

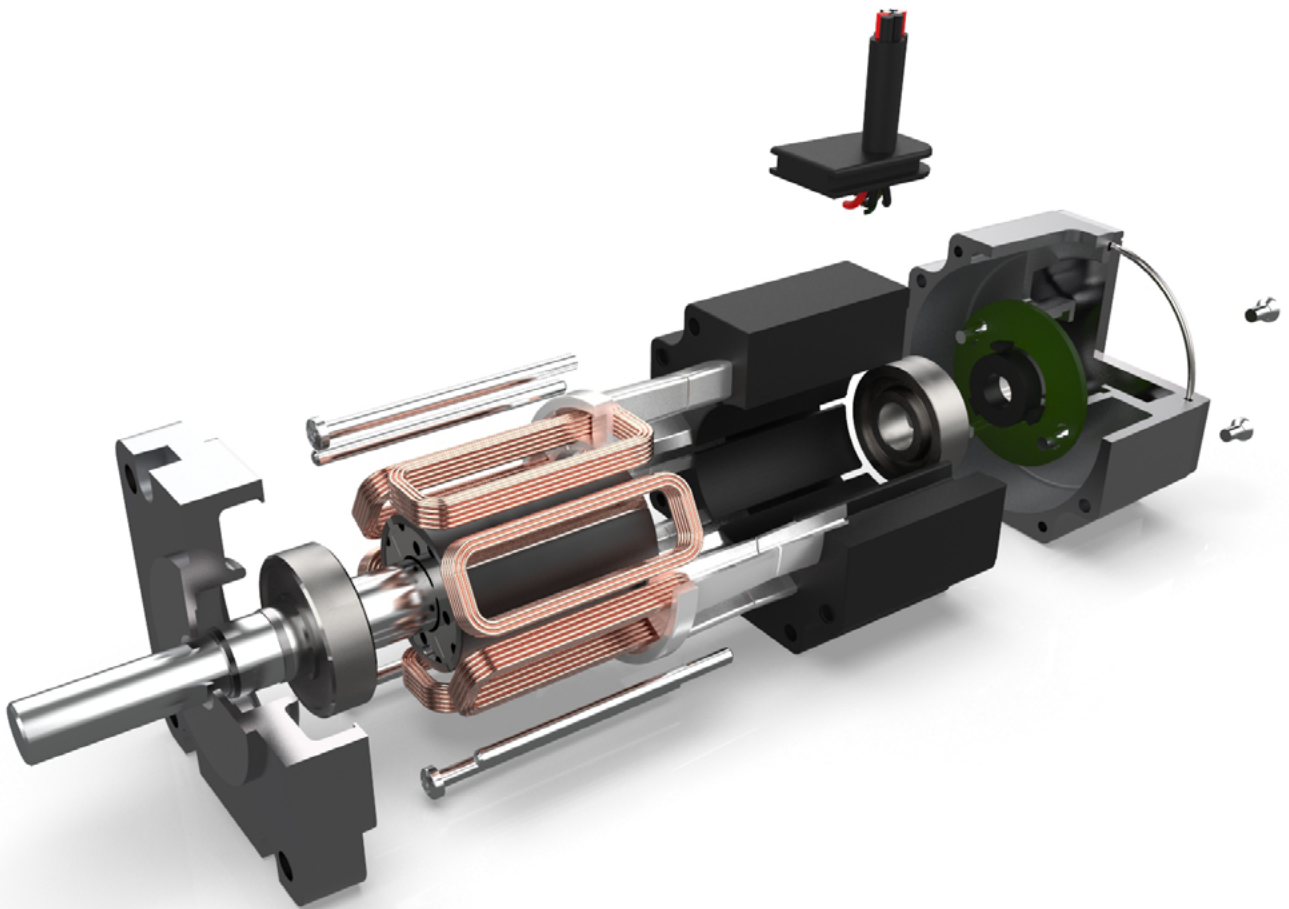
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parvalux
by **maxon**

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Product Range 2023



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Discover our entire range of products online

www.parvalux.com

- Extensive range of PMDC, BLDC and AC motors
- Standard, semi-custom and full-custom products available
- 'Build your own' solution using our configurator and new modular range
- Find out what makes Parvalux the UK's leading manufacturer of geared electric motors

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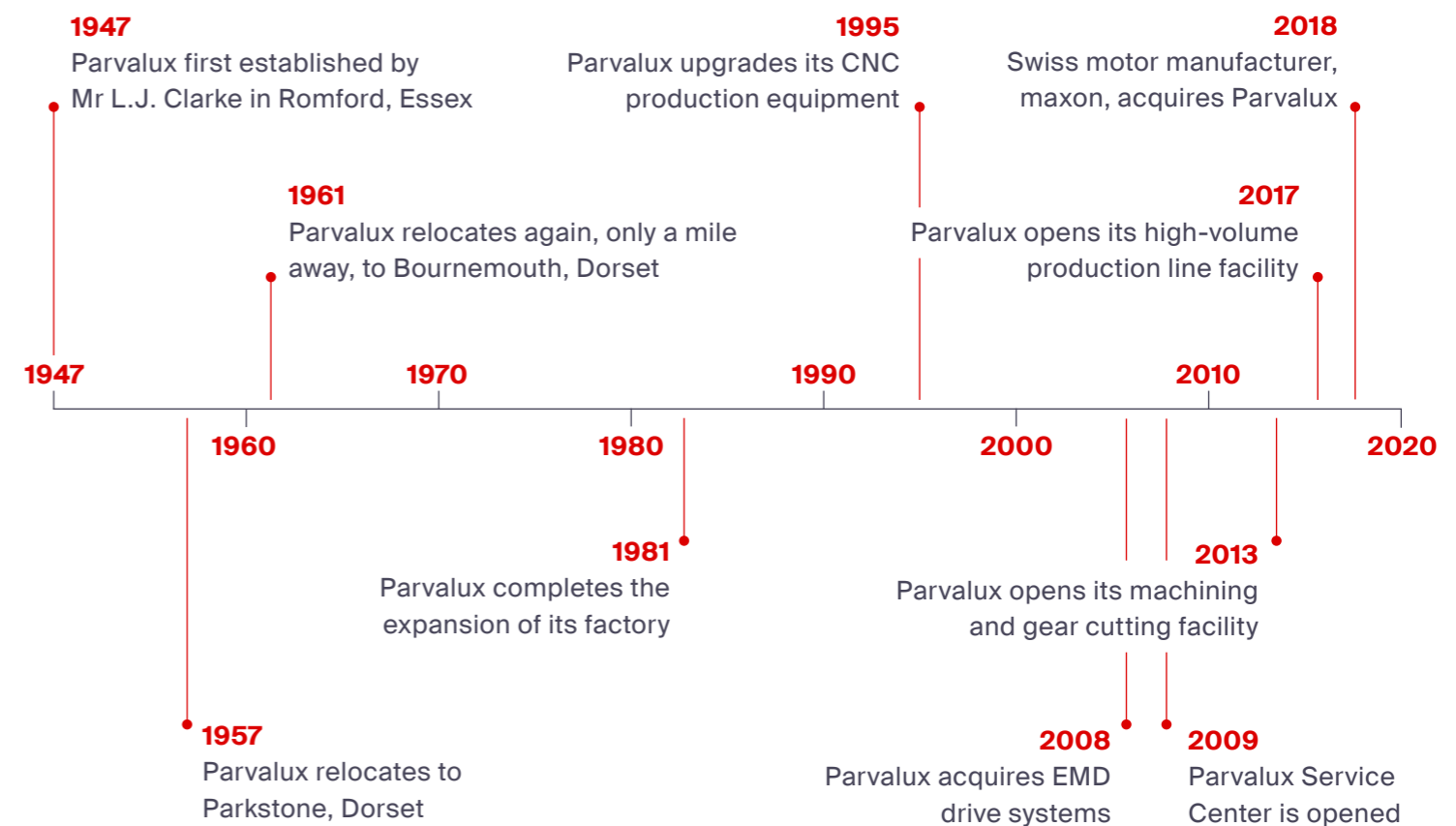


Made in the UK Since 1947

A true British manufacturing success story, Parvalux is the UK's largest fractional horsepower electric motor manufacturer and supplier with state-of-the-art manufacturing and service facilities.

We have over 70 years' experience creating the perfect combination of motor and gearbox to match our customers' application and we offer thousands of standard AC, PMDC and BLDC geared electric motor options. We can easily customise any motor or gearbox to meet your exact requirements and we can do this at no or minimal extra cost. Our design team can help you choose, customise or design from scratch, geared motor solutions, ensuring you gain a competitive advantage in your market.

Our products are found in hundreds of applications, globally but we are particularly strong in healthcare, leisure, mobility, transport, and a diverse range of industrial applications. Parvalux is proudly a maxon company, meaning that we have representation on every continent and the backing of one of the finest technical teams on the planet.





Industrial automation

Since the industrial revolution in the 1800s, design engineers have sought ever-more innovative techniques and equipment to help manufacturers produce and distribute more products, more easily and with greater efficiency.

Today, industrial automation leverages digital controls, robotics technologies and the Internet of Things (IoT) in the production process, thus reducing human intervention in decision making. Indeed, it's hard to imagine a modern production line without some form of automated system; automation drives high-volume production and enables consistently high levels of product quality and reliability.

The electric geared motor is an essential building block in any automated industrial process and Parvalux is at the forefront of global geared motor design and manufacture for this exciting industry. Our products provide the reliable drive behind many of the leading industrial automation product brands.

- Floorcare and cleaning equipment
- High voltage switchgear
- Inspection systems
- Mixing equipment
- Oil and gas industry
- Printing equipment
- Robotic solutions
- Solar panel and wind turbine tracking
- Vending machines



Floorcare and cleaning equipment

Parvalux designs and builds AC and DC motors for many household-name cleaning equipment manufacturers. Our vacuum cleaner motors, carpet extractor vacuum motors and floor polisher motors can be specified in standard or custom formats, and we can even design unique geared motors to take your product from the drawing board to production.



Printing equipment

Parvalux supplies the printing industry in its many and varied forms. We produce custom geared motors for manufacturers of equipment used to produce repeatable samples of paints and surface coatings (such as paint colour charts), systems that print directly onto food products and fruit labelling equipment.



Solar panel & wind turbine tracking

We've been designing high voltage wind turbine position motors and solar panel tracking motors for many years. Our solar panel motors provide the precise power that enables the panels to accurately track the sun over the course of a day, helping generate renewable energy and protecting the planet.

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Agriculture

The automation of farming and food production processes ensures efficiency and good breeding practice in this vital sector. Selecting the right motor manufacturer to drive your products is therefore crucial because automated ventilation systems, for example, ensure that livestock, such as pigs and cattle, are kept healthy and grow at a predictable rate. Poultry breeders have also long understood the importance of maintaining the correct temperature and airflow so that birds will lay consistently high-quality eggs and there are many other agricultural applications, such as arable irrigation or milk production, where automation via powerful electric motors provides benefits.

Effective ventilation and temperature control is important in any livestock production process but for the busy farmer, it's time-consuming to have to check and maintain temperature levels and ensure there is the correct level of airflow for the animals. Automated, computer-controlled systems provide a great solution and Parvalux offers a range of geared motors perfect for driving blowers and activating motorised air vents. We also produce drives for actuators and the systems that measure precise quantities of feed for livestock.

Parvalux gearmotors are trusted globally by the leading agricultural ventilation and feed delivery system manufacturers because they are robust and reliable. Our drives are capable of operating in a wide range of ambient temperatures, are highly durable and get the job done, every time.

- Honey extractors
- Livestock feed systems
- Livestock ventilation systems



Honey extractors

Honey extractors spin honeycomb at varying speeds to enable effective and efficient extraction of honey. Parvalux manufactures geared motors for professional and home-made honey extractors and we have many years' experience in this interesting industry, resulting in our products being trusted by honey producers, worldwide.



Livestock feed systems

Parvalux geared motors are used by leading agricultural manufacturers to provide the reliable drive power behind a wide range of animal dry feed weighing and distribution systems. Our products are widely specified, thanks to their reliability and durability, even in the harshest climates, from the freezing cold of the Arctic Circle to the desert heat of the equator.



Livestock ventilation systems

In modern agriculture, there is a constant requirement to optimise and streamline production. In the key sectors of pork and poultry production, successful breeding and laying will only happen within a surprisingly specific range of temperatures and environmental conditions. Automated ventilation is therefore crucial to achieving effective productivity.

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Material handling

The modern warehouse sector has embraced motorised automated material handling equipment to support employee safety and drive efficiency. Parvalux has significant experience supporting some of the largest and most innovative intralogistics equipment manufacturers.

Since the start of the pandemic, there has been meteoric growth in online shopping, most of this being fulfilled via large, complex warehousing and distribution hub facilities. Parvalux was able to react quickly with standard and custom gear motor designs for conveyor belt systems, picking systems, parcel sorting equipment, pallet shuttles and automated storage and retrieval systems (ASRS).

An effective, reliable, and efficient drive system is essential to any materials handling equipment, whether it's a motor-assisted tow truck, a barrel lifter, a robotic vehicle or a complete high-capacity parcel sorting hub; Parvalux designs and manufactures an exciting range of AC, DC brushless and brushed motors and our drives are valued for their performance and reliability.

- ASRS storage and retrieval systems
- Automated guided vehicles (AGVs)
- Automated shrink wrapping
- Conveyors
- Pallet and tray shuttles
- Sorting machines
- Warehouse tugs



Automated Guided Vehicles

Parvalux geared motors provide reliable power to automated guided vehicles (AGVs), enabling them to transport materials of all shapes and sizes around factories and warehouses. Guided by tape, wire or sensors, the geared motors we provide need to be smart enough to react instantaneously to system control instructions.



Pallet and tray shuttles

Ideal for companies that store large quantities of pallets and trays, automated shuttles are driven by electric motors along rails inside warehouses. These warehouse shuttle motor remove the need for forklifts to drive up and down lanes, increases storage capacity and creates a more modern and flexible automated warehouse operation.



Warehouse tugs

Tow tugs are used to transport materials and goods throughout warehouses and factories. The use of Parvalux geared motor drive systems ensures reliability and high-performance. Tow tugs reduce the need for warehouse operatives to carry out any heavy lifting, which reduces the risk of injury and improves productivity.

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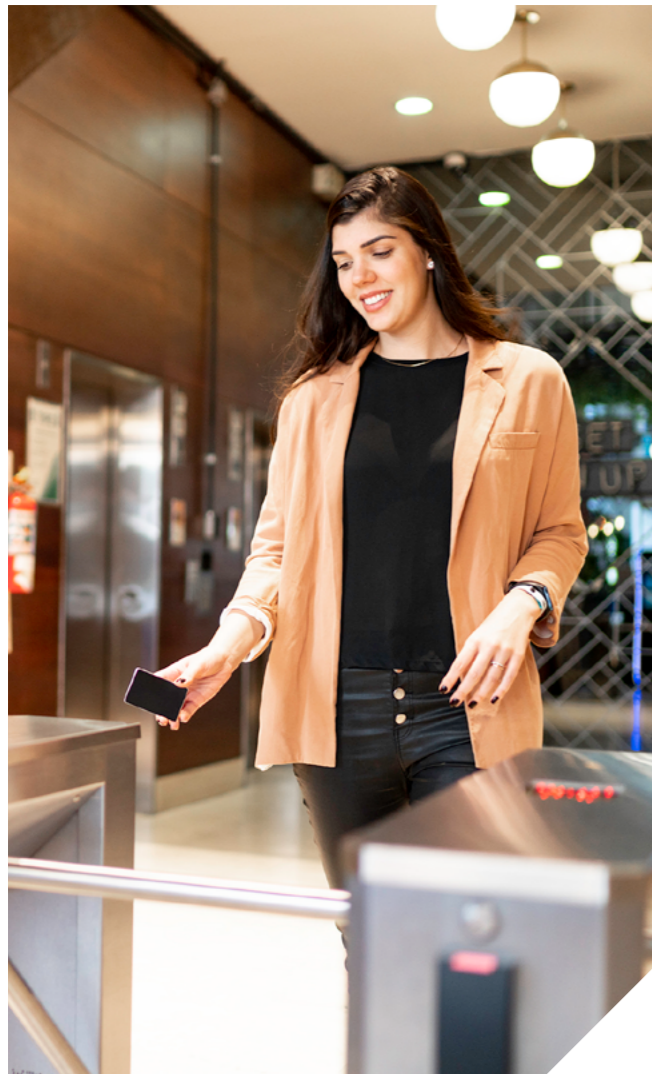


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Building automation

Building automation touches many people's lives, often without them even realising. Revolving, hinged, or sliding security points, elevator doors, car park barriers, roller blinds, CCTV, and HVAC applications all fall under the building automation umbrella and each application requires reliable motor drives in order to function.

Electric door manufacturers are increasingly seeking greater efficiency in door motor drive units, as well as needing long-term reliability and durability. Parvalux delivers on all fronts with a range of AC and DC brushed and brushless geared motors trusted globally in buildings and on mass transit systems, such as train, bus, and elevator doors.

Access control systems such as security barriers, swipe card or proximity entry points in office buildings benefit from leveraging IoT (Internet of Things) technologies; however, these essential functions are only effective when allied to reliable and durable motor drives.

- Access control systems
- Door automation
- Pool cover closers
- Shutter and blind closers



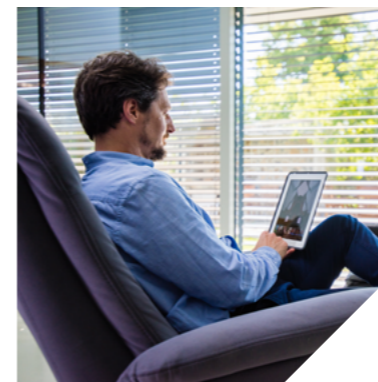
Door automation

Parvalux provides an exciting range of motors for manufacturers of automatic door and gate opening systems. Whether you require automatic sliding doors, gate opening systems or electric garage door motors, we can quickly customise our range to suit your specification or develop a motor that's specific to your application.



Pool cover closers

For swimming pool owners, it's important to keep the heat in and make sure that debris is kept out. For manufacturers of swimming pool cover pullers, we can customise our standard geared motor range or develop a fully customised drive system to help bring your product to life.



Shutter and blind closers

Parvalux manufactures a robust, reliable, and efficient range of motors for manufacturers of automatic blind and shutter closure systems. Whether you need to automate commercial or domestic premises, we can quickly customise our standard range to suit your specification or develop a fully customised motor for your application.

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Mobility solutions

It's a fact of life that advances in healthcare mean people are now living longer and as we age, we become more reliant on mobility products to support independent living. Our ability to travel, go shopping, take outdoor recreation, and even play sports can be extended with the help of a range of mobility solutions.

Parvalux has demonstrable experience providing reliable and robust drive systems for a range of mobility products, from electric wheelchairs to mobility scooters and even golf buggies and carts. Manufacturers benefit from our ability to customise our geared motor products to meet their specific need and our willingness to develop fully custom solutions, where required.

Parvalux geared motor products are valued by mobility product manufacturers and their customers in over 80 countries for their reliability and durability. Our AC, brushed and brushless DC motors and our legendary gearboxes, are available, right now.

- Mobility scooters
- Mobility vehicles
- Patient hoists
- Personnel lifts
- Powered wheelchairs
- Stairlifts
- Taxi step actuators
- Vertical platform lifts
- Wheelchair lifts
- Wheelchair ramps



Patient hoists

Parvalux patient hoist motors are designed and manufactured in Britain and trusted by healthcare providers around the world to power the safe movement of patients. Thanks to the reliability and durability of our drives, we're the first-choice supplier for a wide range of patient hoist and winch manufacturers.



Powered wheelchairs

From lightweight paediatric to rugged off-road all-terrain chairs, our huge range of wheelchair drive solutions provides the smooth, safe power needed for most situations. Parvalux offers an extensive range of electric wheelchair motors that give millions of people the freedom to live life on their own terms.



Stairlifts

Parvalux is proud to be the leading drive system manufacturer behind some of the biggest stairlift brands. The market for stairlifts is growing significantly, as the older generation seeks to continue to enjoy an independent lifestyle and Parvalux is renowned for designing and building reliable, durable drive systems.

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Leisure

Parvalux has an enviable track record supplying custom and standard geared motors to manufacturers operating across the leisure industry.

Many sports benefit from the use of gear motors; some of the more obvious examples include target motor drives on gun ranges and golf caddy motors, where we are a market leader. However, some of the less obvious leisure and sports-focused applications for Parvalux gear motors include motor-driven basketball backboards, rotating scoreboards, and signage.

Our geared motors are specified by the leading golf buggy and golf trolley manufacturers, as well as powering green-cutting equipment, driving range ball delivery and collection systems. Many of the leading professional clay pigeon trap manufacturers insist on Parvalux products to provide reliable and consistent power that is essential in international competitions.

Parvalux amusement and arcade machine motors are prized thanks to their reliability, particularly in heavy-duty and continuous operation. Next time you play the penny fall machine or the prize grab machine, it could be one of our motors providing the quiet, reliable power!

- Amusement machines
- Clay pigeon traps
- Golf trolleys
- Small-arms targets



Amusement machines

Parvalux geared motors provide a field-proven drive solution for a range of amusement machines. Our coin pusher and claw machine motors are both particular favourites with manufacturers. Designed to work continuously, year in / year out, Parvalux's legendary reliability helps to make any trip to the arcade more fun.



Clay pigeon traps

Clay pigeon trap launchers or 'throwers' are powerful, purpose-built devices designed to launch different types of targets in singles or pairs at distances of up to 100 metres. Typically, portable and powered by a 12-volt battery, our clay pigeon trap and thrower motors are robust and offer high torque.



Golf trolleys

We have extensive experience partnering with designers of golf buggies and trolleys to whom we supply our powerful DC motors and specially designed gearboxes. Parvalux golf trolley motors are rugged enough to cope with the full range of environmental conditions yet operate quietly enough to be user-friendly.

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Transport & logistics

If you need absolute visibility on the road, railway or at sea, you'll need a dependable windscreen wiper system.

Parvalux steps up with an exciting range of efficient, reliable gear motors that road haulage, rail and marine equipment manufacturers can rely on. Our Viper3 compact wiper motor can be found powering the wiper systems on trains, trucks, the biggest ocean-going ships and even NASA's CT-2 crawler, as it takes rockets to the launch pad at Cape Canaveral!

For truck drivers, tarpaulins are essential to cover a load safely and their use is mandated by law in many countries. However, they can be very heavy to move by hand. Parvalux geared electric motors step up to provide the reliable and durable drive that is needed.

Our automated door motors are a popular choice for use on train door systems and our tough electric vehicle winch motors are a favourite with the emergency services, as well as off-road enthusiasts, worldwide.

- Automotive
- Caravan movers
- Golf buggies
- Marine steering systems
- Rail and marine wiper systems
- Tarp pullers
- Vehicle winches



Caravan movers

After a long journey, unhitching and pitching a caravan by hand is a task many owners don't look forward to. With considerable weight and with limited handholds, even a single-axle caravan can be cumbersome to move. Parvalux drive systems are the first choice for leading caravan mover manufacturers.



Rail and marine wiper systems

Parvalux windscreen wiper motors are installed on many of the world's fastest trains and even on the world's largest passenger ship. High power and absolute reliability are essential for operation in all weather conditions, which is why our windshield wiper motors are suitable for heavy-duty land and maritime applications.



Tarp pullers

Motorised tarpaulin or 'tarp' covers are used widely on a range of commercial vehicles from dump trucks to trailers. Tarping systems are used in a wide range of applications, including construction, sand & gravel transportation, and general waste handling. They need to be easy to use and durable in a variety of different environmental conditions.

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Medical devices

When the COVID-19 pandemic struck, Parvalux stepped up.

With more than seven decades of motor design and manufacturing experience, as well as a highly desirable European production footprint in the UK, we quickly became the first choice for a number of medical product manufacturers and consortia.

Our rapid design, prototyping and manufacturing capability was key to enabling a number of medical ventilator and surgical pump manufacturers design new and adapt existing products for this vital application. We worked successfully with several leading consortia and Parvalux geared motors are now in use in hospitals and healthcare facilities, globally.

Whether your requirement is for an 'off the shelf' or fully custom product, Parvalux offers the flexibility, heavy-duty reliability and quiet efficiency needed to drive critical care equipment.

- Air pumps and ventilators
- Medical and fluid pumps



Air pumps and ventilators

Medical ventilators have been central to the care and recovery of patients with COVID-19. It's vital they work consistently on every single patient procedure. Parvalux has been at the forefront of medical ventilator geared motor design since the start of the pandemic and our motors offer unrivalled reliability.



Medical and fluid pumps

Medical pumps have proven themselves alongside ventilators in the fight against COVID-19 and whether these systems are used by doctors, nurses, or any healthcare professional, it is vital that they work reliably, consistently, and correctly on every single patient procedure. Parvalux motors offer unrivalled reliability and long-lasting operation.

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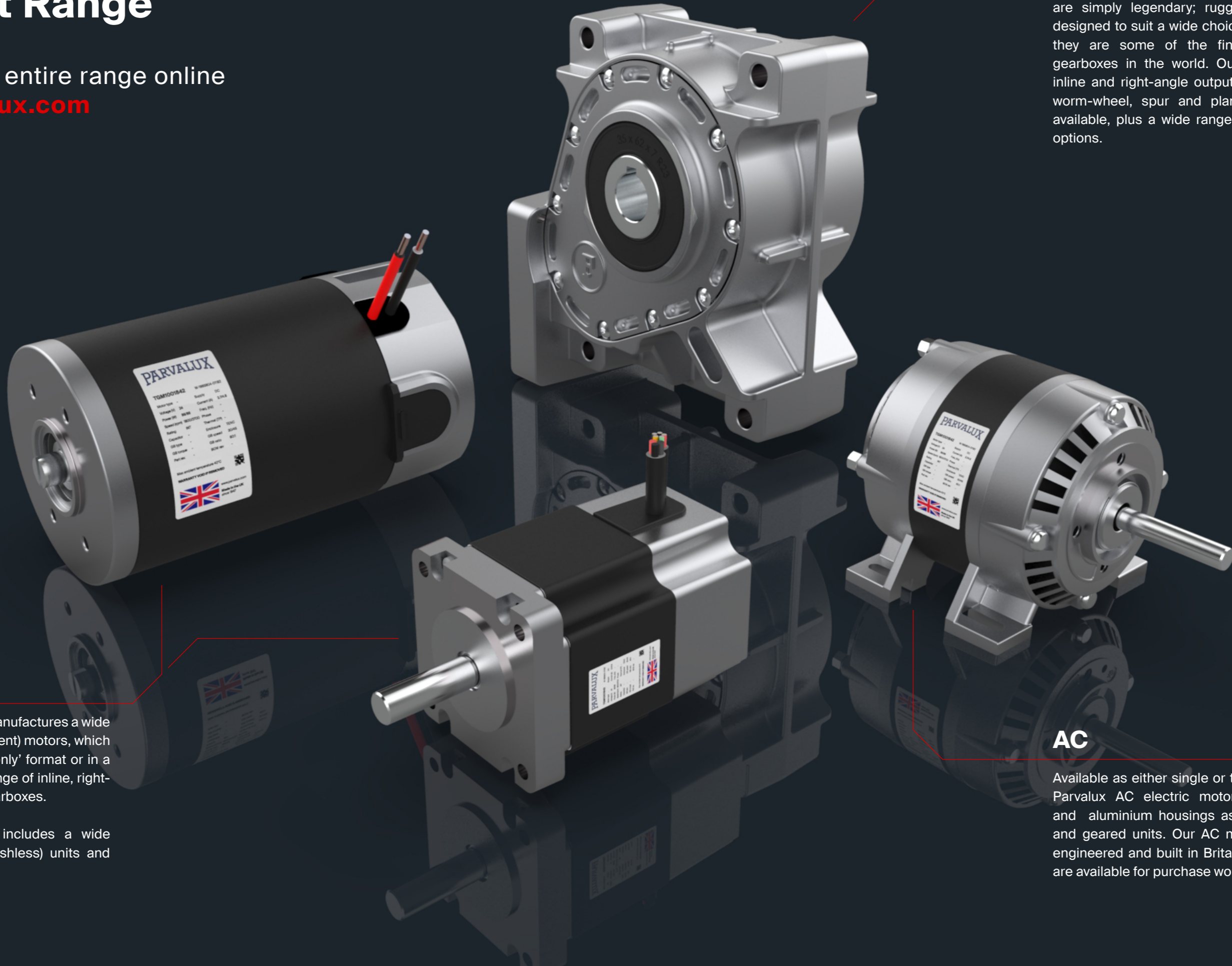
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Parvalux Product Range

Discover the entire range online
www.parvalux.com

Gearboxes

Parvalux British-made electric motor gearboxes are simply legendary; rugged, reliable, and designed to suit a wide choice of applications, they are some of the finest small motor gearboxes in the world. Our range includes inline and right-angle output, with options for worm-wheel, spur and planetary gearboxes available, plus a wide range of customisation options.



DC

Parvalux designs and manufactures a wide range of DC (Direct Current) motors, which are available in 'motor-only' format or in a combination with our range of inline, right-angle, and planetary gearboxes.

Our DC motor range includes a wide selection of BLDC (brushless) units and PMDC (brushed) units.

AC

Available as either single or three phase units, Parvalux AC electric motors come in zinc and aluminium housings as both motor-only and geared units. Our AC motors have been engineered and built in Britain since 1947 and are available for purchase worldwide.

Gearbox

The Parvalux Modular Range features a selection of right-angle, in-line and planetary gearboxes; all with a variety of options for gear ratio, gear material and output shaft type.

Motor

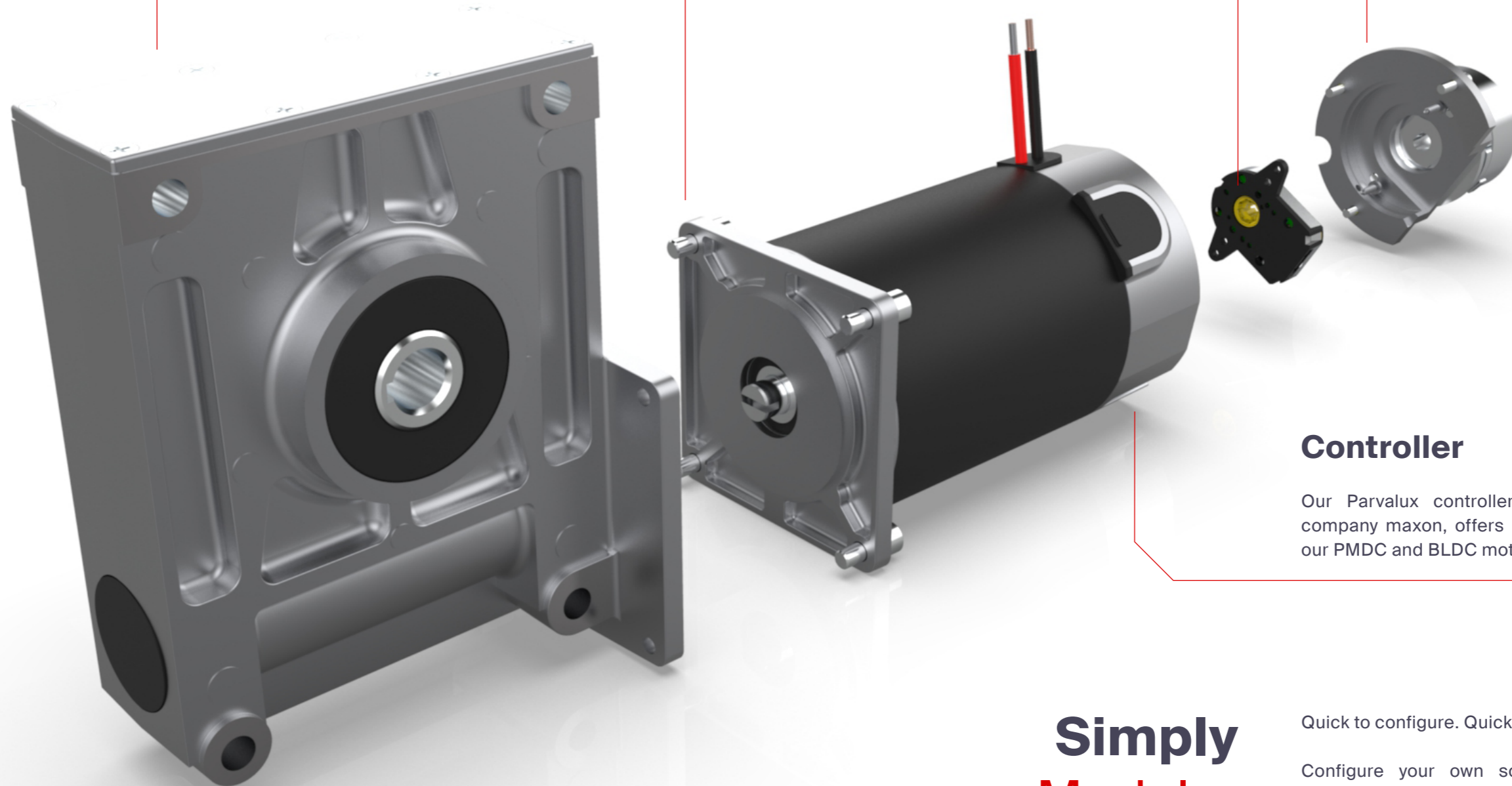
With options in both motor voltage and output speed, you can configure your DC brushed or DC brushless motor to meet your exact performance requirements.

Encoder

We appreciate that motor control can be a key factor in the selection of your motor system, so we offer both optical and magnetic encoders for use within our modular system.

Brake

Intelligently designed to mount around our encoders, our 1.5 Nm brakes combine seamlessly with our modular system motors and offer you greater control of your application's power supply.



Controller

Our Parvalux controller, designed with parent company maxon, offers precise control with both our PMDC and BLDC motors.

Simply Modular

Quick to configure. Quick to build. Quick to deliver.

Configure your own solution online; selecting your motor and gearbox, and adding accessories such as encoders, brakes, controllers, and shaft extension kits to create a solution perfectly suited to your specific application.

Visit www.parvalux.com to build your own solution through our brand new product configurator.

Available in quantities of up to 10 pieces

Modular system Matrix

Quick view of the gearboxes and accessories compatible with our modular range motors

BLDC Motor, gearbox and accessory combinations

PMDC motor	PBL42	PBL60	PBL70	PBL86
Gearbox				
GB28		●		
GB12			●	●
GB9				●
PGH42	●	●		
PGH52	●	●		
PGS62				
PGS71			●	
PGS80			●	●
PGS90				●
Accessories				
Brake		●	●	●
Encoder	●	●	●	●
Brake + Encoder		●	●	●

Flange part numbers

PMDC motor	PBL42	PBL60	PBL70	PBL86
Gearbox				
GB28		781251		
GB12			781255	781260
GB9				781261
PGH42	781248	TBC		
PGH52	TBC	TBC		
PGS62				
PGS71			TBC	
PGS80			781254	TBC
PGS90				781259
Accessories				
Brake	781280	781281	781283	781284
Encoder	781280	781281	781283	781284
Brake+Encoder	781280	781281	781283	781284

Key

● Available now
● Coming soon

PMDC Motor, gearbox and accessory combinations

PMDC motor	BRx42	BRx52	BRx63	BRx70	BRx90
Gearbox					
GB28		●	●		
GB12				●	●
GB9					●
PGH42	●				
PGH52	●	●			
PGS62		●			
PGS71			●		
PGS80				●	●
PGS90					●
Accessories					
Brake			●	●	●
Encoder	●	●	●	●	●
Brake + Encoder			●	●	●

Flange part numbers

PMDC motor	BRx42	BRx52	BRx63	BRx70	BRx90
Gearbox					
GB28		TBC	781239		
GB12				781242	781244
GB9					781247
PGH42	781237				
PGH52	TBC	TBC			
PGS62		TBC	781238		
PGS71			TBC	781238	
PGS80				TBC	TBC
PGS90					781259
Accessories					
Brake	781275	TBC	781276	781277	781279
Encoder	781275	TBC	781276	781277	781279
Brake+Encoder	781275	TBC	781276	781277	781279

Key

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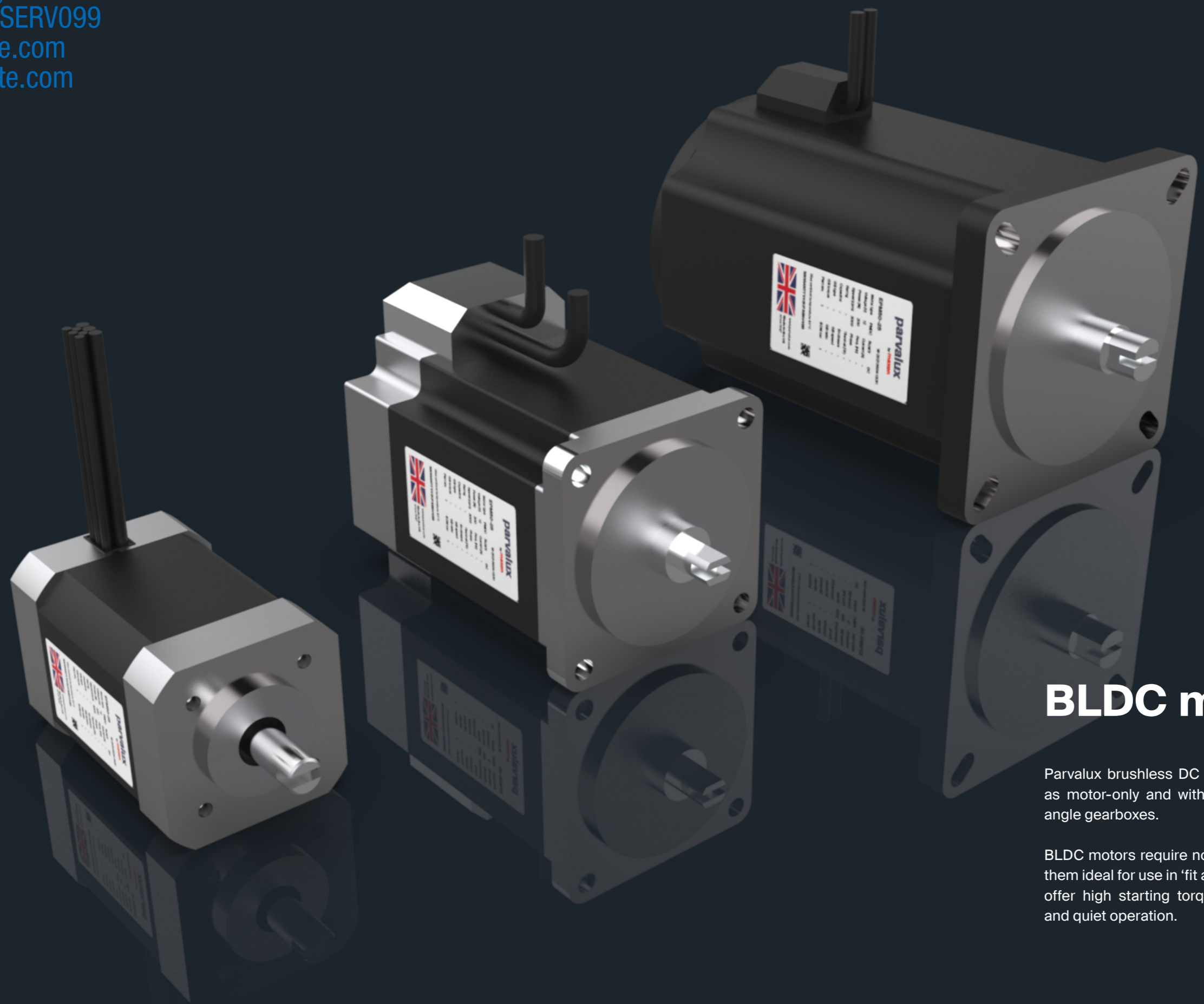
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BLDC motors

Parvalux brushless DC (BLDC) motors are available as motor-only and with a choice of inline or right-angle gearboxes.

BLDC motors require no maintenance, which makes them ideal for use in 'fit and forget' applications. They offer high starting torque, excellent power density and quiet operation.

BLx60 Product Overview

PMDC motor // Ø42 mm frame



BLx60-40 BLDC motor
□60 mm frame // 40 mm stack

Overview

The BLx60 is part of our range of brushless permanent magnet DC motors. Currently available in a single stack length with a range of operating voltages.

The BLx60 is highly efficient motor, designed for market applications such as:

- **Materials handling;** AGVs, pallet and tray shuttles, conveyors, sorting machines
- **Medical devices;** Medical, fluid and air pumps
- **Mobility solutions;** Patient hoists, stairlifts
- **Building automation;** Door automation, access control

Motor Design

The 4-pole bi-directional brushless motor is housed within a powder coated steel and aluminium pressure die-cast housing, sealed to IP54 (with IP67 on request) protecting it from dust particles and water spray.

Built to Class F insulation, enabling a temperature rise of 115°C based on an ambient temperature of 40°C. Casing temperature can operate within -30° to +100°C.

It features a 40mm stack length (overall length 119mm) delivering 0.6Nm. Options include 3000RPM/4000RPM and 12v to 48v models.

Designed with an electronic commutation the motor can support custom shaft designs, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors as required.

