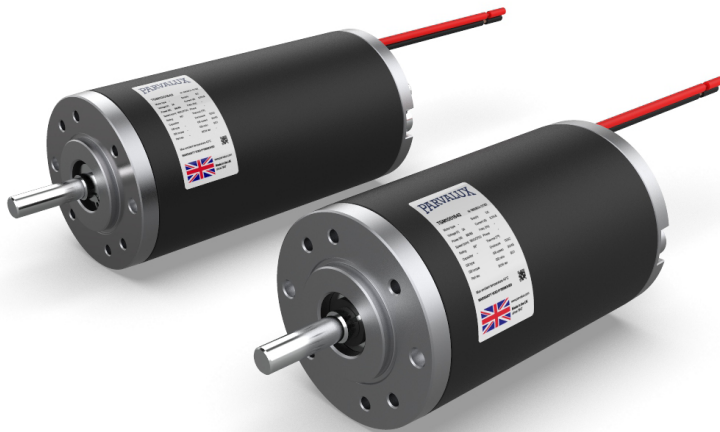


BRx42 Product Overview

PMDC motor // Ø42 mm frame

parvalux

by maxon



BRx42-25 PMDC motor

Ø42 mm frame // 19 mm stack

BRx42-40 PMDC motor

Ø42 mm frame // 34 mm stack

Overview

The BRx42 PMDC (brushed permanent magnet DC motor) has two stack length models available, the BRx42-25 and BRx42-40. Offering a wide range of operating voltages, speeds and torque in a relatively small housing.

It is a highly efficient motor, designed for market applications such as;

- **Agriculture;** seeding machines, forage harvesters, farming robots
- **Medical;** healthcare pumps, hospital beds, stairlift & lift auxiliary drives
- **Industrial;** printing equipment, fire curtains, laboratory devices
- **Building automation;** door automation, automatic blinds

Motor Design

The 2-pole bi-directional BRx42 is housed within a zinc metal enclosure and steel tube sealed to IP54 (with IP67 on request) protecting it from dust particles and water spray. Capable of operating between -30°C and +100°C, with an ambient temperature of +40°C.

Designed with a mechanical commutation through a multi bar commutator to provide a long lifetime, it also features ball bearings at the front and rear of the motor, with low noise and vibration resistance. The motor can support custom shaft designs and special windings as required.

There are two models available, The BRx42-25 (stack length 19mm / overall motor length 70mm) and the BRx42-40 (stack length 34mm / overall motor length 85mm), delivering up to 0.06 Nm and 0.09 Nm respectively.

UL, ETL, CSA approvals available on request, with EMC EN 61000-6-3:2007 +A1:2011 suppression optional.

The motor can be combined with Parvalux encoders, controllers, and gearheads as part of a modular system.

Features at a glance

- Delivers up to 0.09 Nm
- Compact envelope size & lightweight
- Selection of voltages up to 48V DC
- Continuously rated at up to 0.057 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

