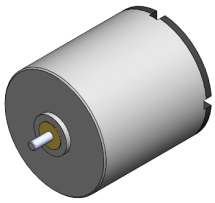
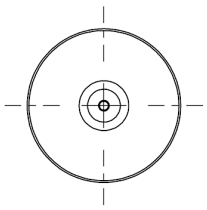
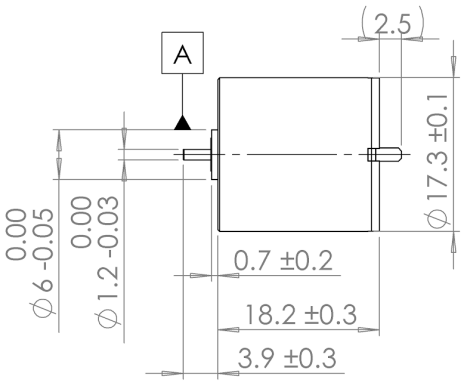
117-203 Brushed motor Coreless (precious metal brushes)

Ø17 x 18mm / customizable housing / fit for gearbox and encoder

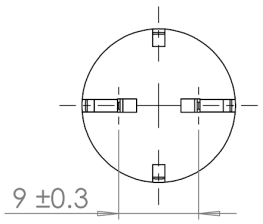
PRECISION MICRODRIVES ™



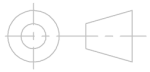




DIMENSIONS ARE IN mm
SURFACE FINISH: N7
TOLERANCES:
LINEAR: ± 0.2
ANGULAR: ±1°



3RD ANGLE PROJECTION



			Samples available	Manufacturable on request		Custom design
Design and accessories		**Units**	**117-203**	**117-401**		**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	18.2	18.2		
L	Weight	g	20.7	20.7		
Performance characteristics						
1	Nominal voltage	V	3.0	5.0		Nominal load, no load, and stall points, and efficiency will depend on the winding design. Please contact support@pmdri.com
2	No load speed	rpm	10 635	10 000		
3	No load current	A	0.047	0.035		
4	Nominal speed	rpm	7 285	7 055		
5	Nominal torque	mNm	2.75	3.05		
6	Nominal current	A	1.100	0.695		
7	Stall torque	mNm	8.74	10.36		
8	Stall current	A	3.39	2.28		
9	Maximum efficiency	%	76.5	75.6		
Winding specific characteristics						
10	Terminal resistance	Ω	0.89	2.20		Winding dependent
11	Terminal inductance	mH	0.011	0.026		
12	Torque constant (Kt)	mNm/A	2.66	4.70		
13	Speed constant (Kv)	rpm/V	3 595	2 031		
14	Speed / torque gradient	rpm/mNm	1 218	965		
15	Mechanical time constant	ms	10.5	8.5		
16	Rotor inertia	g·cm²	0.9	0.9		

Motor body characteristics				
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	265
21	Ambient temperature	min	°C	-20
		max	°C	+60
22	Max. permissable winding temperature		°C	+85
23	Max. permissable rotor speed		rpm	17 500
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

Performance curve (based on ambient 25°C)