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

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

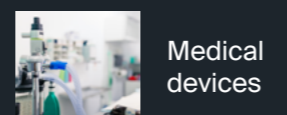
Features at a glance

- 4 pole brushless design
- Continuously rated at up to 0.67Nm
- Selection of voltages up to 48V DC
- Bi-directional operation
- Supports custom shaft designs and windings

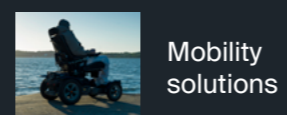
Market sectors



Materials handling



Medical devices



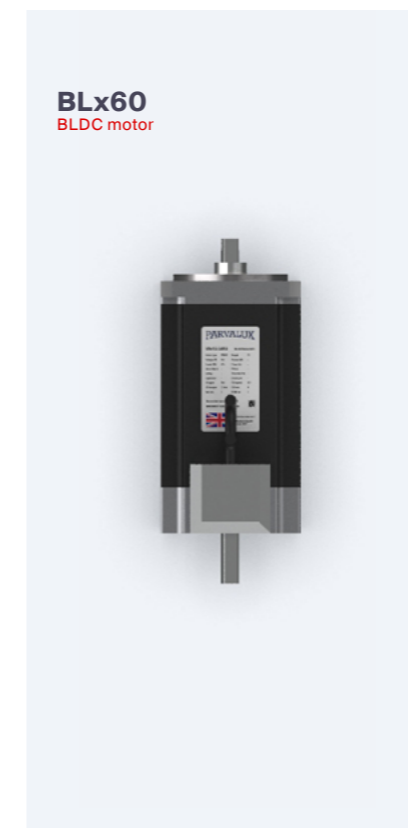
Mobility solutions



Building automation

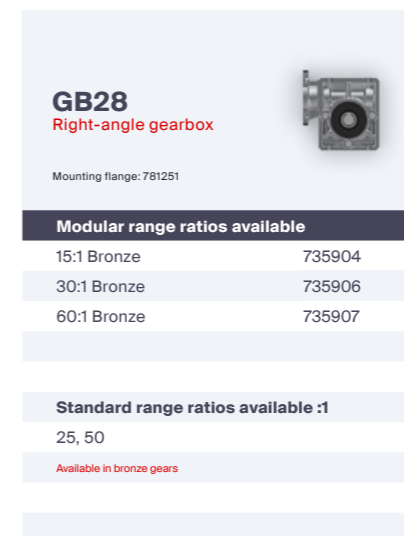
BLx60 Modular System

Compatible gearboxes and accessories



BLx60
BLDC motor

Voltage V	BLx60-40
24	776618
48	776619



GB28
Right-angle gearbox

Mounting flange: 781251

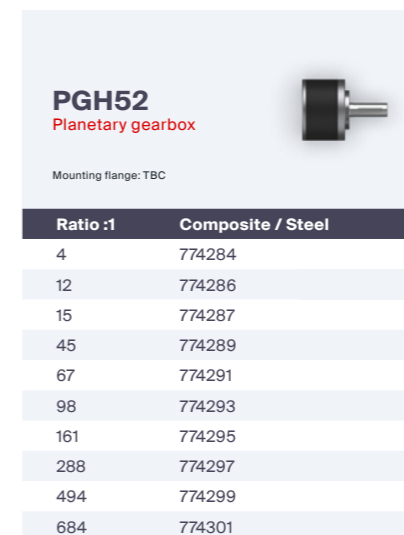
Modular range ratios available

15:1 Bronze	735904
30:1 Bronze	735906
60:1 Bronze	735907

Standard range ratios available :1

25, 50

Available in bronze gears



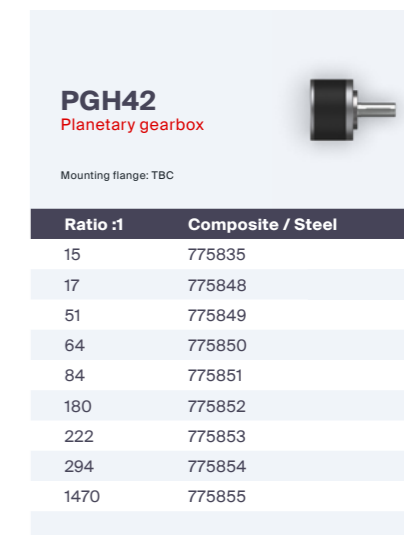
PGH52
Planetary gearbox

Mounting flange: TBC

Ratio :1 Composite / Steel

4	774284
12	774286
15	774287
45	774289
67	774291
98	774293
161	774295
288	774297
494	774299
684	774301

Additional ratios available on request (†): 5, 19, 57, 82, 114, 207, 357, 552

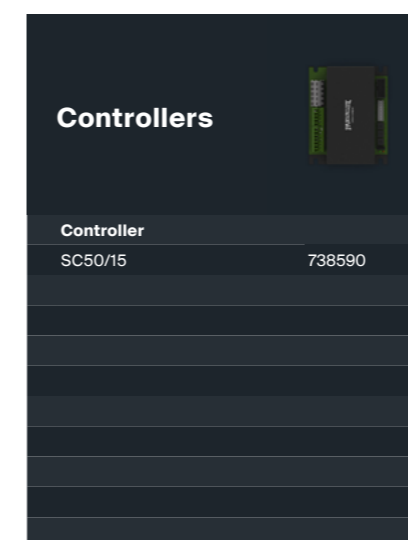


PGH42
Planetary gearbox

Mounting flange: TBC

Ratio :1 Composite / Steel

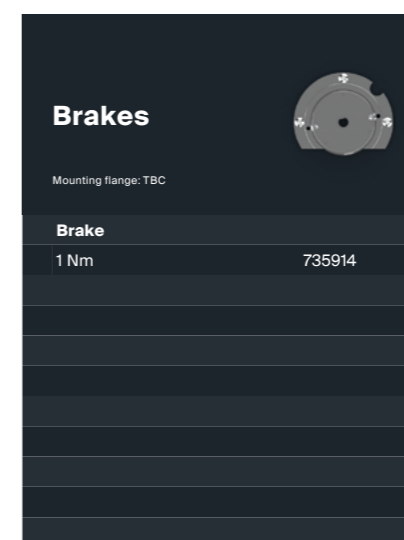
15	775835
17	775848
51	775849
64	775850
84	775851
180	775852
222	775853
294	775854
1470	775855



Controllers

Controller

SC50/15	738590
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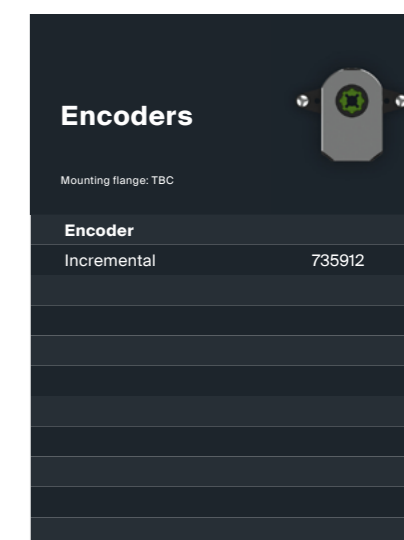


Brakes

Mounting flange: TBC

Brake

1 Nm	735914
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Encoders

Mounting flange: TBC

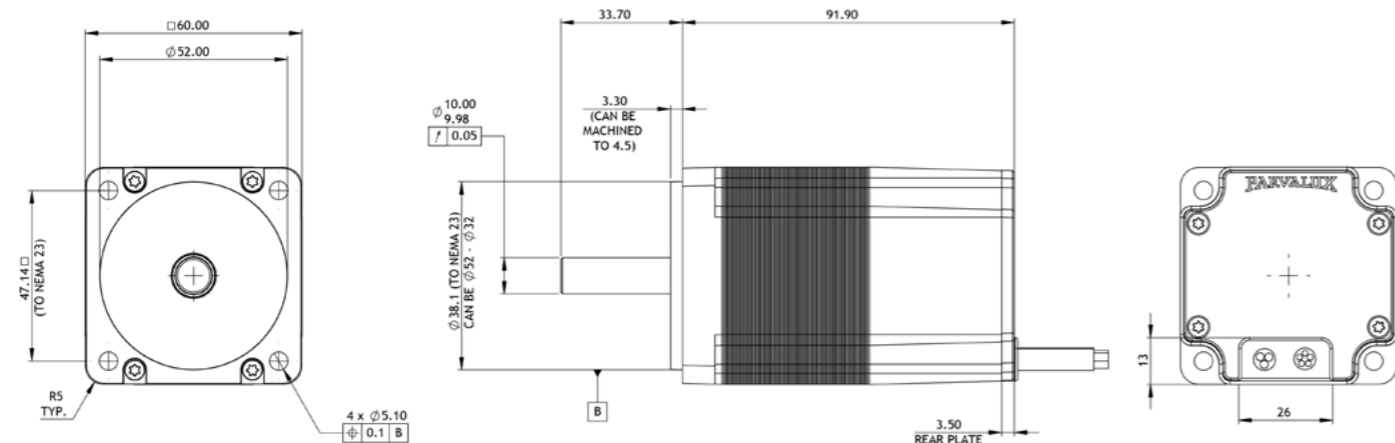
Encoder

Incremental	735912
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BLx60-40 BLDC motor

Ø60 mm frame // 40 mm stack

all dimensions in mm



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

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	- - - - -
2 Nominal power	W 110 110 110 110 147 147 147 147
3 Nominal voltage	V 12 24 40 48 12 24 40 48
4 No load speed	rpm 4066 4066 4066 4066 5016 4843 4877 4843
5 No load current	A 0.58 0.29 0.17 0.15 1.15 0.55 0.33 0.28
6 Nominal speed	rpm 3000 3000 3000 3000 4000 4000 4000 4000
7 Nominal continuous torque (S1)	Nm 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.35
8 Nominal continuous current (S1)	A 12.0 6.0 3.6 3.0 15.2 7.3 4.4 3.7
9 Max Intermittent torque (S2 - 15 minutes)	Nm 0.60 0.60 0.60 0.60 0.60 0.60 0.60 0.60
10 Stall current	A 55.0 27.0 16.0 14.0 87.0 40.0 24.6 20.2
11 Stall torque	Nm 1.6 1.6 1.6 1.6 2.2 2.1 2.1 2.1
12 Stack length	mm 40 40 40 40 40 40 40 40
13 Maximum efficiency	% 84 84 84 84 84 84 84 84
14 Ra	Ω 0.22 0.88 2.44 3.50 0.14 0.59 1.63 2.37
15 Rl	mH - - - - -
16 Speed constant	rpm/V 329 165 99 82 412 199 120 100
17 Torque constant	Nm/A 0.03 0.06 0.11 0.13 0.025 0.051 0.085 0.102
18 Speed torque gradient	rpm/Nm 2530 2530 2530 2530 2310 2310 2310 2310
19 Rotor inertia	Kg/cm ² 2.4 x 10 ⁻⁵ 2.4 x 10 ⁻⁵ 2.4 x 10 ⁻⁵ 2.4 x 10 ⁻⁵ 2.4 x 10 ⁻⁵ 2.4 x 10 ⁻⁵ 2.4 x 10 ⁻⁵ 2.4 x 10 ⁻⁵
20 Weight	Kg 1.15 1.15 1.15 1.15 1.15 1.15 1.15 1.15

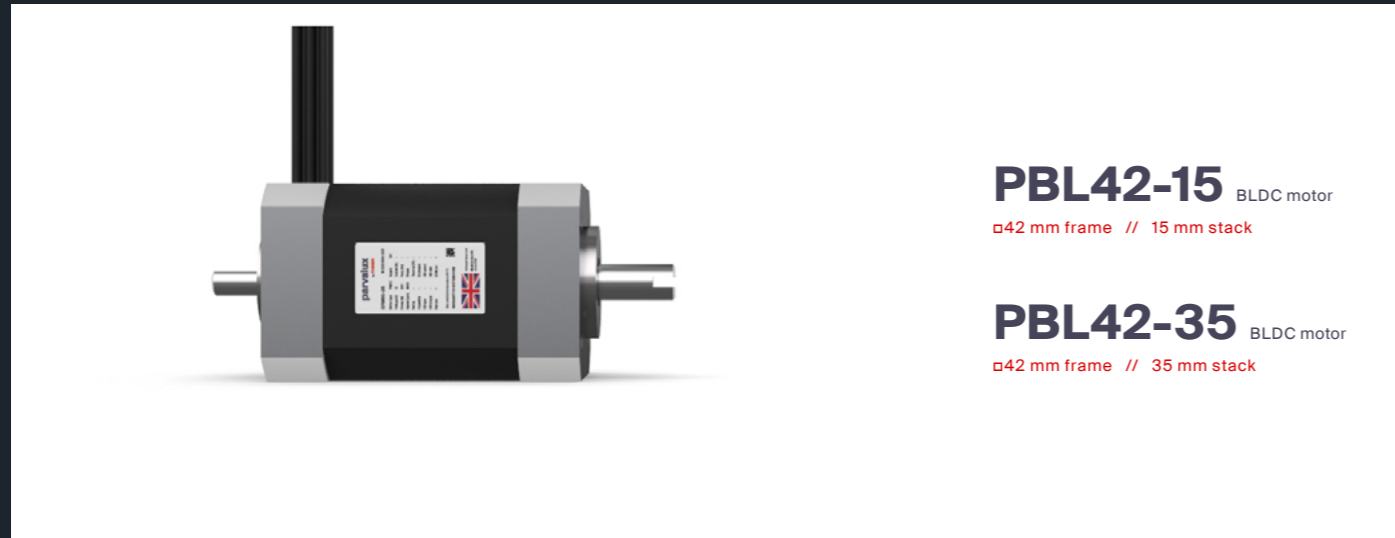
Thermal data		Modular system	
21 Ambient temperature	°C 40	Brake 1.5	+L mm 28.2
Mechanical data		Encoder Optical	+L mm 9
22 Radial load [distance from flange]	N [mm] 150 [15]	Controller SC 50/15	
23 Radial play	mm [@g] 0.025 [450]	ESCON	
24 Axial end play	mm [@g] 0.025 [450]	EPOS	
Other data		Gearbox GB28 +L mm 85	
25 Number of poles	4	PGH42	32 - 60
26 Winding type	Delta	PGH52	53 - 100
27 Hall effect angle (electrical angle)	° 120	+L mm = approximate added length*	
28 IP Rating	IP54		
29 Enclosure	Enclosed		
30 Insulation Class	F		

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

Notes

PBL42 Product Overview

BLDC motor // \varnothing 42 mm frame



PBL42-15 BLDC motor

\varnothing 42 mm frame // 15 mm stack

PBL42-35 BLDC motor

\varnothing 42 mm frame // 35 mm stack

Overview

The PBL42 is a brushless direct current (BLDC) motor. It is available in a range of options with 2 different stack lengths, voltages from 24V – 48V DC and output power up to 42 Watts.

It is rated for nominal continuous torque up to 0.15 Nm (S1) and maximum intermittent torque up to 0.1 Nm (S2 - 15 minutes).

This motor is perfectly suited for use with a range of Parvalux right-angle and inline gearboxes enabling you to assemble the perfect geared motor combination for your application.

Motor Design

The 8-pole bi-directional PBL42 is housed within a lamination steel casing with aluminium end caps, sealed to IP54 (IP50 at exposed motor shafts), protecting it from dust particles and water spray.

Built to Class B insulation, enabling a temperature rise of 115°C based on an ambient temperature of 40°C. Casing temperature can operate within -30° to +100°C.

There are two models available, the PBL42-15 (stack length 15mm, overall motor length 47 mm), and the PBL42-35 (stack length 35mm, overall motor length 67 mm) delivering 0.063 Nm and 0.1 Nm continuous torque (S1) respectively, with a range of voltage options in each.

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

Features at a glance

- Delivers up to 0.15 Nm (S2 - 15 minutes)
- Compact envelope size & lightweight
- Selection of voltages from 24 - 48V DC
- Continuously rated at up to 0.1 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

PBL42 Modular System

Compatible gearboxes and accessories

PBL42 BLDC motor

Voltage V	PBL42-15	PBL42-35
24	776614	776616
48	776615	776617

PGH52 Planetary gearbox

Mounting flange: TBC

Ratio :1	Composite / Steel
4	774284
12	774286
15	774287
45	774289
67	774291
98	774293
161	774295
288	774297
494	774299
684	774301

Additional ratios available on request (t1): 5, 19, 57, 82, 114, 207, 357, 552

PGH42 Planetary gearbox

Mounting flange: 781248

Ratio :1	Composite / Steel
15	775835
17	775848
51	775849
64	775850
84	775851
180	775852
222	775853
294	775854
1470	775855

Controllers

Controller	
SC50/15	738590

Encoders

Mounting flange: 781280

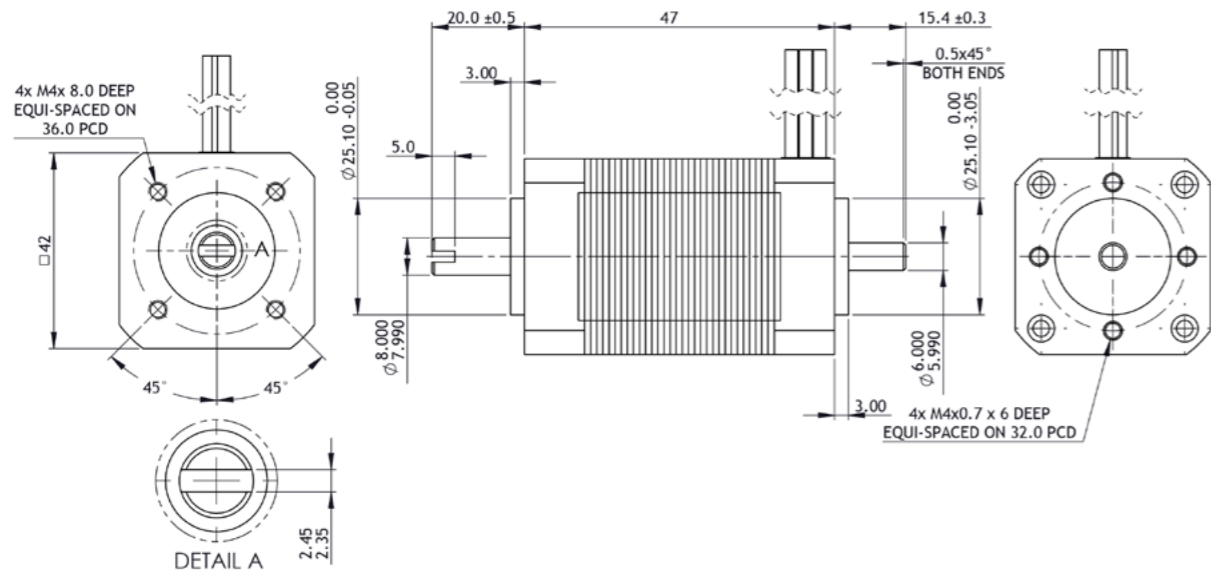
Encoder	
Incremental	735912

PBL42-15

BLDC motor

Ø42 mm frame // 15 mm stack

all dimensions in mm



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

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		776614	776615
2 Nominal power	W	26	26
3 Nominal voltage	V	24	48
4 No load speed	rpm	6068	6227
5 No load current	A	0.4	0.3
6 Nominal speed	rpm	4000	4000
7 Nominal continuous torque (S1)	Nm	0.063	0.063
8 Nominal continuous current (S1)	A	1.8	1.0
9 Max Intermittent torque (S2 - 15 minutes)	Nm	0.095	0.095
10 Stall current	A	6.50	3.34
11 Stall torque	Nm	0.21	0.21
12 Stack length	mm	15	15
13 Maximum efficiency	%	75	75
14 Ra	Ω	1.8	71
15 Ri	mH	2260	911
16 Speed constant	rpm/V	230.4	142.0
17 Torque constant	Nm/A	0.032	0.070
18 Speed torque gradient	rpm/Nm	28152	29351
19 Rotor inertia	Kgcm ²	3.3 x 10 ⁻⁶	3.3 x 10 ⁻⁶
20 Weight	Kg	0.30	0.30

Thermal data		Modular system	
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	

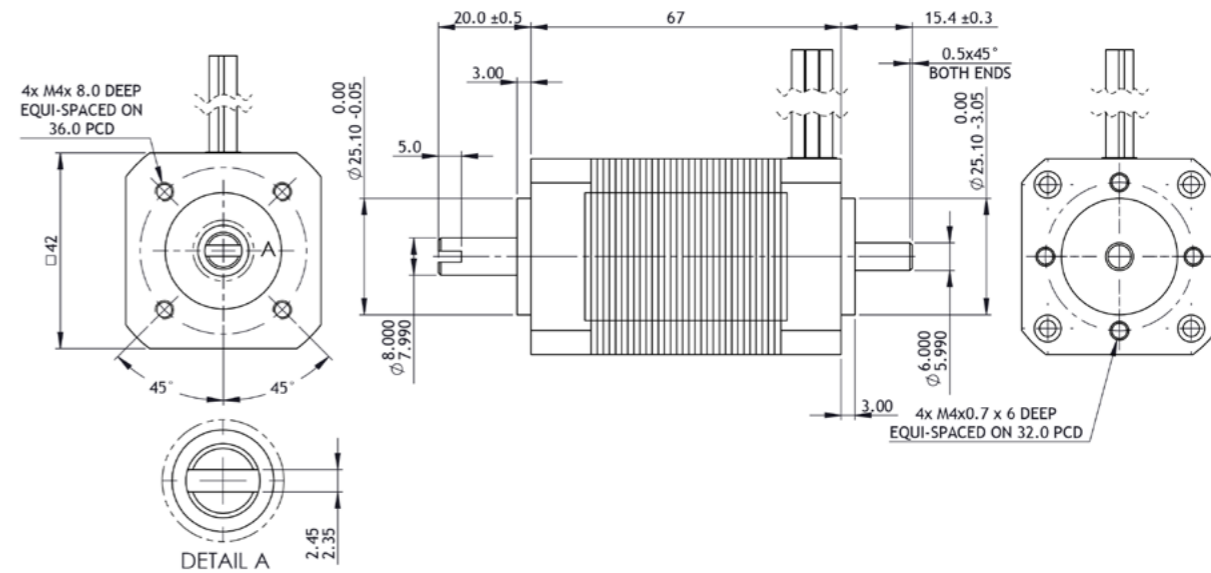
Modular system diagram for PBL42-15. It shows the motor with optional components: Brake (N/A), Encoder (Optical, +L mm 9), Gearbox (PGH42: +L mm 32-60, PGH52: +L mm 53-100), and Controller (SC 50/15, ESCON, EPOS). A note indicates that +L mm is an approximate added length.

PBL42-35

BLDC motor

Ø42 mm frame // 35 mm stack

all dimensions in mm



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

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		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 Ri	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	Kgcm ²	5.5 x 10 ⁻⁶	5.5 x 10 ⁻⁶
20 Weight	Kg	0.45	0.45

Thermal data		Modular system	
22 Ambient temperature	°C	40	

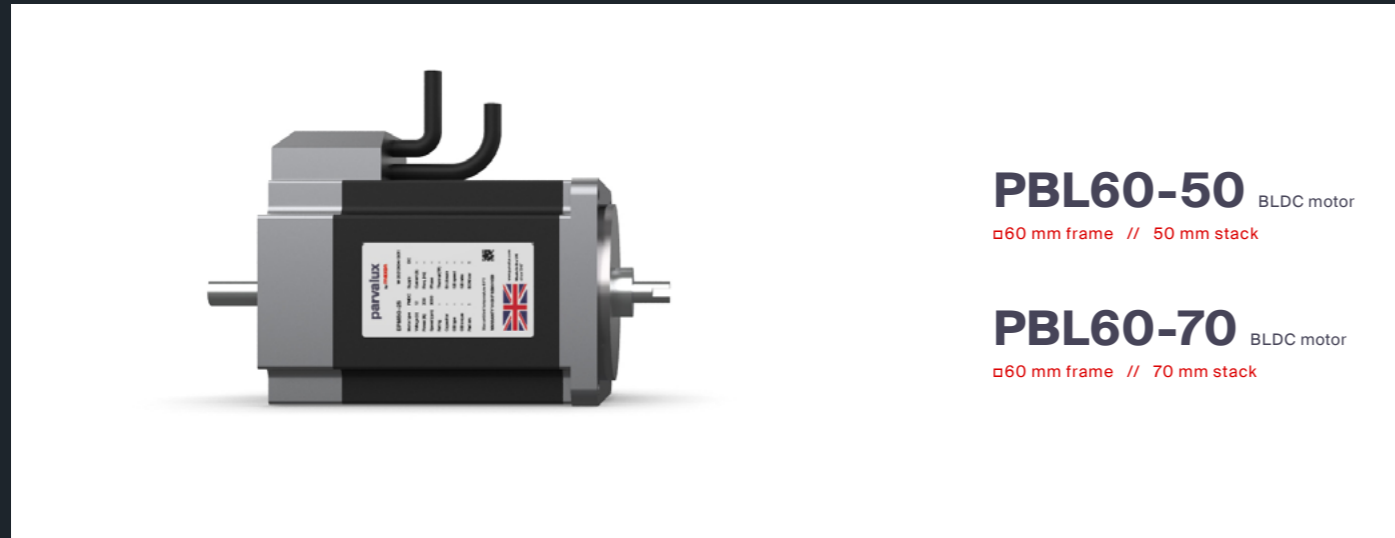
Mechanical data		
23 Radial load [distance from flange]	N [mm]	130 [15]
24 Radial play	mm [g]	0.06 [450]
25 Axial end play	mm [g]	0.06 [450]

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	

Modular system diagram for PBL42-35. It shows the motor with optional components: Brake (N/A), Encoder (Optical, +L mm 9), Gearbox (PGH42: +L mm 32-60, PGH52: +L mm 53-100), and Controller (SC 50/15, ESCON, EPOS). A note indicates that +L mm is an approximate added length.

PBL60 Product Overview

BLDC motor // 60 mm frame



Overview

The Parvalux PBL60 is a brushless direct current (BLDC) motor. It is available in 2 different stack lengths and a range of voltage options from 24V – 48V DC and output power up to 157 Watts.

It is rated for nominal continuous torque up to 0.5 Nm (S1) and maximum intermittent torque up to 0.88 Nm (S2 – 15 minutes).

This motor is perfectly suited for use with a range of Parvalux right-angle and inline gearboxes enabling you to assemble the perfect geared motor combination for your application.

Motor Design

The 8-pole bi-directional PBL60 is housed within a lamination steel casing with aluminium end caps, sealed to IP54 (IP50 at exposed motor shafts), protecting it from dust particles and water spray.

Built to Class B insulation, enabling a temperature rise of 115°C based on an ambient temperature of 40°C. Casing temperature can operate within -30° to +100°C.

There are two models available, the PBL60-50 (stack length 50mm, overall motor length 90mm), and the PBL60-70 (stack length 70mm, overall motor length 110mm) delivering 0.33 Nm and 0.50 Nm continuous torque (S1) respectively, with a range of voltage options in each.

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

Features at a glance

- Delivers up to 0.88 Nm (S2 - 15 minutes)
- Compact envelope size & lightweight
- Selection of voltages from 24 - 48V DC
- Continuously rated at up to 0.5 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

PBL60 Modular System

Compatible gearboxes and accessories

PBL60 BLDC motor

Voltage V	PBL60-50	PBL60-70
24	776618	776620
48	776619	776621

GB28 Right-angle gearbox

Mounting flange: 781251

Modular range ratios available	
15:1 Bronze	735904
30:1 Bronze	735906
60:1 Bronze	735907

Standard range ratios available :1
25, 50
Available in bronze gears

PGH52 Planetary gearbox

Mounting flange: TBC

Ratio :1	Composite / Steel
4	774284
12	774286
15	774287
45	774289
67	774291
98	774293
161	774295
288	774297
494	774299
684	774301

Additional ratios available on request (†): 5, 19, 57, 82, 114, 207, 357, 552

PGH42 Planetary gearbox

Mounting flange: TBC

Ratio :1	Composite / Steel
15	775835
17	775848
51	775849
64	775850
84	775851
180	775852
222	775853
294	775854
1470	775855

Controllers

Controller	
SC50/15	738590

Brakes

Mounting flange: 781281

Brake	
1 Nm	735914

Encoders

Mounting flange: 781281

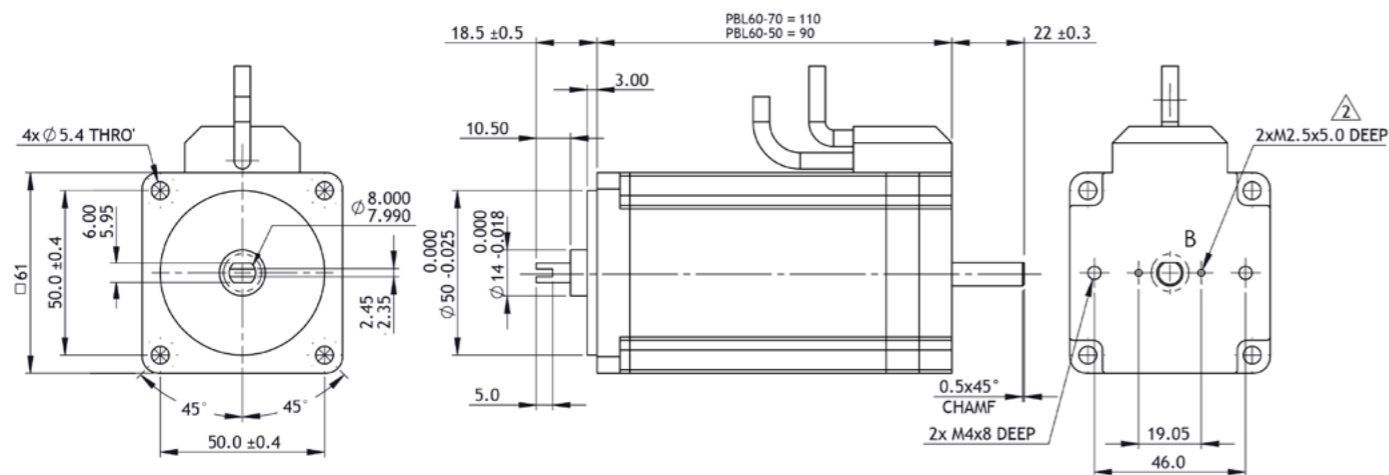
Encoder	
Incremental	735912

PBL60-50

BLDC motor

Ø60 mm frame // 50 mm stack

all dimensions in mm



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

Thermal data		Modular system	
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	

Brake +L mm

1.5 28.2

Gearbox +L mm

GB28 85
PGH42 32 - 60
PGH52 53 - 100

Encoder +L mm

Optical 9

Controller

SC 50/15
ESCON
EPOS

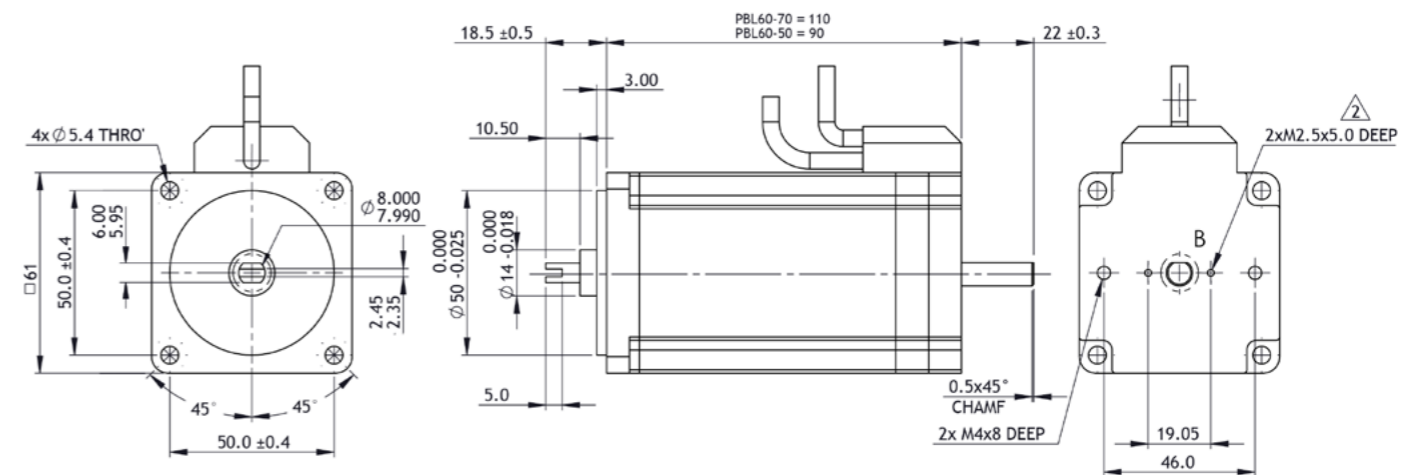
*additional length may also be required for mounting flange between components

PBL60-70

BLDC motor

Ø60 mm frame // 70 mm stack

all dimensions in mm



Part number key			
Modular	#####		
Standard	#####		
Calculated data	#####		
Technical data			
1 Part number		776620	776621
2 Nominal power	W	157	157
3 Nominal voltage	V	24	48
4 No load speed	rpm	3983	3811
5 No load current	A	1.7	0.7
6 Nominal speed	rpm	3000	3000
7 Nominal continuous torque (S1)	Nm	0.5	0.5
8 Nominal continuous current (S1)	A	9.9	4.6
9 Max Intermittent torque (S2 - 15 minutes)	Nm	0.88	0.88
10 Stall current	A	63.44	36.90
11 Stall torque	Nm	3.7	4.5
12 Stack length	mm	70	70
13 Maximum efficiency	%	0.77	0.83
14 Ra	Ω	0.12	0.48
15 Rl	mH	124.1	555.3
16 Speed constant	rpm/V	167.30	80.34
17 Torque constant	Nm/A	0.06	0.12
18 Speed torque gradient	rpm/Nm	1121.90	870.34
19 Rotor inertia	Kgcm ²	7.28 x 10 ⁻⁵	7.28 x 10 ⁻⁵
20 Weight	Kg	1.60	1.60

Thermal data		Modular system	
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	

Brake +L mm

1.5 28.2

Gearbox +L mm

GB28 85
PGH42 32 - 60
PGH52 53 - 100

Encoder +L mm

Optical 9

Controller

SC 50/15
ESCON
EPOS

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

PBL70 Product Overview

BLDC motor // \square 70 mm frame



PBL70-70 BLDC motor
 \square 70 mm frame // 70 mm stack

PBL70-80 BLDC motor
 \square 70 mm frame // 80 mm stack

Overview

The Parvalux PBL70 is a brushless direct current (BLDC) motor. It is available in two stack lengths with voltage of 48V DC and output power up to 276 Watts.

It is rated for nominal continuous torque up to 0.88 Nm (S1) and maximum intermittent torque up to 1.54 Nm (S2 - 15 minutes).

This motor is perfectly suited for use with a range of Parvalux right-angle and inline gearboxes enabling you to assemble the perfect geared motor combination for your application.

Motor Design

The 8-pole bi-directional PBL70 is housed within a lamination steel casing with aluminium end caps, sealed to IP54 (IP50 at exposed motor shafts), protecting it from dust particles and water spray.

Built to Class B insulation, enabling a temperature rise of 115°C based on an ambient temperature of 40°C. Casing temperature can operate within -30° to +100°C.

There are two models available, the PBL70-70 (stack length 70mm, overall motor length 114mm), and the PBL70-80 (stack length 80mm, overall motor length 124mm) delivering 0.77 Nm and 0.88 Nm continuous torque (S1) respectively. This motor comes as a 48v option only.

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

Features at a glance

- Delivers up to 1.54 Nm (S2 - 15 minutes)
- Available voltage: 48V
- Continuously rated at up to 0.88 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

PBL70 Modular System

Compatible gearboxes and accessories

PBL70
BLDC motor

Voltage V	PBL70-70	PBL70-80
48	776622	776623

GB12
Right-angle gearbox

Mounting flange: 781255

Modular range ratios available	
15:1 Composite	735900
30:1 Composite	735901
60:1 Composite	735902

Standard range ratios available :1
12.5, 15, 19, 21, 25, 30, 50, 60, 75

Available in both composite and bronze gears

PGS80
Planetary gearbox

Mounting flange: 781254

Ratio :1	Composite / Steel
4	776144
13	776145
15	776181
49	776182
55	776183
186	776184
210	776185

PGS71
Planetary gearbox

Mounting flange: TBC

Ratio :1	Composite / Steel
4	776197
16	776198
20	776199
50	776200
60	776201
75	776202
91	776203
189	776204
414	776205
543	776206

Controllers

Controller	
SC50/15	738590

Brakes

Mounting flange: 781283

Brake	
1 Nm	735914

Encoders

Mounting flange: 781283

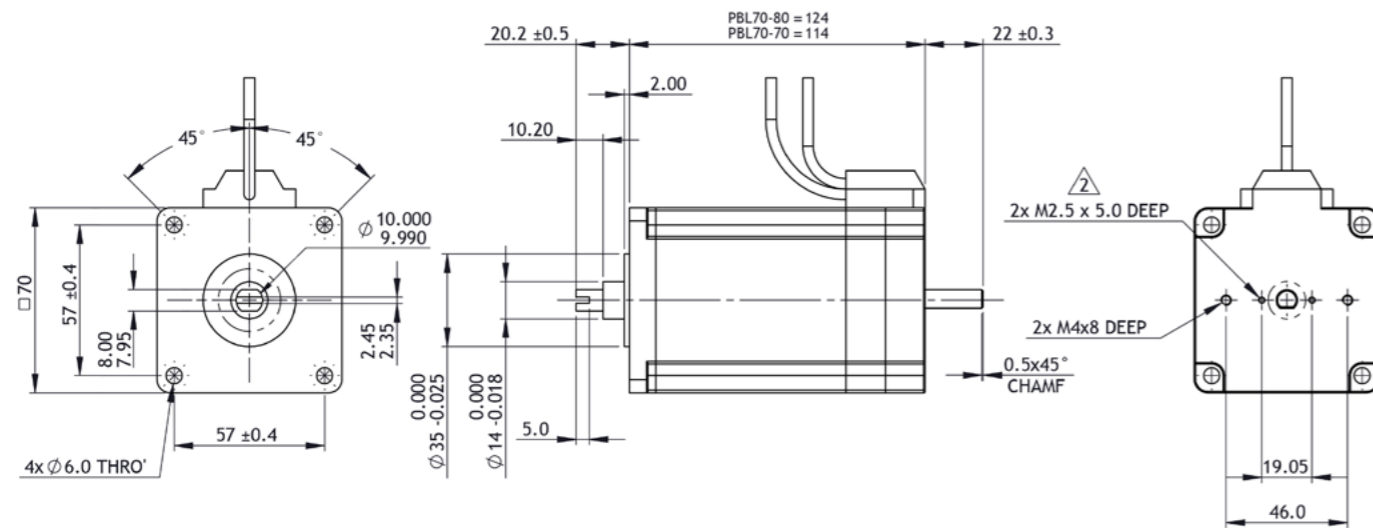
Encoder	
Incremental	735912

PBL70-70

BLDC motor

Ø70 mm frame // 70 mm stack

all dimensions in mm



Part number key		<p>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</p> <p>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</p>
Modular	#####	
Standard	#####	
Calculated data	#####	

Technical data		
1 Part number		776622
2 Nominal power	W	363
3 Nominal voltage	V	48
4 No load speed	rpm	4857
5 No load current	A	1.4
6 Nominal speed	rpm	4500
7 Nominal continuous torque (S1)	Nm	0.77
8 Nominal continuous current (S1)	A	8.9
9 Max Intermittent torque (S2 - 15 minutes)	Nm	1.35
10 Stall current	A	68.2
11 Stall torque	Nm	6.9
12 Stack length	mm	70
13 Maximum efficiency	%	84
14 Ra	Ω	0.151
15 Rl	mH	0.283
16 Speed constant	rpm/V	102.2
17 Torque constant	Nm/A	0.103
18 Speed torque gradient	rpm/Nm	731.0
19 Rotor inertia	Kgcm²	2.39 x 10 ⁻⁴
20 Weight	Kg	2.20

Thermal data		Modular system	
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

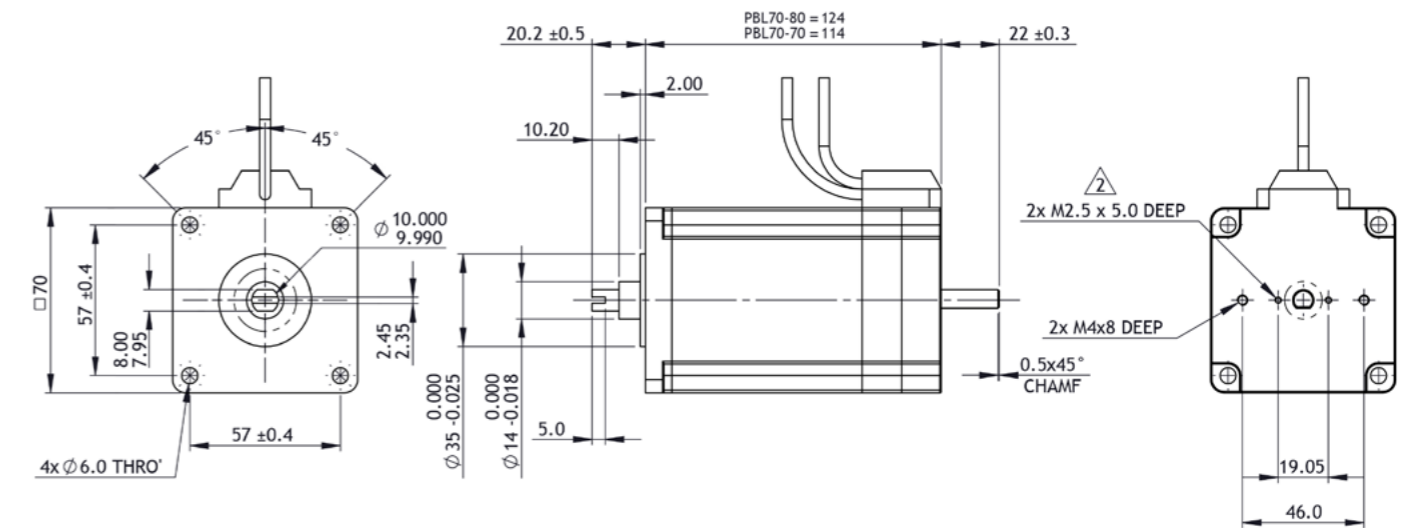
*additional length may also be required for mounting flange between components

PBL70-80

BLDC motor

Ø70 mm frame // 80 mm stack

all dimensions in mm



Part number key		<p>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</p> <p>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</p>
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 x 10 ⁻⁴
20 Weight	Kg	2.60

Thermal data		Modular system	
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

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

PBL86 Product Overview

BLDC motor // \varnothing 86 mm frame



PBL86-55 BLDC motor
 \varnothing 86 mm frame // 55 mm stack

PBL86-80 BLDC motor
 \varnothing 86 mm frame // 80 mm stack

Overview

The Parvalux PBL86 is a brushless direct current (BLDC) motor. It is available in two stack lengths, with a voltage of 48V DC and output power up to 586 Watts

It is rated for nominal continuous torque up to 1.4 Nm (S1) and maximum intermittent torque up to 2.5 Nm (S2 - 15 minutes).

This motor is perfectly suited for use with a range of Parvalux right-angle and inline gearboxes enabling you to assemble the perfect geared motor combination for your application.

Motor Design

The 8-pole bi-directional PBL86 is housed within a lamination steel casing with aluminium end caps, sealed to IP54 (IP50 at exposed motor shafts), protecting it from dust particles and water spray.

Built to Class B insulation, enabling a temperature rise of 115°C based on an ambient temperature of 40°C. Casing temperature can operate within -30° to +100°C.

There are two models available, the PBL86-55 (stack length 55mm, overall motor length 111mm), and the PBL86-80 (stack length 80mm, overall motor length 136mm) delivering 1.0 Nm and 1.4 Nm continuous torque (S1) respectively. This motor is available in a 48v option only.

