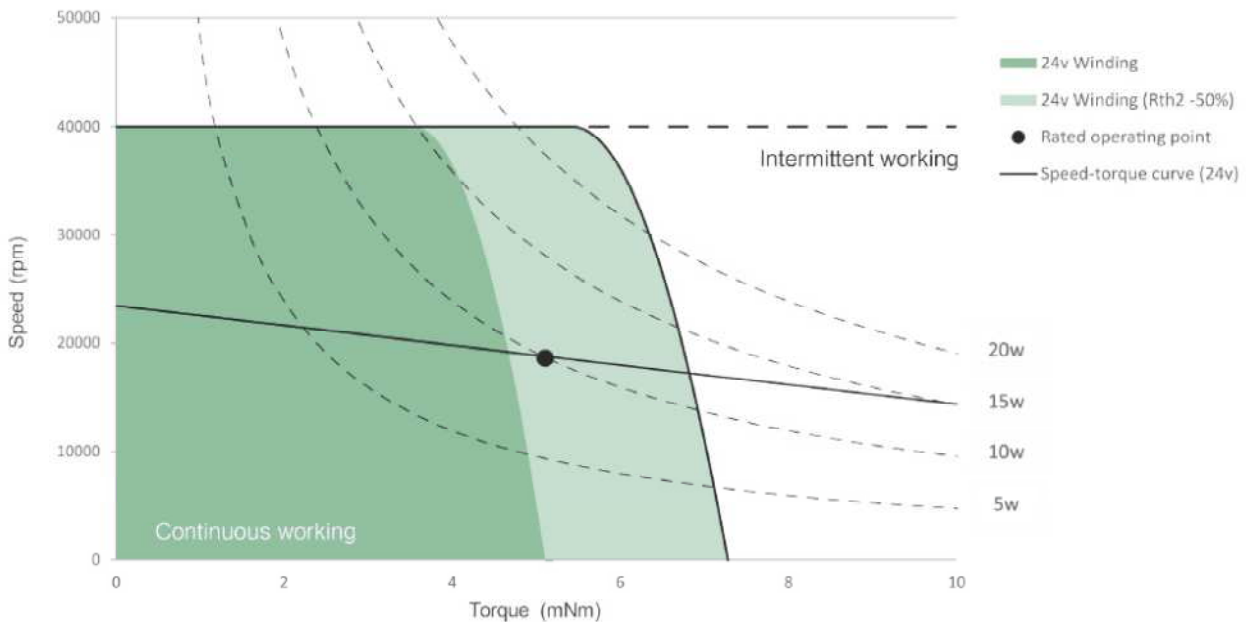
Planetary Gearbox

Encoder

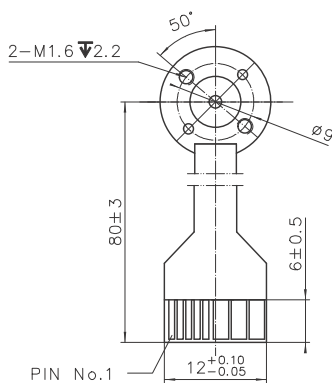
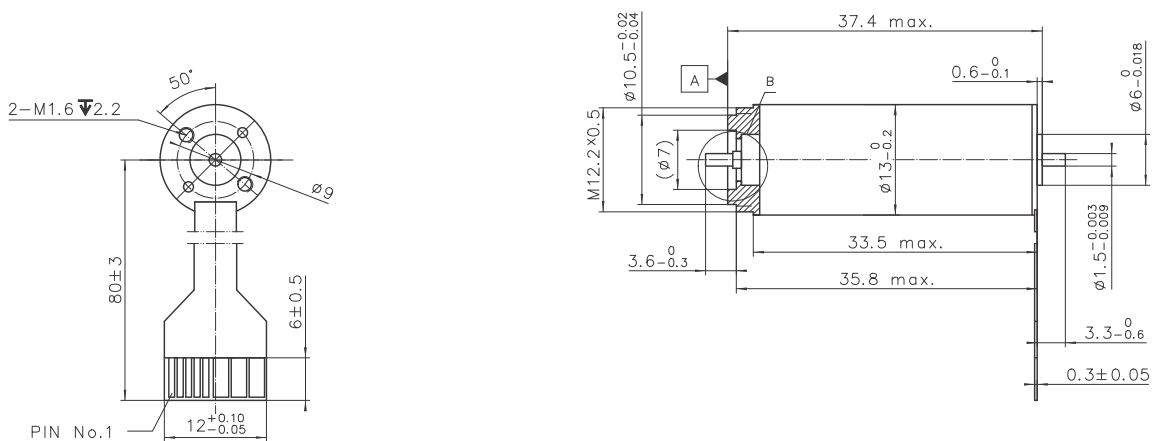
Drive

Technical

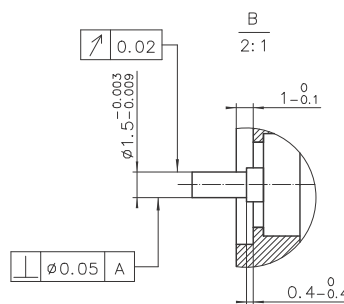
Operating Range



Dimension



PIN No.	Signal
1	4.5-24VDC
2	Hall IC 3
3	Hall IC 1
4	Hall IC 2
5	GND
6	Winding 3
7	Winding 2
8	Winding 1



TSU13038Hxx-S001