Market sectors



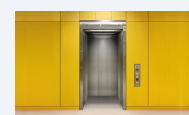
Agriculture



Medical



Industrial



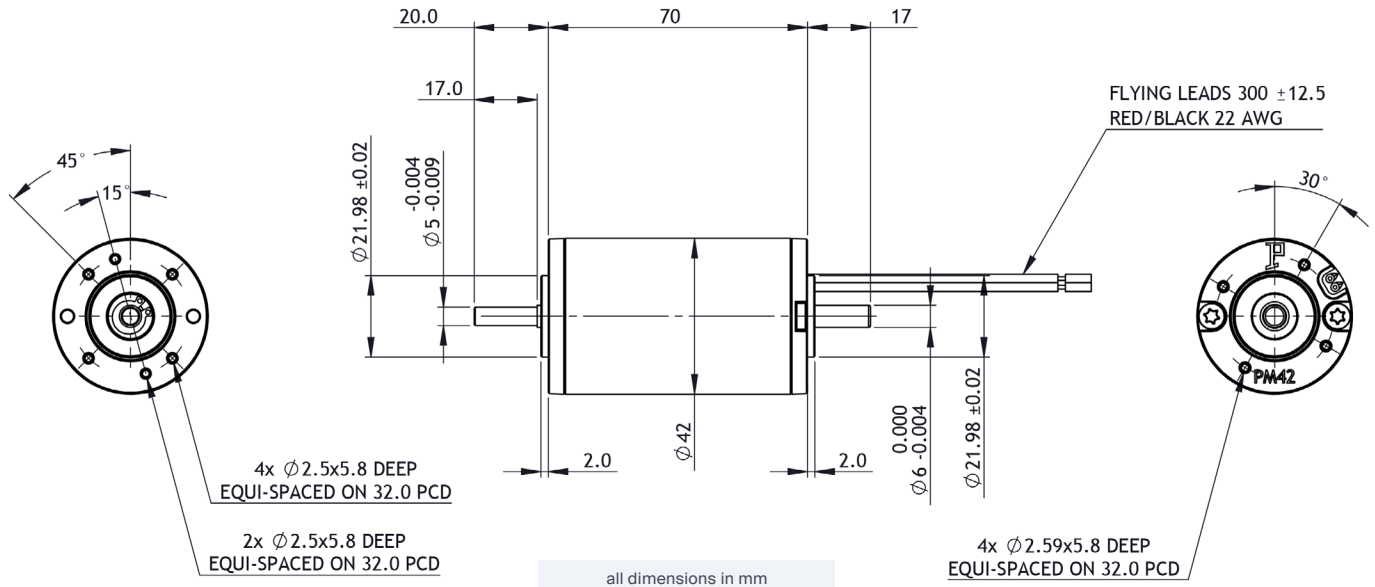
Building automation

BRx42-25 PMDC motor

Ø42 mm frame // 19 mm stack

parvalux

by **maxon**



Part number key

Modular	#####
Standard	#####
Special	#####

Available on request: Custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors

All products are built in accordance to performance tolerances from EN60034-1:2010. As continuous improvement, Parvalux periodically test their product range to ensure test results are as accurate as possible and are therefore subject to change. Please ensure you are using the latest datasheets found on our website

Technical data

		781076	781077	781078
1 Part number		781076	781077	781078
2 Nominal power	W	12	12	12
3 Nominal voltage	V	12	24	48
4 No load speed	rpm	4115	4115	4115
5 No load current	A	0.15	0.76	0.038
6 Nominal speed	rpm	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.038	0.038	0.038
8 Nominal continuous current (S1)	A	1.53	0.76	0.38
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.06	0.06	0.06
10 Stall current	A	5.4	2.7	1.35
11 Stall torque	Nm	0.14	0.14	0.14
12 Stack length	mm	19	19	19
13 Maximum efficiency	%	71	70	71
14 Terminal resistance - phase to phase	Ω	2.220	8.890	35.500
15 Terminal inductance - phase to phase	mH	-	-	-
16 Speed constant	rpm/V	334	165	84
17 Torque constant	Nm/A	0.03	0.06	0.11
18 Speed torque gradient	rpm/Nm	28702	28702	28702
19 Rotor inertia	gcm ²	71	71	71

Thermal data

20 Ambient temperature	°C	40
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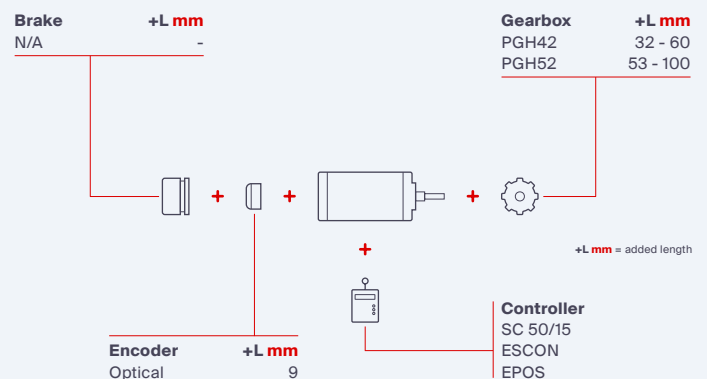
Mechanical data

21 Radial load [distance from flange]	N [mm]	60 [15]
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Other data

22 Number of poles		2
23 Weight	Kg	0.4
24 IP rating		IP54
25 Enclosure		Enclosed
26 Insulation Class		F
27 Reversible		Yes

