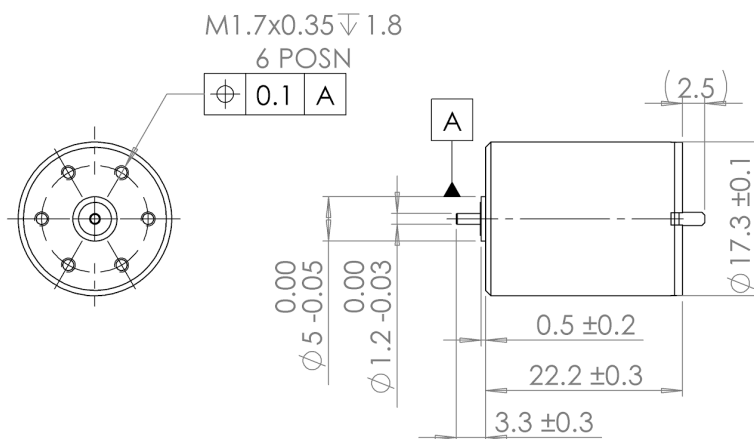
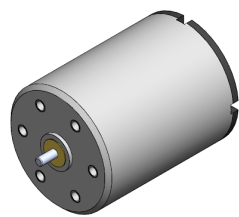
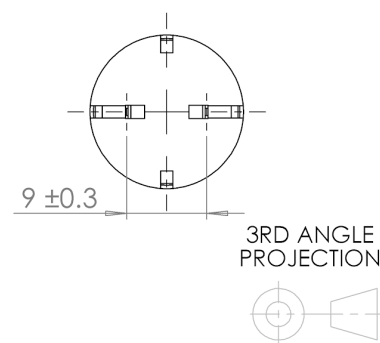


117-301 Brushed motor Coreless (precious metal brushes)

Ø17 x 22mm / customizable housing / fit for gearbox and encoder



DIMENSIONS ARE IN mm
SURFACE FINISH: N7
TOLERANCES:
LINEAR: ± 0.2
ANGULAR: ±1°



Design and accessories	Units	Samples available	Manufacturable on request	Custom design
		117-301	117-402	117-XXX
A Availability		Stocked design	8 weeks	8 weeks
B Motor Type		Brushed	Brushed	Brushed
C Commutation		Precious metal brush	Precious metal brush	Precious metal brush
D Shafts		Single	Single	Single / Dual
E Gearbox		Not fitted	Not fitted	Range 1:3.79 ~ 1:2865
F Encoder		Not fitted	Not fitted	Magnetic / optical
G Connections		Terminals	Terminals	To requirement
H Cable		N/A	N/A	To requirement
I Housing Material		Nickel plated steel	Nickel plated steel	Nickel plated steel
J Body diameter	mm	17.3	17.3	
K Body length	mm	22.2	22.2	
L Weight	g	26.6	26.6	

Performance characteristics		117-301	117-402	Nominal load, no load, and stall points, and efficiency will depend on the winding design. Please contact support@pmdri.com
1 Nominal voltage	V	3.0	12.0	
2 No load speed	rpm	8 015	8 200	
3 No load current	A	0.030	0.010	
4 Nominal speed	rpm	5 530	5 745	
5 Nominal torque	mNm	3.50	3.45	
6 Nominal current	A	1.085	0.275	
7 Stall torque	mNm	11.30	11.53	
8 Stall current	A	3.43	0.90	
9 Maximum efficiency	%	77.1	75.2	

Winding specific characteristics		117-301	117-402	Winding dependent
10 Terminal resistance	Ω	0.87	13.38	
11 Terminal inductance	mH	0.013	0.200	
12 Torque constant (Kt)	mNm/A	3.54	13.82	
13 Speed constant (Kv)	rpm/V	2 695	691	
14 Speed / torque gradient	rpm/mNm	709	711	
15 Mechanical time constant	ms	6.9	6.7	
16 Rotor inertia	g·cm ²	1.0	1.0	

Motor body characteristics		117-301
17 Thermal resistance housing-ambient	°C/W	33.0
18 Thermal resistance winding-housing	°C/W	12.0
19 Thermal time constant winding	s	8
20 Thermal time constant motor	s	272
21 Ambient temperature	min °C	-20
	max °C	+60
22 Max. permissible winding temperature	°C	+85
23 Max. permissible rotor speed	rpm	12 000
24 Axial play at axial load	mm	0.3 max
25 Max. axial load (dynamic)	N	0.2
26 Max. force for press fits (static)	N	15.0
with shaft supported		Dual-shaft version only
27 Max. radial loading (3mm from flange)	N	0.6
28 Number of magnet pole pairs		1