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

Features at a glance

- Delivers up to 2.5 Nm (S2 - 15 minutes)
- Available voltage: 48V
- Continuously rated at up to 1.4 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

PBL86 Modular System

Compatible gearboxes and accessories

PBL86
BLDC motor

Voltage V	PBL86-55	PBL86-80
48	776624	776625

GB9
Right-angle gearbox

Mounting flange: 781261

Modular range ratios available	
15:1 Bronze	735894
30:1 Bronze	735895
60:1 Bronze	735896

Standard range ratios available :1
12.5, 15, 25, 30, 40, 60, 75

Available in both composite and bronze gears

PGS90
Planetary gearbox

Mounting flange: 781259

Ratio :1	Composite / Steel
19	775882
77	775883
89	775884
294	775885
403	775886
517	775887

GB12
Right-angle gearbox

Mounting flange: 781260

Modular range ratios available	
15:1 Composite	735900
30:1 Composite	735901
60:1 Composite	735902

Standard range ratios available :1
12.5, 15, 19, 21, 25, 30, 50, 60, 75

Available in both composite and bronze gears

PGS80
Planetary gearbox

Mounting flange: TBC

Ratio :1	Composite / Steel
4	776144
13	776145
15	776181
49	776182
55	776183
186	776184
210	776185

Controllers

Controller	
SC50/15	738590

Brakes

Mounting flange: 781284

Brake	
1 Nm	735914

Encoders

Mounting flange: 781284

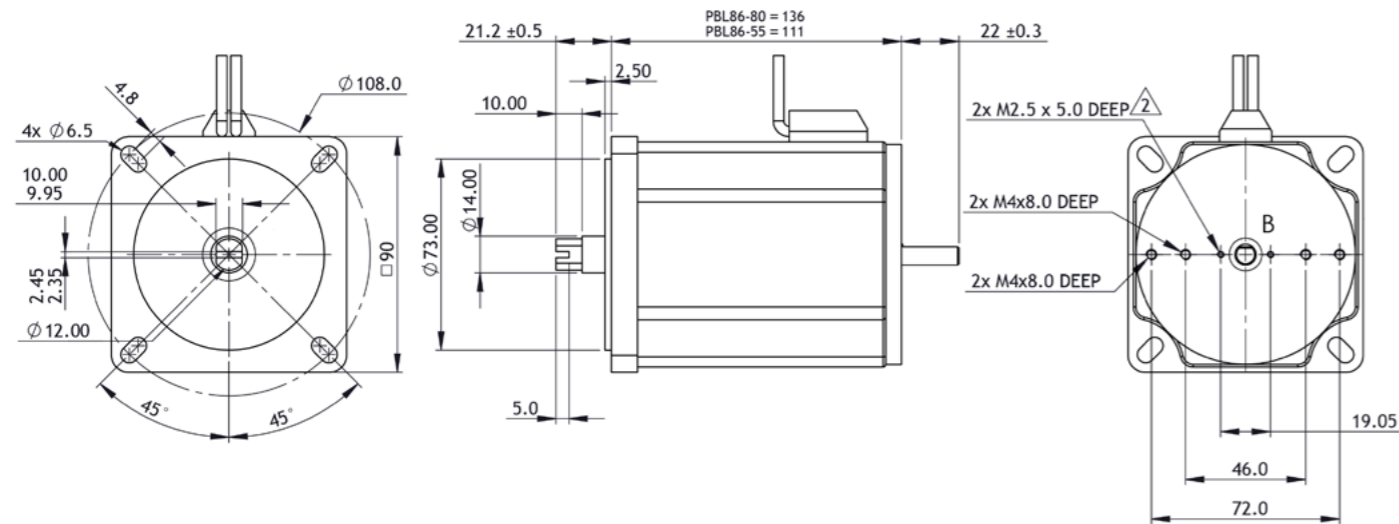
Encoder	
Incremental	735912

PBL86-55

BLDC motor

Ø86 mm frame // 55 mm stack

all dimensions in mm



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

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		776624
2 Nominal power	W	419
3 Nominal voltage	V	48
4 No load speed	rpm	4342
5 No load current	A	1.2
6 Nominal speed	rpm	4000
7 Nominal continuous torque (S1)	Nm	1.0
8 Nominal continuous current (S1)	A	10.3
9 Max Intermittent torque (S2 - 15 minutes)	Nm	1.75
10 Stall current	A	93
11 Stall torque	Nm	10.1
12 Stack length	mm	55
13 Maximum efficiency	%	85
14 Ra	Ω	0.087
15 Ri	mH	230.7
16 Speed constant	rpm/V	90.8
17 Torque constant	Nm/A	0.11
18 Speed torque gradient	rpm/Nm	439.5
19 Rotor inertia	Kgm²	2.04 x 10 ⁻⁴
20 Weight	Kg	3.20

Thermal data		Modular system	
21 Ambient temperature	°C	40	

Mechanical data	
22 Radial load [distance from flange]	N [mm] 350 [15]
23 Radial play	mm [g] 0.06 [450]
24 Axial end play	mm [g] 0.08 [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

Brake	+L mm
1.5	28.2
3.0	32.2

Gearbox	+L mm
GB9	138
GB12	110
PGS80	52 - 102
PGS90	57 - 107

Encoder	+L mm
Optical	9

Controller
SC 50/15
ESCON
EPOS

+L mm = approximate added length*

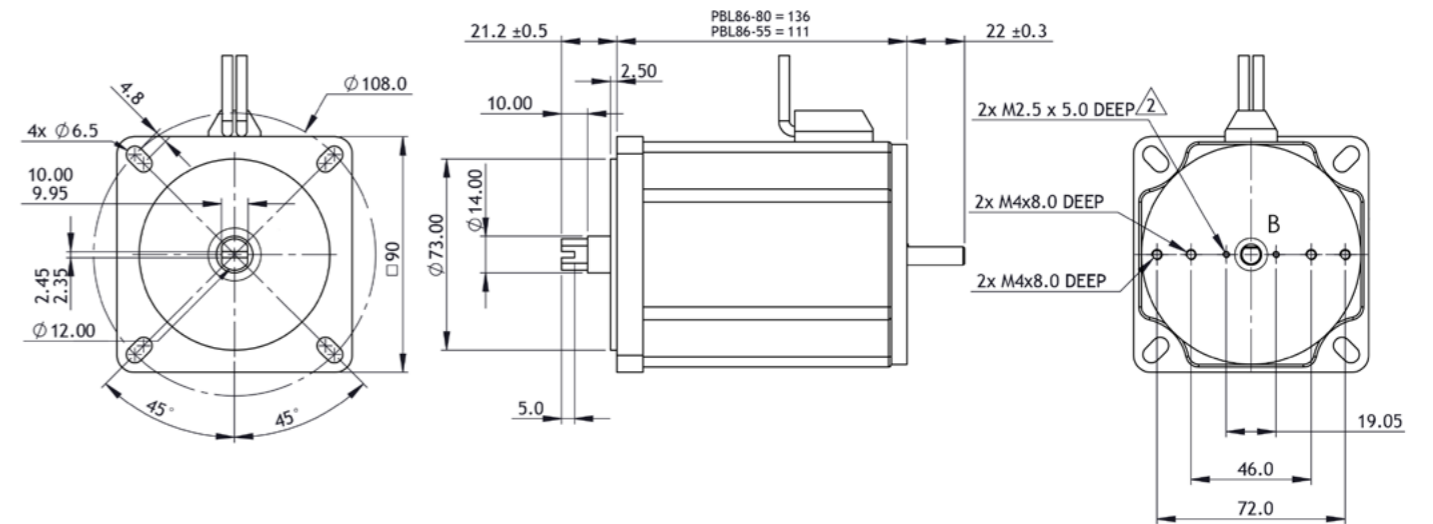
*additional length may also be required for mounting flange between components

PBL86-80

BLDC motor

Ø86 mm frame // 80 mm stack

all dimensions in mm



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

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		776625
2 Nominal power	W	586
3 Nominal voltage	V	48
4 No load speed	rpm	4192
5 No load current	A	1.9
6 Nominal speed	rpm	4000
7 Nominal continuous torque (S1)	Nm	1.4
8 Nominal continuous current (S1)	A	14.4
9 Max Intermittent torque (S2 - 15 minutes)	Nm	2.45
10 Stall current	A	116
11 Stall torque	Nm	12.7
12 Stack length	mm	80
13 Maximum efficiency	%	83
14 Ra	Ω	0.057
15 Ri	mH	161.3
16 Speed constant	rpm/V	87.9
17 Torque constant	Nm/A	0.11
18 Speed torque gradient	rpm/Nm	345.6
19 Rotor inertia	Kgm²	2.9 x 10 ⁻⁴
20 Weight	Kg	4.20

Thermal data		Modular system	
21 Ambient temperature	°C	40	

Mechanical data	
22 Radial load [distance from flange]	N [mm] 350 [15]
23 Radial play	mm [g] 0.06 [450]
24 Axial end play	mm [g] 0.08 [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

Brake	+L mm
1.5	28.2
3.0	32.2

Gearbox	+L mm
GB9	138
GB12	110
PGS80	52 - 102
PGS90	57 - 107

Encoder	+L mm
Optical	9

Controller
SC 50/15
ESCON
EPOS

+L mm = approximate added length*

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

Sold & Serviced By:

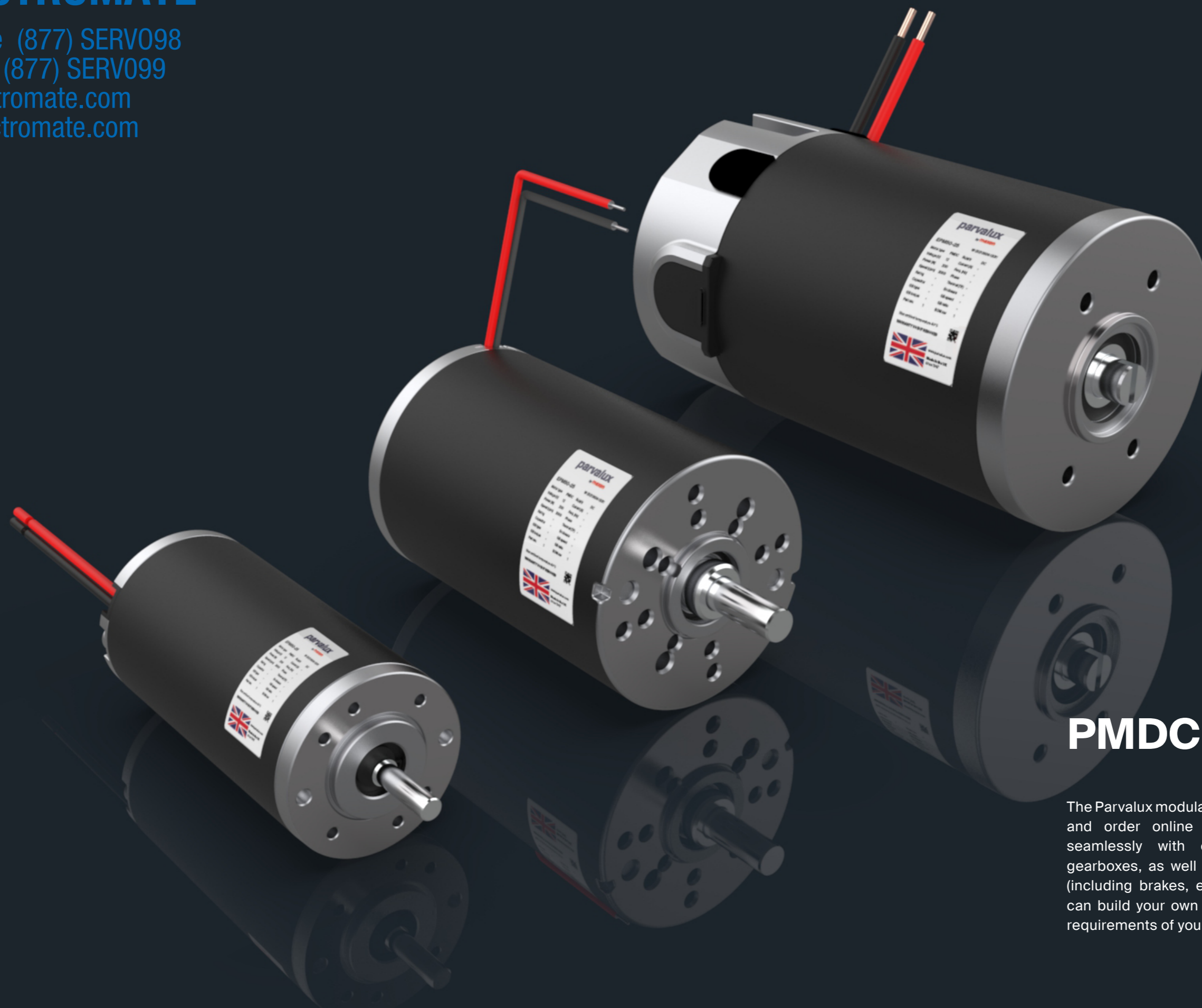


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PMDC modular

The Parvalux modular range is available to configure and order online at parvalux.com. Integrating seamlessly with either right-angle or inline gearboxes, as well as a selection of accessories (including brakes, encoders, and controllers) you can build your own solution to perfectly meet the requirements of your application.

BRx42 Product Overview

PMDC motor // Ø42 mm frame



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.

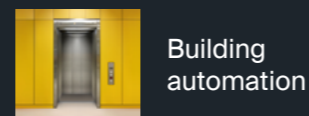
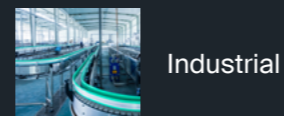
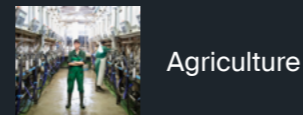
UL, ETL, CSA approvals available on request, with EMC EN 61000-6-3: 2007 +A1:2011 suppression optional.

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



BRx42 Modular System

Compatible gearboxes and accessories

BRx42 PMDC motor

Voltage V	BRx42-25	BRx42-40
12	781076	781079
24	781077	781080
48	781078	781081

PGH52 Planetary gearbox

Mounting flange: TBC

Ratio :1	Composite / Steel
4	774284
12	774286
15	774287
45	774289
67	774291
98	774293
161	774295
288	774297
494	774299
684	774301

Additional ratios available on request (†): 5, 19, 57, 82, 114, 207, 357, 552

PGH42 Planetary gearbox

Mounting flange: 781237

Ratio :1	Composite / Steel
15	775835
17	775848
51	775849
64	775850
84	775851
180	775852
222	775853
294	775854
1470	775855

Controllers

Controller	
SC50/15	738590

Encoders

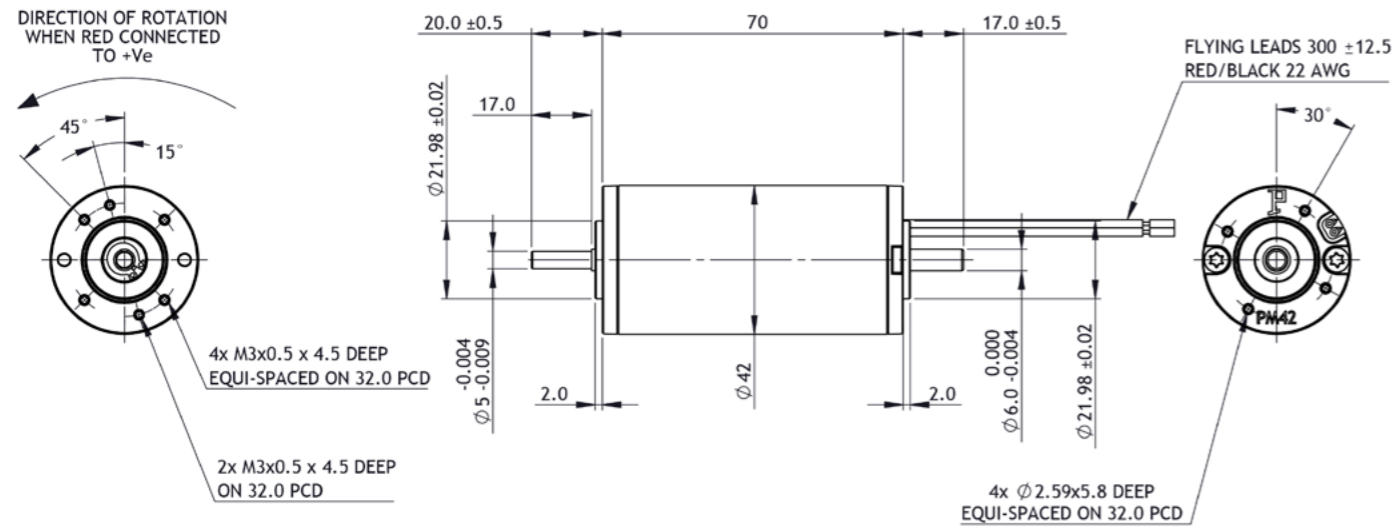
Mounting flange: 781275

Encoder	
Incremental	735912

BRx42-25 PMDC motor

Ø42 mm frame // 19 mm stack

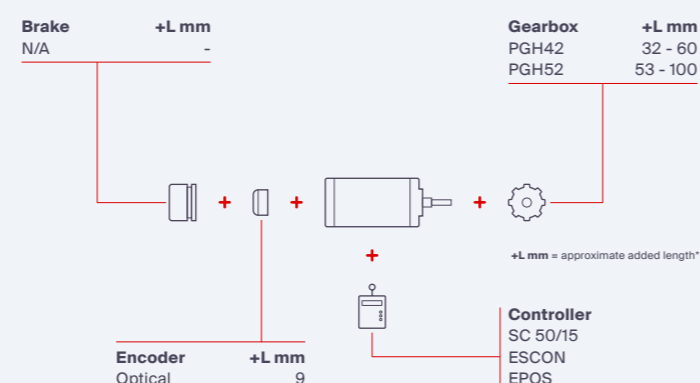
all dimensions in mm



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

Technical data				
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	4091	4006	4115
5 No load current	A	0.280	0.150	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	1.60	0.78	0.38
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.06	0.06	0.06
10 Stall current	A	5.30	2.78	1.35
11 Stall torque	Nm	0.13	0.14	0.14
12 Stack length	mm	19	19	19
13 Maximum efficiency	%	71	71	71
14 Terminal resistance - phase to phase	Ω	2.09	7.02	35.5
15 Terminal inductance - phase to phase	mH	1.555	7.258	-
16 Speed constant	rpm/V	354.6	175.1	84.0
17 Torque constant	Nm/A	0.03	0.05	0.11
18 Speed torque gradient	rpm/Nm	32623	29121	28702
19 Rotor inertia	Kgcm ²	1.0 x 10 ⁻⁵	1.0 x 10 ⁻⁵	1.0 x 10 ⁻⁵

Thermal data		Modular system	
20 Ambient temperature	°C	40	
Mechanical data			
21 Radial load [distance from flange]	N [mm]	60 [15]	
Other data			
22 Number of poles		2	
23 Weight	Kg	0.39	
24 IP rating		IP54	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

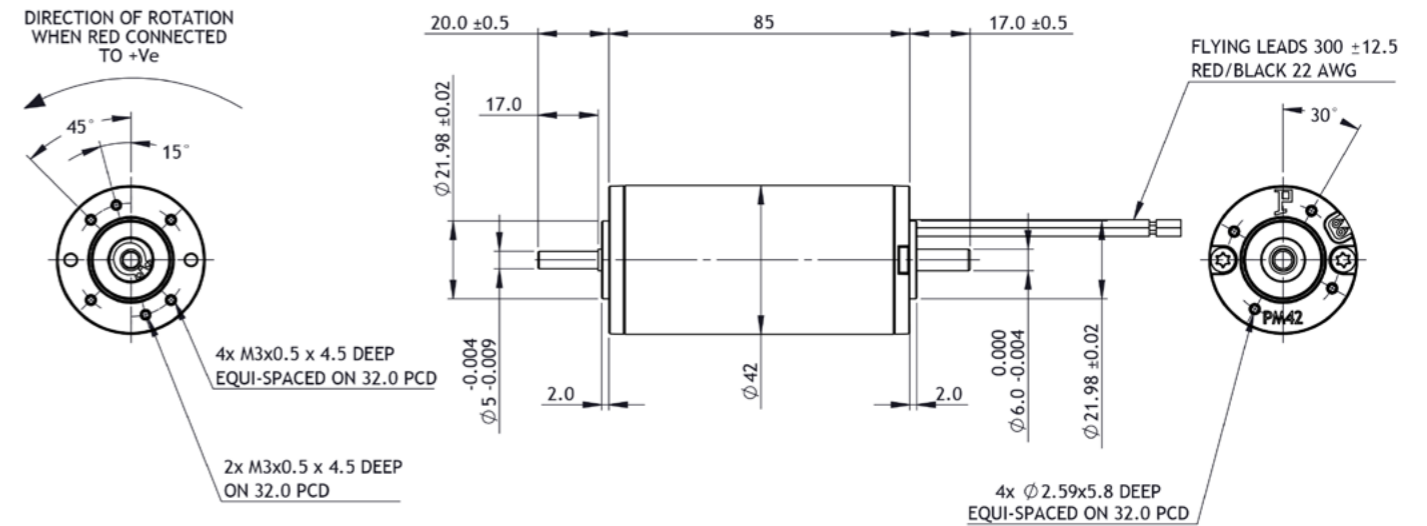


*additional length may also be required for mounting flange between components

BRx42-40 PMDC motor

Ø42 mm frame // 34 mm stack

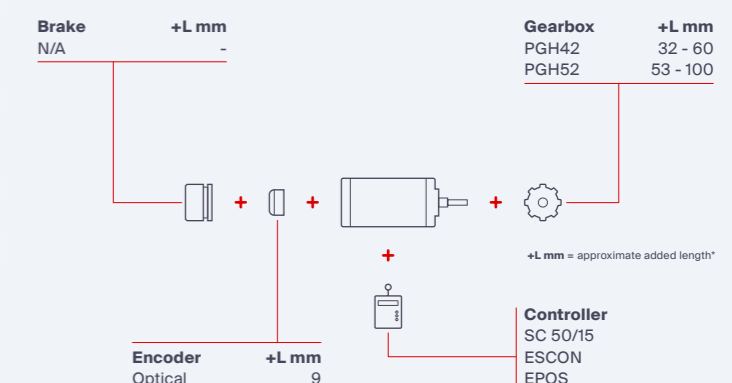
all dimensions in mm



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

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	9.60	4.64	2.30
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	1.25	5.17	20.80
15 Terminal inductance - phase to phase	mH	-	-	-
16 Speed constant	rpm/V	340	165	84
17 Torque constant	Nm/A	0.029	0.060	0.120
18 Speed torque gradient	rpm/Nm	15200	15200	15200
19 Rotor inertia	Kgcm ²	1.4 x 10 ⁻⁵	1.4 x 10 ⁻⁵	1.4 x 10 ⁻⁵

Thermal data		Modular system	
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	0.52	
24 IP rating		IP54	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	



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

BRx52 Product Overview

PMDC motor // Ø52 mm frame



BRx52-30 PMDC motor

Ø52 mm frame // 30 mm stack

BRx52-58 PMDC motor

Ø52 mm frame // 58 mm stack

Overview

The BRx52 PMDC (brushed permanent magnet DC motor) has two stack length models available, the BRx52-30 and BRx52-58. It offers a wide range of operating voltages, speeds and torque in relatively small housing.

Motor Design

The 2-pole bi-directional BRx52 is housed within an aluminium 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 BRx52-30 (stack length 30mm / overall motor length 95mm) and the BRx52-58 (stack length 58mm / overall motor length 125mm), delivering up to 0.15 Nm and 0.35 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 0.35 Nm (S2 - 15 minutes)
- Compact envelope size & lightweight
- Selection of voltages up to 48V DC
- Continuously rated at up to 0.22 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

BRx52 Modular System

Compatible gearboxes and accessories

BRx52 PMDC motor

Voltage V	BRx52-30	BRx52-58
12	787108	787111
24	787109	787113
48	787110	787114

GB12 Right-angle gearbox

Mounting flange: TBC

Modular range ratios available	
15:1 Bronze	735904
30:1 Bronze	735906
60:1 Bronze	735907

Standard range ratios available :1
25, 50
Available in bronze gears

PGS62 Planetary gearbox

Mounting flange: TBC

Ratio :1	Composite / Steel
3	775872
12	775873
43	775875
100	775876
150	775877

PGH52 Planetary gearbox

Mounting flange: TBC

Ratio :1	Composite / Steel
4	774284
12	774286
15	774287
45	774289
67	774291
98	774293
161	774295
288	774297
494	774299
684	774301

Additional ratios available on request (†): 5, 19, 57, 82, 114, 207, 357, 552

Controllers

Controller	
SC50/15	738590

Encoders

Mounting flange: TBC

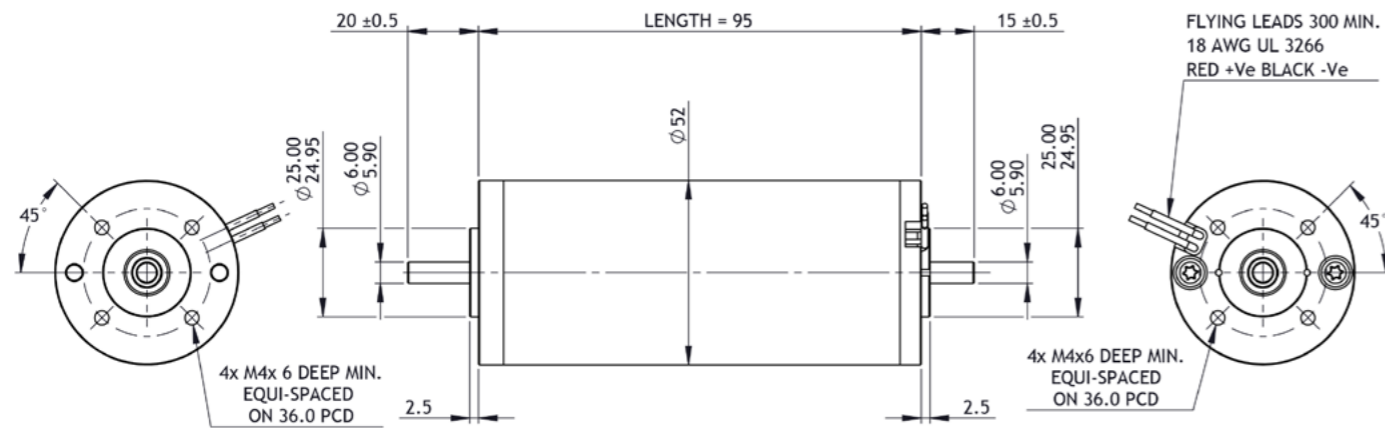
Encoder	
Incremental	735912

BRx52-30

PMDC motor

Ø52 mm frame // 30 mm stack

all dimensions in mm



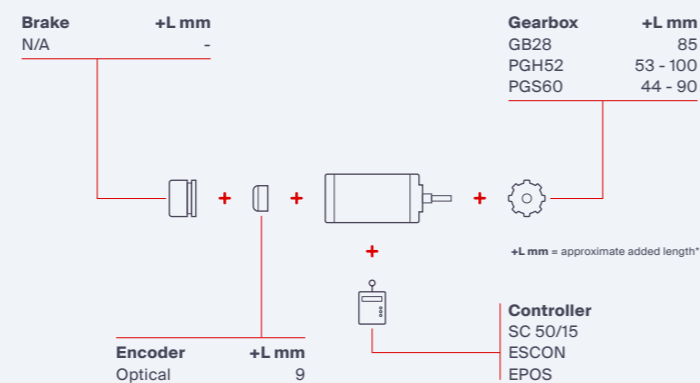
Part number key		Available on request: Custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors	
Modular	#####		
Standard	#####		
Calculated data	#####		
Technical data			

1 Part number		787108	787109	787110
2 Nominal power	W	28	28	28
3 Nominal voltage	V	12	24	48
4 No load speed	rpm	3550	3561	3547
5 No load current	A	0.46	0.51	0.20
6 Nominal speed	rpm	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.09	0.09	0.09
8 Nominal continuous current (S1)	A	3.6	1.7	0.9
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.15	0.15	0.15
10 Stall current	A	19.0	9.8	5.0
11 Stall torque	Nm	0.45	0.50	0.56
12 Stack length	mm	30	30	30
13 Maximum efficiency	%	76	78	71
14 Terminal resistance - phase to phase	Ω	0.63	1.93	6.69
15 Terminal inductance - phase to phase	mH	-	2.713	11.390
16 Speed constant	rpm/V	294.0	154.9	76.7
17 Torque constant	Nm/A	0.021	0.060	0.120
18 Speed torque gradient	rpm/Nm	7888	7250	6692
19 Rotor inertia	Kgcm ²	2.33 x 10 ⁻⁵	2.33 x 10 ⁻⁵	2.33 x 10 ⁻⁵

Thermal data		Modular system	
20 Ambient temperature	°C	40	

Mechanical data		Modular system	
21 Radial load [distance from flange]	N [mm]	90 [15]	

Other data		Modular system	
22 Number of poles		2	
23 Weight	Kg	0.85	
24 IP rating		IP54	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	



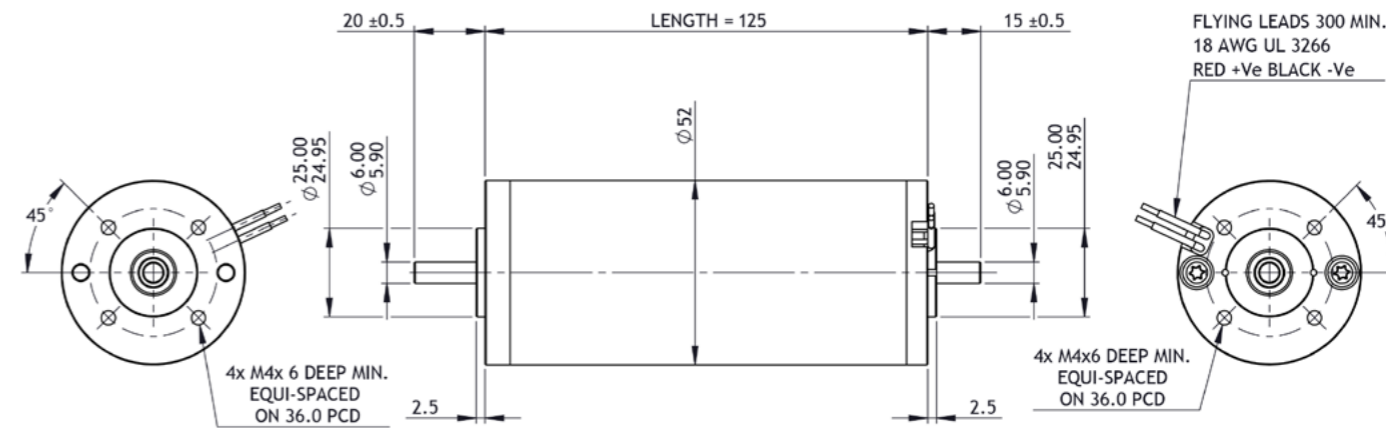
*additional length may also be required for mounting flange between components

BRx52-58

PMDC motor

Ø52 mm frame // 58 mm stack

all dimensions in mm



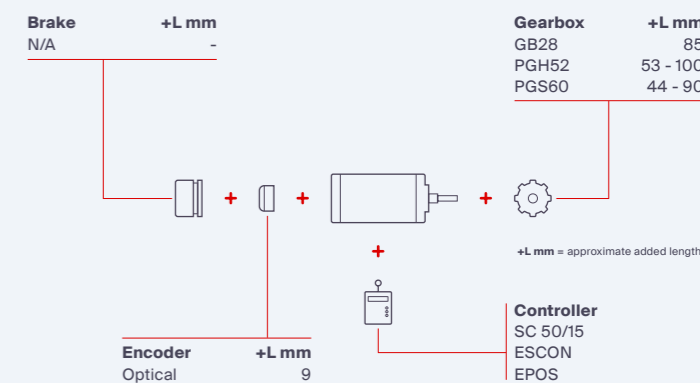
Part number key		Available on request: Custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors	
Modular	#####		
Standard	#####		
Calculated data	#####		
Technical data			

1 Part number		787111	787113	787114
2 Nominal power	W	69	69	69
3 Nominal voltage	V	12	24	48
4 No load speed	rpm	3760	3840	3838
5 No load current	A	0.37	0.40	0.16
6 Nominal speed	rpm	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.22	0.22	0.22
8 Nominal continuous current (S1)	A	7.6	3.9	2.2
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.35	0.35	0.35
10 Stall current	A	35.6	19.0	9.5
11 Stall torque	Nm	1.0	1.1	1.0
12 Stack length	mm	58	58	58
13 Maximum efficiency	%	79	80	80
14 Terminal resistance - phase to phase	Ω	0.330	0.937	3.420
15 Terminal inductance - phase to phase	mH	-	1.272	5.217
16 Speed constant	rpm/V	307.0	161.8	80.8
17 Torque constant	Nm/A	0.031	0.056	0.100
18 Speed torque gradient	rpm/Nm	3500	3805	4411
19 Rotor inertia	Kgcm ²	5.7 x 10 ⁻⁵	5.7 x 10 ⁻⁵	5.7 x 10 ⁻⁵

Thermal data		Modular system	
20 Ambient temperature	°C	40	

Mechanical data		Modular system	
21 Radial load [distance from flange]	N [mm]	90 [15]	

Other data		Modular system	
22 Number of poles		2	
23 Weight	Kg	1.16	
24 IP rating		IP54	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	



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

BRx63 Product Overview

PMDC motor // Ø63 mm frame



BRx63-40 PMDC motor

Ø63 mm frame // 40 mm stack

BRx63-55 PMDC motor

Ø63 mm frame // 55 mm stack

Overview

The BRx63 PMDC (brushed permanent magnet DC motor) has two stack length models available, the BRx63-40 and BRx63-55. It offers a wide range of operating voltages, speeds and torque to perfectly meet the requirements of your application.

Motor Design

The 2-pole bi-directional BRx63 is housed within an aluminium 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 BRx63-40 (stack length 40mm / overall motor length 95mm) and the BRx63-55 (stack length 55mm / overall motor length 125mm), delivering up to 0.30 Nm and 0.45 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 0.45 Nm (S2 - 15 minutes)
- Compact envelope size & lightweight
- Selection of voltages up to 48V DC
- Continuously rated at up to 0.27 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

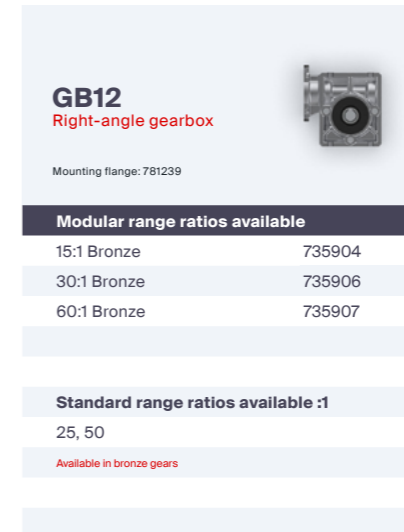
BRx63 Modular System

Compatible gearboxes and accessories



BRx63 PMDC motor

Voltage V	BRx63-40	BRx63-55
12	781083	781088
24	781084	781089
48	781085	781090



GB12 Right-angle gearbox

Mounting flange: 781239

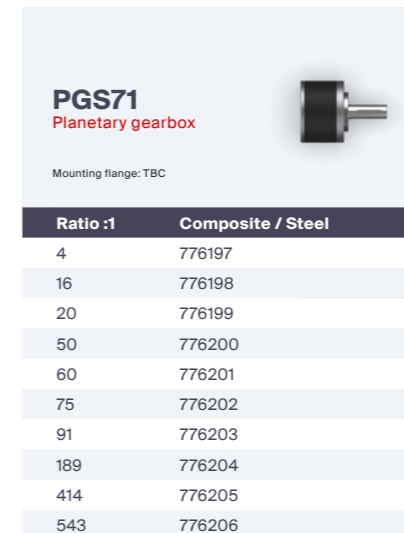
Modular range ratios available

15:1 Bronze	735904
30:1 Bronze	735906
60:1 Bronze	735907

Standard range ratios available :1

25, 50

Available in bronze gears



PGS71 Planetary gearbox

Mounting flange: TBC

Ratio :1 Composite / Steel

4	776197
16	776198
20	776199
50	776200
60	776201
75	776202
91	776203
189	776204
414	776205
543	776206

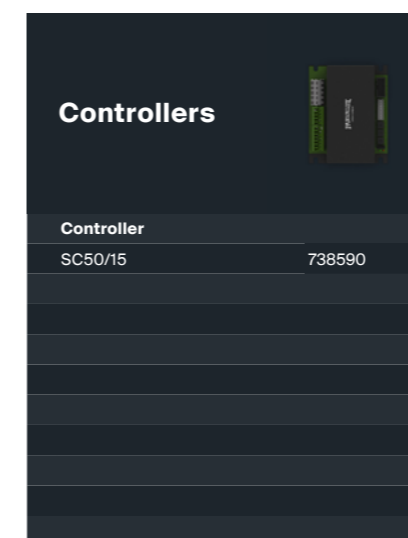


PGS62 Planetary gearbox

Mounting flange: 781238

Ratio :1 Composite / Steel

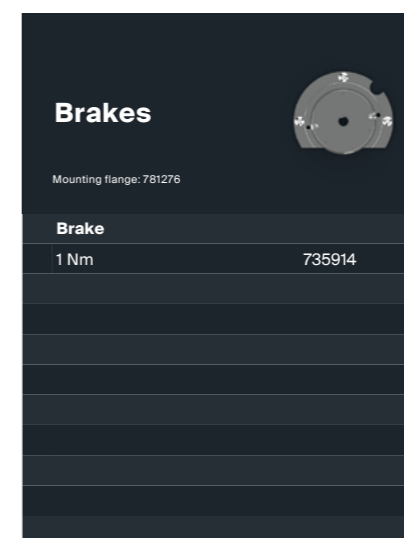
3	775872
12	775873
43	775875
100	775876
150	775877



Controllers

Controller

SC50/15	738590
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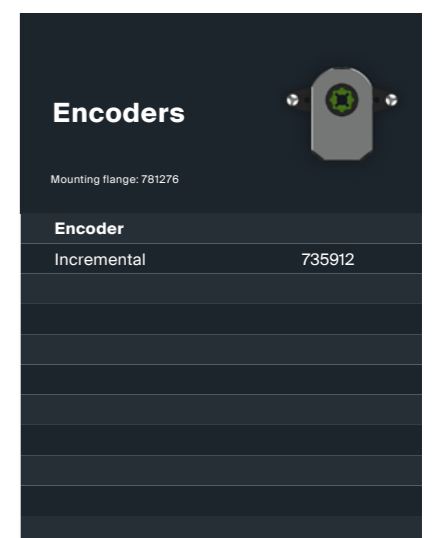


Brakes

Mounting flange: 781276

Brake

1 Nm	735914
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Encoders

Mounting flange: 781276

Encoder

Incremental	735912
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BRx70 Product Overview

PMDC motor // Ø70 mm frame



BRx70-40 PMDC motor
Ø70 mm frame // 40 mm stack

BRx70-60 PMDC motor
Ø70 mm frame // 60 mm stack

Overview

The BRx70 PMDC (brushed permanent magnet DC motor) has two stack length models available, the BRx70-40 and BRx70-60. It offers a wide range of operating voltages, speeds and torque to perfectly meet the requirements of your application.

Motor Design

The 2-pole bi-directional BRx70 is housed within an aluminium 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 BRx70-40 (stack length 40mm / overall motor length 125mm) and the BRx70-60 (stack length 60mm / overall motor length 146mm), delivering up to 0.42 Nm and 0.88 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 0.88 Nm (S2 - 15 minutes)
- Compact envelope size & lightweight
- Selection of voltages up to 48V DC
- Continuously rated at up to 0.5 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

BRx70 Modular System

Compatible gearboxes and accessories



BRx70
PMDC motor

Voltage V	BRx70-40	BRx70-60
12	781092	781095
24	781093	781096
48	781094	781097



GB12
Right-angle gearbox

Mounting flange: 781242

Modular range ratios available

15:1 Composite	735900
30:1 Composite	735901
60:1 Composite	735902

Standard range ratios available :1

12.5, 15, 19, 21, 25, 30, 50, 60, 75

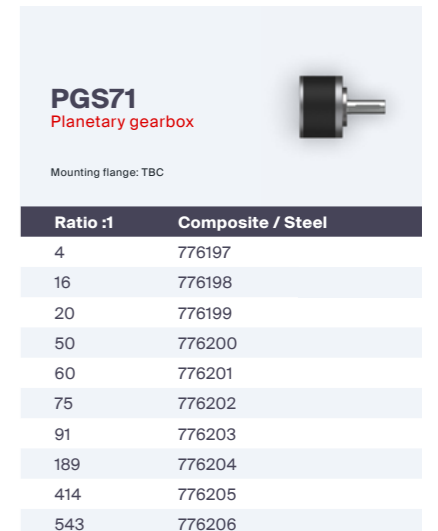
Available in both composite and bronze gears



PGS80
Planetary gearbox

Mounting flange: 781240

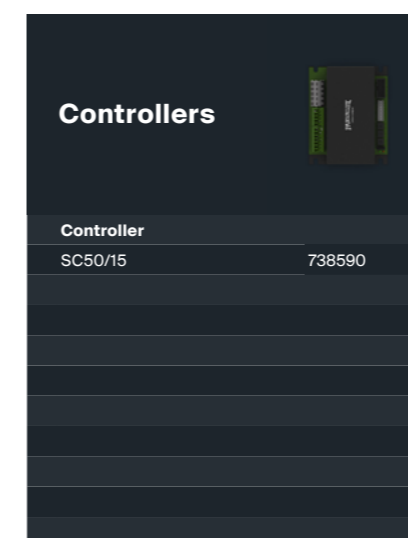
Ratio :1	Composite / Steel
4	776144
13	776145
15	776181
49	776182
55	776183
186	776184
210	776185



PGS71
Planetary gearbox

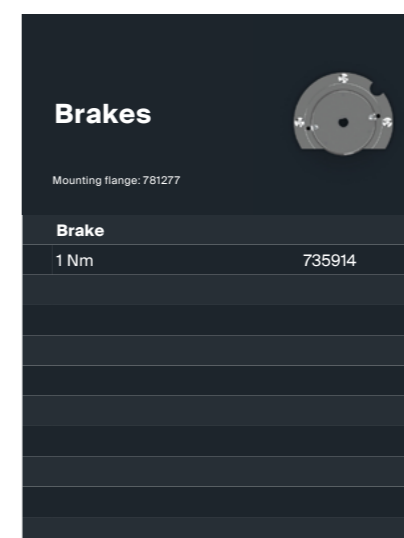
Mounting flange: TBC

Ratio :1	Composite / Steel
4	776197
16	776198
20	776199
50	776200
60	776201
75	776202
91	776203
189	776204
414	776205
543	776206



Controllers

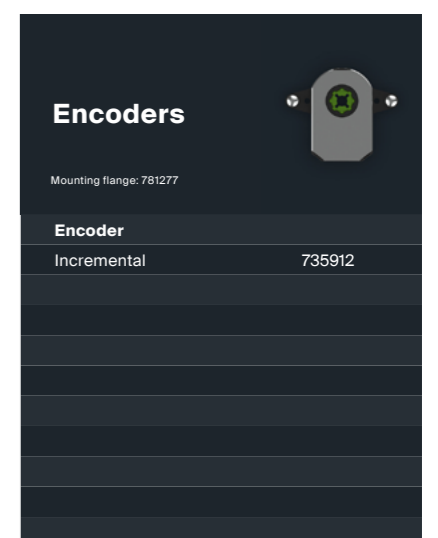
Controller	
SC50/15	738590



Brakes

Mounting flange: 781277

Brake	
1 Nm	735914



Encoders

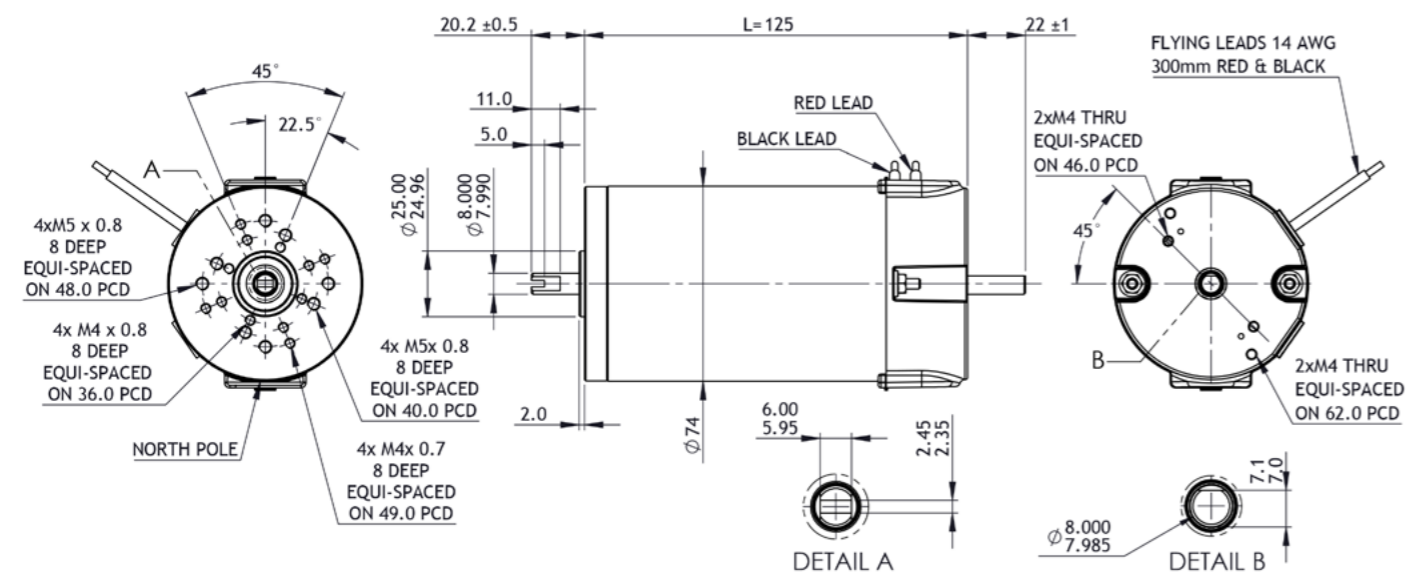
Mounting flange: 781277

Encoder	
Incremental	735912

BRx70-40 PMDC motor

Ø70 mm frame // 40 mm stack

all dimensions in mm



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

Technical data				
1 Part number		781092	781093	781094
2 Nominal power	W	79	79	79
3 Nominal voltage	V	12	24	48
4 No load speed	rpm	3340	3433	3167
5 No load current	A	1.50	0.80	0.28
6 Nominal speed	rpm	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.25	0.25	0.25
8 Nominal continuous current (S1)	A	9.2	4.7	2.1
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.42	0.42	0.42
10 Stall current	A	59.2	33.5	18.7
11 Stall torque	Nm	1.8	2.1	2.4
12 Stack length	mm	40	40	40
13 Maximum efficiency	%	71	78	78
14 Terminal resistance - phase to phase	Ω	0.13	0.44	1.86
15 Terminal inductance - phase to phase	mH	0.253	1.235	5.060
16 Speed constant	rpm/V	280.1	145.0	66.6
17 Torque constant	Nm/A	0.03	0.06	0.13
18 Speed torque gradient	rpm/Nm	1944	1784	1415
19 Rotor inertia	Kgcm ²	1.83 x 10 ⁻⁴	1.83 x 10 ⁻⁴	1.83 x 10 ⁻⁴

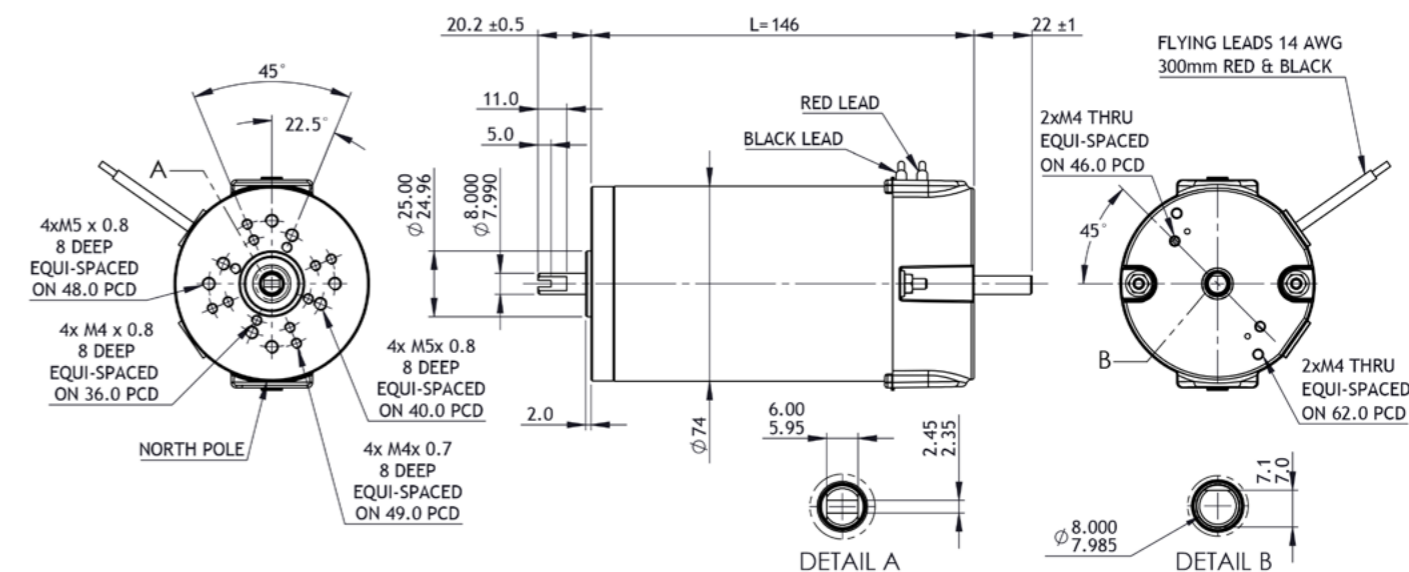
Thermal data		Modular system	
20 Ambient temperature	°C	40	
Mechanical data			
21 Radial load [distance from flange]	N [mm]	200 [15]	
Other data			
22 Number of poles		2	
23 Weight	Kg	1.85	
24 IP rating		IP54	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

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

BRx70-60 PMDC motor

Ø70 mm frame // 60 mm stack

all dimensions in mm



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

Technical data				
1 Part number		781095	781096	781097
2 Nominal power	W	157	157	157
3 Nominal voltage	V	12	24	48
4 No load speed	rpm	3970	3580	3310
5 No load current	A	1.80	0.80	0.37
6 Nominal speed	rpm	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.5	0.5	0.5
8 Nominal continuous current (S1)	A	21.0	9.0	4.2
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.88	0.63	0.88
10 Stall current	A	70.7	48.0	28.7
11 Stall torque	Nm	1.8	2.8	3.6
12 Stack length	mm	60	60	60
13 Maximum efficiency	%	72	79	82
14 Terminal resistance - phase to phase	Ω	0.10	0.36	1.51
15 Terminal inductance - phase to phase	mH	0.15	0.81	3.29
16 Speed constant	rpm/V	333.1	150.4	69.1
17 Torque constant	Nm/A	0.026	0.060	0.130
18 Speed torque gradient	rpm/Nm	2423	1383	985
19 Rotor inertia	Kgcm ²	2.5 x 10 ⁻⁴	2.5 x 10 ⁻⁴	2.5 x 10 ⁻⁴

Thermal data		Modular system	
20 Ambient temperature	°C	40	
Mechanical data			
21 Radial load [distance from flange]	N [mm]	200 [15]	
Other data			
22 Number of poles		2	
23 Weight	Kg	2.25	
24 IP rating		IP54	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

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

BRx90 Product Overview

PMDC motor // Ø90 mm frame



BRx90-50 PMDC motor

Ø90 mm frame // 50 mm stack

BRx90-75 PMDC motor

Ø90 mm frame // 75 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.

