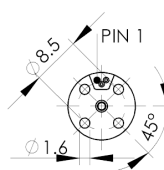


Ø12 x 16mm / with dual shafts / with sensors / sensorless



DIMENSIONS ARE IN mm
SURFACE FINISH: N7
TOLERANCES:
LINEAR: ± 0.2
ANGULAR: $\pm 1^\circ$

VARIATIONS (deviating dimensions given only)



712-100.001



712-100.006

3RD ANGLE
PROJECTION

PIN	Description
1	Phase 1
2	Phase 2
3	Phase 3

			Samples available	Manufacturable on request		Custom design
Design and accessories		Units	712-100	712-100.001	712-100.006	712-XXX
A	Availability		Stocked design	8 weeks	8 weeks	8 weeks
B	Motor Type		Brushless	Brushless	Brushless	Brushless
C	Commutation		Sensorless	Sensorless	Sensorless	Sensored / sensorless
D	Shafts		Single	Single	Single	Dual / single
E	Encoder		Not fitted	Not fitted	Not fitted	Magnetic / optical
F	Gearbox		Not fitted	Not fitted	Not fitted	Range 1:4 ~ 1:6016
G	Connections		Tinned	Tinned	Tinned	To requirement
H	Cable		100mm x AWG28	100mm x AWG28	100mm x AWG28	To requirement
I	Housing Material		Aluminium alloy	Aluminium alloy	Aluminium alloy	Aluminium alloy
J	Body diameter	mm	12	12	12	
K	Body length	mm	15.0	15.5	16.5	
L	Weight	g	8.1	8.1	8.1	

Performance characteristics						This motor can be wound for nominal voltages in a 4 ~ 12V range. Nominal load, no load, and stall points , and efficiency will depend on the winding design. Please contact support@pmdri.com
1	Nominal voltage	V	8	5	5	
2	No load speed	rpm	25 100	16 140	15 360	
3	No load current	A	0.09	0.07	0.07	
4	Nominal speed	rpm	12 400	3 940	3 580	
5	Nominal torque	mNm	2.50	2.23	2.30	
6	Nominal current	A	0.95	0.86	0.86	
7	Stall torque	mNm	5.20	3.13	3.20	
8	Stall current	A	1.80	1.12	1.10	
9	Maximum efficiency	%	60.50	57.70	56.20	

Winding specific characteristics		0.225	0.275	0.325	0.375
10	Terminal resistance Ω	4.45	4.45	4.55	Winding dependent
11	Terminal inductance mH	0.08	0.09	0.10	
12	Torque constant (Kt) mNm/A	2.89	2.79	2.91	
13	Speed constant (Kv) rpm/V	3 300	3 425	3 278	
14	Speed / torque gradient rpm/mNm	5 074.8	5 467	5 120	
15	Mechanical time constant ms	7.3	7.9	7.9	
16	Rotor inertia g·cm ²	0.14	0.14	0.2	

Motor body characteristics			Operating range (based on ambient 25°C)	
17	Thermal resistance housing-ambient	°C/W	12.8	712-100
18	Thermal resistance winding-housing	°C/W	4.0	
19	Thermal time constant winding	s	3	
20	Thermal time constant motor	s	156	
21	Ambient temperature	min °C	-30	
		max °C	100	
22	Max. permissible winding temperature	°C	100	
23	Max. permissible rotor speed	rpm	50 000	
24	Axial play at axial load	mm	0.1 max	
25	Radial play		Preloaded	
26	Max. axial load (dynamic)	N	0.5	
27	Max. force for press fits (static)	N	10	
	with shaft supported	N	200	

Continuous operating zone

Temporary operating zone ($R_{th,50\%}$)

Nominal load point at nominal voltage

Speed torque curve at nominal voltage

29	Number of pole pairs	1
30	Number of winding phases	3

