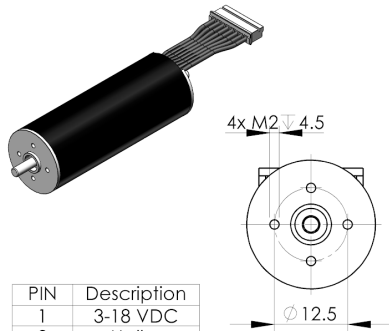
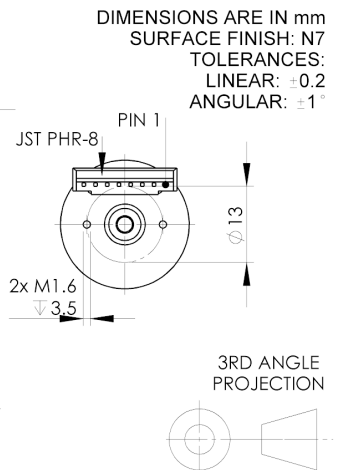
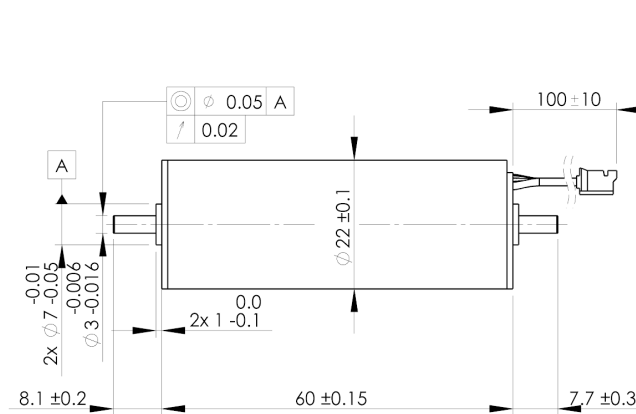


722-401 Brushless motor Slotless (inrunner)

Ø22 x 60mm / with dual shafts / with sensors / fit for gearbox and encoder



PIN	Description
1	3-18 VDC
2	Hall a
3	Hall b
4	Hall c
5	GND
6	Phase 1
7	Phase 2
8	Phase 3



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

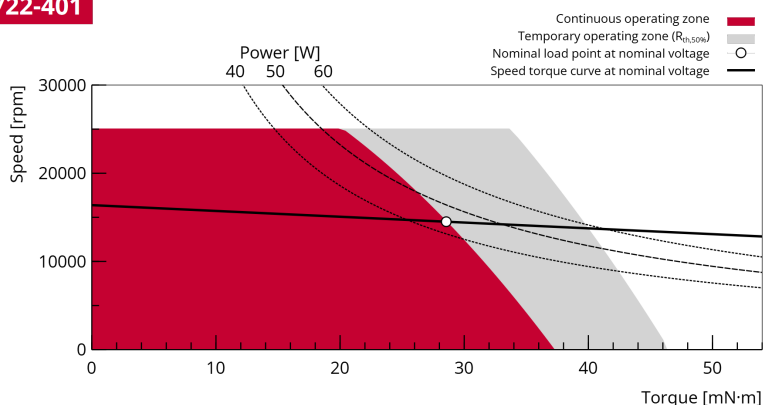
		Samples available	Manufacturable on request		Custom design
		722-401	722-802	722-C01	722-XXX
A	Availability	Stocked design	8 weeks	8 weeks	8 weeks
B	Motor Type	Brushless	Brushless	Brushless	Brushless
C	Commutation	Digital Hall	Digital Hall	Digital Hall	Sensored / sensorless
D	Shafts	Dual	Dual	Dual	Dual / single
E	Encoder	Not fitted	Not fitted	Not fitted	Magnetic / optical
F	Gearbox	Not fitted	Not fitted	Not fitted	Range 1:4 ~ 1:5033
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
I	Body diameter	mm	22	22	22
K	Body length	mm	60	60	60
L	Weight	g	122.0	122.0	122.0

Performance characteristics					This motor can be wound for nominal voltages in a 12 ~ 36V 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	12	24	36
2	No load speed	rpm	16 130	16 190	16 070
3	No load current	A	0.38	0.14	0.11
4	Nominal speed	rpm	13 340	13 720	13 840
5	Nominal torque	mNm	28.50	34.30	37.45
6	Nominal current	A	4.45	2.58	1.87
7	Stall torque	mNm	167.90	227.73	273.81
8	Stall current	A	24.00	16.22	12.90
9	Maximum efficiency	%	76.40	82.40	82.40

Winding specific characteristics					Winding dependent
10	Terminal resistance	Ω	0.50	1.48	2.79
11	Terminal inductance	mH	0.03	0.13	0.30
12	Torque constant (Kt)	mNm/A	7.00	14.04	21.22
13	Speed constant (Kv)	rpm/V	1 365	680	450
14	Speed / torque gradient	rpm/mNm	98	72	59
15	Mechanical time constant	ms	4.5	3.3	2.7
16	Rotor inertia	g·cm ²	4.5	4.5	4.5

Motor body characteristics		Operating range (based on ambient 25°C)	
17	Thermal resistance housing-ambient	°C/W	7.6
18	Thermal resistance winding-housing	°C/W	4.6
19	Thermal time constant winding	s	29
20	Thermal time constant motor	s	533
21	Ambient temperature	min °C	-30
		max °C	100
22	Max. permissible winding temperature	°C	150
23	Max. permissible rotor speed	rpm	25 000
24	Axial play at axial load	mm	0.3 max
25	Radial play	Preloaded	
26	Max. axial load (dynamic)	N	3.5
27	Max. force for press fits (static)	N	44.0
	with shaft supported	kN	1.2
28	Max. radial loading (5mm from flange)	N	15.0

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

V2 - Feb 2025