Motor Design

The 2-pole bi-directional BRx42 is housed within an aluminium 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 1.5 Nm (S2 - 15 minutes)
- Compact envelope size & lightweight
- Selection of voltages up to 48V DC
- Continuously rated at up to 0.9 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

BRx90 Modular System

Compatible gearboxes and accessories

BRx90 PMDC motor

Voltage V	BRx90-50	BRx90-75
12	781102	781106
24	781103	781107
48	781104	781108

GB9 Right-angle gearbox

Mounting flange: 781247

Modular range ratios available	
15:1 Bronze	735894
30:1 Bronze	735895
60:1 Bronze	735896

Standard range ratios available :1
12.5, 15, 25, 30, 40, 60, 75

Available in both composite and bronze gears

Ratio :1	Composite / Steel
19	775882
77	775883
89	775884
294	775885
403	775886
517	775887

GB12 Right-angle gearbox

Mounting flange: 781244

Modular range ratios available	
15:1 Composite	735900
30:1 Composite	735901
60:1 Composite	735902

Standard range ratios available :1
12.5, 15, 19, 21, 25, 30, 50, 60, 75

Available in both composite and bronze gears

Ratio :1	Composite / Steel
4	776144
13	776145
15	776181
49	776182
55	776183
186	776184
210	776185

Controllers

Controller	
SC50/15	738590

Brakes

Mounting flange: 781279

Brake	
1 Nm	735914

Encoders

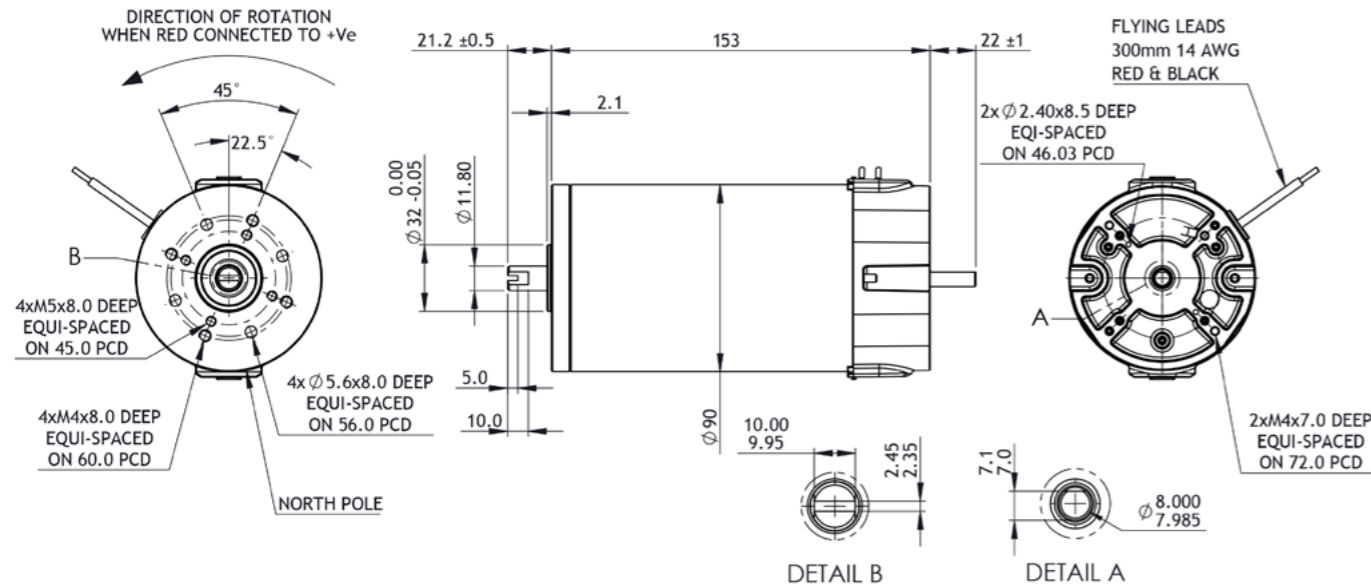
Mounting flange: 781279

Encoder	
Incremental	735912

BRx90-50 PMDC motor

Ø90 mm frame // 50 mm stack

all dimensions in mm



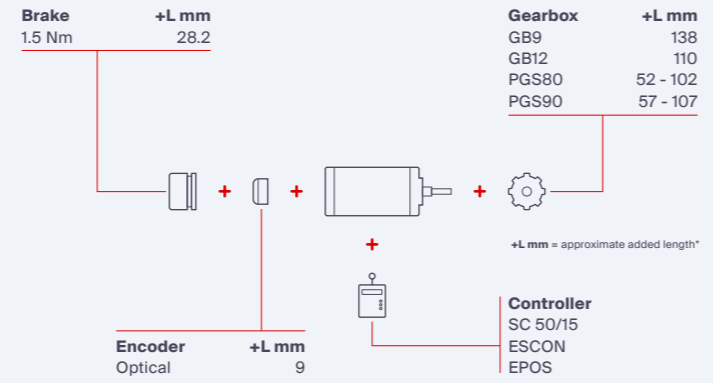
Part number key		Available on request: Custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors	
Modular	#####		
Standard	#####		
Calculated data	#####		

Technical data				
1 Part number		781102	781103	781104
2 Nominal power	W	157	210	210
3 Nominal voltage	V	12	24	48
4 No load speed	rpm	3870	3423	3480
5 No load current	A	2.6	1.1	0.6
6 Nominal speed	rpm	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.50	0.67	0.67
8 Nominal continuous current (S1)	A	25.5	10.5	5.7
9 Max. intermittent torque (S2 - 15 minutes)	Nm	1.17	1.17	1.17
10 Stall current	A	83.7	82.1	51.8
11 Stall torque	Nm	2.40	5.61	6.70
12 Stack length	mm	50	50	50
13 Maximum efficiency	%	67	81	80
14 Terminal resistance - phase to phase	Ω	0.112	0.294	0.580
15 Terminal inductance - phase to phase	mH	100.5	504.4	1987.0
16 Speed constant	rpm/V	314.9	139.0	69.1
17 Torque constant	Nm/A	0.030	0.069	0.130
18 Speed torque gradient	rpm/Nm	1509.7	590.0	511.0
19 Rotor inertia	Kgcm ²	6.57 x 10 ⁻⁴	6.57 x 10 ⁻⁴	6.57 x 10 ⁻⁴

Thermal data		Modular system	
20 Ambient temperature	°C	40	

Mechanical data		Modular system	
21 Radial load [distance from flange]	N [mm]	200 [15]	

Other data		Modular system	
22 Number of poles		2	
23 Weight	Kg	3.60	
24 IP rating		IP54	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

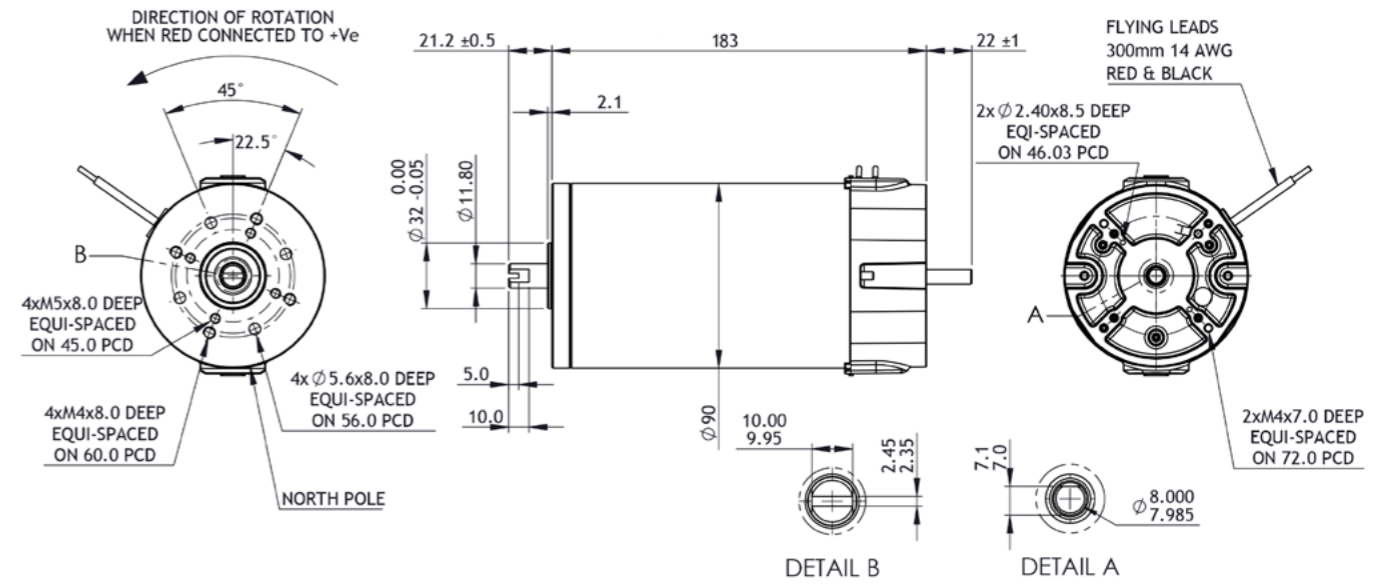


*additional length may also be required for mounting flange between components

BRx90-75 PMDC motor

Ø90 mm frame // 75 mm stack

all dimensions in mm



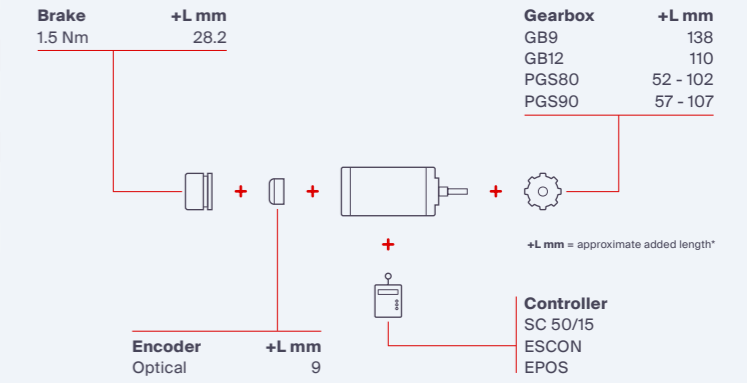
Part number key		Available on request: Custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors	
Modular	#####		
Standard	#####		
Calculated data	#####		

Technical data				
1 Part number		781106	781107	781108
2 Nominal power	W	236	283	283
3 Nominal voltage	V	12	24	48
4 No load speed	rpm	3750	3417	3376
5 No load current	A	3.4	1.2	0.6
6 Nominal speed	rpm	2500	3000	3000
7 Nominal continuous torque (S1)	Nm	0.9	0.9	0.9
8 Nominal continuous current (S1)	A	33.2	14.5	7.3
9 Max. intermittent torque (S2 - 15 minutes)	Nm	1.50	1.50	1.50
10 Stall current	A	83.5	93.0	58.0
11 Stall torque	Nm	2.38	6.14	7.71
12 Stack length	mm	75	75	75
13 Maximum efficiency	%	69	79	80
14 Terminal resistance - phase to phase	Ω	0.116	0.312	0.426
15 Terminal inductance - phase to phase	mH	78.3	422.3	1620.0
16 Speed constant	rpm/V	311.3	135.9	68.0
17 Torque constant	Nm/A	0.03	0.07	0.13
18 Speed torque gradient	rpm/Nm	1667.4	547.1	433.0
19 Rotor inertia	Kgcm ²	8.65 x 10 ⁻⁴	8.65 x 10 ⁻⁴	8.65 x 10 ⁻⁴

Thermal data		Modular system	
20 Ambient temperature	°C	40	

Mechanical data		Modular system	
21 Radial load [distance from flange]	N [mm]	200 [15]	

Other data		Modular system	
22 Number of poles		2	
23 Weight	Kg	4.00	
24 IP rating		IP54	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	



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

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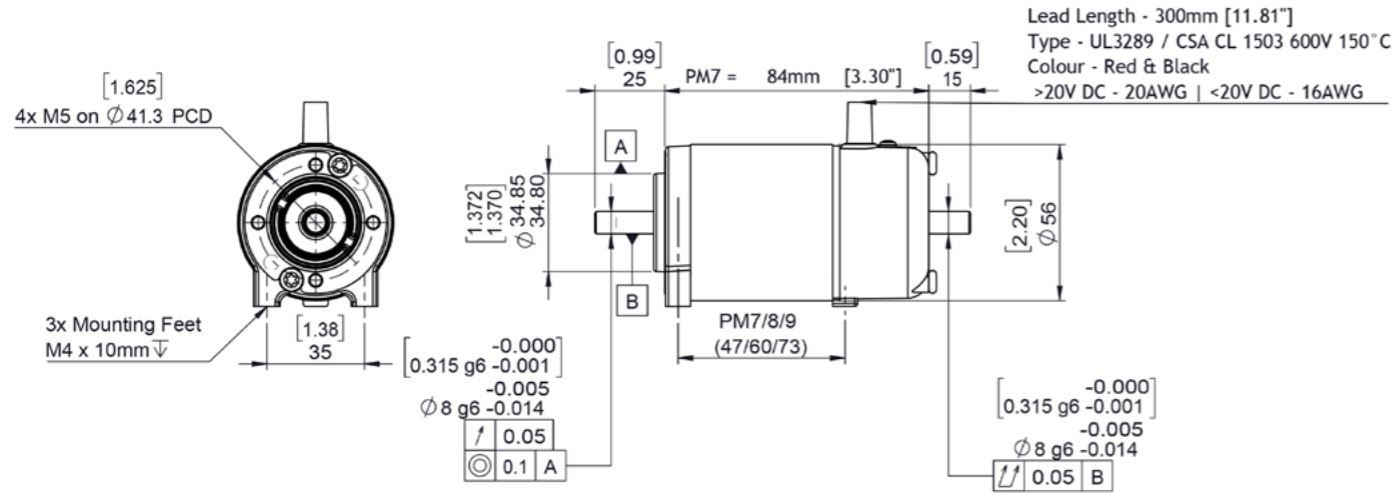
sales@electromate.com



PMDC standard

Reliable and with a high starting torque, Parvalux PMDC motors can be combined with one of our gearboxes to reduce speed and increase torque for the ultimate solution.

- Voltage: 12 - 220 V
- Speed: 1000 - 5000 rpm
- Power: Up to 600 W
- Continuous torque: 0.038 - 1.2 Nm



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

1 Part number		775282	775283	775284	775285
2 Nominal power	W	15	15	15	15
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	3743	4057	4194	4154
5 No load current	A	0.40	0.28	0.13	0.11
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.05	0.05	0.05	0.05
8 Nominal continuous current (S1)	A	2.11	1.39	0.75	0.62
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.08	0.08	0.08	0.08
10 Stall current	A	10.0	4.9	2.4	2.0
11 Stall torque	Nm	0.3	0.2	0.2	0.2
12 Stack length	mm	12	12	12	12
13 Maximum efficiency	%	61	47	52	52
14 Terminal resistance - phase to phase	Ω	1.0	4.9	16.7	24.2
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	319	172	112	93
17 Torque constant	Nm/A	0.028	0.043	0.078	0.094
18 Speed torque gradient	rpm/Nm	13959	20491	23482	23483
19 Rotor inertia	gcm²	361	361	361	361

Thermal data

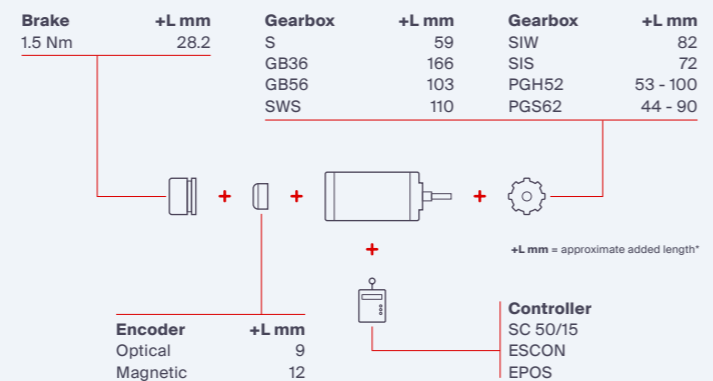
20 Ambient temperature	°C	40
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Mechanical data

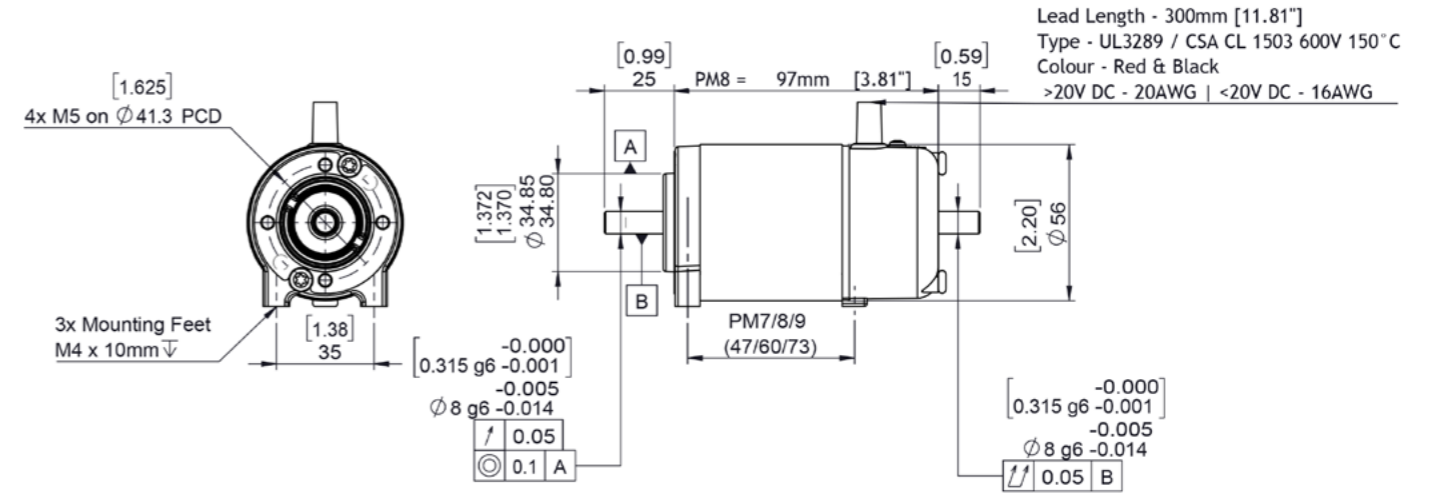
21 Radial load [distance from flange]	N [mm]	110 [15]
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Other data

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



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



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

1 Part number		775295	775296	775297	775298	775299	775300
2 Nominal power	W	25	25	25	25	25	25
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	4317	3812	4099	3936	3849	4229
5 No load current	A	0.60	0.20	0.13	0.11	0.05	0.03
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.078	0.078	0.078	0.078	0.078	0.078
8 Nominal continuous current (S1)	A	3.60	1.90	1.03	0.76	0.34	0.18
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.11	0.11	0.11	0.11	0.11	0.11
10 Stall current	A	19.0	7.9	5.4	4.1	1.3	0.8
11 Stall torque	Nm	0.5	0.5	0.5	0.4	0.3	0.4
12 Stack length	mm	24	24	24	24	24	24
13 Maximum efficiency	%	68	64	65	71	62	70
14 Terminal resistance - phase to phase	Ω	0.5	2.4	4.7	11.7	72.0	171.0
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	353	151	97	78	34	18
17 Torque constant	Nm/A	0.026	0.060	0.090	0.120	0.260	0.520
18 Speed torque gradient	rpm/Nm	9131	8230	4593	9980	13485	10916
19 Rotor inertia	gcm²	523	523	523	523	523	523

Thermal data

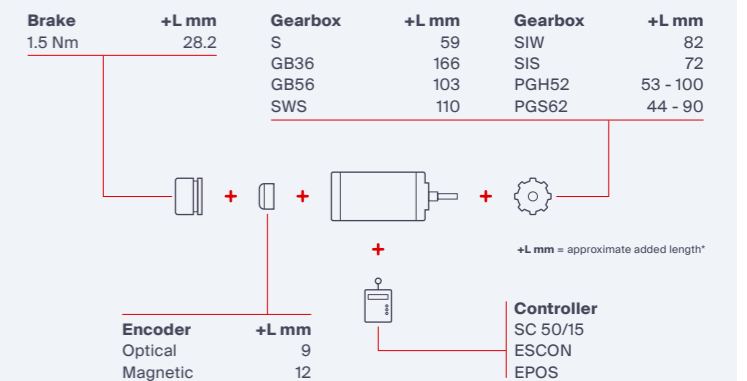
20 Ambient temperature	°C	40
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Mechanical data

21 Radial load [distance from flange]	N [mm]	110 [15]
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Other data

22 Number of poles		2
23 Weight	Kg	0.6
24 IP rating		IP54
25 Enclosure		Enclosed
26 Insulation Class		F
27 Reversible		Yes



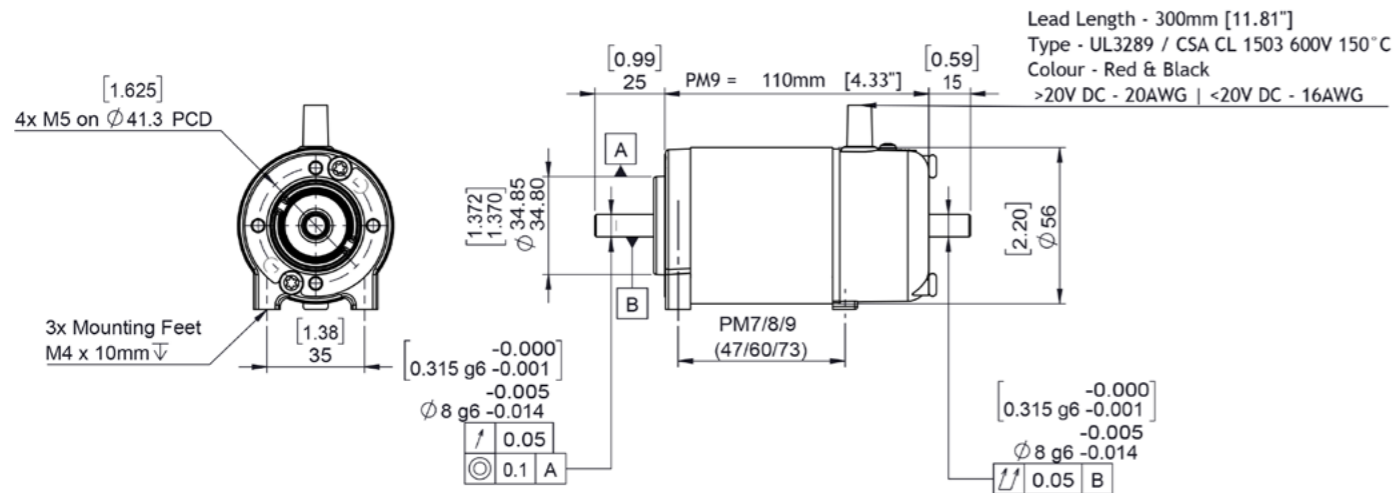
*additional length may also be required for mounting flange between components

PM9

PMDC motor

Ø56 mm frame // 37 mm stack

all dimensions in mm



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

Technical data							
1 Part number		775302	775303	775304	775305	775306	775307
2 Nominal power	W	38	38	38	38	38	38
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	3546	3674	3700	3738	3813	3645
5 No load current	A	0.50	0.20	0.12	0.10	0.10	0.05
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.12	0.12	0.12	0.12	0.12	0.12
8 Nominal continuous current (S1)	A	4.2	2.1	1.3	1.1	0.5	0.3
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.17	0.17	0.17	0.17	0.17	0.17
10 Stall current	A	18.30	10.30	6.20	5.30	2.44	1.12
11 Stall torque	Nm	0.60	0.63	0.63	0.64	0.63	0.60
12 Stack length	mm	37	37	37	37	37	37
13 Maximum efficiency	%	71	75	75	75	66	66
14 Terminal resistance - phase to phase	Ω	0.7	1.8	6.4	9.0	45.0	197.0
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	296	148	90	76	35	17
17 Torque constant	Nm/A	0.033	0.063	0.104	0.120	0.270	0.570
18 Speed torque gradient	rpm/Nm	6087	5827	5827	5825	6055	6055
19 Rotor inertia	gcm²	596	596	596	596	596	596

Thermal data		Compatible products			
20 Ambient temperature	°C	40			
Mechanical data					
21 Radial load [distance from flange]	N [mm]	110 [15]			
Other data					
22 Number of poles		2			
23 Weight	Kg	0.7			
24 IP rating		IP54			
25 Enclosure		Enclosed			
26 Insulation Class		F			
27 Reversible		Yes			

Brake
1.5 Nm

+L mm
28.2

Gearbox
S
GB36
GB56
SWS

+L mm
59
166
103
110

Gearbox
SIW
SIS
PGH52
PGS62

+L mm
82
72
53 - 100
44 - 90

Encoder
Optical
Magnetic

+L mm
9
12

Controller
SC 50/15
ESCON
EPOS

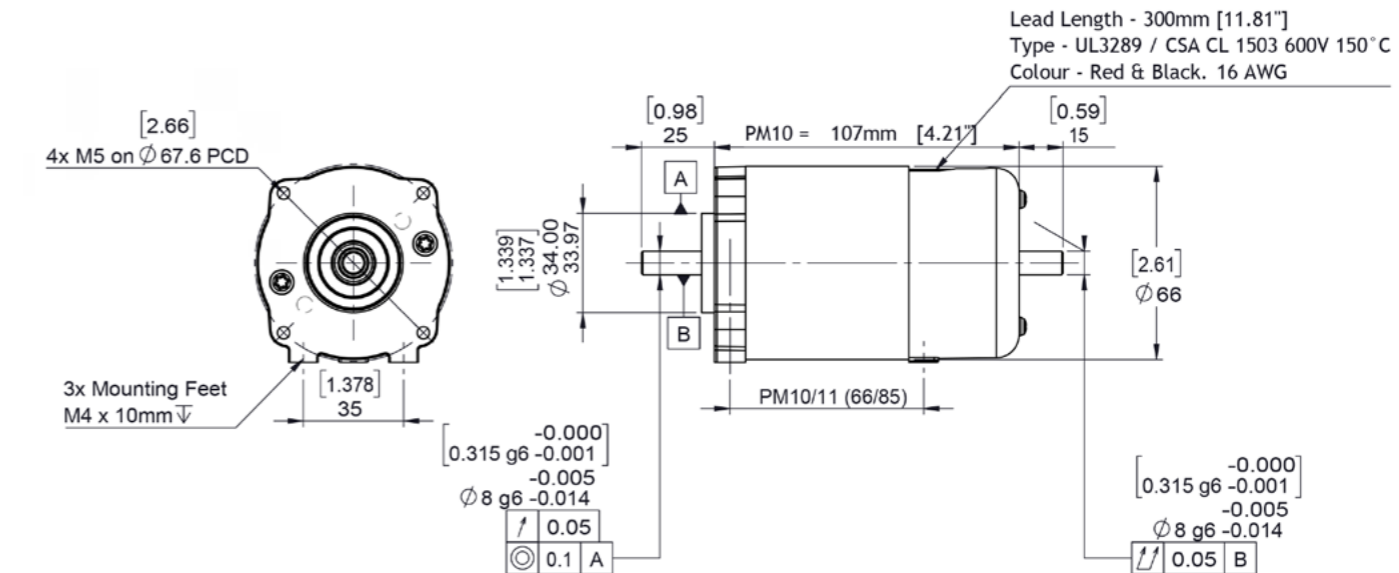
*additional length may also be required for mounting flange between components

PM10

PMDC motor

Ø66 mm frame // 26 mm stack

all dimensions in mm



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

Technical data							
1 Part number		775321	775322	775323	775324	775325	775326
2 Nominal power	W	45	45	45	45	45	45
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	4185	3895	3820	4082	4252	3707
5 No load current	A	0.70	0.34	0.19	0.21	0.07	0.04
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.14	0.14	0.14	0.14	0.14	0.14
8 Nominal continuous current (S1)	A	6.00	2.60	1.70	1.55	0.64	0.30
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.20	0.20	0.20	0.20	0.20	0.20
10 Stall current	A	32.0	11.0	7.9	6.9	3.3	1.5
11 Stall torque	Nm	0.8	0.7	0.7	0.7	0.8	0.8
12 Stack length	mm	26	26	26	26	26	26
13 Maximum efficiency	%	71	74	67	66	73	69
14 Terminal resistance - phase to phase	Ω	0.3	1.2	5.1	5.6	23.7	116.0
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	341	154	93	80	35	16
17 Torque constant	Nm/A	0.260	0.062	0.092	0.105	0.240	0.540
18 Speed torque gradient	rpm/Nm	5165	5765	5385	5854	5342	4827
19 Rotor inertia	gcm²	944	944	944	944	944	944

Thermal data		Compatible products			
20 Ambient temperature	°C	40			
Mechanical data					
21 Radial load [distance from flange]	N [mm]	150 [15]			
Other data					
22 Number of poles		2			
23 Weight	Kg	1.1			
24 IP rating		IP54			
25 Enclosure		Enclosed			
26 Insulation Class		F			
27 Reversible		Yes			

Brake
1.5 Nm

+L mm
28.2

Gearbox
S
M
GB28
GB36

+L mm
59
85
85
166

Gearbox
MIW
MWS
MIS
LIW

+L mm
83
110
95
102

Gearbox
LWS
LIS
PGS62
PGS71

+L mm
127
108
44 - 90
49 - 99

Encoder
Optical
Magnetic

+L mm
9
12

Controller
SC 50/15
ESCON
EPOS

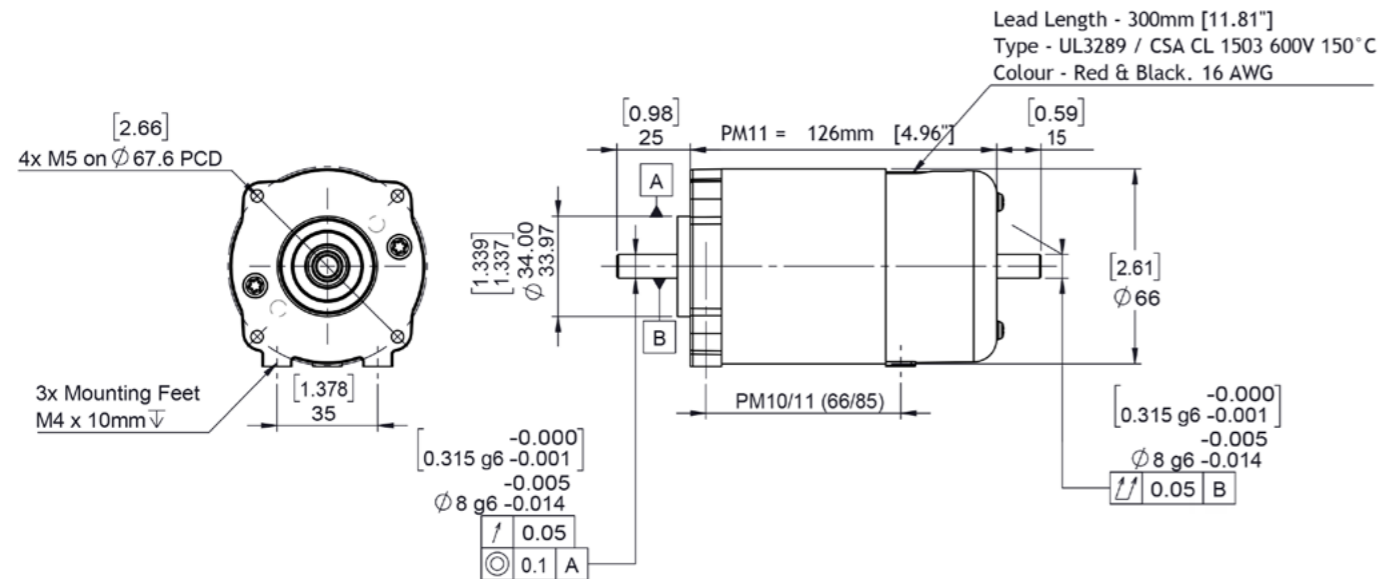
*additional length may also be required for mounting flange between components

PM11

PMDC motor

Ø66 mm frame // 44 mm stack

all dimensions in mm



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

Technical data							
1 Part number		775328	775329	775330	775331	775332	775333
2 Nominal power	W	101	101	101	101	101	101
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	4004	4012	3804	3844	3627	3957
5 No load current	A	0.60	0.40	0.28	0.23	0.12	0.05
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.32	0.32	0.32	0.32	0.32	0.32
8 Nominal continuous current (S1)	A	12.3	5.6	3.3	1.2	1.2	0.7
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.53	0.53	0.53	0.53	0.53	0.53
10 Stall current	A	47.0	22.0	17.0	14.0	6.4	2.5
11 Stall torque	Nm	1.3	1.3	1.8	1.8	1.9	1.3
12 Stack length	mm	44	44	44	44	44	44
13 Maximum efficiency	%	76	81	82	82	80	74
14 Terminal resistance - phase to phase	Ω	0.1	0.7	2.4	1.2	17.2	50.0
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	321	162	93	77	33	18
17 Torque constant	Nm/A	0.03	0.06	0.10	0.12	0.30	0.52
18 Speed torque gradient	rpm/Nm	3149	3061	2142	2165	1914	3051
19 Rotor inertia	gcm²	1260	1260	1260	1260	1260	1260

Thermal data		Compatible products			
20 Ambient temperature	°C	40			
Mechanical data		Gearbox	+L mm	Gearbox	+L mm
		S	59	MIW	83
		M	85	MWS	110
		GB28	85	MIS	95
		GB36	166	LIW	102
		LWS	127	LIS	108
		PGS62	44 - 90	PGS71	49 - 99
Other data					
22 Number of poles		2			
23 Weight	Kg	1.6			
24 IP rating		IP54			
25 Enclosure		Enclosed			
26 Insulation Class		F			
27 Reversible		Yes			

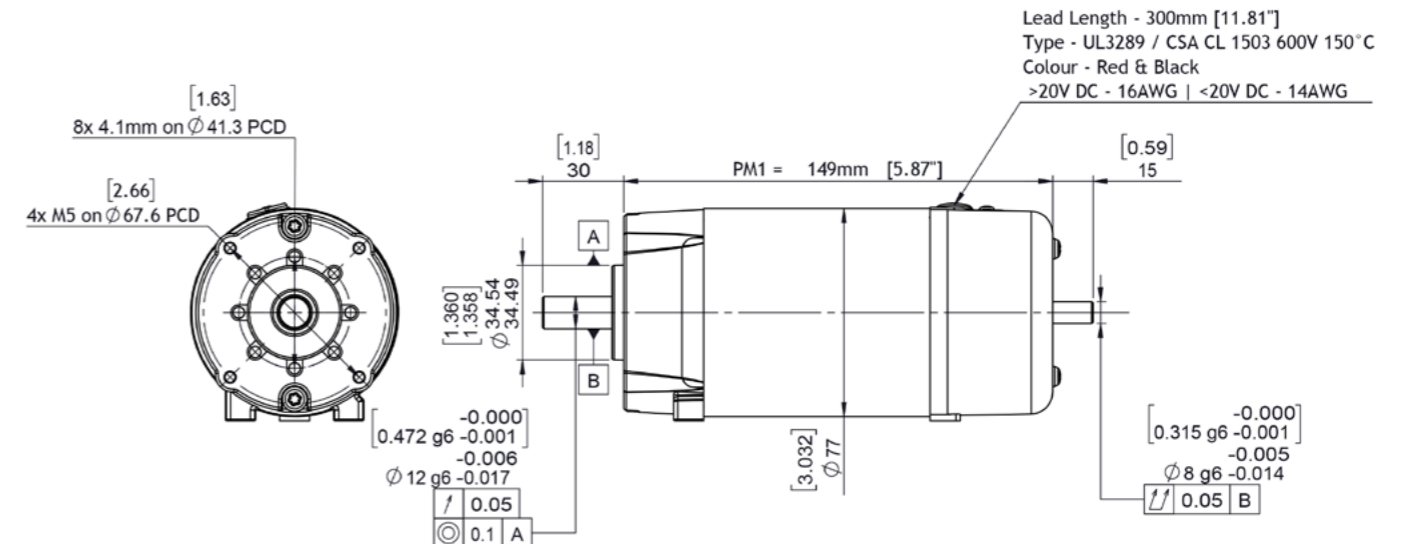
*additional length may also be required for mounting flange between components

PM1

PMDC motor

Ø76 mm frame // 45 mm stack

all dimensions in mm



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

Technical data							
1 Part number		773352	773353	773354	773355	773356	773357
2 Nominal power	W	157	157	157	157	157	157
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	4364	4115	3676	3870	3874	4110
5 No load current	A	1.46	1.08	0.56	0.45	0.26	0.12
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.5	0.5	0.5	0.5	0.5	0.5
8 Nominal continuous current (S1)	A	22.5	10.5	5.7	4.7	2.3	1.1
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.65	0.65	0.65	0.65	0.65	0.65
10 Stall current	A	72.0	40.3	30.0	24.0	9.4	4.2
11 Stall torque	Nm	1.9	2.1	2.9	2.8	2.3	2.1
12 Stack length	mm	45	45	45	45	45	45
13 Maximum efficiency	%	69	68	71	75	63	71
14 Terminal resistance - phase to phase	Ω	0.2	0.6	1.3	2.0	11.8	52.6
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	351	175	89	77	35	18
17 Torque constant	Nm/A	0.024	0.053	0.099	0.120	0.250	0.510
18 Speed torque gradient	rpm/Nm	2601	1963	1283	1398	1715	1991
19 Rotor inertia	gcm²	1260	1260	1260	1260	1260	1260

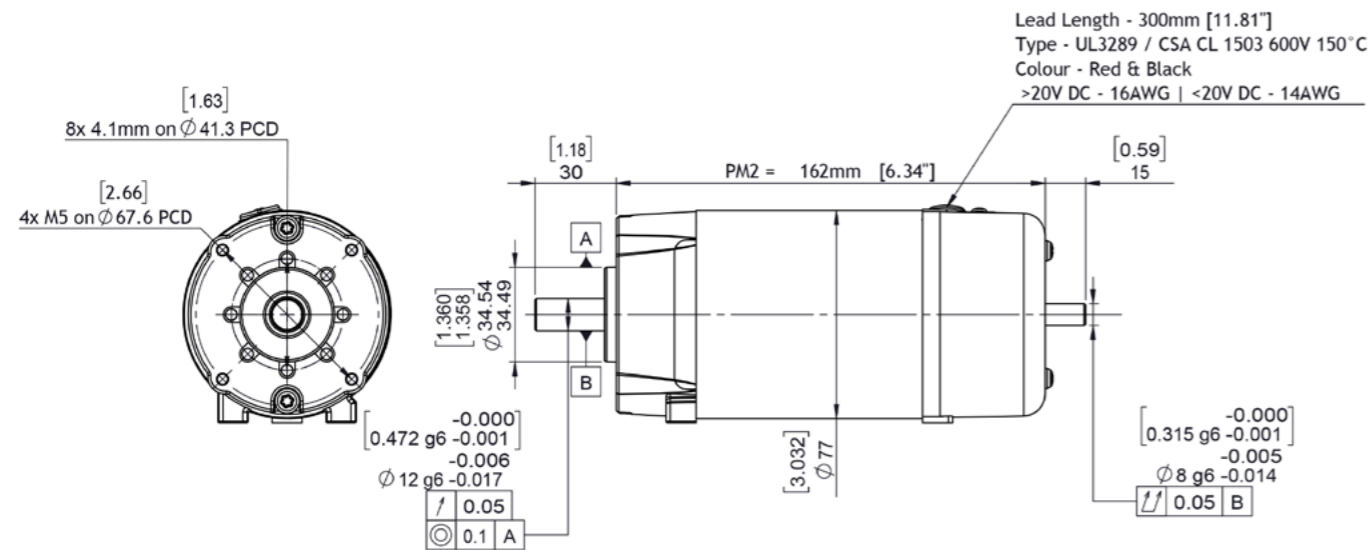
Thermal data		Compatible products			
20 Ambient temperature	°C	40			
Mechanical data		Brake	+L mm	Gearbox	+L mm
		1.5 Nm	28.2	M	85
		2.0 Nm	32.4	GB12	110
				MIW	83
				MIS	95
				LIW	102
				LWS	127
				LIS	108
				PGS71	49 - 99
				PGS80	52 - 102
Other data					
22 Number of poles		2			
23 Weight	Kg	2.1			
24 IP rating		IP21			
25 Enclosure		Ventilated			
26 Insulation Class		F			
27 Reversible		Yes			