Modular system

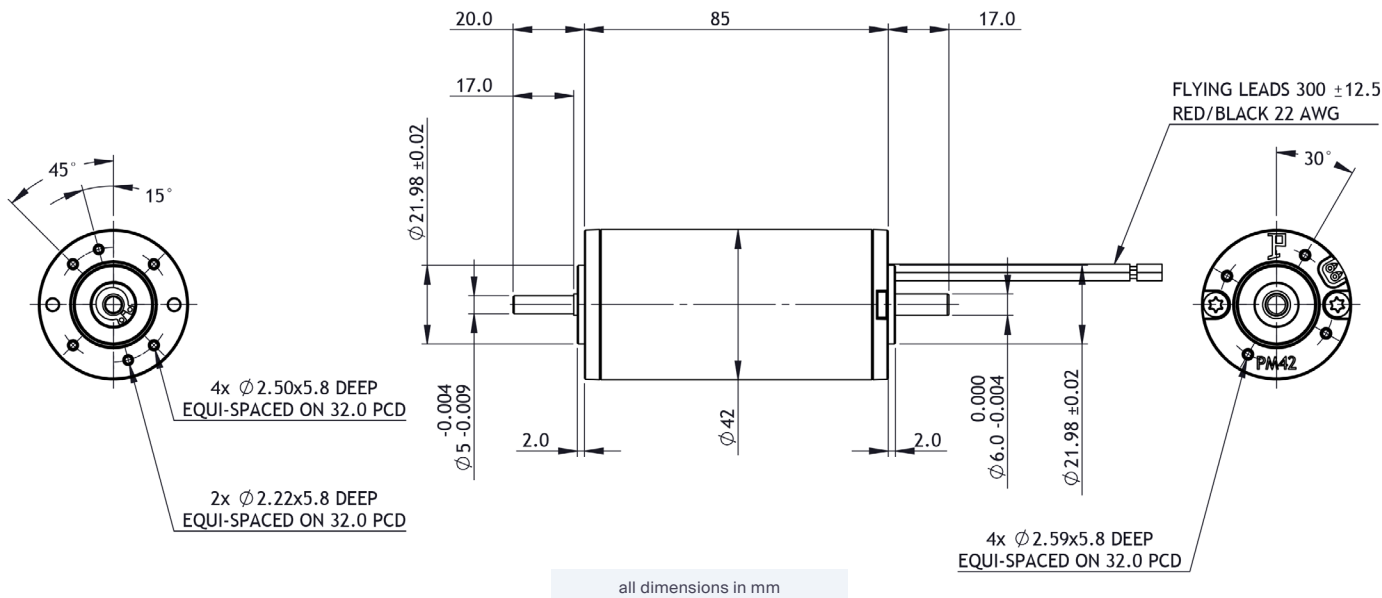


BRx42-40 PMDC motor

Ø42 mm frame // 34 mm stack

parvalux

by **maxon**



Part number key	
Modular	#####
Standard	#####
Special	#####

Available on request: Custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors

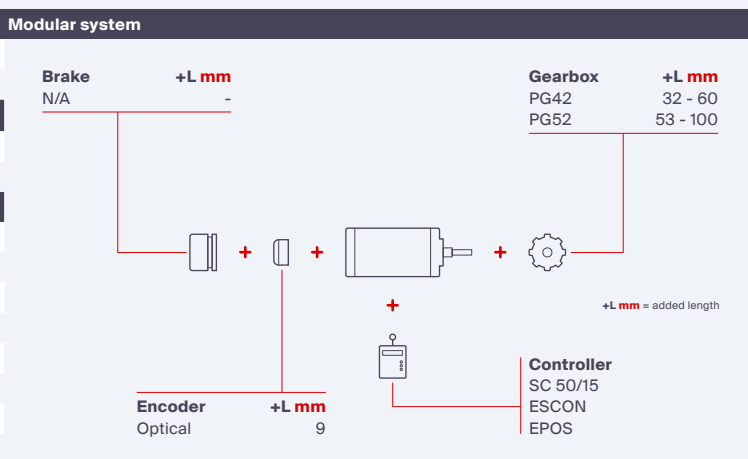
All products are built in accordance to performance tolerances from EN60034-1:2010. As continuous improvement, Parvalux periodically test their product range to ensure test results are as accurate as possible and are therefore subject to change. Please ensure you are using the latest datasheets found on our website

