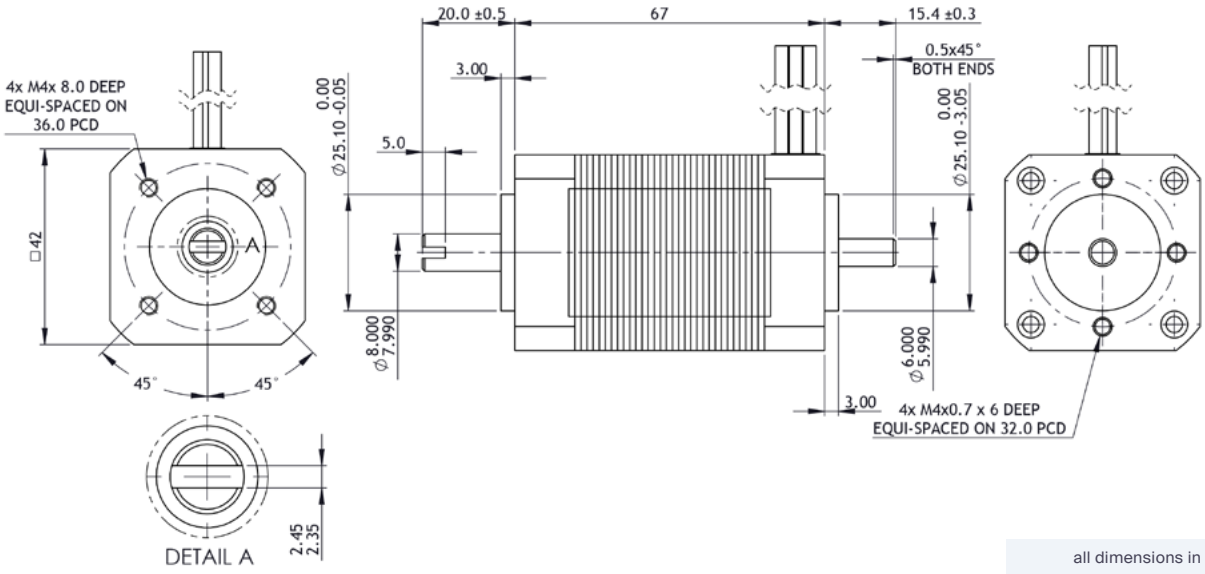
PBL42-35 BLDC motor

Ø42 mm frame // 35 mm stack

parvalux by maxon



all dimensions in mm

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

	Technical data			
1	Part number		776616	776617
2	Nominal power	W	42	42
3	Nominal voltage	V	24	48
4	No load speed	rpm	5835	6001
5	No load current	A	0.4	0.3
6	Nominal speed	rpm	4000	4000
7	Nominal continuous torque (S1)	Nm	0.1	0.1
8	Nominal continuous current (S1)	A	2.6	1.3
9	Max Intermittent torque (S2 - 15 minutes)	Nm	0.15	0.15
10	Stall current	A	9.6	5.0
11	Stall torque	Nm	0.4	0.4
12	Stack length	mm	35	35
13	Maximum efficiency	%	77	75
14	Ra	Ω	0.87	3.35
15	Rl	mH	1298	5415
16	Speed constant	rpm/V	251.7	132.2
17	Torque constant	Nm/A	0.043	0.093
18	Speed torque gradient	rpm/Nm	14157	13361
19	Rotor inertia	Kgcm²	5.5 x 10^{-6}	5.5 x 10^{-6}
20	Weight	Kg	0.45	0.45

	Thermal data		
22	Ambient temperature	°C	40

	Mechanical data		
23	Radial load [distance from flange]	N [mm]	130 [15]
24	Radial play	mm [@g]	0.06 [450]
25	Axial end play	mm [@g]	0.06 [450]

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

Connection details

Lead colour	Lead gauge	Function
Red	UL1569/26 AWG	VCC
Black	UL1569/26 AWG	GND
Yellow	UL1569/26 AWG	Hall A
Green	UL1569/26 AWG	Hall B
Blue	UL1569/26 AWG	Hall C
Yellow	UL1569/20 AWG	Phase U
Green	UL1569/20 AWG	Phase V
Blue	UL1569/20 AWG	Phase W

Modular system

Gearbox	+L mm
N/A	-

Brake	+L mm
N/A	-

Encoder	+L mm
Incremental	9

Controller
SC 50/15

+L mm = approximate added length*

Compatible products key

Product name	Standard combination
Product name	Modular combination

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

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additional information available on request