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

PM2

PMDC motor
Ø76 mm frame // 57 mm stack

all dimensions in mm



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

Technical data							
1 Part number		773842	773843	773844	773845	773846	773847
2 Nominal power	W	182	182	182	182	182	182
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	4436	3850	3697	4117	3856	4011
5 No load current	A	1.90	1.28	0.55	0.70	0.18	0.11
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.58	0.58	0.58	0.58	0.58	0.58
8 Nominal continuous current (S1)	A	23.5	11.3	6.5	5.9	2.5	1.3
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.68	0.75	0.75	0.75	0.75	0.75
10 Stall current	A	63.4	44.3	33.4	20.0	10.4	5.2
11 Stall torque	Nm	1.7	2.5	3.2	2.1	2.6	2.6
12 Stack length	mm	57	57	57	57	57	57
13 Maximum efficiency	%	73	69	73	68	72	72
14 Terminal resistance - phase to phase	Ω	0.2	0.5	1.2	2.4	10.4	42.0
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	343	161	90	86	35	17
17 Torque constant	Nm/A	0.03	0.06	0.01	0.11	0.25	0.51
18 Speed torque gradient	rpm/Nm	2695	1539	1143	1916	1470	1528
19 Rotor inertia	gcm²	2830	2830	2830	2830	2830	2830

Thermal data		Compatible products						
20 Ambient temperature	°C	40						
Mechanical data								
21 Radial load [distance from flange]	N [mm]	200 [15]						
Other data								
22 Number of poles		2						
23 Weight	Kg	2.5						
24 IP rating		IP21						
25 Enclosure		Ventilated						
26 Insulation Class		F						
27 Reversible		Yes						

Brake	+L mm	Gearbox	+L mm	Gearbox	+L mm
1.5 Nm	28.2	M	85	LWS	127
2.0 Nm	32.4	GB12	110	LIS	108
		MIW	83	PGS71	49 - 99
		MIS	95	PGS80	52 - 102
		LIW	102		

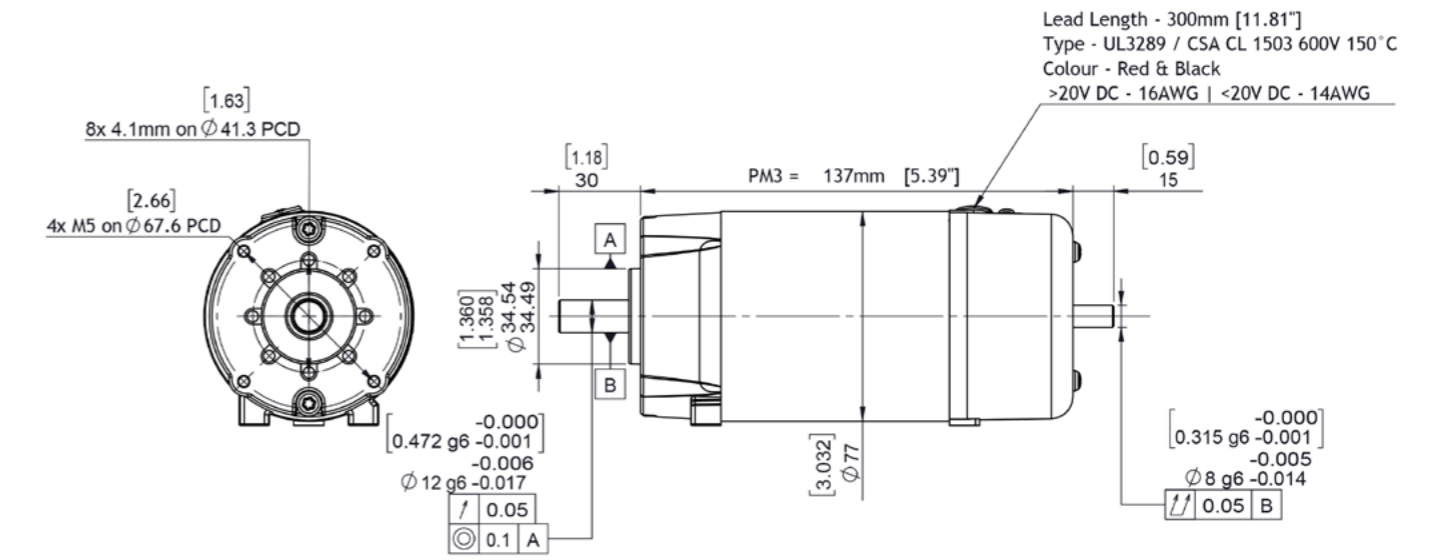
Encoder	+L mm	Controller
Optical	9	SC 50/15
Magnetic	12	ESCON
		EPOS

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

PM3

PMDC motor
Ø76 mm frame // 45 mm stack

all dimensions in mm



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

Technical data							
1 Part number		774305	774306	774307	774308	774309	774310
2 Nominal power	W	119	119	119	119	119	119
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	4364	4115	3676	3870	3874	4110
5 No load current	A	1.46	1.08	0.56	0.45	0.26	0.12
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.38	0.38	0.38	0.38	0.38	0.38
8 Nominal continuous current (S1)	A	17.5	8.2	4.4	3.7	1.8	0.9
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.50	0.50	0.50	0.50	0.50	0.50
10 Stall current	A	72.0	40.3	30.0	24.0	9.4	4.2
11 Stall torque	Nm	1.9	2.1	2.9	2.8	2.3	2.1
12 Stack length	mm	45	45	45	45	45	45
13 Maximum efficiency	%	69	68	71	75	63	71
14 Terminal resistance - phase to phase	Ω	0.2	0.6	1.3	2.0	11.8	52.6
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	351	175	89	77	35	18
17 Torque constant	Nm/A	0.024	0.053	0.099	0.120	0.250	0.510
18 Speed torque gradient	rpm/Nm	2601	1963	1283	1398	1715	1991
19 Rotor inertia	gcm²	1260	1260	1260	1260	1260	1260

Thermal data		Compatible products						
20 Ambient temperature	°C	40						
Mechanical data								
21 Radial load [distance from flange]	N [mm]	200 [15]						
Other data								
22 Number of poles		2						
23 Weight	Kg	2.1						
24 IP rating		IP54						
25 Enclosure		Enclosed						
26 Insulation Class		F						
27 Reversible		Yes						

Brake	+L mm	Gearbox	+L mm	Gearbox	+L mm
1.5 Nm	28.2	M	85	LWS	127
2.0 Nm	32.4	GB12	110	LIS	108
		MIW	83	PGS71	49 - 99
		MIS	95	PGS80	52 - 102
		LIW	102		

Encoder	+L mm	Controller
Optical	9	SC 50/15
Magnetic	12	ESCON
		EPOS

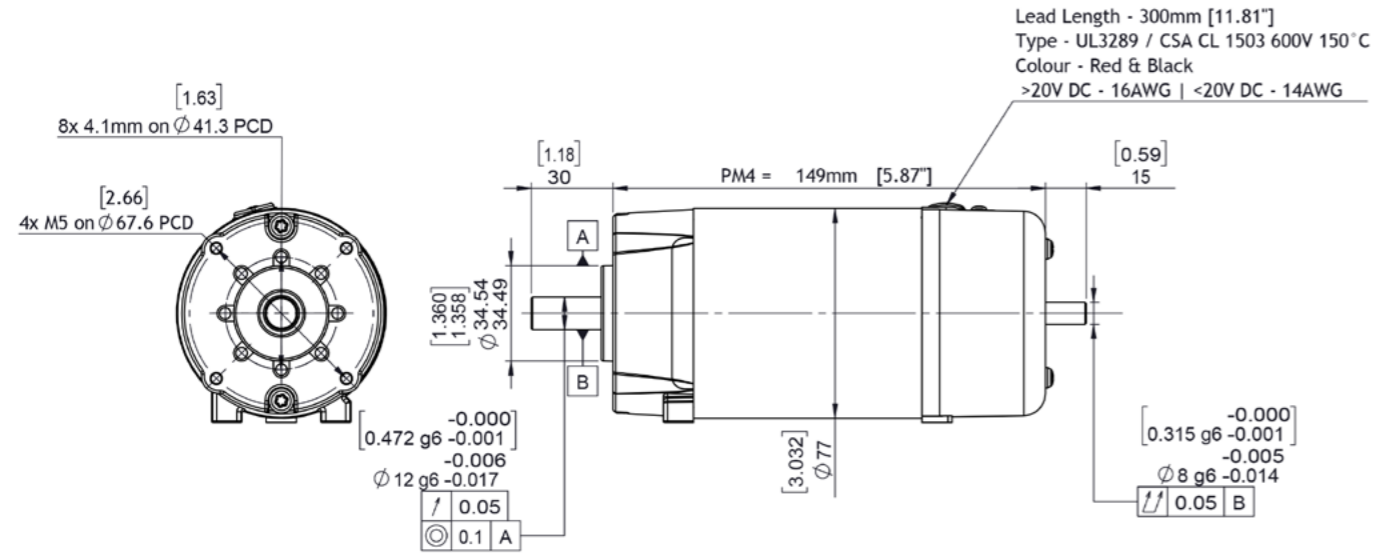
*additional length may also be required for mounting flange between components

PM4

PMDC motor

Ø76 mm frame // 57 mm stack

all dimensions in mm



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

1 Part number		774710	774711	774712	774713	774714	774715
2 Nominal power	W	141	141	141	141	141	141
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	4436	3850	3697	4117	3856	4011
5 No load current	A	1.90	1.28	0.55	0.70	0.18	0.11
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.45	0.45	0.45	0.45	0.45	0.45
8 Nominal continuous current (S1)	A	18.6	9.1	5.1	4.7	2.0	1.0
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.58	0.58	0.58	0.58	0.58	0.58
10 Stall current	A	63.4	44.3	33.4	20.0	10.4	5.2
11 Stall torque	Nm	1.7	2.5	3.2	2.1	2.6	2.6
12 Stack length	mm	57	57	57	57	57	57
13 Maximum efficiency	%	73	69	73	68	72	72
14 Terminal resistance - phase to phase	Ω	0.2	0.5	1.2	2.4	10.4	42.0
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	343	161	90	86	35	17
17 Torque constant	Nm/A	0.027	0.058	0.098	0.110	0.250	0.510
18 Speed torque gradient	rpm/Nm	2695	1539	1143	1916	1470	1528
19 Rotor inertia	gcm ²	2830	2830	2830	2830	2830	2830

Thermal data		Compatible products																																					
20 Ambient temperature	°C	40																																					
Mechanical data		<table border="1"> <tr> <td>Brake</td> <td>+L mm</td> <td>Gearbox</td> <td>+L mm</td> <td>Gearbox</td> <td>+L mm</td> </tr> <tr> <td>1.5 Nm</td> <td>28.2</td> <td>M</td> <td>85</td> <td>LWS</td> <td>127</td> </tr> <tr> <td>2.0 Nm</td> <td>32.4</td> <td>GB12</td> <td>110</td> <td>LIS</td> <td>108</td> </tr> <tr> <td></td> <td></td> <td>MIW</td> <td>83</td> <td>PGS71</td> <td>49 - 99</td> </tr> <tr> <td></td> <td></td> <td>MIS</td> <td>95</td> <td>PGS80</td> <td>52 - 102</td> </tr> <tr> <td></td> <td></td> <td>LIW</td> <td>102</td> <td></td> <td></td> </tr> </table>	Brake	+L mm	Gearbox	+L mm	Gearbox	+L mm	1.5 Nm	28.2	M	85	LWS	127	2.0 Nm	32.4	GB12	110	LIS	108			MIW	83	PGS71	49 - 99			MIS	95	PGS80	52 - 102			LIW	102			
Brake	+L mm	Gearbox	+L mm	Gearbox	+L mm																																		
1.5 Nm	28.2	M	85	LWS	127																																		
2.0 Nm	32.4	GB12	110	LIS	108																																		
		MIW	83	PGS71	49 - 99																																		
		MIS	95	PGS80	52 - 102																																		
		LIW	102																																				
21 Radial load [distance from flange]	N [mm]	200 [15]																																					
Other data																																							
22 Number of poles		2																																					
23 Weight	Kg	2.5																																					
24 IP rating		IP54																																					
25 Enclosure		Enclosed																																					
26 Insulation Class		F																																					
27 Reversible		Yes																																					

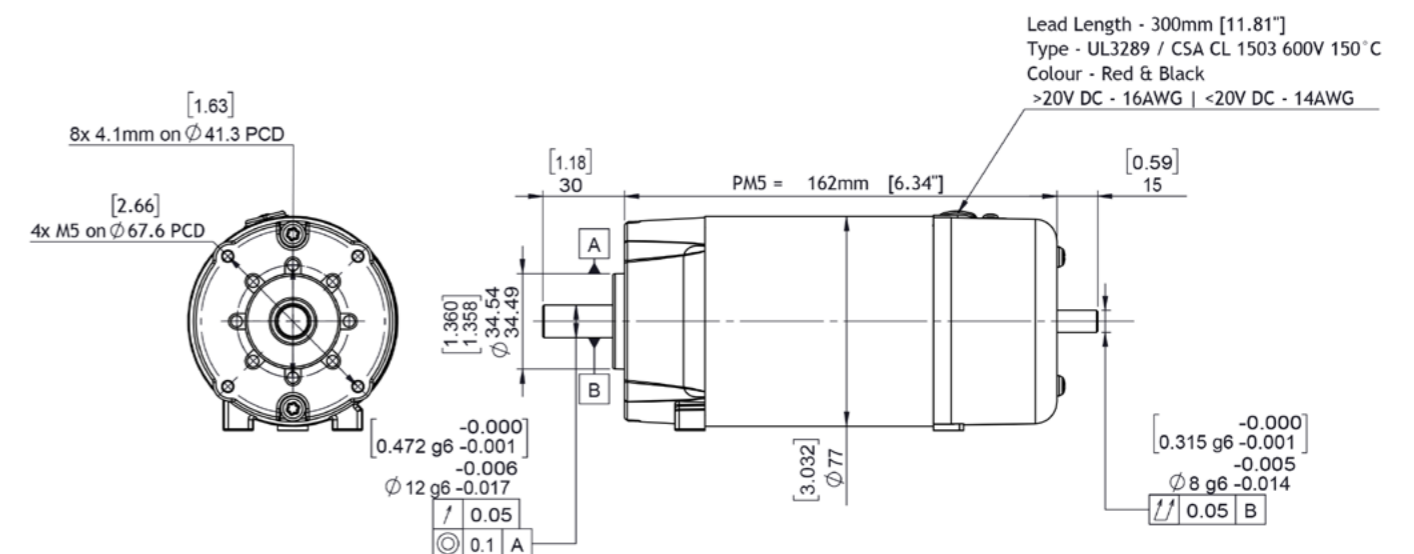
*additional length may also be required for mounting flange between components

PM5

PMDC motor

Ø76 mm frame // 69 mm stack

all dimensions in mm



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

1 Part number		774940	774941	774942	774943	774944	774945
2 Nominal power	W	170	170	170	170	170	170
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	3602	3869	3789	3748	3511	3726
5 No load current	A	1.80	1.31	0.41	0.77	0.29	0.11
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.54	0.54	0.54	0.54	0.54	0.54
8 Nominal continuous current (S1)	A	18.3	10.6	5.6	4.9	2.1	1.1
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.70	0.70	0.70	0.70	0.70	0.70
10 Stall current	A	66.0	53.4	36.0	26.0	12.3	1.1
11 Stall torque	Nm	2.1	3.0	3.6	3.3	3.6	3.3
12 Stack length	mm	69	69	69	69	69	69
13 Maximum efficiency	%	73	71	81	75	73	74
14 Terminal resistance - phase to phase	Ω	0.18	0.45	1.13	1.85	8.97	36.00
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	301	156	91	78	32	16
17 Torque constant	Nm/A	0.033	0.058	0.100	0.130	0.300	0.550
18 Speed torque gradient	rpm/Nm	1723	1284	1048	1146	975	1136
19 Rotor inertia	gcm ²	3250	3250	3250	3250	3250	3250

Thermal data		Compatible products																																					
20 Ambient temperature	°C	40																																					
Mechanical data		<table border="1"> <tr> <td>Brake</td> <td>+L mm</td> <td>Gearbox</td> <td>+L mm</td> <td>Gearbox</td> <td>+L mm</td> </tr> <tr> <td>1.5 Nm</td> <td>28.2</td> <td>M</td> <td>85</td> <td>LWS</td> <td>127</td> </tr> <tr> <td>2.0 Nm</td> <td>32.4</td> <td>GB12</td> <td>110</td> <td>LIS</td> <td>108</td> </tr> <tr> <td></td> <td></td> <td>MIW</td> <td>83</td> <td>PGS71</td> <td>49 - 99</td> </tr> <tr> <td></td> <td></td> <td>MIS</td> <td>95</td> <td>PGS80</td> <td>52 - 102</td> </tr> <tr> <td></td> <td></td> <td>LIW</td> <td>102</td> <td></td> <td></td> </tr> </table>	Brake	+L mm	Gearbox	+L mm	Gearbox	+L mm	1.5 Nm	28.2	M	85	LWS	127	2.0 Nm	32.4	GB12	110	LIS	108			MIW	83	PGS71	49 - 99			MIS	95	PGS80	52 - 102			LIW	102			
Brake	+L mm	Gearbox	+L mm	Gearbox	+L mm																																		
1.5 Nm	28.2	M	85	LWS	127																																		
2.0 Nm	32.4	GB12	110	LIS	108																																		
		MIW	83	PGS71	49 - 99																																		
		MIS	95	PGS80	52 - 102																																		
		LIW	102																																				
21 Radial load [distance from flange]	N [mm]	200 [15]																																					
Other data																																							
22 Number of poles		2																																					
23 Weight	Kg	2.7																																					
24 IP rating		IP54																																					
25 Enclosure		Enclosed																																					
26 Insulation Class		F																																					
27 Reversible		Yes																																					

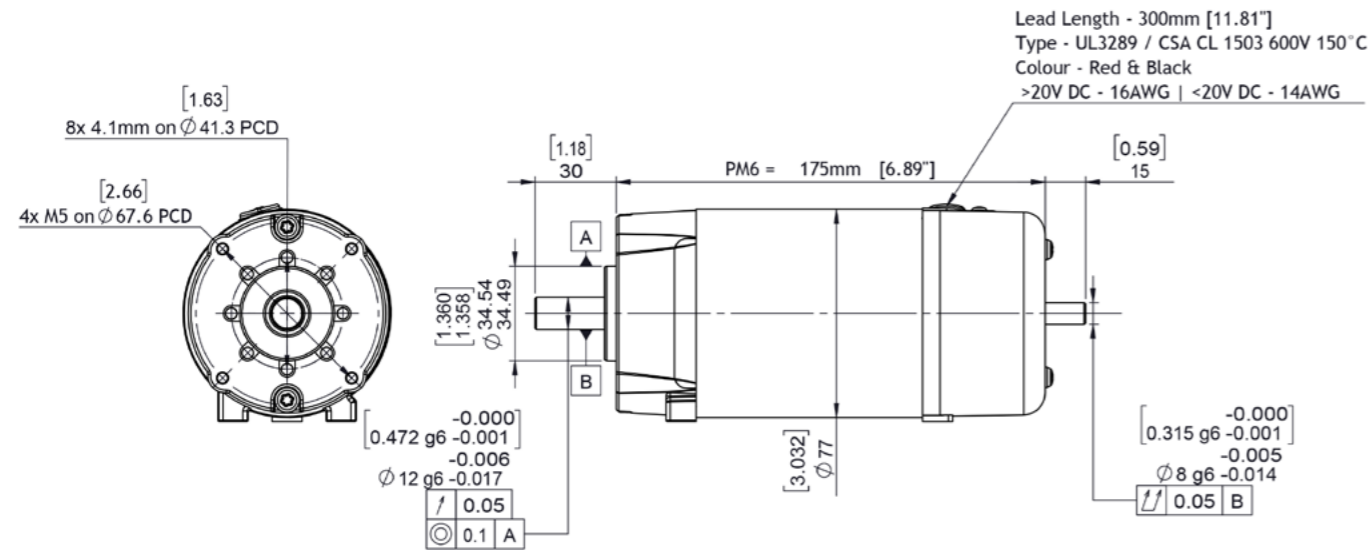
*additional length may also be required for mounting flange between components

PM6

PMDC motor

Ø76 mm frame // 69 mm stack

all dimensions in mm

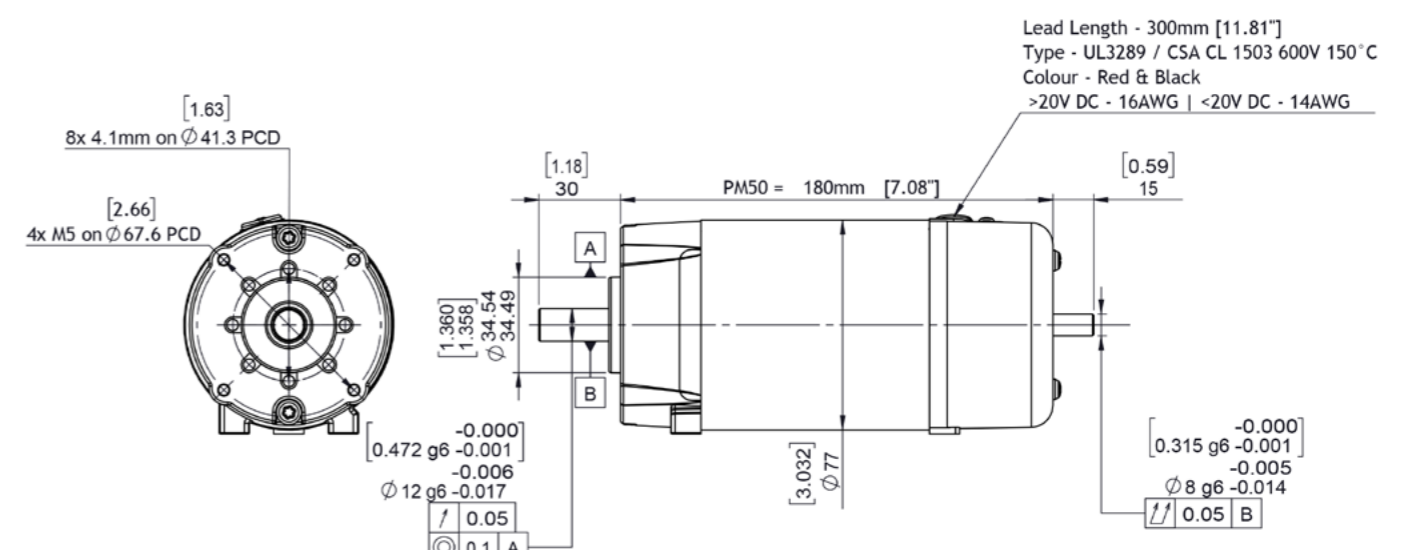


PM50

PMDC motor

Ø76 mm frame // 81 mm stack

all dimensions in mm



all dimensions in mm

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

Technical data							
1 Part number		775121	775122	775123	775124	775125	775126
2 Nominal power	W	220	220	220	220	220	220
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	4322	3869	3789	3748	3511	3726
5 No load current	A	2.20	1.31	0.41	0.77	0.29	0.11
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.7	0.7	0.7	0.7	0.7	0.7
8 Nominal continuous current (S1)	A	2.78	13.4	7.2	6.2	2.6	1.4
9 Max. intermittent torque (S2 - 15 minutes)	Nm	0.9	0.9	0.9	0.9	0.9	0.9
10 Stall current	A	94.0	53.4	36.0	26.0	12.3	1.1
11 Stall torque	Nm	2.5	3.0	3.6	3.3	3.6	3.3
12 Stack length	mm	69	69	69	69	69	69
13 Maximum efficiency	%	75	71	81	75	73	74
14 Terminal resistance - phase to phase	Ω	0.13	0.45	1.13	1.85	8.97	36.00
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	359	156	91	78	32	16
17 Torque constant	Nm/A	0.027	0.058	0.100	0.130	0.300	0.550
18 Speed torque gradient	rpm/Nm	1723	1284	1048	1146	975	1136
19 Rotor inertia	gcm²	3250	3250	3250	3250	3250	3250

Thermal data		Compatible products	
20 Ambient temperature	°C	40	
Mechanical data			
21 Radial load [distance from flange]	N [mm]	200 [15]	
Other data			
22 Number of poles		2	
23 Weight	Kg	2.7	
24 IP rating		IP21	
25 Enclosure		Ventilated	
26 Insulation Class		F	
27 Reversible		Yes	

Brake	+L mm	Gearbox	+L mm	Gearbox	+L mm
1.5 Nm	28.2	M	85	LWS	127
2.0 Nm	32.4	GB12	110	LIS	108
		MIW	83	PGS71	49 - 99
		MIS	95	PGS80	52 - 102
		LIW	102		

Encoder	+L mm	Controller
Optical	9	SC 50/15
Magnetic	12	ESCON
		EPOS

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

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

Technical data							
1 Part number		775158	775159	775160	775161	775162	775163
2 Nominal power	W	210	210	210	210	210	210
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	3559	3865	3748	3641	3668	3797
5 No load current	A	2.30	1.30	0.65	0.52	0.27	0.14
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.67	0.67	0.67	0.67	0.67	0.67
8 Nominal continuous current (S1)	A	22.5	12.3	7.6	6.2	2.5	1.3
9 Max. intermittent torque (S2 - 15 minutes)	Nm	1.17	1.17	1.17	1.17	1.17	1.17
10 Stall current	A	101.0	80.0	51.0	40.4	19.0	8.6
11 Stall torque	Nm	3.3	4.8	4.8	4.7	5.5	4.8
12 Stack length	mm	81	81	81	81	81	81
13 Maximum efficiency	%	74	79	75	75	81	79
14 Terminal resistance - phase to phase	Ω	0.12	0.30	0.78	1.19	5.85	25.50
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	296	156	88	71	33	17
17 Torque constant	Nm/A	0.336	0.060	0.090	0.120	0.290	0.570
18 Speed torque gradient	rpm/Nm	1079	809	777	777	666	797
19 Rotor inertia	gcm²	4600	4600	4600	4600	4600	4600

Thermal data		Compatible products	
20 Ambient temperature	°C	40	
Mechanical data			
21 Radial load [distance from flange]	N [mm]	200 [15]	
Other data			
22 Number of poles		2	
23 Weight	Kg	2.9	
24 IP rating		IP54	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

Brake	+L mm	Gearbox	+L mm	Gearbox	+L mm
1.5 Nm	28.2	M	85	LWS	127
2.0 Nm	32.4	GB12	110	LIS	108
		MIW	83	PGS71	49 - 99
		MIS	95	PGS80	52 - 102
		LIW	102		

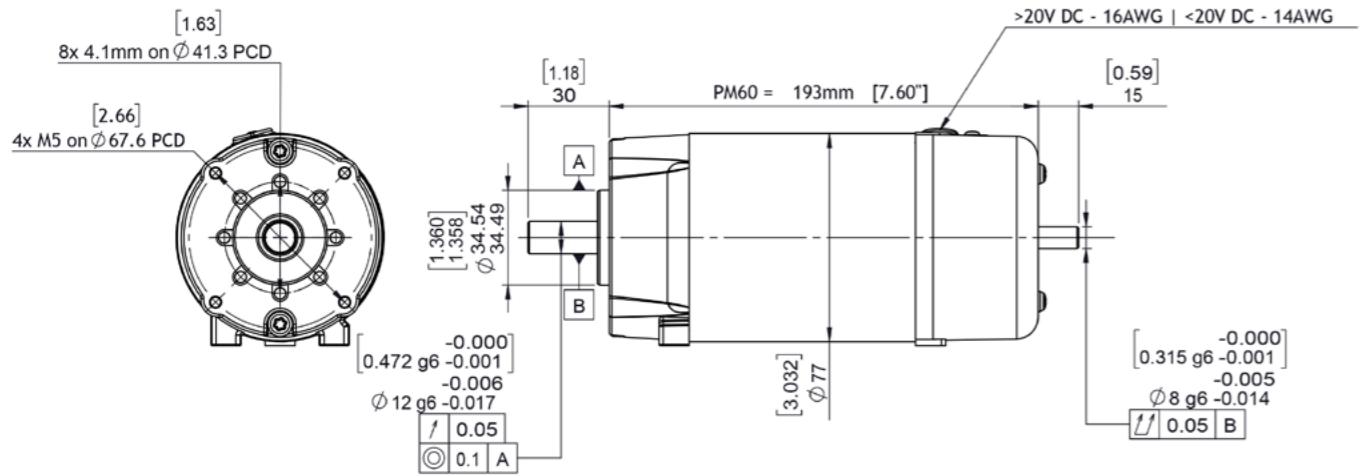
Encoder	+L mm	Controller
Optical	9	SC 50/15
Magnetic	12	ESCON
		EPOS

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

PM60 PMDC motor

Ø76 mm frame // 81 mm stack

all dimensions in mm



Notes

all dimensions in mm

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

Technical data							
1 Part number		775166	775167	775168	775169	775170	775171
2 Nominal power	W	273	273	273	273	273	273
3 Nominal voltage	V	12	24	40	48	110	220
4 No load speed	rpm	3562	3638	3846	3564	4091	3983
5 No load current	A	2.50	1.20	0.59	0.77	0.35	0.13
6 Nominal speed	rpm	3000	3000	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.87	0.87	0.87	0.87	0.87	0.87
8 Nominal continuous current (S1)	A	28.5	14.8	9.4	8.0	3.6	1.8
9 Max. intermittent torque (S2 - 15 minutes)	Nm	1.15	1.15	1.15	1.15	1.15	1.15
10 Stall current	A	112.0	76.0	54.0	55.0	17.4	8.7
11 Stall torque	Nm	3.7	4.8	5.3	6.4	4.5	4.7
12 Stack length	mm	81	81	81	81	81	81
13 Maximum efficiency	%	77	79	80	74	77	78
14 Terminal resistance - phase to phase	Ω	0.11	0.32	0.74	0.87	6.34	25.30
15 Terminal inductance - phase to phase	mH	-	-	-	-	-	-
16 Speed constant	rpm/V	285	146	92	73	37	17
17 Torque constant	Nm/A	0.034	0.064	0.098	0.120	0.260	0.530
18 Speed torque gradient	rpm/Nm	974	760	732	552	906	874
19 Rotor inertia	gcm ²	4600	4600	4600	4600	4600	4600

Thermal data		Compatible products					
20 Ambient temperature	°C	40					
Mechanical data		Brake 1.5 Nm 2.0 Nm	+L mm 28.2 32.4	Gearbox M GB12 MIW MIS LIW	+L mm 85 110 83 95 102	Gearbox LWS LIS PGS71 PGS80	+L mm 127 108 49 - 99 52 - 102
Other data		<p>*additional length may also be required for mounting flange between components</p>					
21 Radial load [distance from flange]	N [mm]	200 [15]					
22 Number of poles		2					
23 Weight	Kg	2.9					
24 IP rating		IP21					
25 Enclosure		Ventilated					
26 Insulation Class		F					
27 Reversible		Yes					

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EPM Range

Our EPM DC motor range offers a wide selection of output speed, power, and torque to perfectly meet the requirements of applications in a myriad of market sectors.

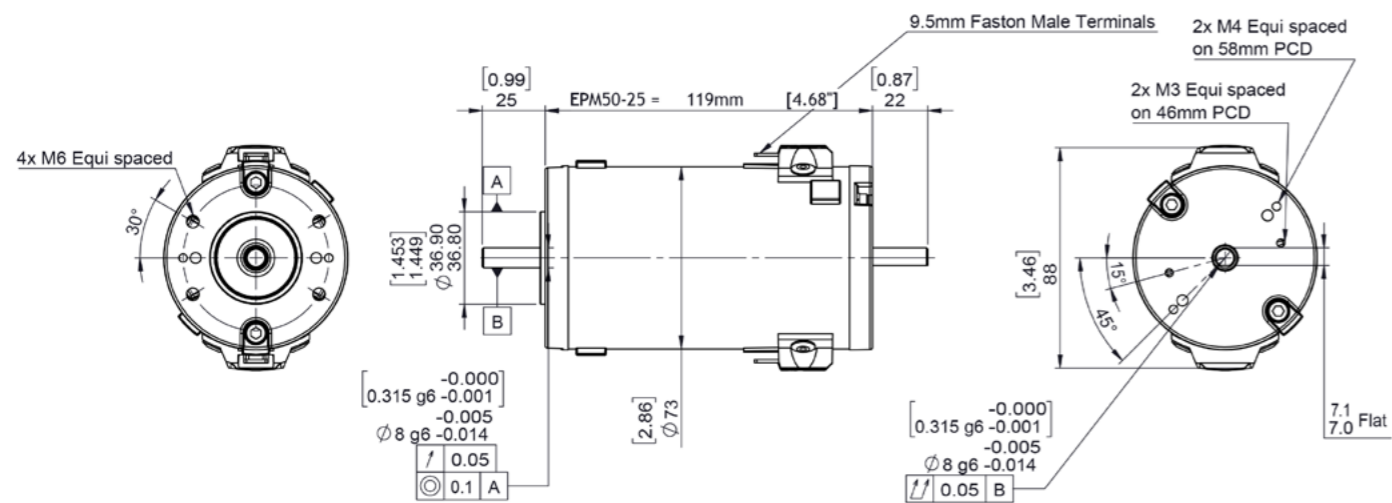
Reliable and robust, they combine seamlessly with our gearbox range, enabling you to fine tune the output performance of your motor-gearbox system.

EPM50-25

PMDC motor

Ø73 mm frame // 25 mm stack

all dimensions in mm



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

1 Part number	-	-	-	-	
2 Nominal power	W	79	79	79	79
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	4376	4136	4073	3893
5 No load current	A	1.75	1.04	0.61	0.31
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.25	0.25	0.25	0.25
8 Nominal continuous current (S1)	A	12.3	5.6	3.3	2.6
9 Max. intermittent torque (S3)	Nm	0.44	0.44	0.44	0.44
10 Stall current	A	35.7	23.6	13.8	11.5
11 Stall torque	Nm	0.81	1.16	1.14	1.20
12 Stack length	mm	25	25	25	25
13 Maximum efficiency	%	61	64	65	70
14 Terminal resistance - phase to phase	Ω	0.34	1.02	2.91	4.19
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	383.4	180.3	106.6	83.4
17 Torque constant	Nm/A	0.024	0.050	0.080	0.110
18 Speed torque gradient	rpm/Nm	5800	3621	3621	3428
19 Rotor inertia	Kgcm ²	1.41 x 10 ⁻⁴	1.41 x 10 ⁻⁴	1.41 x 10 ⁻⁴	1.41 x 10 ⁻⁴

Thermal data		Modular system	
20 Ambient temperature	°C	40	
Mechanical data			
21 Radial load [distance from flange]	N [mm]	150 [15]	
Other data			
22 Number of poles		2	
23 Weight	Kg	1.40	
24 IP rating		IP44	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

Brake

1.5 Nm +L mm 28.2

2.0 Nm +L mm 32.2

Gearbox

GB4/41 +L mm 110

GB12 +L mm 110

PGS62 44 - 90

PGS71 49 - 99

Encoder

Optical +L mm 9

Magnetic +L mm 12

Controller

SC 50/15

ESCON

EPOS

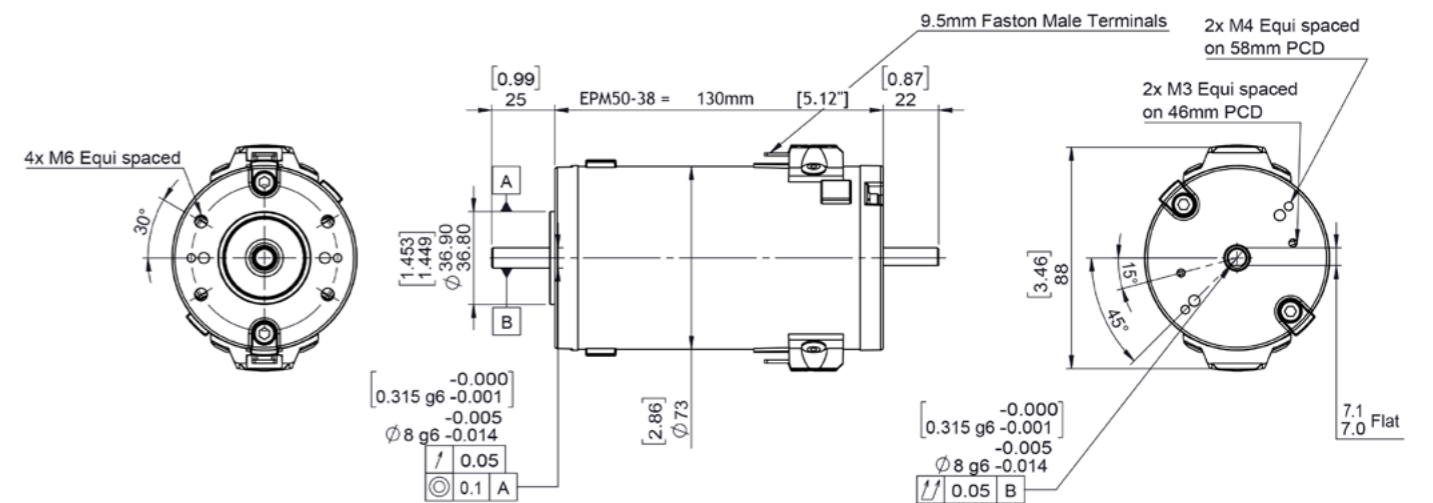
*additional length may also be required for mounting flange between components

EPM50-38

PMDC motor

Ø73 mm frame // 38 mm stack

all dimensions in mm



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

1 Part number	-	-	-	-	
2 Nominal power	W	94	94	94	94
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	3807	3827	3939	3920
5 No load current	A	1.4	0.57	0.35	0.29
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.3	0.3	0.3	0.3
8 Nominal continuous current (S1)	A	11.0	5.5	3.4	2.8
9 Max. intermittent torque (S3)	Nm	0.50	0.50	0.50	0.50
10 Stall current	A	76	32	20	17
11 Stall torque	Nm	2.3	1.9	1.9	1.9
12 Stack length	mm	38	38	38	38
13 Maximum efficiency	%	78	77	77	77
14 Terminal resistance - phase to phase	Ω	0.159	0.760	1.990	2.900
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	312	156	96	80
17 Torque constant	Nm/A	0.031	0.060	0.098	0.120
18 Speed torque gradient	rpm/Nm	1646	2041	2041	2041
19 Rotor inertia	Kgcm ²	1.57 x 10 ⁻⁴	1.57 x 10 ⁻⁴	1.57 x 10 ⁻⁴	1.57 x 10 ⁻⁴

Thermal data		Modular system	
20 Ambient temperature	°C	40	
Mechanical data			
21 Radial load [distance from flange]	N [mm]	150 [15]	
Other data			
22 Number of poles		2	
23 Weight	kg	1.60	
24 IP rating		IP44	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

Brake

1.5 Nm +L mm 28.2

2.0 Nm +L mm 32.2

Gearbox

GB4/41 +L mm 110

GB12 +L mm 110

PGS62 44 - 90

PGS71 49 - 99

Encoder

Optical +L mm 9

Magnetic +L mm 12

Controller

SC 50/15

ESCON

EPOS

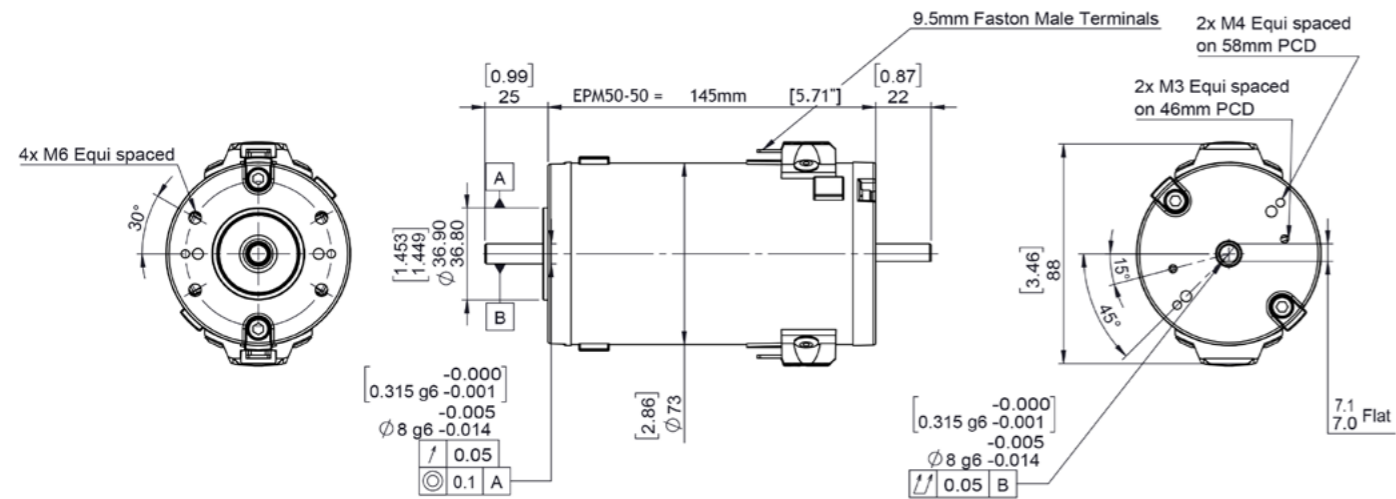
*additional length may also be required for mounting flange between components

EPM50-50

PMDC motor

Ø73 mm frame // 50 mm stack

all dimensions in mm



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

1 Part number	-	-	-	-	
2 Nominal power	W	123	123	123	123
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	4051	3624	3579	3624
5 No load current	A	1.26	0.50	0.30	0.25
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.39	0.39	0.39	0.39
8 Nominal continuous current (S1)	A	14.3	6.7	4.0	3.3
9 Max. intermittent torque (S3)	Nm	0.65	0.65	0.65	0.65
10 Stall current	A	77	41	24	20
11 Stall torque	Nm	2.3	2.5	2.5	2.5
12 Stack length	mm	50	50	50	50
13 Maximum efficiency	%	81	79	80	80
14 Terminal resistance - phase to phase	Ω	0.16	0.59	1.68	2.36
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	1786	148	88	74
17 Torque constant	Nm/A	0.03	0.06	0.11	0.13
18 Speed torque gradient	rpm/Nm	1786	1426	1426	1426
19 Rotor inertia	Kgcm ²	2.28 x 10 ⁻⁴	2.28 x 10 ⁻⁴	2.28 x 10 ⁻⁴	2.28 x 10 ⁻⁴

Thermal data		Modular system	
20 Ambient temperature	°C	40	
Mechanical data			
21 Radial load [distance from flange]	N [mm]	150 [15]	
Other data			
22 Number of poles		2	
23 Weight	Kg	2.05	
24 IP rating		IP44	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

Brake

1.5 Nm +L mm: 28.2

2.0 Nm +L mm: 32.2

Gearbox

GB4/41 +L mm: 110

GB12 +L mm: 110

PGS62 +L mm: 44 - 90

PGS71 +L mm: 49 - 99

Encoder

Optical +L mm: 9

Magnetic +L mm: 12

Controller

SC 50/15

ESCON

EPOS

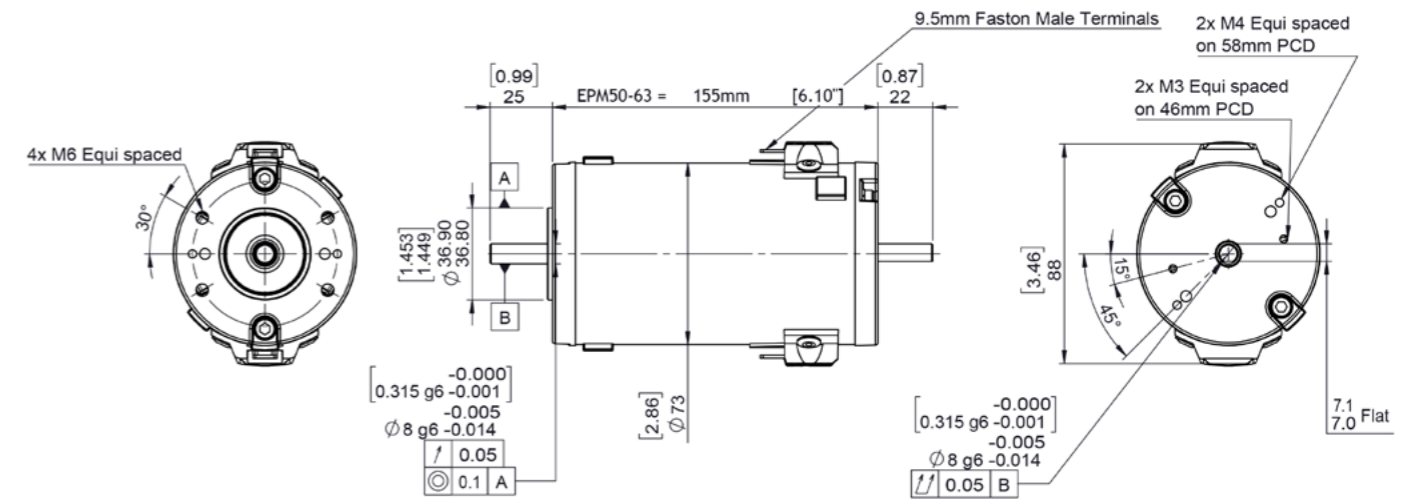
*additional length may also be required for mounting flange between components

