

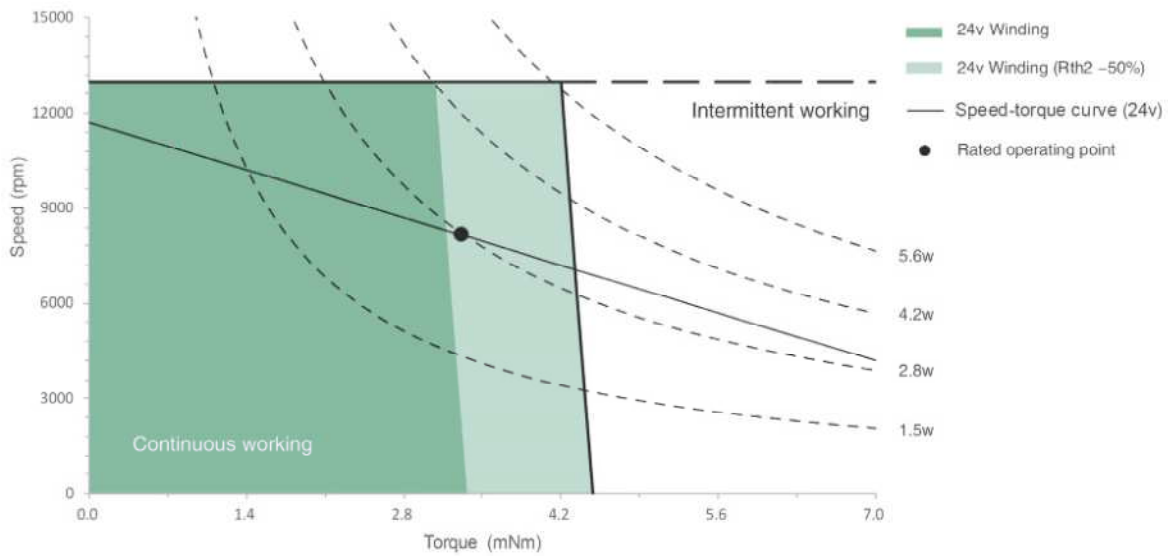
# TCU13028 Ø13mm Precious Metal Brushes 2.8/4.2W

Motor Data		Part Numbers				
		TCU13028P06	TCU13028P12	TCU13028P15	TCU13028P18	TCU13028P24
Nominal voltage	V	6	12	15	18	24
No load speed	rpm	9700	11800	12000	11400	11700
No load current	mA	16.7	16.8	10.0	10.5	7.5
Nominal speed	rpm	6110	7980	8430	7730	7980
Max. continuous torque	mNm	3.36	3.43	3.33	3.44	3.48
Max. continuous current	A	0.591	0.359	0.293	0.231	0.179
Stall torque	mNm	9.18	11.36	11.34	10.91	11.40
Stall current	A	1.57	1.15	0.96	0.72	0.57
Max efficiency	%	80	82	81	85	84
Terminal Resistance	Ohm	3.8	10.4	15.6	25.0	41.9
Terminal Inductance	mH	0.090	0.244	0.372	0.574	0.977
Torque constant	mNm / A	5.86	9.84	11.79	15.16	19.89
Speed constant	rpm / V	1630	970	810	630	480
Speed/torque gradient	rpm / mNm	1066	1025	1072	1039	1011
Mechanical time constant	ms	4.72	4.5	4.73	4.58	4.44
Rotor inertia	gcm <sup>2</sup>	0.423	0.419	0.421	0.421	0.419

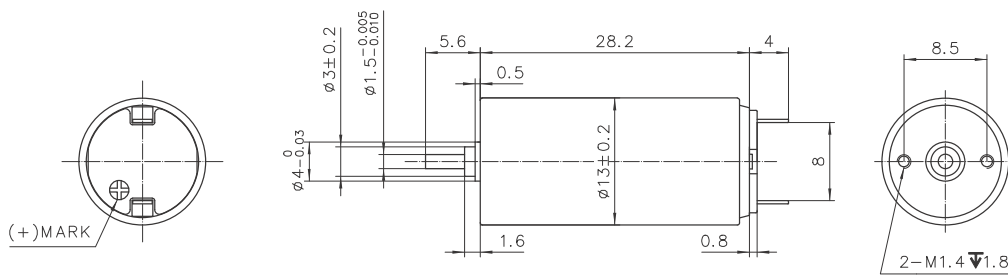
Specification		
Bearing	Sleeve bearing	
Max speed	rpm	13000
Axial play	mm	≤0.3
Number of commutator segments	5	
Ambient temperature	° C	-20~+65
Max winding temperature	° C	100
Thermal resistance		
Housing - Ambient	° C/ W	36.3
Winding - Housing	° C/ W	8.4
Thermal time constant		
Motor	s	229
Winding	s	3.90
Number of pole pairs	1	
Weight	g	20.4

Combination	
<b>Gearbox</b>	
PG13C	
Ø13mm	0.3 Nm 16:1-425:1
Page 43	
<b>Encoder</b>	
R13	
Ø13mm	256 Lines 3 Channels
Page 48	
<b>Option</b>	
Precious Metal Brushes / Graphite Brushes	

## Operating Range



## Dimension



TCU13028Pxx-S001