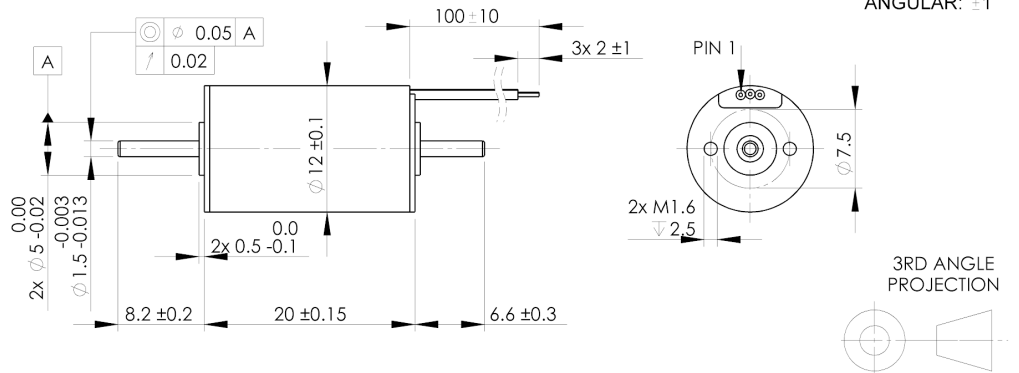
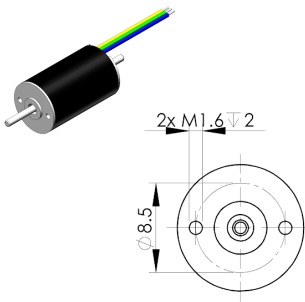


712-201 Brushless motor Slotless (inrunner)

Ø12 x 20mm / with dual shafts / sensorless / fit for gearbox and encoder



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



PIN	Description
1	Phase 1
2	Phase 2
3	Phase 3

Design and accessories	Units	Samples available 712-201	Manufacturable on request	Custom design 712-XXX
A Availability		Stocked design		8 weeks
B Motor Type		Brushless		Brushless
C Commutation		Sensorless		Sensored / sensorless
D Shafts		Dual		Dual / single
E Encoder		Not fitted		Magnetic / optical
F Gearbox		Not fitted		Range 1:4 ~ 1:6016
G Connections		Tinned		To requirement
H Cable		100mm x AWG28		To requirement
I Housing Material		Aluminium alloy		Aluminium alloy
J Body diameter	mm	12		
K Body length	mm	20		
L Weight	g	9.8		

Performance characteristics				
1 Nominal voltage	V	6		This motor can be wound for nominal voltages in a 6 ~ 9V range. Nominal load, no load, and stall points, and efficiency will depend on the winding design. Please contact support@nmдри.com
2 No load speed	rpm	29 320		
3 No load current	A	0.15		
4 Nominal speed	rpm	19 110		
5 Nominal torque	mNm	1.60		
6 Nominal current	A	1.02		
7 Stall torque	mNm	4.87		
8 Stall current	A	2.64		
9 Maximum efficiency	%	58.0		

Winding specific characteristics				
10 Terminal resistance	Ω	2.27		Winding dependent
11 Terminal inductance	mH	0.03		
12 Torque constant (Kt)	mNm/A	1.84		
13 Speed constant (Kv)	rpm/V	5 180		
14 Speed / torque gradient	rpm/mNm	6 378		
15 Mechanical time constant	ms	11.4		
16 Rotor inertia	g·cm ²	0.17		

Motor body characteristics			Operating range (based on ambient 25°C)	
17 Thermal resistance housing-ambient	°C/W	38.3	712-201	
18 Thermal resistance winding-housing	°C/W	9.6		
19 Thermal time constant winding	s	5		
20 Thermal time constant motor	s	196		
21 Ambient temperature	min °C	-30		
	max °C	+100		
22 Max. permissible winding temperature	°C	+125		
23 Max. permissible rotor speed	rpm	50 000		
24 Axial play at axial load	mm	0.6 max		
25 Radial play		Preloaded		
26 Max. axial load (dynamic)	N	0.3		
27 Max. force for press fits (static)	N	11.0		
with shaft supported	N	200		
28 Max. radial loading (5mm from flange)	N	4.3		
29 Number of pole pairs		1		
30 Number of winding phases		3		

Detailed datasheets, and stocked samples, are available upon request. Please contact support@precisionmicrodrives.com

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