EPM50-63

PMDC motor

Ø73 mm frame // 63 mm stack

all dimensions in mm



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

1 Part number	-	-	-	-	
2 Nominal power	W	151	151	151	151
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	4119	3912	3650	3598
5 No load current	A	1.30	0.50	0.27	0.22
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.48	0.48	0.48	0.48
8 Nominal continuous current (S1)	A	18.0	8.4	4.9	4.1
9 Max. intermittent torque (S3)	Nm	0.80	0.80	0.80	0.80
10 Stall current	A	79	42	32	26
11 Stall torque	Nm	2.3	2.8	3.3	3.2
12 Stack length	mm	63	63	63	63
13 Maximum efficiency	%	80	80	81	81
14 Terminal resistance - phase to phase	Ω	0.15	0.57	1.25	1.86
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	330	178	90	74
17 Torque constant	Nm/A	0.03	0.06	0.10	0.13
18 Speed torque gradient	rpm/Nm	1835	1412	1121	1120
19 Rotor inertia	Kgcm ²	2.48 x 10 ⁻⁴	2.48 x 10 ⁻⁴	2.48 x 10 ⁻⁴	2.48 x 10 ⁻⁴

Thermal data		Modular system	
20 Ambient temperature	°C	40	
Mechanical data			
21 Radial load [distance from flange]	N [mm]	150 [15]	
Other data			
22 Number of poles		2	
23 Weight	Kg	2.15	
24 IP rating		IP44	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

Brake

1.5 Nm +L mm: 28.2

2.0 Nm +L mm: 32.2

Gearbox

GB4/41 +L mm: 110

GB12 +L mm: 110

PGS62 +L mm: 44 - 90

PGS71 +L mm: 49 - 99

Encoder

Optical +L mm: 9

Magnetic +L mm: 12

Controller

SC 50/15

ESCON

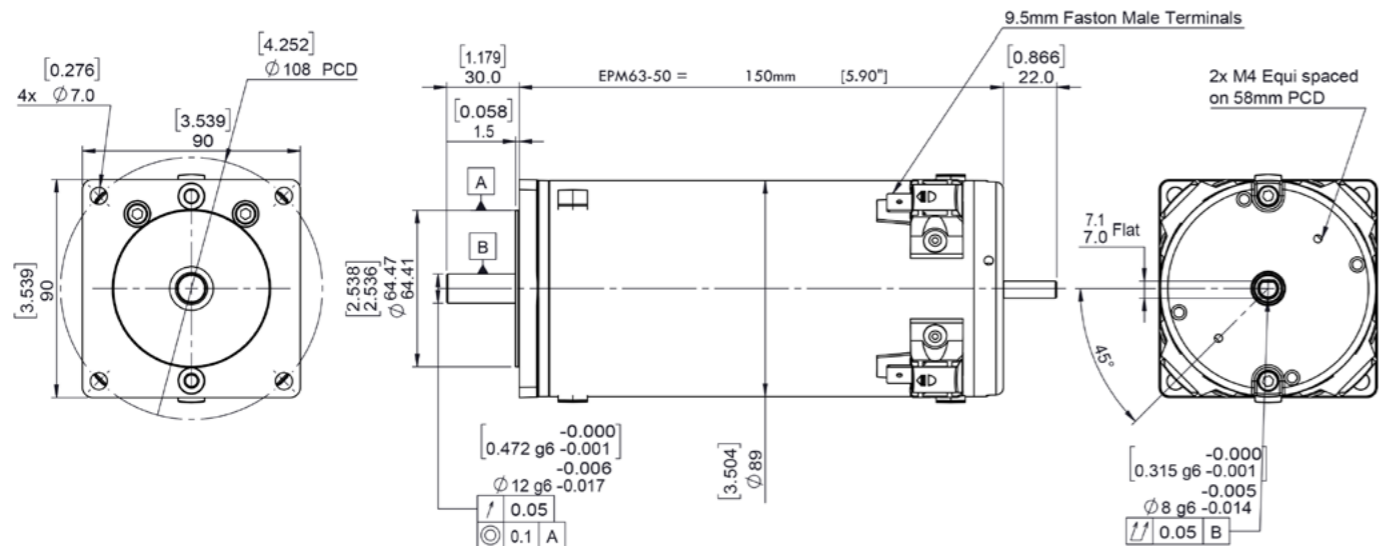
EPOS

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

EPM63-50 PMDC motor

Ø90 mm frame // 50 mm stack

all dimensions in mm



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

Technical data					
1 Part number	-	-	-	-	-
2 Nominal power	W	220	220	220	220
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	3899	3992	3881	3854
5 No load current	A	4.70	2.60	1.50	1.24
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.7	0.7	0.7	0.7
8 Nominal continuous current (S1)	A	28.4	14.5	8.4	7.0
9 Max. intermittent torque (S3)	Nm	1.17	1.17	1.17	1.17
10 Stall current	A	115	83	47	39
11 Stall torque	Nm	3.3	4.8	4.7	4.6
12 Stack length	mm	50	50	50	50
13 Maximum efficiency	%	67	70	70	70
14 Terminal resistance - phase to phase	Ω	0.10	0.29	0.85	1.24
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	320	159	93	77
17 Torque constant	Nm/A	0.03	0.06	0.10	0.12
18 Speed torque gradient	rpm/Nm	1200	831	831	831
19 Rotor inertia	Kgcm²	6.13 x 10 ⁻⁴	6.13 x 10 ⁻⁴	6.13 x 10 ⁻⁴	6.13 x 10 ⁻⁴

Thermal data		Modular system			
20 Ambient temperature	°C	40			

Mechanical data		Modular system	
21 Radial load [distance from flange]	N [mm]	200 [15]	

Other data		Modular system	
22 Number of poles		4	
23 Weight	Kg	3.00	
24 IP rating		IP44	
25 Enclosure		Enclosed	
26 Insulation Class		F	
27 Reversible		Yes	

Gearbox		+L mm	
GB4/41		110	
GB12		110	
GB9		138	
PGS62		44 - 90	
PGS71		49 - 99	

Encoder		+L mm	
Optical		9	
Magnetic		12	

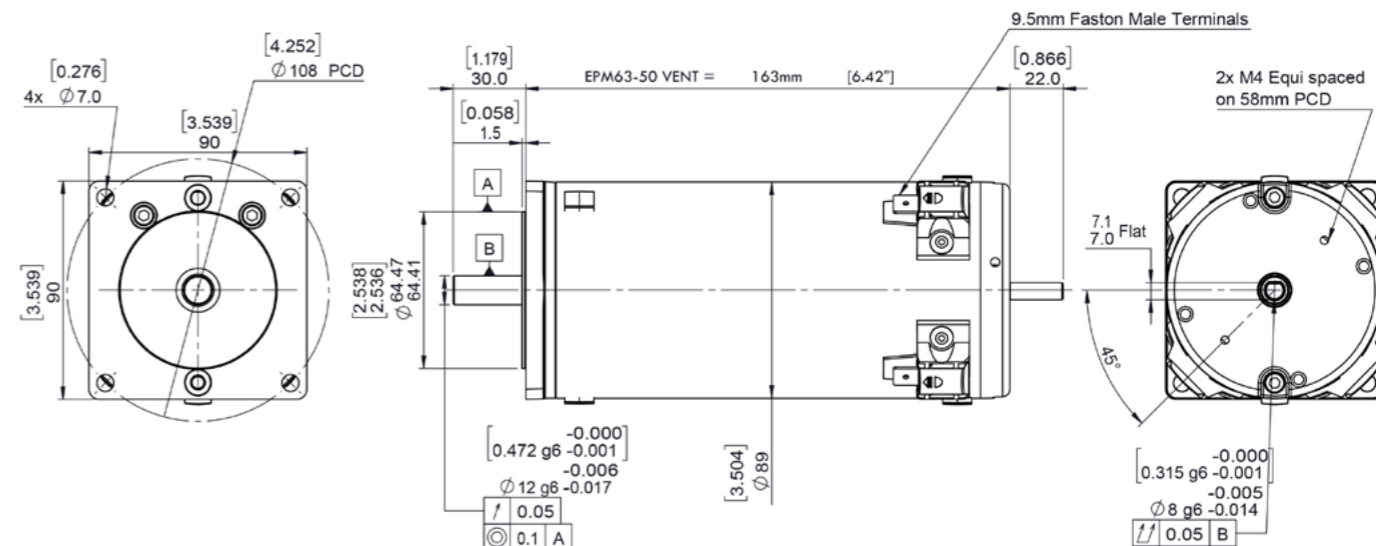
Controller		+L mm	
SC 50/15			
ESCON			
EPOS			

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

EPM63-50 Fan Cooled PMDC motor

Ø90 mm frame // 50 mm stack

all dimensions in mm



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

Technical data					
1 Part number	-	-	-	-	-
2 Nominal power	W	327	327	327	327
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	4548	3992	3881	3854
5 No load current	A	5.50	2.60	1.50	1.04
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	1.04	1.04	1.04	1.04
8 Nominal continuous current (S1)	A	46.0	20.0	11.4	7.0
9 Max. intermittent torque (S3)	Nm	1.60	1.60	1.60	1.60
10 Stall current	A	156.0	83.0	47.0	38.7
11 Stall torque	Nm	3.8	4.8	4.7	4.6
12 Stack length	mm	50	50	50	50
13 Maximum efficiency	%	69	70	70	70
14 Terminal resistance - phase to phase	Ω	0.08	0.29	0.85	1.24
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	371	159	93	77
17 Torque constant	Nm/A	0.025	0.059	0.100	0.123
18 Speed torque gradient	rpm/Nm	1200	831	831	831
19 Rotor inertia	Kgcm²	6.13 x 10 ⁻⁴	6.13 x 10 ⁻⁴	6.13 x 10 ⁻⁴	6.13 x 10 ⁻⁴

Thermal data		Modular system			
20 Ambient temperature	°C	40			

Mechanical data		Modular system	
21 Radial load [distance from flange]	N [mm]	200 [15]	

Other data		Modular system	
22 Number of poles		4	
23 Weight	Kg	3.10	
24 IP rating		IP21	
25 Enclosure		Ventilated	
26 Insulation Class		F	
27 Reversible		Yes	

Gearbox		+L mm	
GB4/41		110	
GB12		110	
GB9		138	
PGS62		44 - 90	
PGS71		49 - 99	

Encoder		+L mm	
Optical		9	
Magnetic		12	

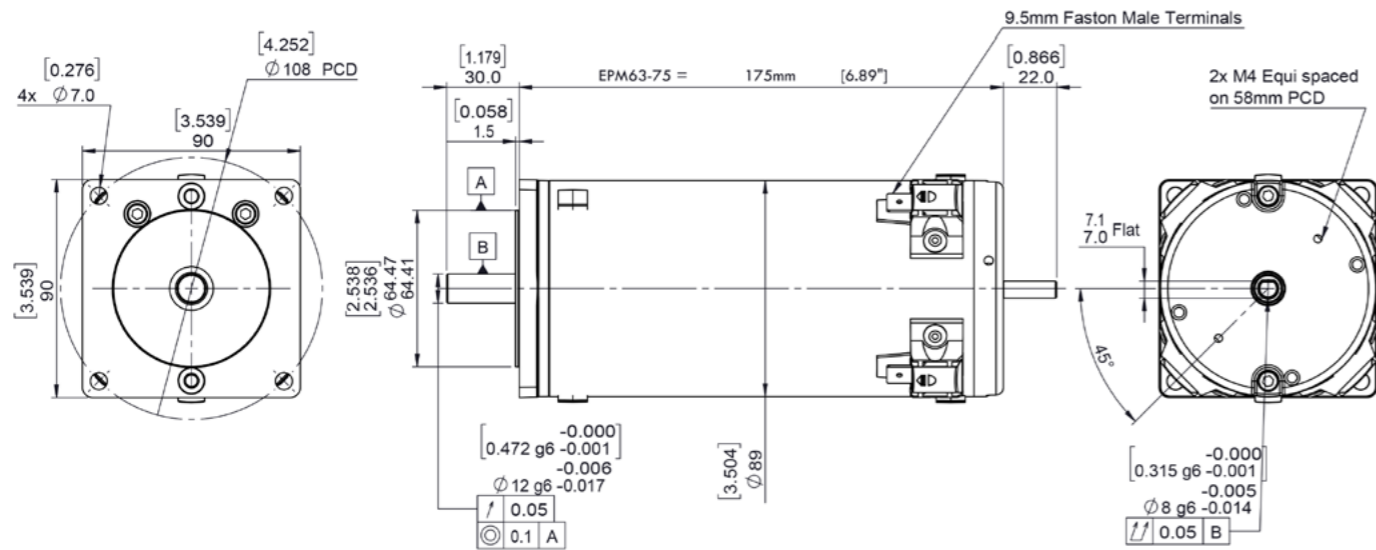
Controller		+L mm	
SC 50/15			
ESCON			
EPOS			

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

EPM63-75 PMDC motor

Ø90 mm frame // 75 mm stack

all dimensions in mm



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

1 Part number	-	-	-	-	
2 Nominal power	W	283	283	283	283
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	3564	3973	3913	3973
5 No load current	A	3.40	1.70	1.00	0.85
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	0.9	0.9	0.9	0.9
8 Nominal continuous current (S1)	A	25.8	13.2	7.8	6.6
9 Max. intermittent torque (S3)	Nm	1.50	1.50	1.50	1.50
10 Stall current	A	178.0	88.0	51.3	44.0
11 Stall torque	Nm	5.5	5.3	5.2	5.3
12 Stack length	mm	75	75	75	75
13 Maximum efficiency	%	67	79	79	80
14 Terminal resistance - phase to phase	Ω	0.067	0.272	0.780	1.090
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	288.0	160.0	94.4	80.0
17 Torque constant	Nm/A	0.031	0.061	0.100	0.120
18 Speed torque gradient	rpm/Nm	649	755	755	755
19 Rotor inertia	Kgcm²	2.83 x 10 ⁻⁴	2.83 x 10 ⁻⁴	2.83 x 10 ⁻⁴	2.83 x 10 ⁻⁴

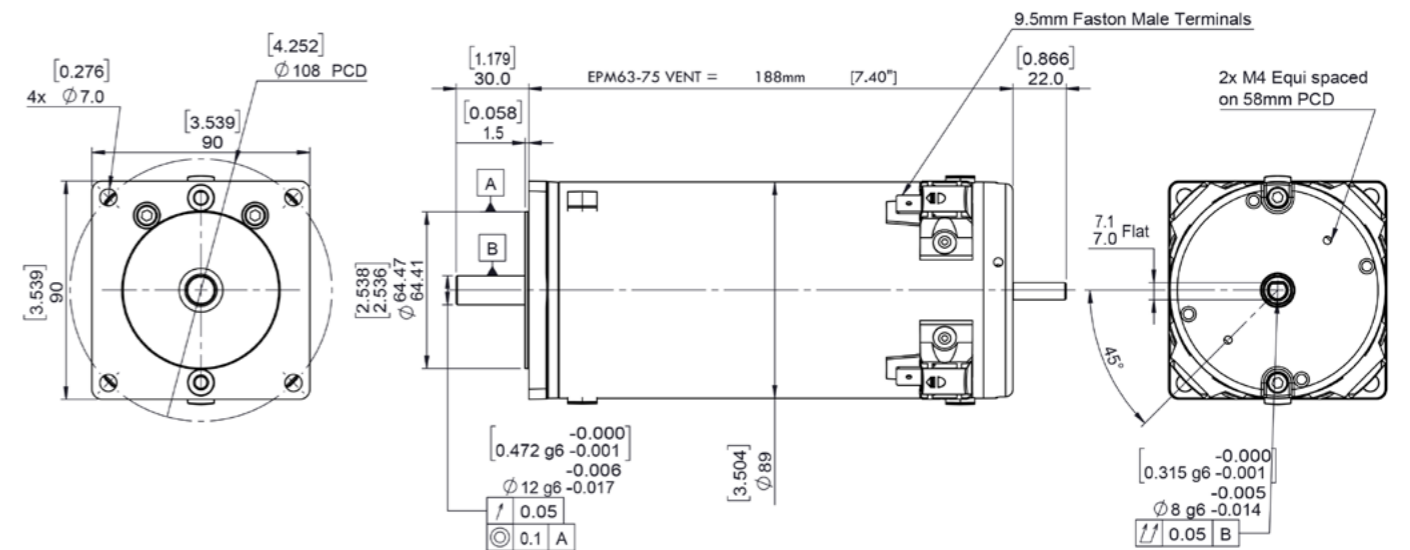
Thermal data		Modular system			
20 Ambient temperature	°C	40			
Mechanical data		Brake	+L mm	Gearbox	+L mm
21 Radial load [distance from flange]	N [mm]	2.0 Nm	32.2	GB4/41	110
				GB12	110
				GB9	138
				PGS62	44 - 90
				PGS71	49 - 99
Other data		Encoder	+L mm	Controller	
22 Number of poles		Optical	9	SC 50/15	
23 Weight	Kg	Magnetic	12	ESCON	
24 IP rating				EPOS	
25 Enclosure					
26 Insulation Class					
27 Reversible					

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

EPM63-75 Fan Cooled PMDC motor

Ø90 mm frame // 75 mm stack

all dimensions in mm



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

1 Part number	-	-	-	-	
2 Nominal power	W	377	377	377	377
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	4158	3973	3913	3973
5 No load current	A	4.00	1.70	1.00	0.85
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	1.2	1.2	1.2	1.2
8 Nominal continuous current (S1)	A	30.0	21.4	12.6	10.7
9 Max. intermittent torque (S3)	Nm	1.80	1.80	1.80	1.80
10 Stall current	A	242	88	51	44
11 Stall torque	Nm	6.4	5.3	5.2	5.3
12 Stack length	mm	75	75	75	75
13 Maximum efficiency	%	75	80	79	79
14 Terminal resistance - phase to phase	Ω	0.050	0.272	0.780	1.090
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	335	160	94	80
17 Torque constant	Nm/A	0.027	0.061	0.100	0.120
18 Speed torque gradient	rpm/Nm	649	755	755	755
19 Rotor inertia	Kgcm²	2.83 x 10 ⁻⁴	2.83 x 10 ⁻⁴	2.83 x 10 ⁻⁴	2.83 x 10 ⁻⁴

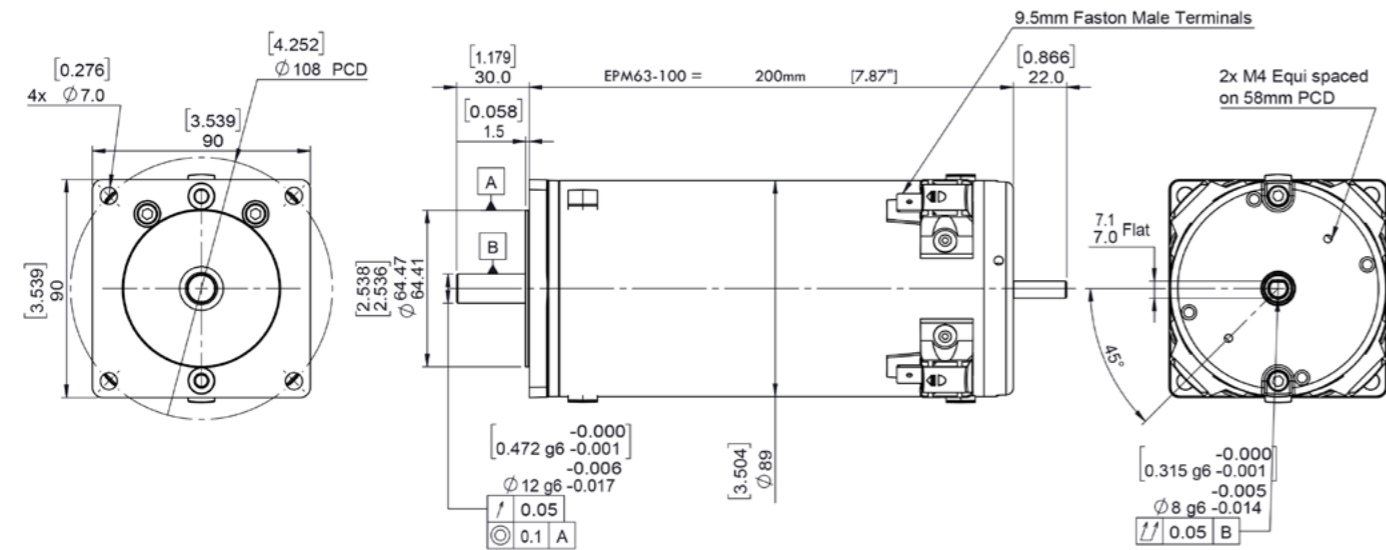
Thermal data		Compatible products			
20 Ambient temperature	°C	40			
Mechanical data		Brake	+L mm	Gearbox	+L mm
21 Radial load [distance from flange]	N [mm]	2.0 Nm	32.2	GB4/41	110
				GB12	110
				GB9	138
				PGS62	44 - 90
				PGS71	49 - 99
Other data		Encoder	+L mm	Controller	
22 Number of poles		Optical	9	SC 50/15	
23 Weight	Kg	Magnetic	12	ESCON	
24 IP rating				EPOS	
25 Enclosure					
26 Insulation Class					
27 Reversible					

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

EPM63-100 PMDC motor

Ø90 mm frame // 100 mm stack

all dimensions in mm



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

1 Part number	-	-	-	-	
2 Nominal power	W	377	377	377	377
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	4771	3895	3819	3895
5 No load current	A	5.20	1.90	1.10	0.94
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	1.2	1.2	1.2	1.2
8 Nominal continuous current (S1)	A	54.6	22.3	13.1	11.1
9 Max. intermittent torque (S3)	Nm	1.90	1.90	1.90	1.90
10 Stall current	A	194	134	77	67
11 Stall torque	Nm	4.6	7.7	7.5	7.7
12 Stack length	mm	100	100	100	100
13 Maximum efficiency	%	73	78	78	78
14 Terminal resistance - phase to phase	Ω	0.062	0.300	0.520	0.720
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	393	158	93	79
17 Torque constant	Nm/A	0.024	0.060	0.100	0.120
18 Speed torque gradient	rpm/Nm	1041	509	509	509
19 Rotor inertia	gcm²	9.64 x 10 ⁻⁴	9.64 x 10 ⁻⁴	9.64 x 10 ⁻⁴	9.64 x 10 ⁻⁴

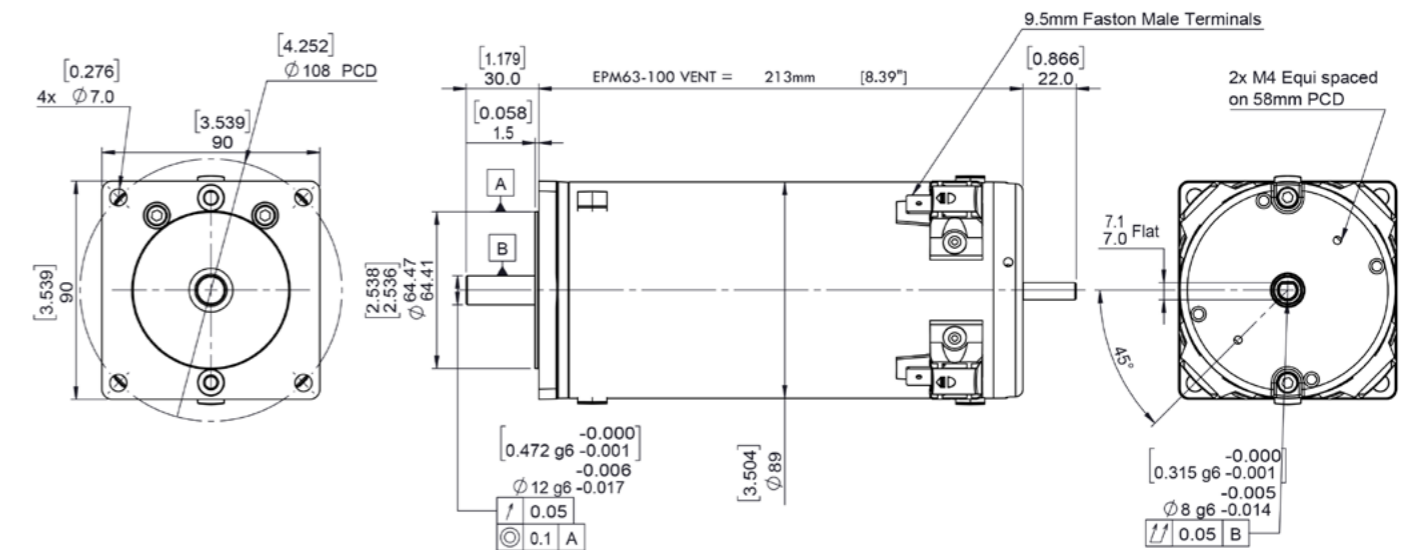
Thermal data		Modular system	
20 Ambient temperature	°C	40	
Mechanical data		Brake	+L mm
21 Radial load [distance from flange]	N [mm]	2.0 Nm	32.2
Other data		Gearbox	+L mm
22 Number of poles		GB4/41	110
23 Weight	Kg	GB12	110
24 IP rating		GB9	138
25 Enclosure		PGS62	44 - 90
26 Insulation Class		PGS71	49 - 99
27 Reversible	Yes		

Diagram showing the assembly of the motor with a brake, gearbox, encoder, and controller. The diagram includes dimensions for the added length (+L mm) for each component: Brake (2.0 Nm), Gearbox (GB4/41, GB12, GB9, PGS62, PGS71), Encoder (Optical, Magnetic), and Controller (SC 50/15, ESCON, EPOS). A note indicates: "+L mm = approximate added length*"

EPM63-100 Fan Cooled PMDC motor

Ø90 mm frame // 100 mm stack

all dimensions in mm



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

1 Part number	-	-	-	-	
2 Nominal power	W	471	471	471	471
3 Nominal voltage	V	12	24	40	48
4 No load speed	rpm	4771	3895	3819	3895
5 No load current	A	5.20	1.90	1.10	0.94
6 Nominal speed	rpm	3000	3000	3000	3000
7 Nominal continuous torque (S1)	Nm	1.5	1.5	1.5	1.5
8 Nominal continuous current (S1)	A	67.0	27.5	16.2	13.7
9 Max. intermittent torque (S3)	Nm	2.00	2.40	2.40	2.40
10 Stall current	A	194	134	77	67
11 Stall torque	Nm	4.6	7.7	7.5	7.7
12 Stack length	mm	100	100	100	100
13 Maximum efficiency	%	67	78	78	78
14 Terminal resistance - phase to phase	Ω	0.06	0.18	0.52	0.72
15 Terminal inductance - phase to phase	mH	-	-	-	-
16 Speed constant	rpm/V	393	158	93	79
17 Torque constant	Nm/A	0.024	0.060	0.100	0.120
18 Speed torque gradient	rpm/Nm	1041	509	509	509
19 Rotor inertia	Kg/cm²	9.64 x 10 ⁻⁴	9.64 x 10 ⁻⁴	9.64 x 10 ⁻⁴	9.64 x 10 ⁻⁴

Thermal data		Compatible products	
20 Ambient temperature	°C	40	
Mechanical data		Brake	+L mm
21 Radial load [distance from flange]	N [mm]	2.0 Nm	32.2
Other data		Gearbox	+L mm
22 Number of poles		GB4/41	110
23 Weight	Kg	GB12	110
24 IP rating		GB9	138
25 Enclosure		PGS62	44 - 90
26 Insulation Class		PGS71	49 - 99
27 Reversible	Yes		

Diagram showing the assembly of the fan-cooled motor with a brake, gearbox, encoder, and controller. The diagram includes dimensions for the added length (+L mm) for each component: Brake (2.0 Nm), Gearbox (GB4/41, GB12, GB9, PGS62, PGS71), Encoder (Optical, Magnetic), and Controller (SC 50/15, ESCON, EPOS). A note indicates: "+L mm = approximate added length*"

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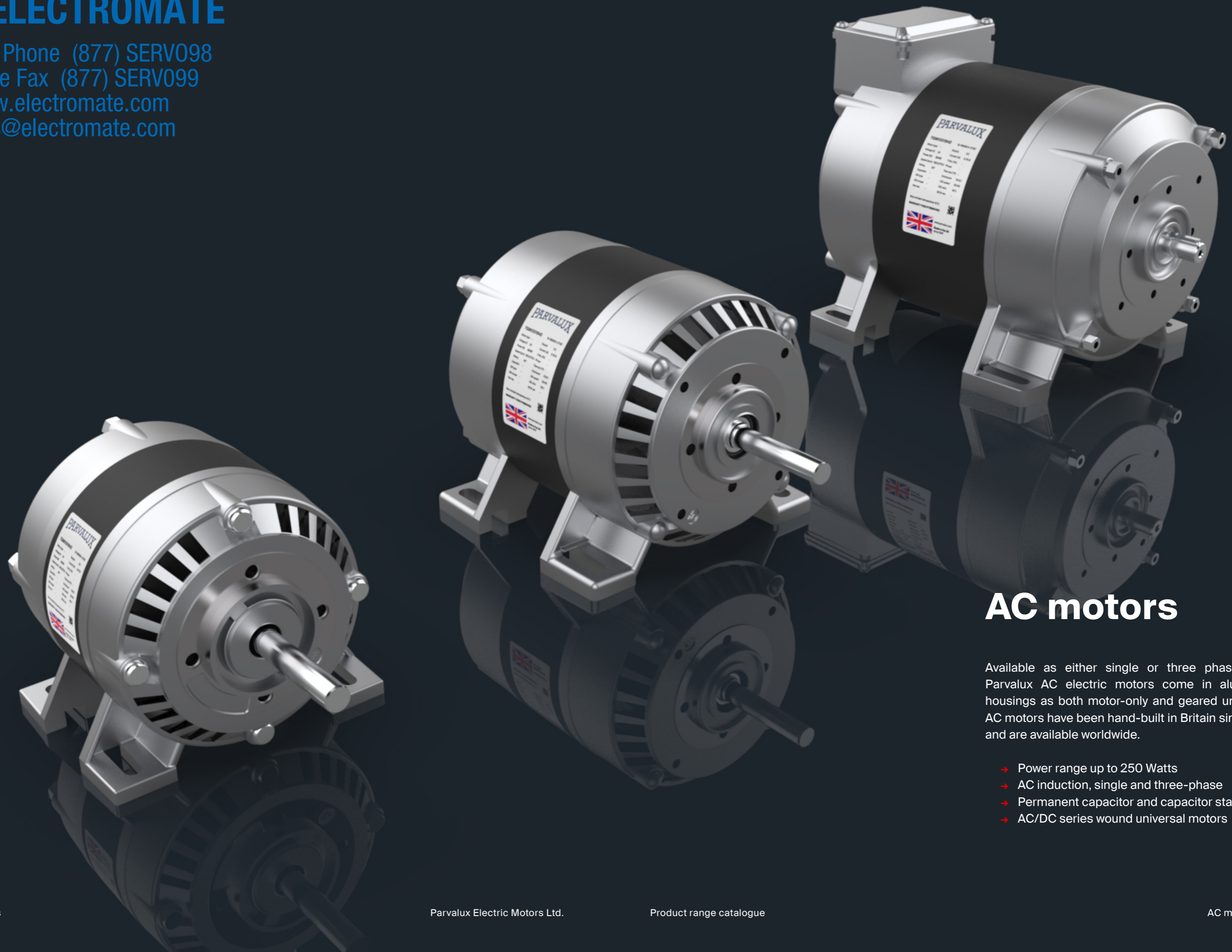


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AC motors

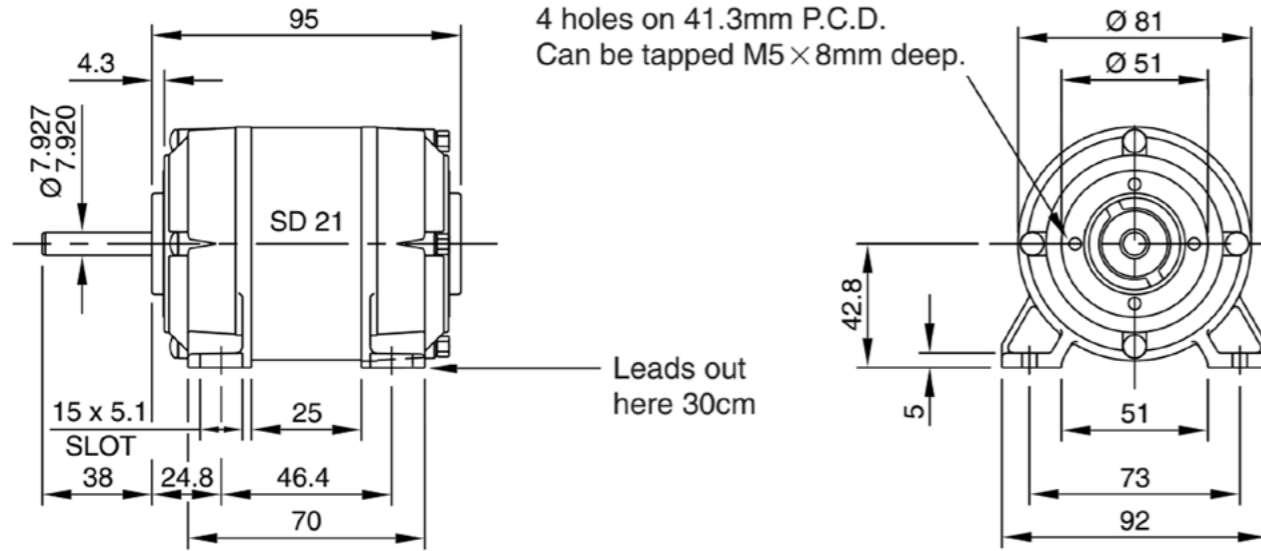
Available as either single or three phase units, Parvalux AC electric motors come in aluminium housings as both motor-only and geared units. Our AC motors have been hand-built in Britain since 1947 and are available worldwide.

- Power range up to 250 Watts
- AC induction, single and three-phase
- Permanent capacitor and capacitor start/run
- AC/DC series wound universal motors

SD21 AC motor

Ø81 mm frame // 25 mm stack

all dimensions in mm



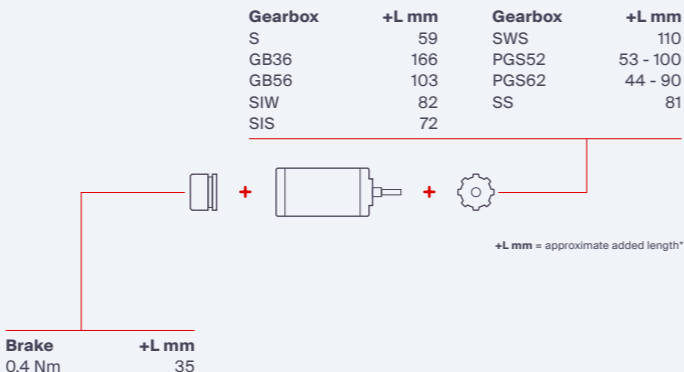
4 holes on 41.3mm P.C.D.
Can be tapped M5 × 8mm deep.

Leads out here 30cm

Part number key		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			
Modular	#####	Note: Brakes are not available on TEFC (Totally Enclosed Fan Cooled) motors.			
Standard	#####	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			
Calculated data	#####				
Technical data					
1 Part number	-	-	-	-	-
2 Phases	1	1	1	1	1
3 Frequency	Hz	50	50	60	60
4 Nominal voltage	V AC	230	230	115	230
5 Nominal power	W	8	20	8	20
6 Nominal speed	rpm	1400	2800	1700	3400
7 Nominal continuous torque (S1)	Nm	0.06	0.07	0.05	0.06
8 Nominal continuous current (S1)	A	0.18	0.34	0.42	0.60
9 Starting Current	A	0.45	0.85	1.05	1.50
10 Input Watts	W	40	80	40	80
11 Capacitor Value	M.F.D	2.5	2.0	2.0	2.0
12 Starting Torque Full Load	%	100	85	100	85
13 Stack length	mm	25	25	25	25
14 Number of poles		4	2	4	2
15 Rotor inertia	Kg/cm ²	-	-	-	-

Thermal data		Modular system	
16 Ambient temperature	°C	40	
Mechanical data			
17 Radial load [distance from flange]	N [mm]	110 [15]	
Other data			
18 Weight	Kg	1.5	
19 Enclosure		VENT/TE	
20 IP Rating - Ventilated		IP20	
21 IP Rating - TE/TEFC		IP54	
22 Insulation Class		F	
23 Type		Permanent capacitor, asynchronous	
24 Direction		Bi-directional	

Gearbox	+L mm	Gearbox	+L mm
S	59	SWS	110
GB36	166	PGH52	53 - 100
GB56	103	PGS62	44 - 90
SIW	82	SS	81
SIS	72		

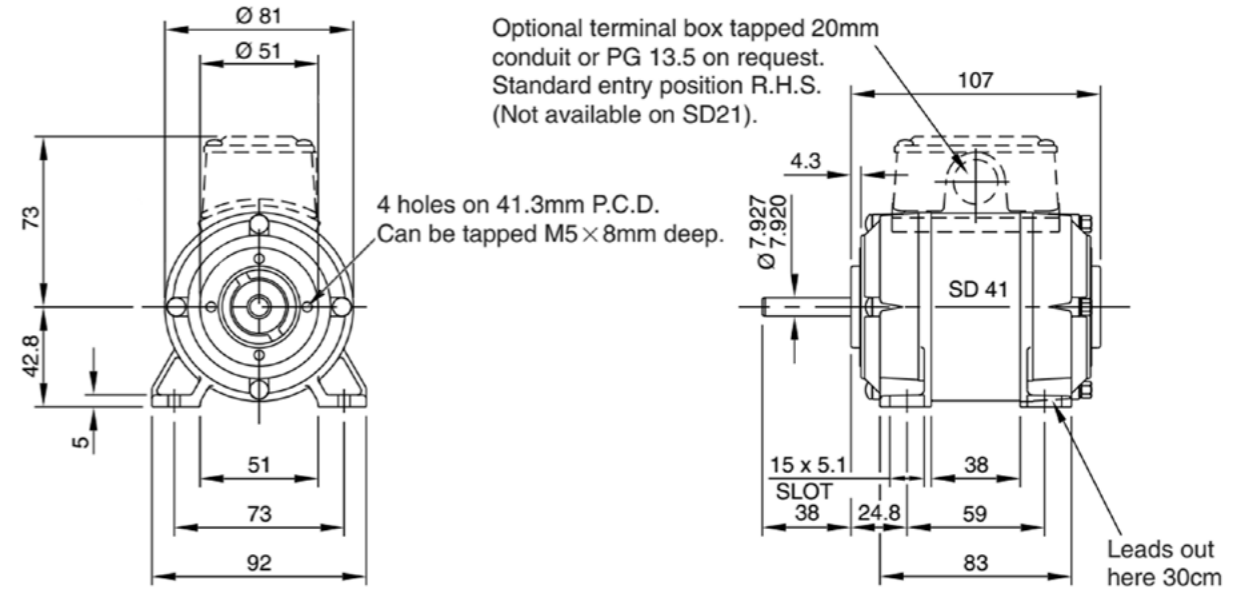


*additional length may also be required for mounting flange between components

SD41 AC motor

Ø81 mm frame // 38 mm stack

all dimensions in mm



4 holes on 41.3mm P.C.D.
Can be tapped M5 × 8mm deep.

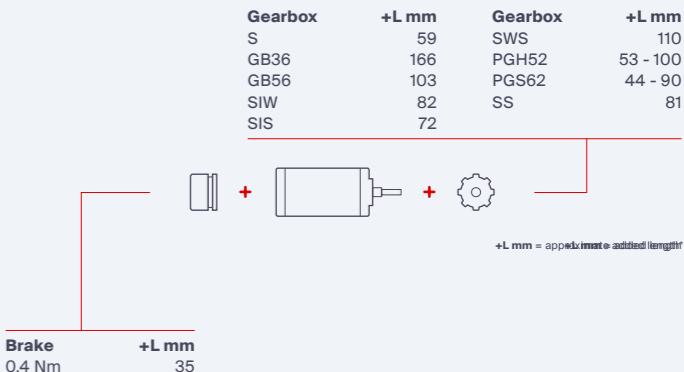
Optional terminal box tapped 20mm conduit or PG 13.5 on request. Standard entry position R.H.S. (Not available on SD21).

