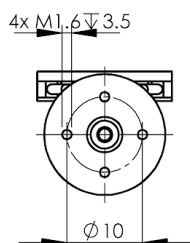
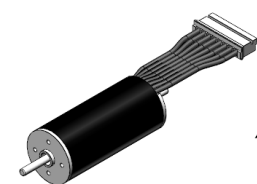
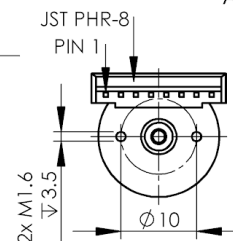
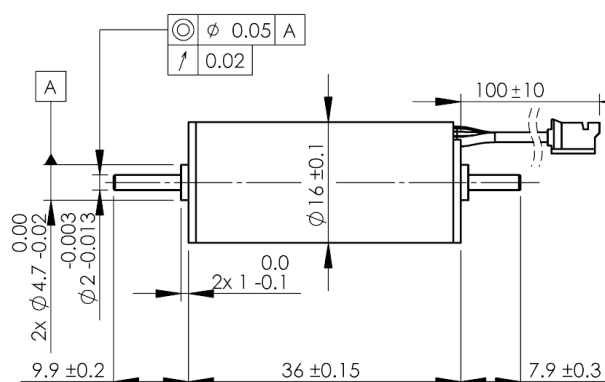


716-403 Brushless motor Slotless (inrunner)

Ø16 x 36mm / with dual shafts / with sensors / fit for gearbox and encoder

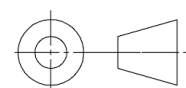


PIN	Description
1	U
2	V
3	W
4	GND
5	Hu
6	Hv
7	Hw
8	Vcc



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

3RD ANGLE PROJECTION



		Samples available	Manufacturable on request		Custom design
		716-403	716-201	716-802	716-XXX
Design and accessories	Units				
A Availability		Stocked design	8 weeks	8 weeks	8 weeks
B Motor Type		Brushless	Brushless	Brushless	Brushless
C Commutation		Digital Hall	Digital Hall	Digital Hall	Sensored / sensorless
D Shafts		Dual	Dual	Dual	Dual / single
E Encoder		Not fitted	Not fitted	Not fitted	Magnetic / optical
F Gearbox		Not fitted	Not fitted	Not fitted	Range 1:4 ~ 1:3373
G Connections		8-pinned JST PHR-8	8-pinned JST PHR-8	8-pinned JST PHR-8	To requirement
H Cable		100mm x AWG26	100mm x AWG26	100mm x AWG26	To requirement
I Housing Material		Aluminium alloy	Aluminium alloy	Aluminium alloy	Aluminium alloy
J Body diameter	mm	16	16	16	
K Body length	mm	36	36	36	
L Weight	g	32.0	32.0	32.0	
Performance characteristics					
1 Nominal voltage	v	12	6	24	This motor can be wound for nominal voltages in a 6 ~ 24V range. 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	14 020	13 580	13 780	
3 No load current	A	0.05	0.18	0.07	
4 Nominal speed	rpm	9 980	9 070	9 990	
5 Nominal torque	mNm	7.98	7.98	9.00	
6 Nominal current	A	1.04	2.13	0.63	Winding dependent
7 Stall torque	mNm	28.05	24.83	33.90	
8 Stall current	A	3.48	6.06	2.11	
9 Maximum efficiency	%	78.1	68.5	67.3	
Winding specific characteristics					
10 Terminal resistance	Ω	3.45	0.99	11.40	Winding dependent
11 Terminal inductance	mH	0.18	0.04	0.81	
12 Torque constant (Kt)	mNm/A	8.07	4.10	16.10	
13 Speed constant (Kv)	rpm/V	1 184	2 331	593	
14 Speed / torque gradient	rpm/mNm	507	563	420	
15 Mechanical time constant	ms	3.2	3.7	2.7	
16 Rotor inertia	g·cm ²	0.62	0.62	0.62	
Motor body characteristics					
		Operating range (based on ambient 25°C)			
17 Thermal resistance housing-ambient	°C/W	17.1	716-403		
18 Thermal resistance winding-housing	°C/W	5.3			
19 Thermal time constant winding	s	6			
20 Thermal time constant motor	s	252			
21 Ambient temperature	min °C	-30			
	max °C	+100			
22 Max. permissible winding temperature	°C	+150			
23 Max. permissible rotor speed	rpm	30 000			
24 Axial play at axial load	mm	0.3 max			
25 Radial play		Preloaded			
26 Max. axial load (dynamic)	N	1.3			
27 Max. force for press fits (static)	N	15.0			
with shaft supported	N	350			
28 Max. radial loading (5mm from flange)	N	5.0			
29 Number of pole pairs		1			
30 Number of winding phases		3			

