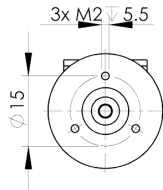
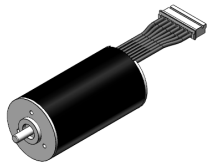
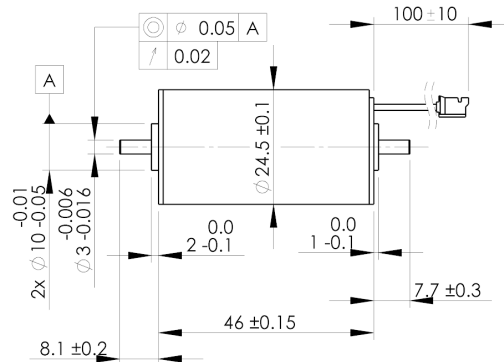


724-401 Brushless motor Slotless (inrunner)

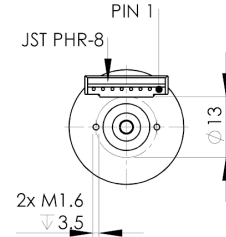
Ø24 x 46mm / with dual shafts / with sensors



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°



3RD ANGLE PROJECTION

		Samples available	Manufacturable on request		Custom design
Design and accessories		724-401	724-801	724-C00	724-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 ~ 1:3736
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	24	24	24
K	Body length	mm	46	46	46
L	Weight	g	92.0	92.0	92.0

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	14 400	14 300	16 140
3	No load current	A	0.17	0.07	0.09
4	Nominal speed	rpm	12 400	12 290	13 720
5	Nominal torque	mNm	21.76	22.20	16.35
6	Nominal current	A	2.93	1.46	0.87
7	Stall torque	mNm	157.84	159.15	110.87
8	Stall current	A	20.00	10.00	5.29
9	Maximum efficiency	%	82.50	84.00	75.60

Winding specific characteristics					Winding dependent
10	Terminal resistance	Ω	0.60	2.40	6.80
11	Terminal inductance	mH	0.07	0.30	0.62
12	Torque constant (Kt)	mNm/A	7.89	15.92	20.94
13	Speed constant (Kv)	rpm/V	1 210	600	456
14	Speed / torque gradient	rpm/mNm	92	90	148
15	Mechanical time constant	ms	4.0	3.9	6.4
16	Rotor inertia	g·cm²	4.2	4.2	4.2

Motor body characteristics		Operating range (based on ambient 25°C)		
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17	Thermal resistance housing-ambient	°C/W	11.6	724-401
18	Thermal resistance winding-housing	°C/W	5.6	
19	Thermal time constant winding	s	30	
20	Thermal time constant motor	s	557	
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	