Leads out here 30cm

Part number key		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							
Modular	#####	Note: Brakes are not available on TEFC (Totally Enclosed Fan Cooled) motors.							
Standard	#####	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							
Calculated data	#####								
Technical data									
1 Part number	-	-	-	-	-	-	-	-	-
2 Phases	1	1	1	1	3	3	3	3	3
3 Frequency	Hz	50	50	60	60	50	50	60	60
4 Nominal voltage	V AC	230	230	115	115	400	400	230	230
5 Nominal power	W	10	25	10	25	10	25	10	25
6 Nominal speed	rpm	1400	2800	1700	3400	1400	2800	1700	3400
7 Nominal continuous torque (S1)	Nm	0.07	0.09	0.06	0.07	0.09	0.10	0.07	0.08
8 Nominal continuous current (S1)	A	0.20	0.25	0.60	0.70	0.14	0.14	-	-
9 Starting Current	A	0.50	0.63	1.50	1.75	0.35	0.35	0	0
10 Input Watts	W	40	65	-	-	47	58	-	-
11 Capacitor Value	M.F.D	3	2.5	10	8.4	-	-	-	-
12 Starting Torque Full Load	%	100	100	100	100	150	150	150	150
13 Stack length	mm	38	38	38	38	38	38	38	38
14 Number of poles		4	2	4	2	4	2	4	2
15 Rotor inertia	Kg/cm ²	-	-	-	-	-	-	-	-

Thermal data		Modular system	
16 Ambient temperature	°C	40	
Mechanical data			
17 Radial load [distance from flange]	N [mm]	110 [15]	
Other data			
18 Weight	Kg	2.1	
19 Enclosure		VENT/TE	
20 IP Rating - Ventilated		IP20	
21 IP Rating - TE/TEFC		IP54	
22 Insulation Class		F	
23 Type		Permanent capacitor, asynchronous	
24 Direction		Bi-directional	

Gearbox	+L mm	Gearbox	+L mm
S	59	SWS	110
GB36	166	PGH52	53 - 100
GB56	103	PGS62	44 - 90
SIW	82	SS	81
SIS	72		

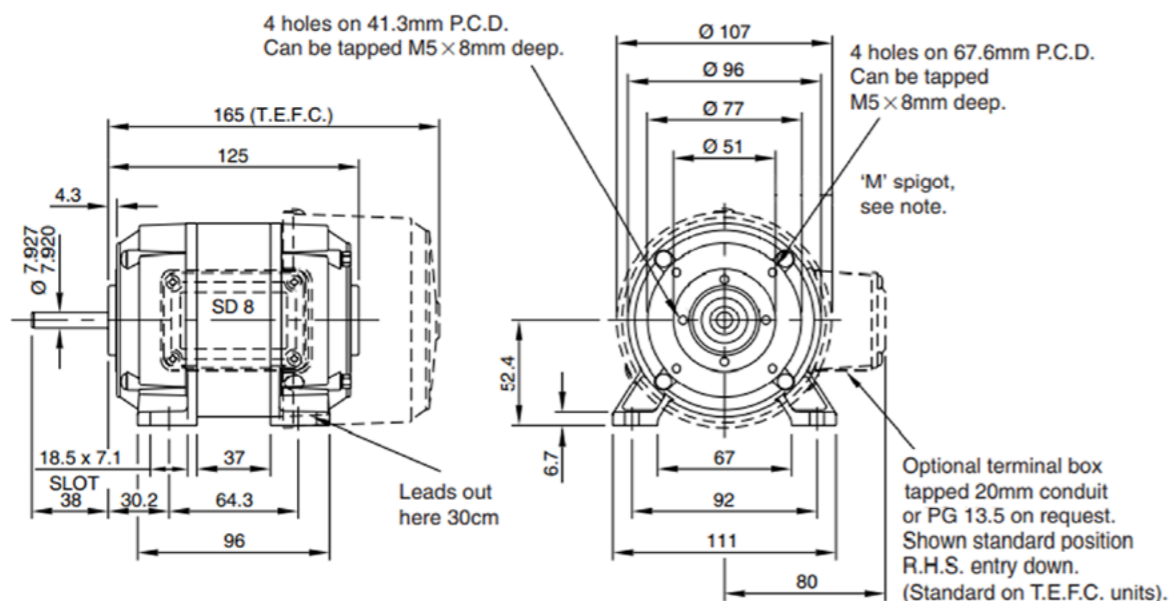


*additional length may also be required for mounting flange between components

SD8 AC motor

Ø96 mm frame // 37 mm stack

all dimensions in mm



Part number key		Available on request: 2 speed motor type, custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors. Additional motor output speeds available (900 & 1200 rpm), please contact sales for further details.							
Modular	#####	Note: Brakes are not available on TEFC (Totally Enclosed Fan Cooled) motors.							
Standard	#####	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							
Calculated data	#####								

Technical data									
1 Part number	-	-	-	-	-	-	-	-	-
2 Phases	1	1	1	1	3	3	3	3	3
3 Frequency	Hz	50	50	60	60	50	50	60	60
4 Nominal voltage	V AC	230	230	115	115	400	400	230	230
5 Nominal power	W	35	60	35	60	35	60	35	60
6 Nominal speed	rpm	1400	2800	1700	3400	1400	2800	1700	3400
7 Nominal continuous torque (S1)	Nm	0.24	0.20	0.20	0.17	0.24	0.20	0.20	0.17
8 Nominal continuous current (S1)	A	0.3	0.57	-	-	0.24	0.24	-	-
9 Starting Current	A	0.75	1.42	0	0	0.60	0.60	0	0
10 Input Watts	W	75	127	75	127	80	105	80	105
11 Capacitor Value	M.F.D	2.5	4.0	2.5	4.0	-	-	-	-
12 Starting Torque Full Load	%	85	75	85	75	200	200	200	200
13 Stack length	mm	37	37	37	37	37	37	37	37
14 Number of poles		4	2	4	2	4	2	4	2
15 Rotor inertia	Kg/cm ²	-	-	-	-	-	-	-	-

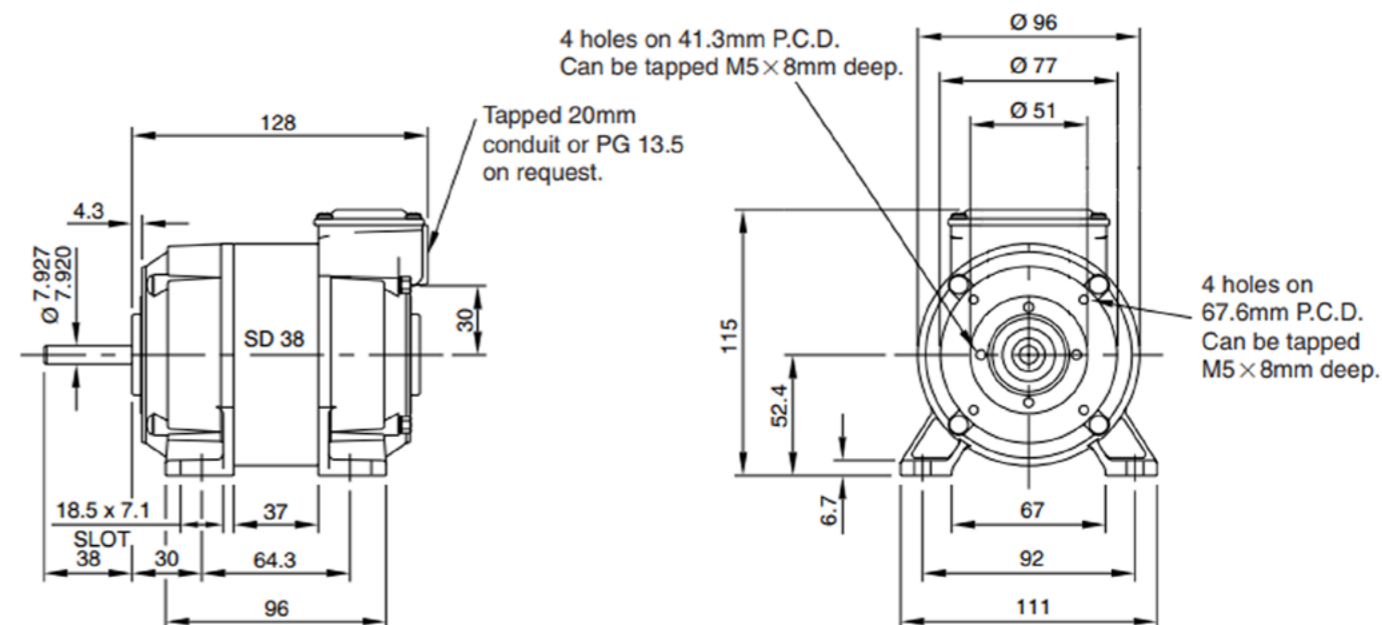
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16 Ambient temperature	°C	40																																									
Mechanical data																																											
17 Radial load [distance from flange]	N [mm]	150 [15]																																									
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18 Weight	Kg	2.8																																									
19 Enclosure		VENT/TE																																									
20 IP Rating - Ventilated		IP20																																									
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*additional length may also be required for mounting flange between components

SD38 AC motor

Ø96 mm frame // 37 mm stack

all dimensions in mm



Part number key		Available on request: 2 speed and synchronous, custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors. Additional motor output speeds available (900 & 1200 rpm), please contact sales for further details.							
Modular	#####	Note: Brakes are not available on TEFC (Totally Enclosed Fan Cooled) motors.							
Standard	#####	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							
Calculated data	#####								

Technical data									
1 Part number	-	-	-	-	-	-	-	-	-
2 Phases	1	1	1	1	3	3	3	3	3
3 Frequency	Hz	50	50	60	60	50	50	60	60
4 Nominal voltage	V AC	230	230	115	115	400	400	230	230
5 Nominal power	W	35	60	35	60	35	60	35	60
6 Nominal speed	rpm	1400	2800	1700	3400	1400	2800	1700	3400
7 Nominal continuous torque (S1)	Nm	0.24	0.20	0.20	0.17	0.24	0.20	0.20	0.17
8 Nominal continuous current (S1)	A	0.30	0.57	-	-	0.24	0.24	-	-
9 Starting Current	A	0.75	1.43	0	0	0.60	0.60	0	0
10 Input Watts	W	75	127	75	127	80	105	80	105
11 Capacitor Value	M.F.D	2.5	4.0	2.5	4.0	-	-	-	-
12 Starting Torque Full Load	%	85	75	85	75	200	200	200	200
13 Stack length	mm	37	37	37	37	37	37	37	37
14 Number of poles		4	2	4	2	4	2	4	2
15 Rotor inertia	Kg/cm ²	-	-	-	-	-	-	-	-

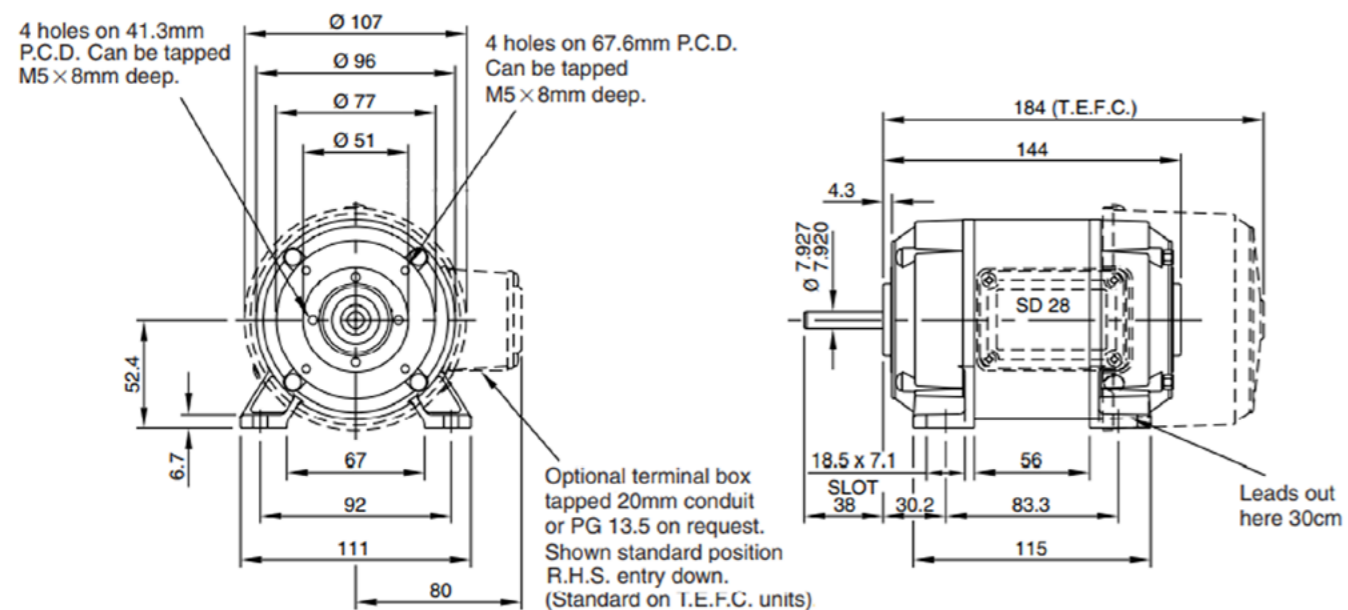
Thermal data		Modular system																																									
16 Ambient temperature	°C	40																																									
Mechanical data																																											
17 Radial load [distance from flange]	N [mm]	150 [15]																																									
Other data																																											
18 Weight	Kg	2.9																																									
19 Enclosure		VENT/TEFC																																									
20 IP Rating - Ventilated		IP20																																									
21 IP Rating - TE/TEFC		IP54																																									
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*additional length may also be required for mounting flange between components

SD28 AC motor

Ø96 mm frame // 56 mm stack

all dimensions in mm



Part number key		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.							
Modular	#####	Note: Brakes are not available on TEFC (Totally Enclosed Fan Cooled) motors.							
Standard	#####	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							
Calculated data	#####								

Technical data									
1 Part number	-	-	-	-	-	-	-	-	-
2 Phases	1	1	1	1	3	3	3	3	3
3 Frequency	Hz	50	50	60	60	50	50	60	60
4 Nominal voltage	V AC	230	230	115	115	400	400	230	230
5 Nominal power	W	55	100	55	100	55	120	55	120
6 Nominal speed	rpm	1400	2800	1700	3400	1400	2800	1700	3400
7 Nominal continuous torque (S1)	Nm	0.38	0.34	0.31	0.28	0.38	0.41	0.38	0.41
8 Nominal continuous current (S1)	A	0.41	0.76	-	-	0.28	0.36	-	-
9 Starting Current	A	1.03	1.90	0	0	0.70	0.90	0	0
10 Input Watts	W	100	185	100	185	100	185	100	185
11 Capacitor Value	M.F.D	3.0	6.0	3.0	6.0	-	-	-	-
12 Starting Torque Full Load	%	85	85	85	85	150	150	150	150
13 Stack length	mm	56	56	56	56	56	56	56	56
14 Number of poles		4	2	4	2	4	2	4	2
15 Rotor inertia	Kg/cm ²	-	-	-	-	-	-	-	-

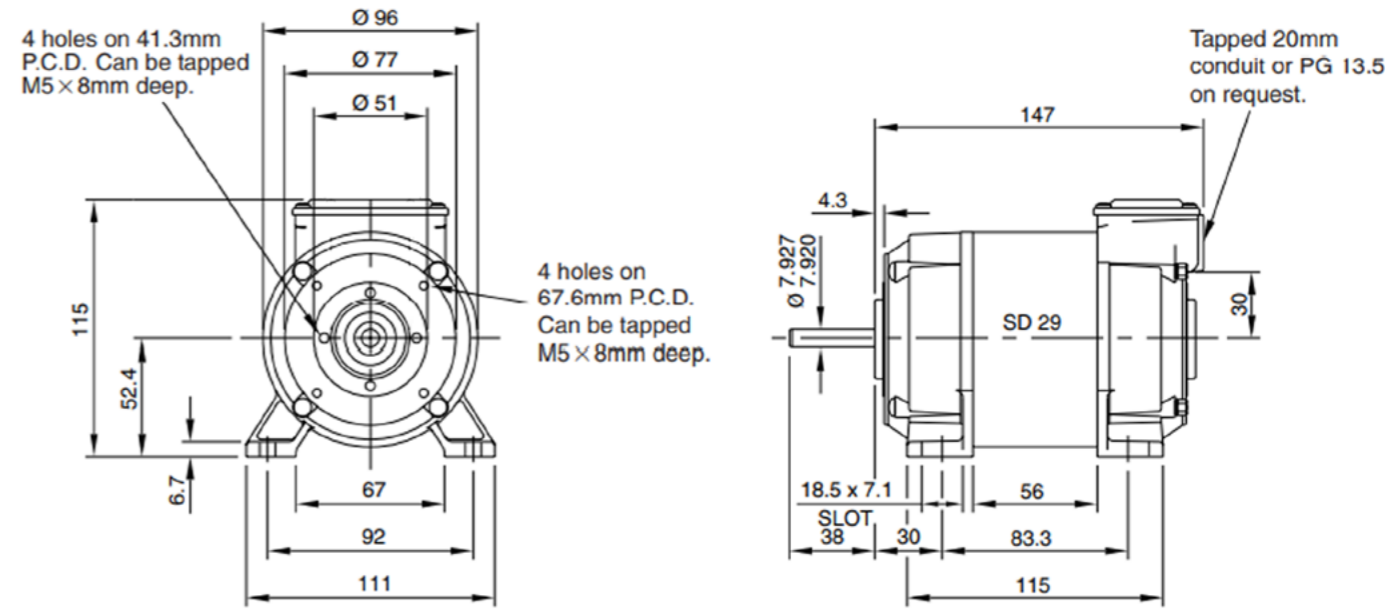
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23 Type	Permanent capacitor, asynchronous																																																							
24 Direction	Bi-directional																																																							

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

SD29 AC motor

Ø96 mm frame // 56 mm stack

all dimensions in mm



Part number key		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.							
Modular	#####	Note: Brakes are not available on TEFC (Totally Enclosed Fan Cooled) motors.							
Standard	#####	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							
Calculated data	#####								

Technical data									
1 Part number	-	-	-	-	-	-	-	-	-
2 Phases	1	1	1	1	3	3	3	3	3
3 Frequency	Hz	50	50	60	60	50	50	60	60
4 Nominal voltage	V AC	230	230	115	115	400	400	230	230
5 Nominal power	W	55	100	55	100	55	120	55	120
6 Nominal speed	rpm	1400	2800	1700	3400	1400	2800	1700	3400
7 Nominal continuous torque (S1)	Nm	0.38	0.34	0.31	0.28	0.38	0.41	0.38	0.41
8 Nominal continuous current (S1)	A	0.41	0.76	-	-	0.28	0.36	-	-
9 Starting Current	A	1.03	1.90	0	0	0.70	0.90	0	0
10 Input Watts	W	100	185	100	185	100	185	100	185
11 Capacitor Value	M.F.D	3.0	6.0	3.0	6.0	-	-	-	-
12 Starting Torque Full Load	%	85	85	85	85	150	150	150	150
13 Stack length	mm	56	56	56	56	56	56	56	56
14 Number of poles		4	2	4	2	4	2	4	2
15 Rotor inertia	Kg/cm ²	-	-	-	-	-	-	-	-

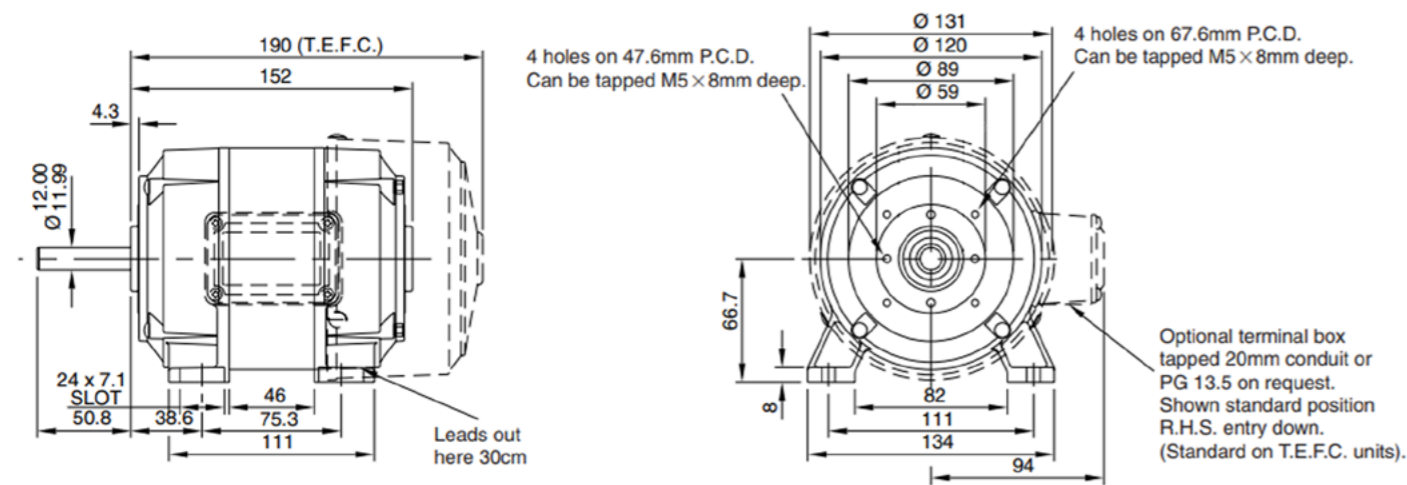
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23 Type	Permanent capacitor, asynchronous																																																							
24 Direction	Bi-directional																																																							

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

SD13 AC motor

Ø120 mm frame // 46 mm stack

all dimensions in mm



Part number key		Available on request: synchronous motor type, custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors. Additional motor output speeds available (900 & 1200 rpm), please contact sales for further details.							
Modular	#####	Note: Brakes are not available on TEFC (Totally Enclosed Fan Cooled) motors.							
Standard	#####	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							
Calculated data	#####								
Technical data									
1 Part number	-	-	-	-	-	-	-	-	-
2 Phases	1	1	1	1	3	3	3	3	3
3 Frequency	Hz	50	50	60	60	50	50	60	60
4 Nominal voltage	V AC	230	230	115	115	400	400	230	230
5 Nominal power	W	100	150	100	150	125	190	125	190
6 Nominal speed	rpm	1400	2800	1700	3400	1400	2800	1700	3400
7 Nominal continuous torque (S1)	Nm	0.68	0.51	0.56	0.42	0.85	0.65	0.70	0.53
8 Nominal continuous current (S1)	A	0.76	1.20	-	-	0.44	0.46	-	-
9 Starting Current	A	1.9	3.0	0	0	1.1	1.2	0	0
10 Input Watts	W	180	290	180	290	210	273	210	273
11 Capacitor Value	M.F.D	6.0	8.4	6.0	8.4	-	-	-	-
12 Starting Torque Full Load	%	75	80	75	80	200	200	200	200
13 Stack length	mm	46	46	46	46	46	46	46	46
14 Number of poles		4	2	4	2	4	2	4	2
15 Rotor inertia	Kg/cm ²	-	-	-	-	-	-	-	-

Thermal data		Modular system			
16 Ambient temperature	°C	40			
Mechanical data					
17 Radial load [distance from flange]	N [mm]	200 [15]			
Other data					
18 Weight	Kg	5.4			
19 Enclosure		VENT/TEFC			
20 IP Rating - Ventilated		IP20			
21 IP Rating - TE/TEFC		IP54			
22 Insulation Class		F			
23 Type		Permanent capacitor, asynchronous			
24 Direction		Bi-directional			

Gearbox	+L mm	Gearbox	+L mm	Gearbox	+L mm
M	85	LIW	102	PGS71	49 - 99
GB4/41	110	LWS	127	PGS80	52 - 102
GB12	110	LIS	108	PGS90	57 - 107
GB9	138	PGS62	44 - 90		

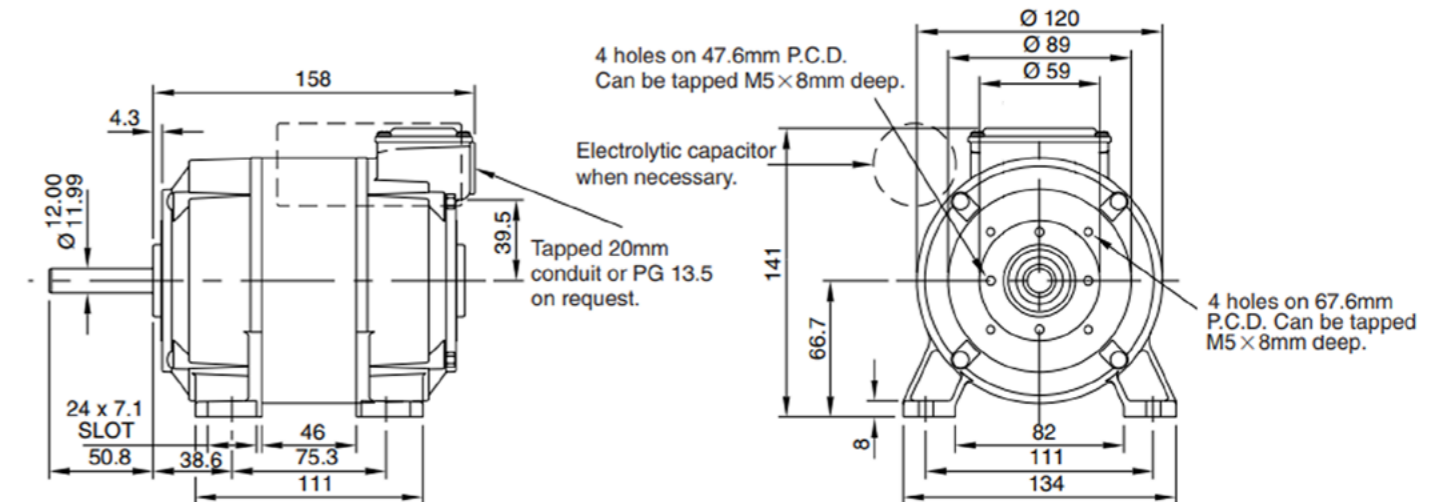
Brake	+L mm
0.4 Nm	35

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

SD18 AC motor

Ø120 mm frame // 46 mm stack

all dimensions in mm



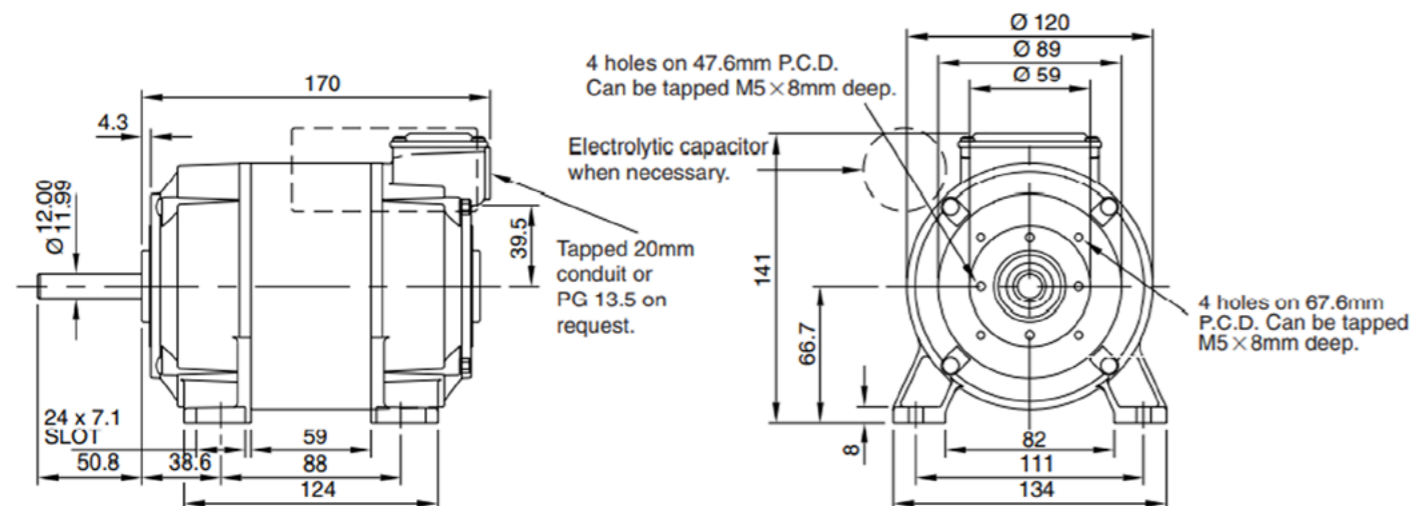
Part number key		Available on request: synchronous and CAP start motor types, custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors. Additional motor output speeds available (900 & 1200 rpm), please contact sales for further details.							
Modular	#####	Note: Brakes are not available on TEFC (Totally Enclosed Fan Cooled) motors.							
Standard	#####	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							
Calculated data	#####								
Technical data									
1 Part number	-	-	-	-	-	-	-	-	-
2 Phases	1	1	1	1	3	3	3	3	3
3 Frequency	Hz	50	50	60	60	50	50	60	60
4 Nominal voltage	V AC	230	230	115	115	400	400	230	230
5 Nominal power	W	100	150	100	150	125	190	125	190
6 Nominal speed	rpm	1400	2800	1700	3400	1400	2800	1700	3400
7 Nominal continuous torque (S1)	Nm	0.68	0.51	0.56	0.42	0.85	0.65	0.70	0.53
8 Nominal continuous current (S1)	A	0.76	1.20	-	-	0.44	0.46	-	-
9 Starting Current	A	1.9	3.0	0	0	1.1	1.2	0	0
10 Input Watts	W	180	290	180	290	210	273	210	273
11 Capacitor Value	M.F.D	6.0	8.4	6.0	8.4	-	-	-	-
12 Starting Torque Full Load	%	75	80	75	80	200	200	200	200
13 Stack length	mm	46	46	46	46	46	46	46	46
14 Number of poles		4	2	4	2	4	2	4	2
15 Rotor inertia	Kg/cm ²	-	-	-	-	-	-	-	-

Thermal data		Modular system			
16 Ambient temperature	°C	40			
Mechanical data					
17 Radial load [distance from flange]	N [mm]	200 [15]			
Other data					
18 Weight	Kg	5.4			
19 Enclosure		VENT/TEFC			
20 IP Rating - Ventilated		IP20			
21 IP Rating - TE/TEFC		IP54			
22 Insulation Class		F			
23 Type		Permanent capacitor, asynchronous			
24 Direction		Bi-directional			

Gearbox	+L mm	Gearbox	+L mm	Gearbox	+L mm
M	85	LIW	102	PGS71	49 - 99
GB4/41	110	LWS	127	PGS80	52 - 102
GB12	110	LIS	108	PGS90	57 - 107
GB9	138	PGS62	44 - 90		

Brake	+L mm
0.4 Nm	35

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



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

custom shaft length and diameter, shaft on both sides, special windings for specific voltages and speed, higher IP protection class, custom flanges and connectors.
 Brakes are not available on TEFC (Totally Enclosed Fan Cooled) motors.
 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

1 Part number	-	-	-	-	-	-	-	-	-
2 Phases	1	1	1	1	3	3	3	3	3
3 Frequency	Hz	50	50	60	60	50	50	60	60
4 Nominal voltage	V AC	230	230	115	115	400	400	230	230
5 Nominal power	W	150	190	55	100	190	250	190	250
6 Nominal speed	rpm	1400	2800	1700	3400	1400	2800	1700	3400
7 Nominal continuous torque (S1)	Nm	1.00	0.65	0.84	0.53	1.30	0.85	1.07	0.70
8 Nominal continuous current (S1)	A	1.70	1.70	-	-	0.50	0.75	-	-
9 Starting Current	A	4.25	4.25	0	0	1.25	1.88	0	0
10 Input Watts	W	308	324	308	324	300	400	300	400
11 Capacitor Value	M.F.D	40/50	40/50	40/50	40/50	-	-	-	-
12 Starting Torque Full Load	%	150	130	150	130	150	150	150	150
13 Stack length	mm	56	56	56	56	56	56	56	56
14 Number of poles		4	2	4	2	4	2	4	2
15 Rotor inertia	Kg/cm²	-	-	-	-	-	-	-	-

16 Ambient temperature	°C	40
17 Radial load [distance from flange]	N [mm]	200 [15]
18 Weight	Kg	6.5
19 Enclosure	VENT/TEFC	
20 IP Rating - Ventilated	IP20	
21 IP Rating - TE/TEFC	IP54	
22 Insulation Class	F	
23 Type	Capacitor start, asynchronous	
24 Direction	Bi-directional	

Gearbox	+L mm	Gearbox	+L mm	Gearbox	+L mm
M	85	LIW	102	PGS71	49 - 99
GB4/41	110	LWS	127	PGS80	52 - 102
GB12	110	LIS	108	PGS90	57 - 107
GB9	138	PGS62	44 - 90		

Brake	+L mm
0.4 Nm	35

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

Notes

Sold & Serviced By:

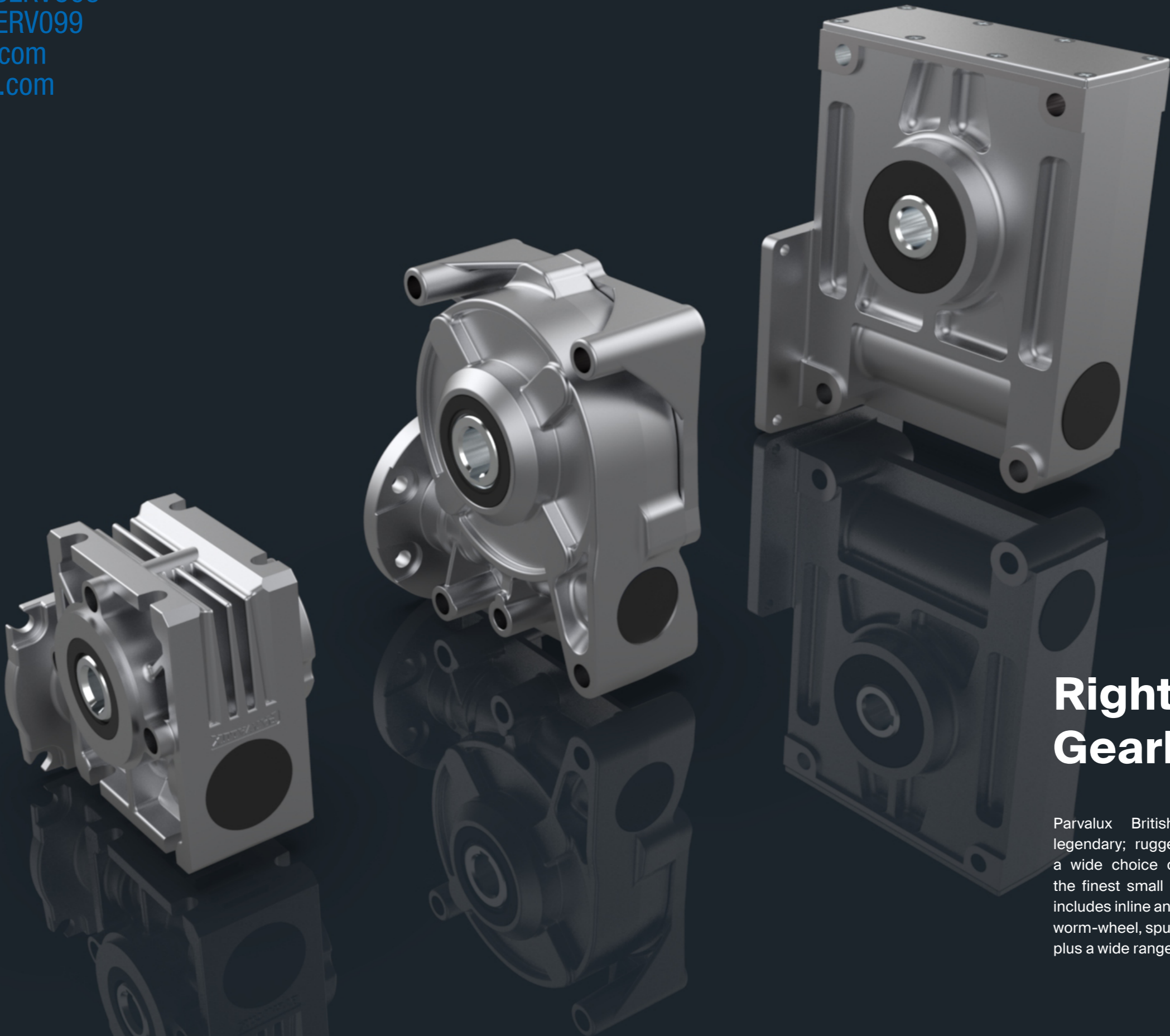


Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com



Right-angle Gearboxes

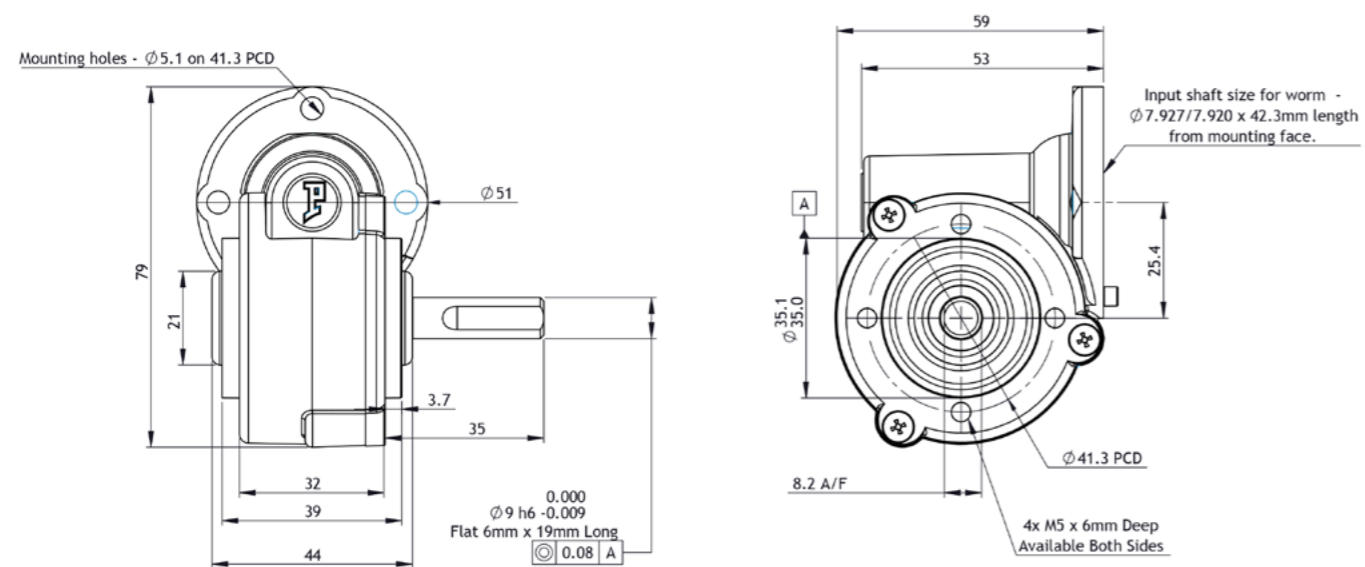
Parvalux British-made gearboxes are simply legendary; rugged, reliable, and designed to suit a wide choice of applications, they are some of the finest small gearboxes in the world. Our range includes inline and right-angle output, with options for worm-wheel, spur and planetary gearboxes available, plus a wide range of customisation options.

S Box

Right-angle gearbox // Composite gears

4:1-70:1 ratio // 4.8 Nm

all dimensions in mm

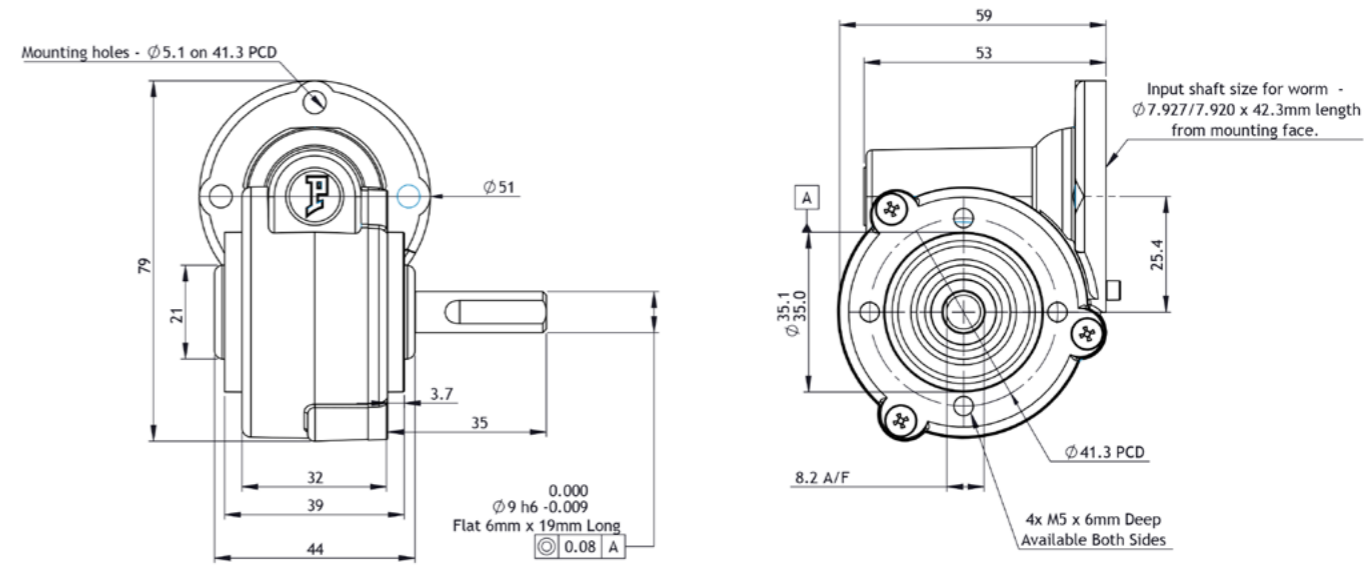


S Box

Right-angle gearbox // Bronze gears

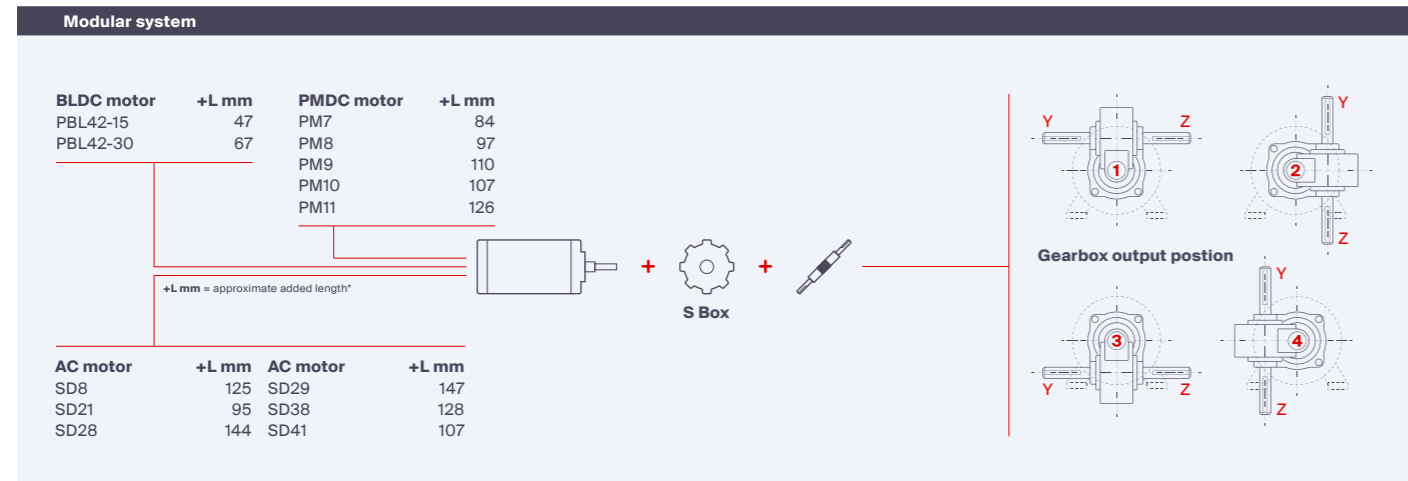
4:1-70:1 ratio // 7.2 Nm

all dimensions in mm



Part number key												
Modular	#####											
Standard	#####											
Calculated data	#####											
*Other ratios available on request (†): 6, 7, 8, 9, 11, 12, 13, 14, 16, 18, 22, 25, 27, 33, 36, 44, 54, 66												
Technical data												
1 Part number	-	-	-	-	-	-	-	-	-	-	-	-
2 Gear ratio ¹	:1	4	5	10	15	20	30	40	48	60	70	-
3 Stages	1	1	1	1	1	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ²	Nm	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.2	2.0	-
5 Max. intermittent torque	Nm	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.0	3.5	3.2	-
6 Efficiency	%	80	80	80	75	70	65	60	55	48	40	-
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	-
8 Max. axial load (dynamic)	N	150	150	150	150	150	150	150	150	150	150	-
9 Max. radial load, 12 mm from flange	N	250	250	250	250	250	250	250	250	250	250	-
10 Weight	Kg	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	-
11 Gear material		Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	-

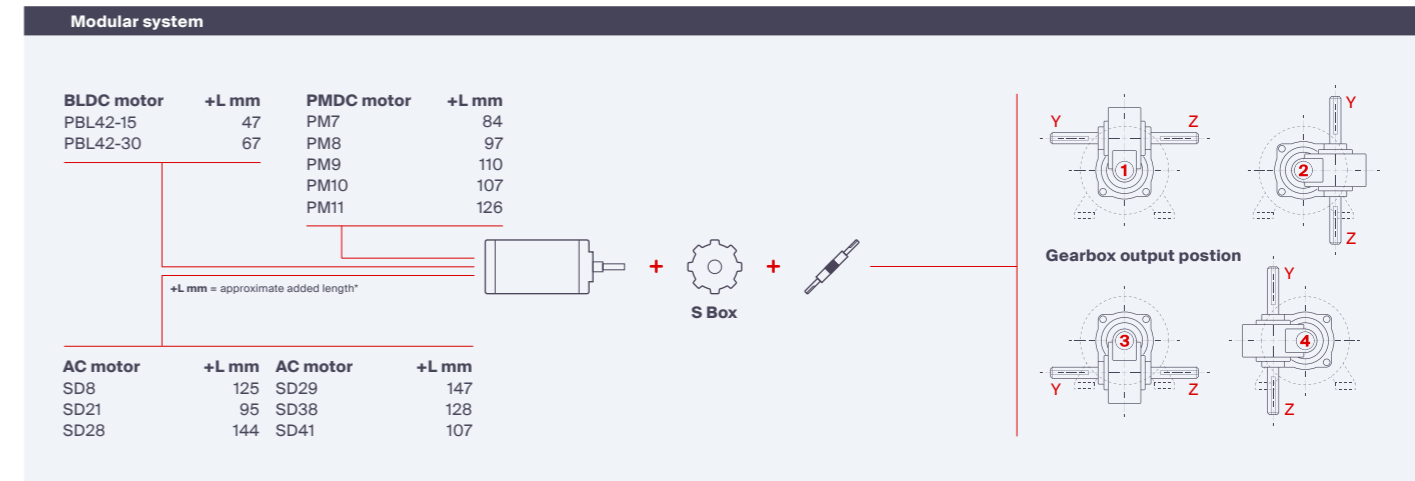
² S1 duty cycle based on 3000 RPM input speed



