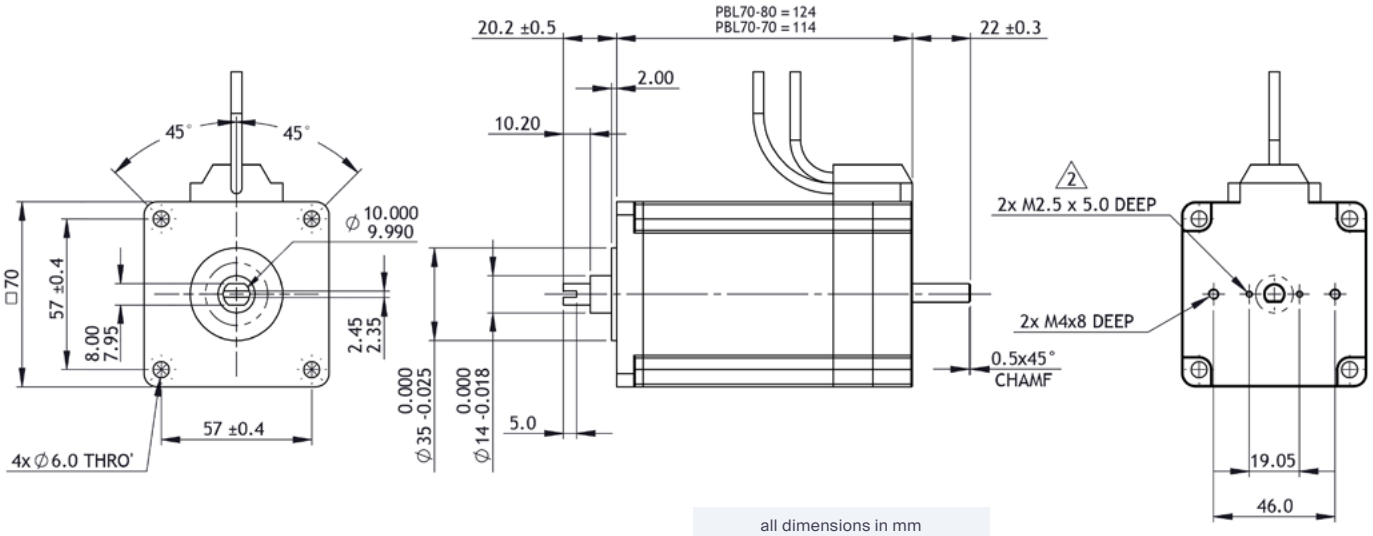
PBL70-80 BLDC motor

Ø70 mm frame // 80 mm stack

parvalux by maxon



all dimensions in mm

Part number key	
Modular	######
Standard	######
Calculated data	######

Technical data			
1	Part number		776623
2	Nominal power	W	415
3	Nominal voltage	V	48
4	No load speed	rpm	4902
5	No load current	A	1.5
6	Nominal speed	rpm	4500
7	Nominal continuous torque (S1)	Nm	0.88
8	Nominal continuous current (S1)	A	10.4
9	Max Intermittent torque (S2 - 15 minutes)	Nm	1.54
10	Stall current	A	75.6
11	Stall torque	Nm	7.3
12	Stack length	mm	80
13	Maximum efficiency	%	82
14	Ra	Ω	0.151
15	Rl	mH	0.221
16	Speed constant	rpm/V	103
17	Torque constant	Nm/A	0.10
18	Speed torque gradient	rpm/Nm	691.7
19	Rotor inertia	Kgcm²	2.77×10^{-4}
20	Weight	Kg	2.60

Connection details		
Lead colour	Lead gauge	Function
Red	UL1569/26 AWG	VCC
Black	UL1569/26 AWG	GND
Blue	UL1569/26 AWG	Hall A
Green	UL1569/26 AWG	Hall B
White	UL1569/26 AWG	Hall C
Red	UL3266/16 AWG	Phase U
Yellow	UL3266/16 AWG	Phase V
Black	UL3266/16 AWG	Phase W

Thermal data			
21	Ambient temperature	°C	40

Mechanical data			
22	Radial load [distance from flange]	N [mm]	350 [15]
23	Radial play	mm [@g]	0.025 [450]
24	Axial end play	mm [@g]	0.025 [450]

Other data			
25	Number of poles		8
26	Winding type		Delta
27	Hall effect angle (electrical angle)	°	120
28	IP Rating		IP54
29	Enclosure		Enclosed
30	Insulation Class		B

Modular system

Gearbox	+L mm
L Box	108.0
LWS	127.0
LIW	102.0
LIS	108.0
GB12	110.0
GB80	80.0
PGx70	58.0 - 80.0

Brake	+L mm
1.5 Nm	28.2
2.0 Nm	32.4
4.0 Nm	27.7
Power-on	26.4

Encoder	+L mm
Incr. 5-pin	9.0
Incr. 10-pin	9.0
Diff. 10-pin	12.0
Magnetic	12.0

Controller
SC 50/15
ESCON
EPOS

Key
Standard combination
Modular combination

+L mm = approximate added length*

*additional length may also be required for mounting flange between components

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additional information available on request