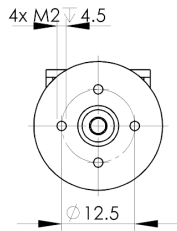
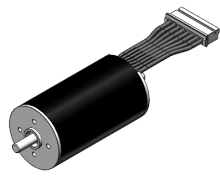
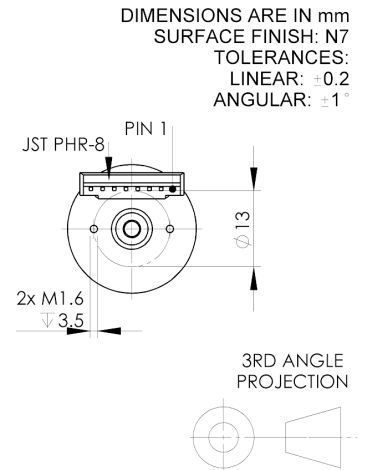
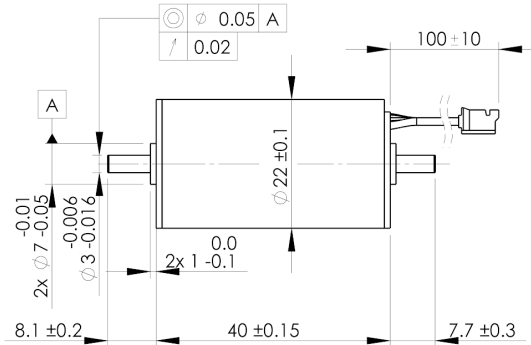


722-400 Brushless motor Slotless (inrunner)

Ø22 x 40mm / 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°

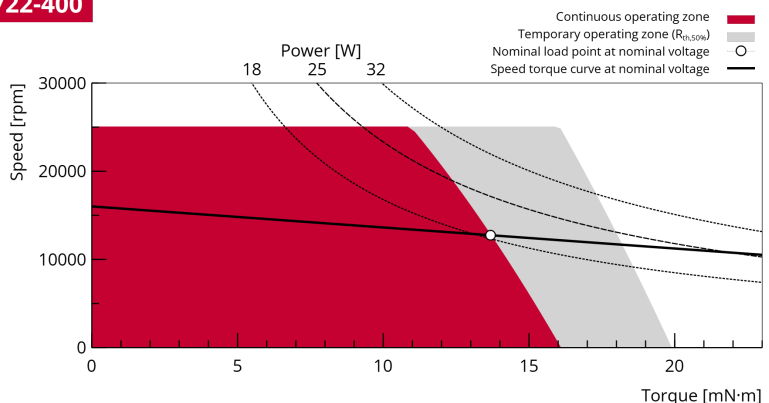
		Samples available	Manufacturable on request		Custom design
Design and accessories		722-400	722-801	722-C00	722-XXX
A	Availability	Stocked design	8 weeks	8 weeks	8 weeks
B	Motor Type	Brushless	Brushless	Brushless	Brushless
C	Commutation	Digital Hall	Digital Hall	Sensored / sensorless	Sensored / sensorless
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 PH2.0	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	
K	Body length	mm	40	40	
L	Weight	g	64.0	64.0	64.0

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@pmicrodrives.com
1	Nominal voltage	v	12	24	36
2	No load speed	rpm	16 380	16 390	16 780
3	No load current	A	0.16	0.08	0.08
4	Nominal speed	rpm	12 930	13 560	13 770
5	Nominal torque	mNm	12.64	14.40	14.00
6	Nominal current	A	2.00	1.13	0.77
7	Stall torque	mNm	61.07	84.92	79.44
8	Stall current	A	8.89	6.15	3.95
9	Maximum efficiency	%	75.00	78.10	74.30

Winding specific characteristics					Winding dependent
10	Terminal resistance	Ω	1.35	3.90	9.11
11	Terminal inductance	mH	0.08	0.31	0.64
12	Torque constant (Kt)	mNm/A	6.87	13.80	20.10
13	Speed constant (Kv)	rpm/V	1 390	692	475
14	Speed / torque gradient	rpm/mNm	273	196	215
15	Mechanical time constant	ms	6.6	4.7	5.2
16	Rotor inertia	g·cm²	2.3	2.3	2.3

Motor body characteristics		Operating range (based on ambient 25°C)	
17	Thermal resistance housing-ambient	°C/W	12.7
18	Thermal resistance winding-housing	°C/W	5.0
19	Thermal time constant winding	s	12
20	Thermal time constant motor	s	420
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