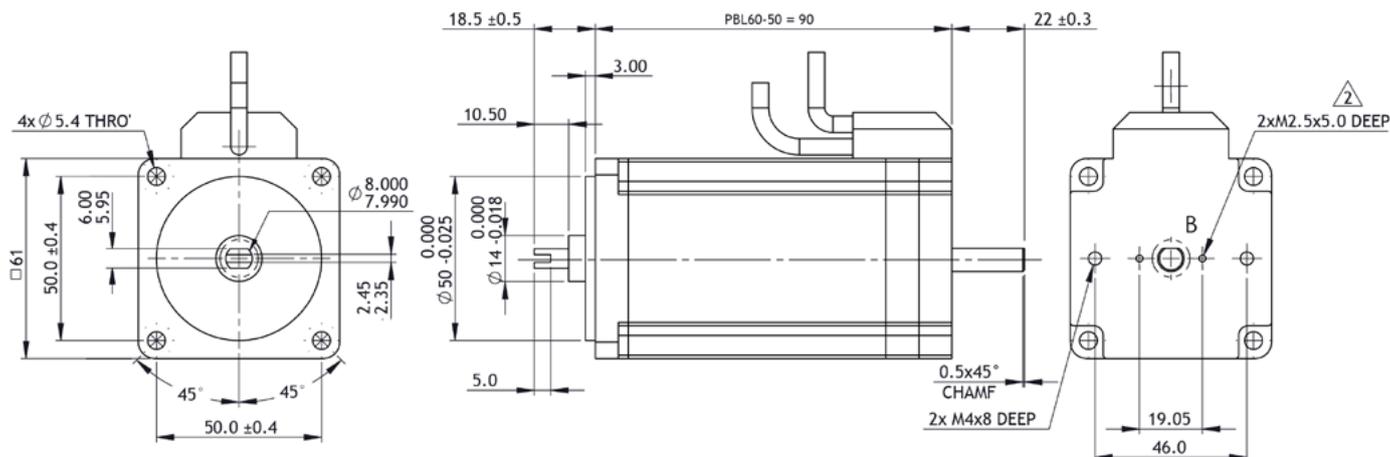


# PBL60-50 BLDC motor

Ø60 mm frame // 50 mm stack

**parvalux**  
by **maxon**



all dimensions in mm

### Part number key

Modular	#####
Standard	#####
Calculated data	#####

### Technical data

		776618	776619
1 Part number		776618	776619
2 Nominal power	<b>W</b>	104	104
3 Nominal voltage	<b>V</b>	24	48
4 No load speed	<b>rpm</b>	3798	3827
5 No load current	<b>A</b>	1.1	0.5
6 Nominal speed	<b>rpm</b>	3000	3000
7 Nominal continuous torque (S1)	<b>Nm</b>	0.33	0.33
8 Nominal continuous current (S1)	<b>A</b>	6.1	3.0
9 Max Intermittent torque (S2 - 15 minutes)	<b>Nm</b>	0.58	0.58
10 Stall current	<b>A</b>	41.00	26.40
11 Stall torque	<b>Nm</b>	2.6	3.4
12 Stack length	<b>mm</b>	50	50
13 Maximum efficiency	<b>%</b>	80	84
14 Ra	<b>Ω</b>	0.202	0.757
15 RI	<b>mH</b>	211.8	856.4
16 Speed constant	<b>rpm/V</b>	159.6	80.7
17 Torque constant	<b>Nm/A</b>	0.07	0.13
18 Speed torque gradient	<b>rpm/Nm</b>	1502.6	1152.9
19 Rotor inertia	<b>Kgcm<sup>2</sup></b>	4.97 x 10 <sup>-6</sup>	4.97 x 10 <sup>-6</sup>
20 Weight	<b>Kg</b>	1.20	1.20

### Connection details

Lead colour	Lead gauge	Function
Red	UL1007/26 AWG	VCC
Black	UL1007/26 AWG	GND
Blue	UL1007/26 AWG	Hall A
Green	UL1007/26 AWG	Hall B
White	UL1007/26 AWG	Hall C
Red	UL1007/18 AWG	Phase U
Yellow	UL1007/18 AWG	Phase V
Black	UL1007/18 AWG	Phase W

### Thermal data

21 Ambient temperature	<b>°C</b>	40
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Mechanical data	
22 Radial load [distance from flange]	<b>N [mm]</b> 350 [15]
23 Radial play	<b>mm [g]</b> 0.025 [450]
24 Axial end play	<b>mm [g]</b> 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	Brake	+L mm	Encoder	+L mm
S Box	110.0	1.5 Nm	28.2	Incr. 5-pin	9.0
M Box	88.0	2.0 Nm	32.4	Incr. 10-pin	9.0
MWS	110.0	4.0 Nm	27.7	Diff. 10-pin	12.0
MIW	83.0	Power-on	26.4	Magnetic	12.0
GB12	110.0				
GB28	88.0				
GB36	166.0				
GB58	50.0				
GB80	80.0				
PGx52	50.0 - 85.0				

Controller	Key
SC 50/15	Standard combination
ESCON	Modular combination
EPOS	

+L mm = approximate added length\*

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