Technical data				
1 Part number		781079	781080	781081
2 Nominal power	W	20	20	20
3 Nominal voltage	V	12	24	48
4 No load speed	rpm	4128	4064	4064
5 No load current	A	0.22	0.11	0.05
6 Nominal speed	rpm	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.057	0.057	0.057
8 Nominal continuous current (S1)	A	2.16	1.06	0.53
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.09	0.09	0.09
10 Stall current	A	9.6	4.64	2.3
11 Stall torque	Nm	0.27	0.27	0.27
12 Stack length	mm	34	34	34
13 Maximum efficiency	%	77	77	77
14 Terminal resistance - phase to phase	Ω	1.250	5.170	20.800
15 Terminal inductance - phase to phase	mH	-	-	-
16 Speed constant	rpm/V	340	165	84
17 Torque constant	Nm/A	0.03	0.06	0.12
18 Speed torque gradient	rpm/Nm	15200	15200	15200
19 Rotor inertia	gcm²	110	110	110

Thermal data	
20 Ambient temperature	°C 40

Mechanical data	
21 Radial load [distance from flange]	N [mm] 350 [15]

Other data	
22 Number of poles	2
23 Weight	Kg 0.5
24 IP rating	IP54
25 Enclosure	Enclosed
26 Insulation Class	F
27 Reversible	Yes



BRx42 Product Overview

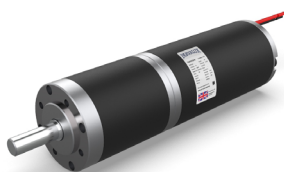
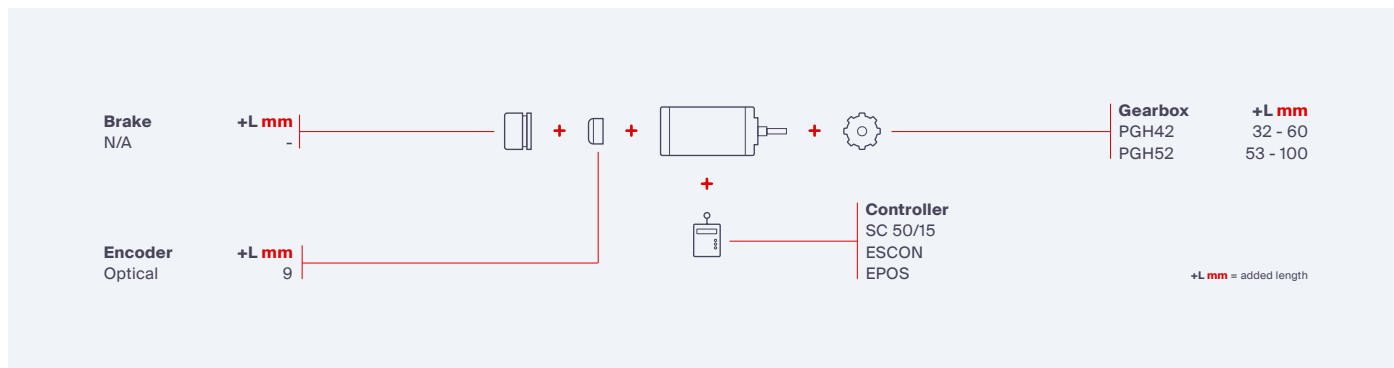
PMDC motor // Ø42 mm frame

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Compatible products

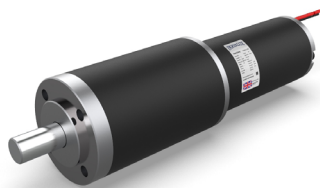
The BRx42 can be combined with Parvalux encoders, controllers, and gear heads to offer a complete application solution.



PGH42

1 Gearbox ratio	:1	15 - 1470
2 Output speed ¹	rpm	2 - 200
3 Continuous torque	Nm	Up to 14
4 Intermittent torque	Nm	Up to 21
5 Gearbox efficiency	%	Up to 90

¹ Based on a 3000 rpm input speed



PGH52

1 Gearbox ratio	:1	4 - 684
2 Output speed ¹	rpm	4 - 750
3 Continuous torque	Nm	Up to 24
4 Intermittent torque	Nm	Up to 36
5 Gearbox efficiency	%	Up to 90

¹ Based on a 3000 rpm input speed