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

Part number key												
Modular	#####											
Standard	#####											
Calculated data	#####											
*Other ratios available on request (†): 6, 7, 8, 9, 11, 12, 13, 14, 16, 18, 22, 25, 27, 33, 36, 44, 54, 66												
Technical data												
1 Part number	-	-	-	-	-	-	-	-	-	-	-	-
2 Gear ratio ¹	:1	4	5	10	15	20	30	40	48	60	70	-
3 Stages	1	1	1	1	1	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ²	Nm	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.8	3.3	3.0	-
5 Max. intermittent torque	Nm	7.2	7.2	7.2	7.2	7.2	7.2	7.2	6.0	5.3	4.8	-
6 Efficiency	%	70	70	70	65	61	57	52	48	42	35	-
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	-
8 Max. axial load (dynamic)	N	150	150	150	150	150	150	150	150	150	150	-
9 Max. radial load, 12 mm from flange	N	250	250	250	250	250	250	250	250	250	250	-
10 Weight	Kg	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	-
11 Gear material		Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	-

² S1 duty cycle based on 3000 RPM input speed

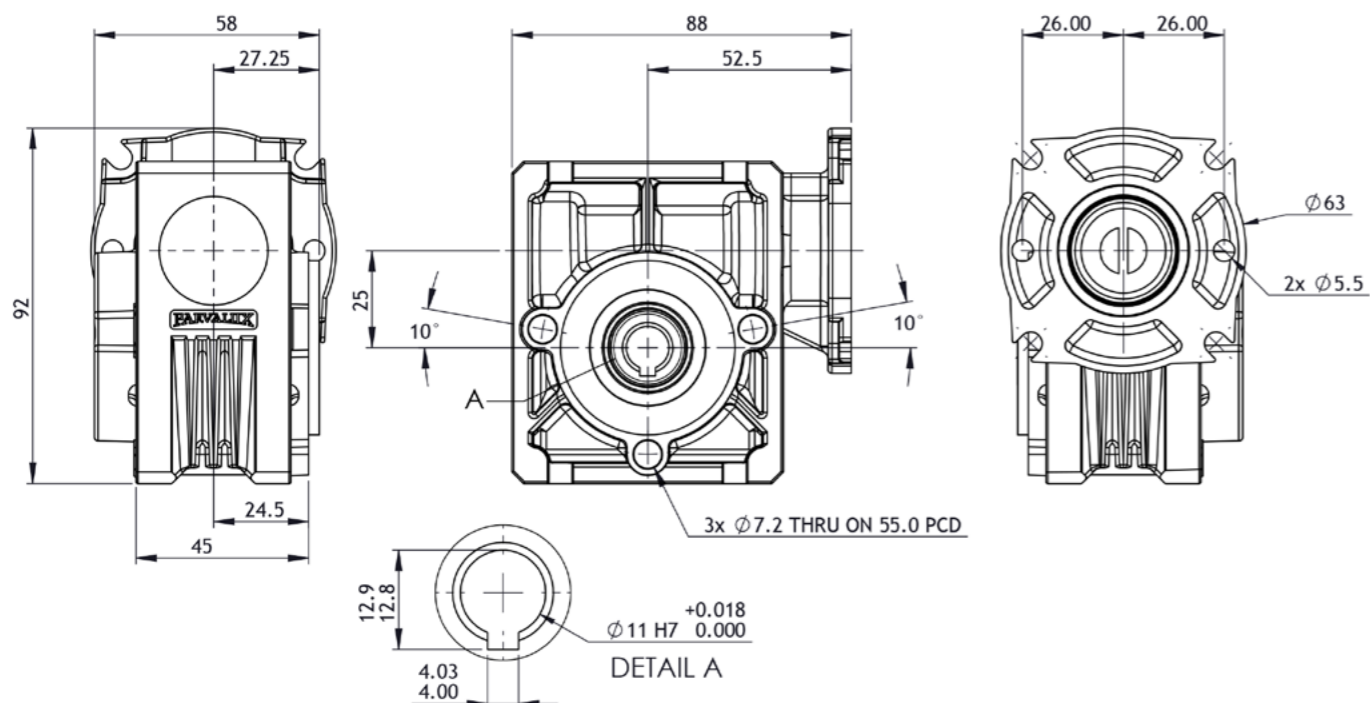


*additional length may also be required for mounting flange between components

GB28 Right-angle gearbox // Bronze gears

15:1 - 60:1 ratio // 8.0 Nm

all dimensions in mm



Part number key						
Modular	#####					
Standard	#####					
Calculated data	#####					
Technical data						
1 Part number		735904	-	735906	-	735907
2 Gear ratio	:1	15	25	30	50	60
3 Stages		1	1	1	1	1
4 Max. continuous torque (S1) ¹	Nm	5.0	5.0	5.0	5.0	5.0
5 Max. intermittent torque	Nm	8.0	8.0	8.0	8.0	8.0
6 Efficiency	%	75	70	65	50	45
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25
8 Max. axial load (dynamic)	N	300	300	300	300	300
9 Max. radial load, 12 mm from flange	N	400	400	400	400	400
10 Weight	Kg	0.83	0.83	0.83	0.83	0.83
11 Gear material		Bronze	Bronze	Bronze	Bronze	Bronze

¹ S1 duty cycle based on 3000 RPM input speed

Modular system

BLDC motor	+L mm
BLx60-40	85
PBL60-50	90
PBL60-70	110

+L mm = approximate added length*

PMDc motor	+L mm
BRx52-30	95
BRx52-58	125
BRx63-40	95
BRx63-55	125

+L mm = approximate added length*

Shaft extension kit 735908

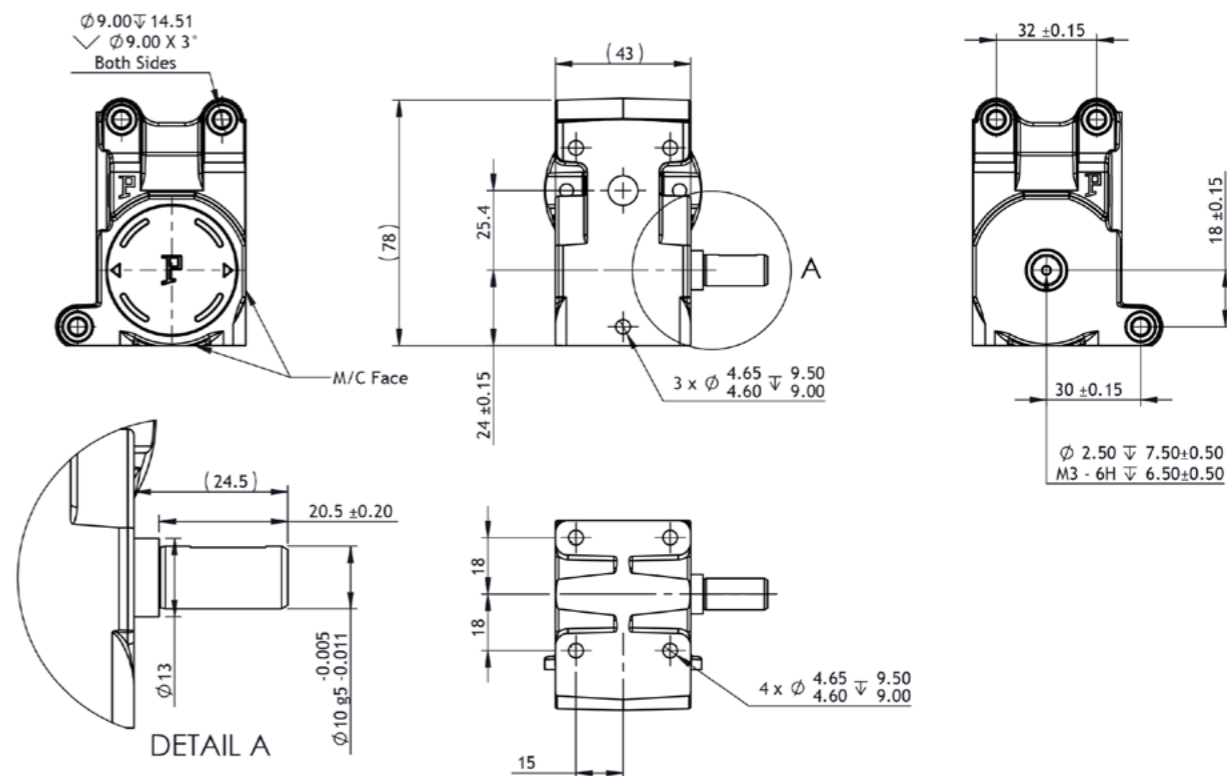
Gearbox output position diagrams 1, 2, 3, 4.

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

GB58 Right-angle gearbox // Composite gears

4:1 - 25:1 ratio // 8.0 Nm

all dimensions in mm



Part number key												
Modular	#####											
Standard	#####											
Calculated data	#####											
Technical data												
1 Part number		-	-	-	-	-	-	-	-	-	-	-
2 Gear ratio ¹	:1	4	5	7	9	10	14	15	18	20	25	
3 Stages		1	1	1	1	1	1	1	1	1	1	
4 Max. continuous torque (S1) ²	Nm	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
5 Max. intermittent torque	Nm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
6 Efficiency	%	85	84	82	80	80	76	75	73	72	68	
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	
8 Max. axial load (dynamic)	N	300	300	300	300	300	300	300	300	300	300	
9 Max. radial load, 12 mm from flange	N	400	400	400	400	400	400	400	400	400	400	
10 Weight	Kg	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
11 Gear material		Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	

Notes: Custom shaft available on request, max diameter 20mm. Double exit and hollow shaft (11mm bore) available. Casting finish - shot blast with m/c features (powder coating on request)

¹ Other ratios available on request (1): 6, 8, 11, 12, 13, 16, 22

² S1 duty cycle based on 2000 RPM input speed

Modular system

PMDc motor	+L mm
BRx52-30	95
BRx52-58	125
BRx63-40	110
BRx63-55	125

+L mm = approximate added length*

BLDC motor	+L mm
PBL42-15	47
PBL42-30	67
PBL60-50	90
PBL60-70	110

+L mm = approximate added length*

Gearbox output position diagrams 1, 2, 3, 4.

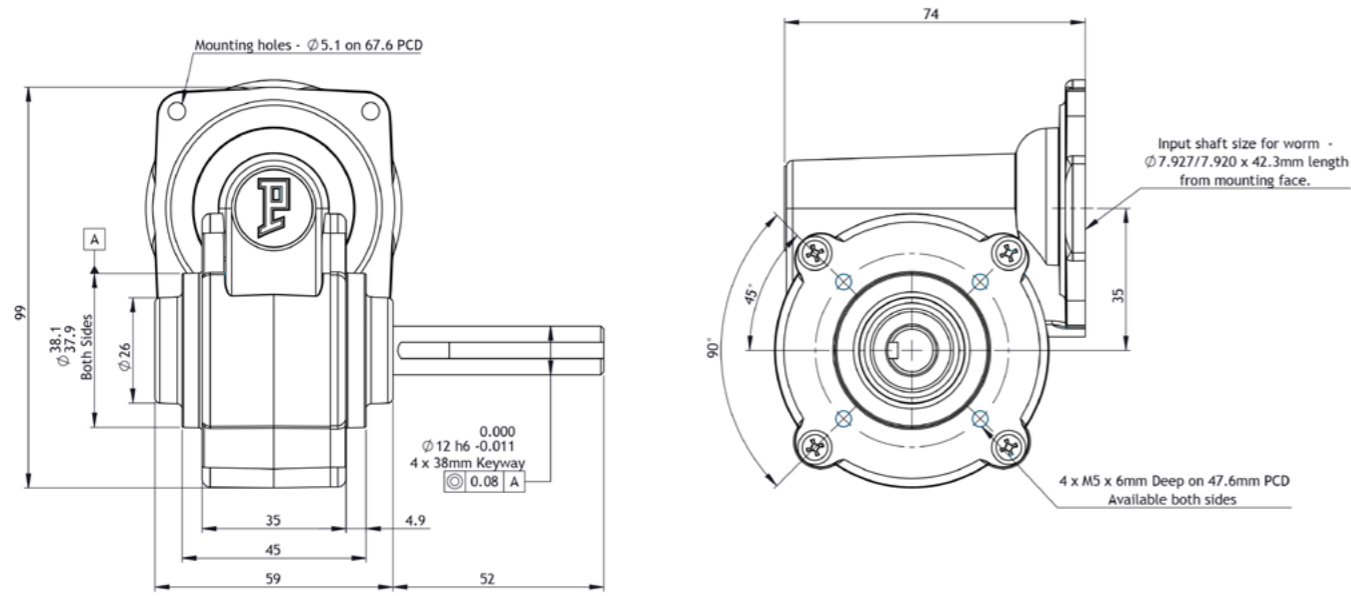
*additional length may also be required for mounting flange between components

M Box

Right-angle gearbox // Composite gears

4:1 - 72:1 ratio // 13.0 Nm

all dimensions in mm



Part number key											
Modular	#####										
Standard	#####										
Calculated data	#####										
*Other ratios available on request (!): 6, 8, 9, 12, 13, 14, 18, 25, 33, 44, 54, 66											
Technical data											
1 Part number	-	-	-	-	-	-	-	-	-	-	-
2 Gear ratio ¹	:1	4	5	10	16	20	30	40	48	60	72
3 Stages	1	1	1	11	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ²	Nm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0	5.0
5 Max. intermittent torque	Nm	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	10.0	8.0
6 Efficiency	%	85	85	82	77	74	70	65	58	54	46
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25
8 Max. axial load (dynamic)	N	300	300	300	300	300	300	300	300	300	300
9 Max. radial load, 12 mm from flange	N	350	350	350	350	350	350	350	350	350	350
10 Weight	Kg	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
11 Gear material		Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite

² S1 duty cycles based on 3000 RPM input speed

Compatible products

BLDC motor	+L mm	AC motor	+L mm	AC motor	+L mm
PBL60-50	90	SD8	125	SD28	144
PBL60-70	110	SD13	152	SD29	147
		SD18	158	SD38	128
		SD21	95	SD41	107

PMDC motor	+L mm	PMDC motor	+L mm
PM1	149	PM6	175
PM2	162	PM10	107
PM3	137	PM11	126
PM4	149	PM50	180
PM5	162	PM60	193

+L mm = approximate added length*

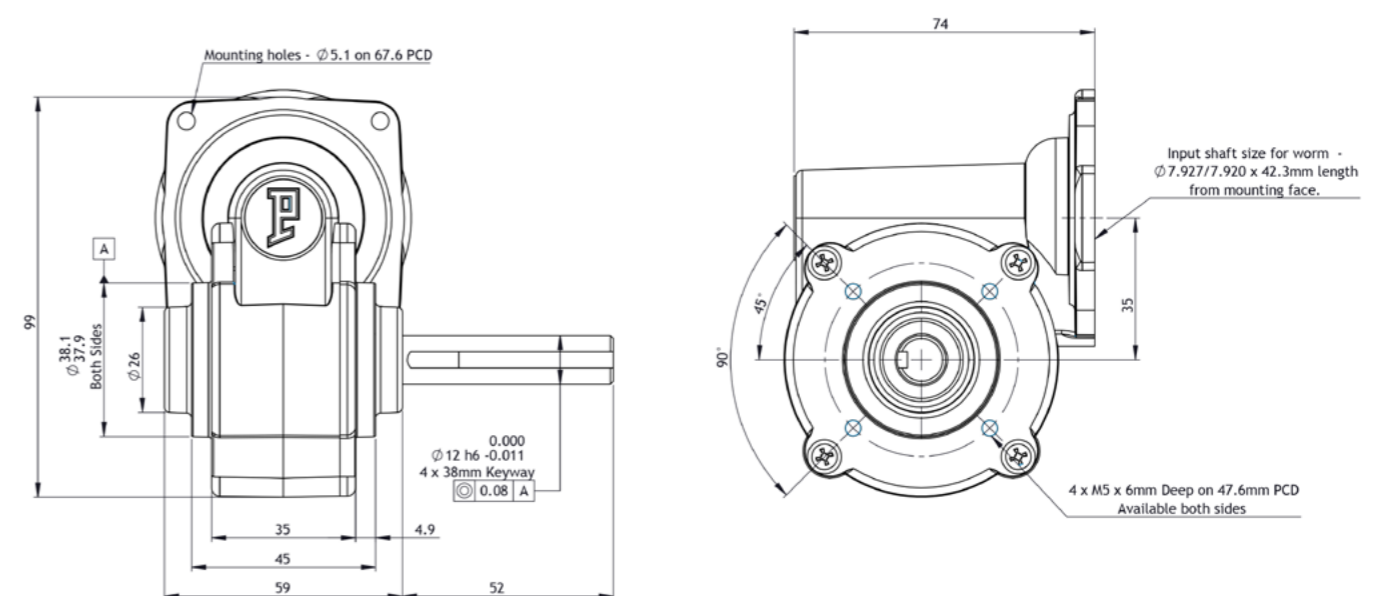
*additional length may also be required for mounting flange between components

M Box

Right-angle gearbox // Bronze gears

4:1 - 72:1 ratio // 19.0 Nm

all dimensions in mm



Part number key											
Modular	#####										
Standard	#####										
Calculated data	#####										
*Other ratios available on request (!): 6, 8, 9, 12, 13, 14, 18, 25, 33, 44, 54, 66											
Technical data											
1 Part number	-	-	-	-	-	-	-	-	-	-	-
2 Gear ratio ¹	:1	4	5	10	16	20	30	40	48	60	72
3 Stages	1	1	1	11	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ²	Nm	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	9.0	8.0
5 Max. intermittent torque	Nm	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	14.0	12.0
6 Efficiency	%	74	74	71	67	64	61	57	50	47	40
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25
8 Max. axial load (dynamic)	N	300	300	300	300	300	300	300	300	300	300
9 Max. radial load, 12 mm from flange	N	350	350	350	350	350	350	350	350	350	350
10 Weight	Kg	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
11 Gear material		Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze

² S1 duty cycle based on 3000 RPM input speed

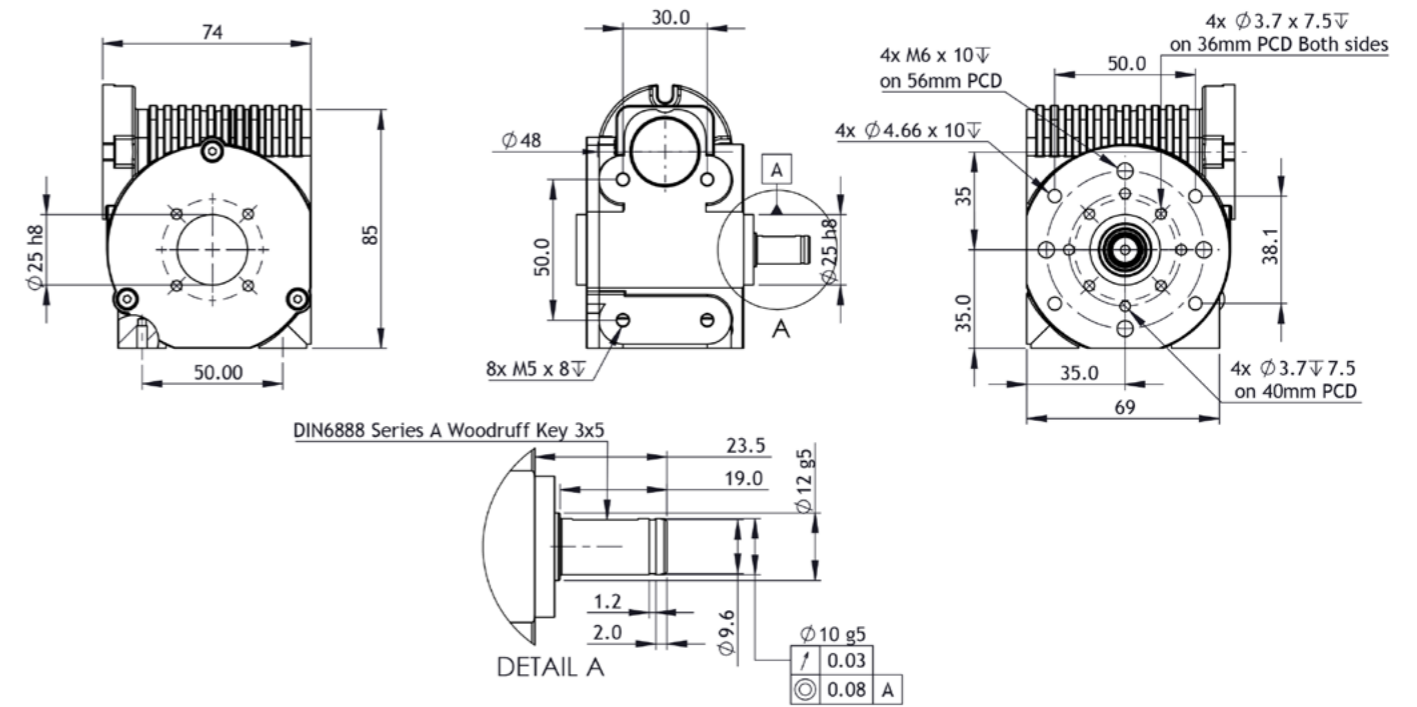
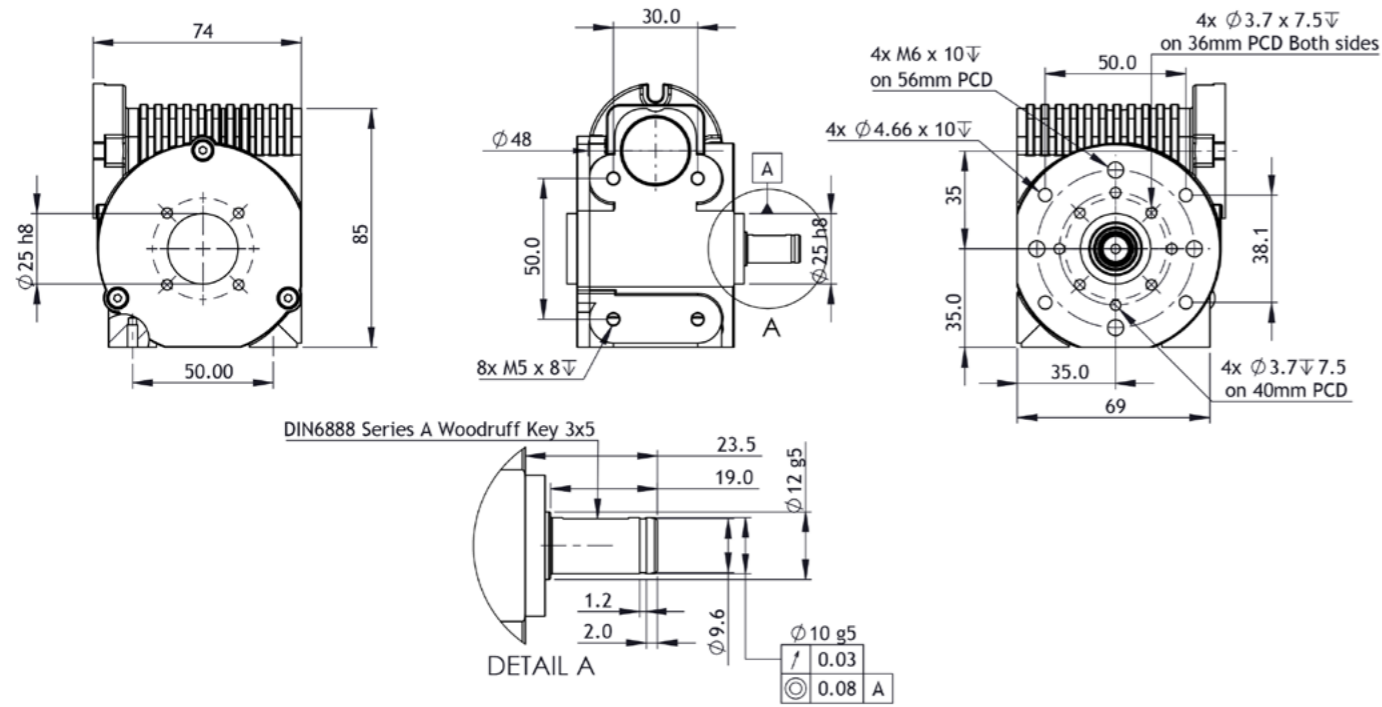
Modular system

BLDC motor	+L mm	AC motor	+L mm	AC motor	+L mm
PBL60-50	90	SD8	125	SD28	144
PBL60-70	110	SD13	152	SD29	147
		SD18	158	SD38	128
		SD21	95	SD41	107

PMDC motor	+L mm	PMDC motor	+L mm
PM1	149	PM6	175
PM2	162	PM10	107
PM3	137	PM11	126
PM4	149	PM50	180
PM5	162	PM60	193

+L mm = approximate added length*

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



Part number key											
Modular	#####	Notes: Custom shaft available on request.									
Standard	#####	¹ Other ratios available on request (1): 5, 8, 9, 12, 13, 14, 18, 25, 33, 44, 48, 66									
Calculated data	#####										
Technical data											
1 Part number	-	-	-	-	-	-	-	-	-	-	-
2 Gear ratio ¹	:1	4	6	10	16	20	30	40	54	60	72
3 Stages	1	1	1	1	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ²	Nm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.0	6.0	5.0
5 Max. intermittent torque	Nm	13.0	13.0	13.0	13.0	13.0	13.0	13.0	11.0	10.0	8.0
6 Efficiency	%	85	85	82	77	74	70	65	56	54	46
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25
8 Max. axial load (dynamic)	N	300	300	300	300	300	300	300	300	300	300
9 Max. radial load, 12 mm from flange	N	350	350	350	350	350	350	350	350	350	350
10 Weight	Kg	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
11 Gear material		Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite

² S1 duty cycle based on 2000 RPM input speed

Modular system

Motor	+L mm
PMDC motor	
BRx63-40	110
BRx63-55	125
BRx70-40	125
BRx70-60	146
BLDC motor	
BLx60-40	85
PBL60-50	90
PBL60-70	110

+L mm = approximate added length*

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

Part number key											
Modular	#####	Notes: Custom shaft available on request, max diameter 20mm. Double exit and hollow shaft (11mm bore) available. Casting finish - shot blast with m/c features (powder coating on request)									
Standard	#####	¹ Other ratios available on request (1): 6, 8, 11, 12, 13, 16, 22									
Calculated data	#####										
Technical data											
1 Part number	-	-	-	-	-	-	-	-	-	-	-
2 Gear ratio ¹	:1	4	6	10	16	20	30	40	54	60	72
3 Stages	1	1	1	1	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ²	Nm	12.0	12.0	12.0	12.0	12.0	12.0	12.0	11.0	9.0	8.0
5 Max. intermittent torque	Nm	19.0	19.0	19.0	19.0	19.0	19.0	19.0	17.0	14.0	12.0
6 Efficiency	%	74	74	71	67	64	61	57	49	47	40
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25
8 Max. axial load (dynamic)	N	300	300	300	300	300	300	300	300	300	300
9 Max. radial load, 12 mm from flange	N	350	350	350	350	350	350	350	350	350	350
10 Weight	Kg	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
11 Gear material		Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze

² S1 duty cycle based on 2000 RPM input speed

Modular system

Motor	+L mm
PMDC motor	
BRx63-40	110
BRx63-55	125
BRx70-40	125
BRx70-60	146
BLDC motor	
BLx60-40	85
PBL60-50	90
PBL60-70	110

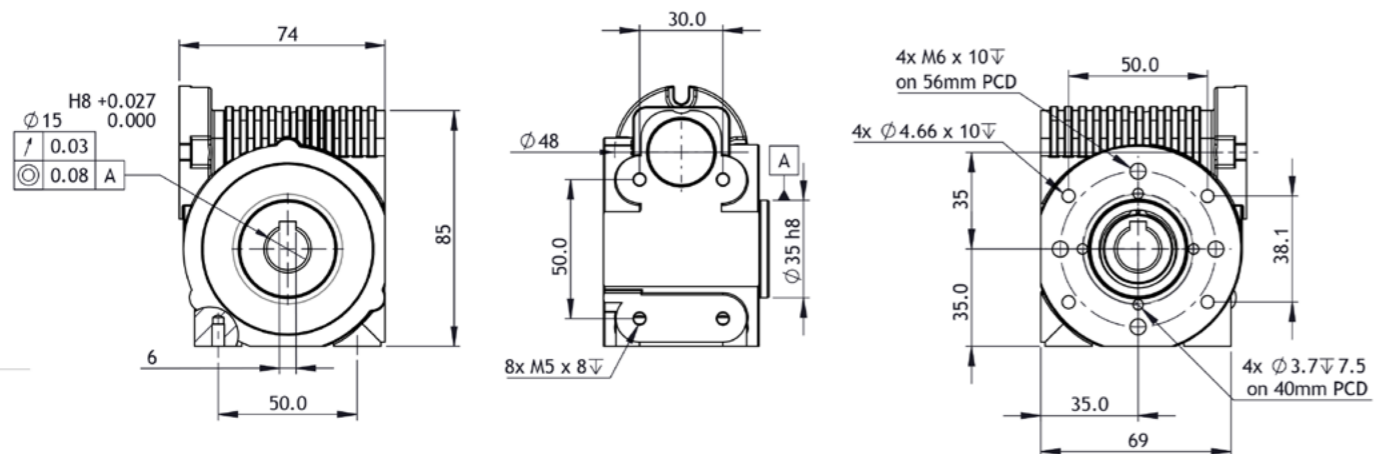
+L mm = approximate added length*

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

GB80 HD Heavy duty right-angle gearbox // Bronze gears
 4:1 - 72:1 ratio // 34.0 Nm

all dimensions in mm

specifications and technical drawing subject to change



Part number key

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

Notes: Custom shaft available on request, max diameter 20mm. Double exit and hollow shaft (11mm bore) available. Casting finish - shot blast with m/c features (powder coating on request)

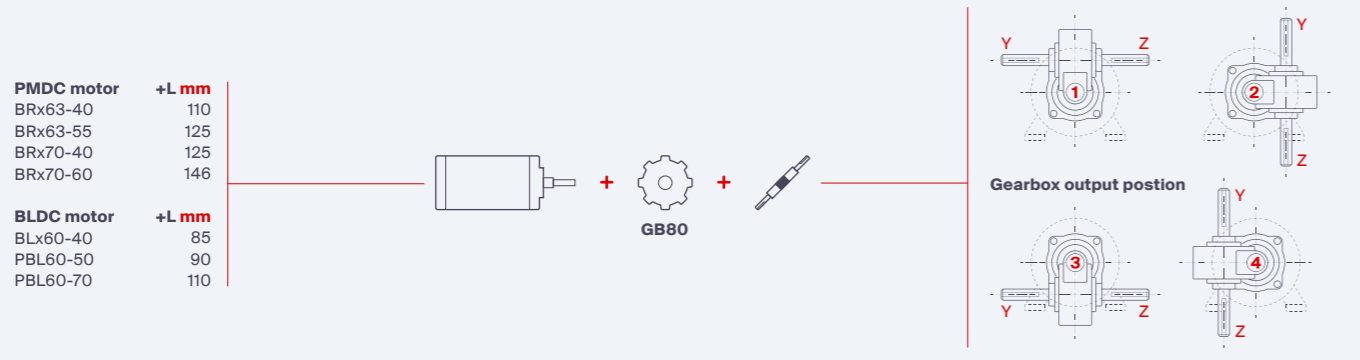
*Other ratios available on request (†): 6, 8, 11, 12, 13, 16, 22

Technical data

1 Part number		-	-	-	-	-	-	-	-	-	-
2 Gear ratio ¹	:1	4	6	10	16	20	30	40	54	60	72
3 Stages		1	1	1	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ²	Nm	22.0	22.0	22.0	22.0	22.0	22.0	22.0	21.0	19.0	18.0
5 Max. intermittent torque	Nm	34.0	34.0	34.0	34.0	34.0	34.0	34.0	32.0	29.0	28.0
6 Efficiency	%	74	74	71	67	64	61	57	49	47	40
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25
8 Max. axial load (dynamic)	N	300	300	300	300	300	300	300	300	300	300
9 Max. radial load, 12 mm from flange	N	350	350	350	350	350	350	350	350	350	350
10 Weight	Kg	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
11 Gear material		Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze

² S1 duty cycle based on 2000 RPM input speed

Modular system



+L mm = approximate added length*

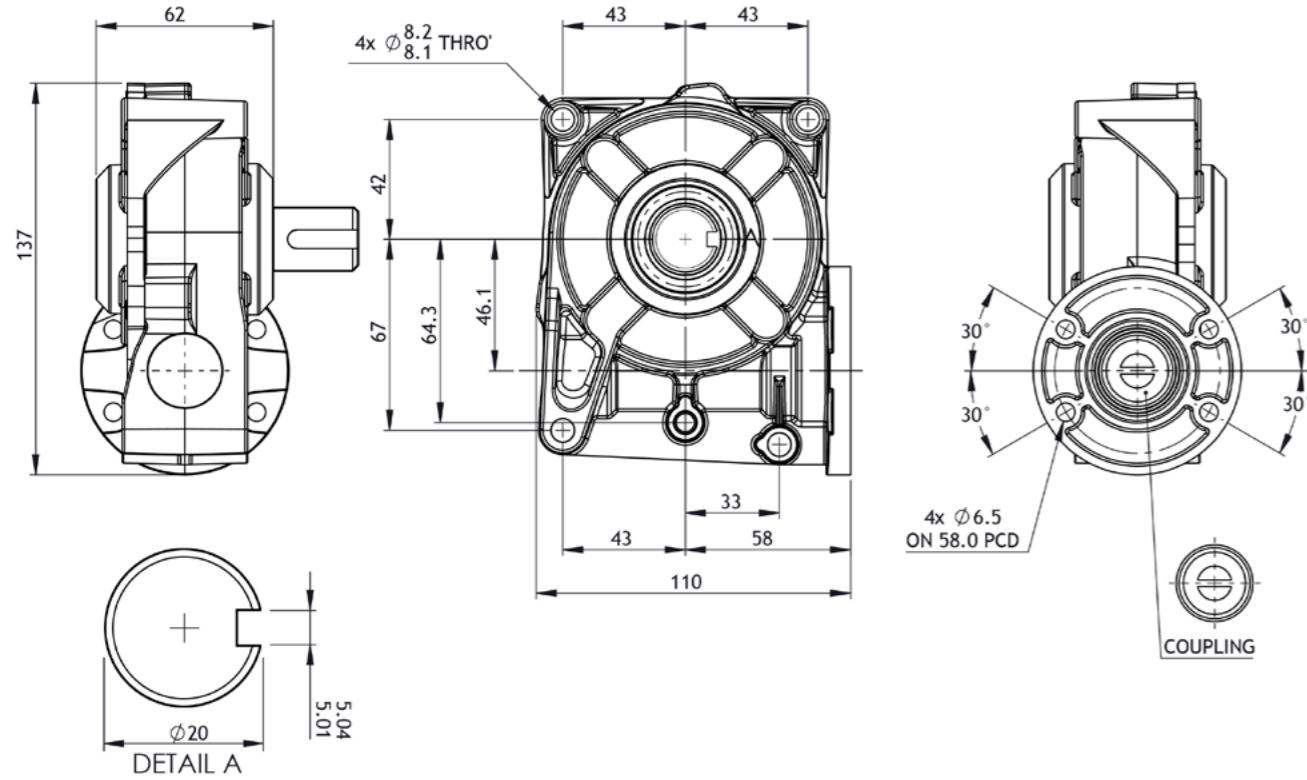
*additional length may also be required for mounting flange between components

Notes

GB12 Right-angle gearbox // Composite gears

12.5:1 - 75:1 ratio // 32.0 Nm

all dimensions in mm



Part number key											
Modular	#####										
Standard	#####										
Calculated data	#####										
Technical data											
1 Part number	-	-	-	-	-	-	-	-	-	-	-
2 Gear ratio	:1	12.5	14	15	19	21	25	30	50	60	75
3 Stages	1	1	1	1	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ¹	Nm	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.0
5 Max. intermittent torque	Nm	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	29.0
6 Efficiency	%	85	83	83	80	78	75	72	60	55	50
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25
8 Max. axial load (dynamic)	N	300	300	300	300	300	300	300	300	300	300
9 Max. radial load, 12 mm from flange	N	500	500	500	500	500	500	500	500	500	500
10 Weight	Kg	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
11 Gear material		Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite

¹ S1 duty cycle based on 3000 RPM input speed

Modular system

BLDC motor	+L mm	BLDC motor	+L mm
BLx60-40	85	PBL70-70	114
PBL60-50	90	PBL70-80	124
PBL60-70	110	PBL86-55	111
		PBL86-80	136

PMDC motor	+L mm
BRx70-40	125
BRx70-60	146
BRx90-50	153
BRx90-75	183

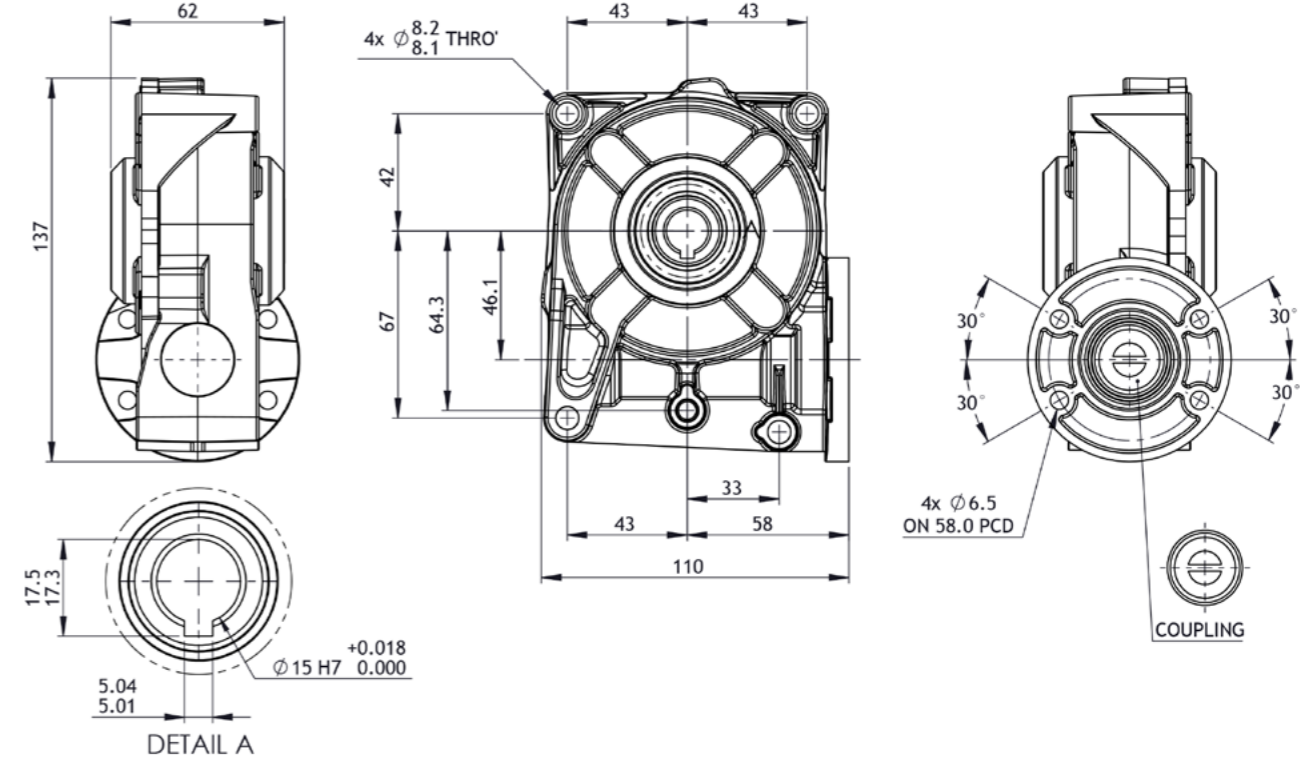
Shaft extension kit 735903

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

GB12 Right-angle gearbox // Bronze gears

12.5:1 - 75:1 ratio // 48.0 Nm

all dimensions in mm



Part number key											
Modular	#####										
Standard	#####										
Calculated data	#####										
Technical data											
1 Part number	-	-	-	735900	-	-	-	735901	-	735902	-
2 Gear ratio	:1	12.5	14	15	19	21	25	30	50	60	75
3 Stages	1	1	1	1	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ¹	Nm	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	27.0
5 Max. intermittent torque	Nm	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	43.0
6 Efficiency	%	80	75	75	73	73	72	65	55	50	45
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25	10-25
8 Max. axial load (dynamic)	N	600	600	600	600	600	600	600	600	600	600
9 Max. radial load, 12 mm from flange	N	800	800	800	800	800	800	800	800	800	800
10 Weight	Kg	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
11 Gear material		Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze

¹ S1 duty cycle based on 3000 RPM input speed

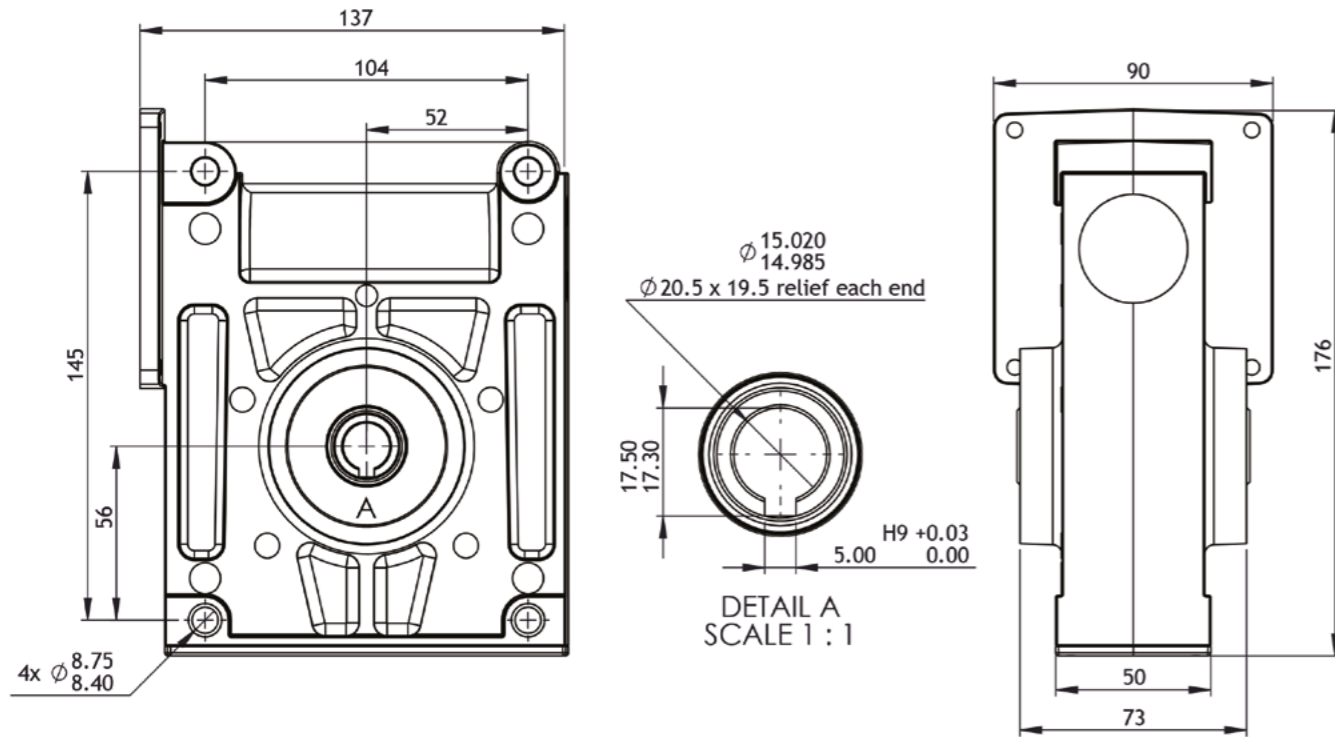
Modular system

BLDC motor	+L mm	BLDC motor	+L mm
BLx60-40	85	PBL70-70	114
PBL60-50	90	PBL70-80	124
PBL60-70	110	PBL86-55	111
		PBL86-80	136

PMDC motor	+L mm
BRx70-40	125
BRx70-60	146
BRx90-50	153
BRx90-75	183

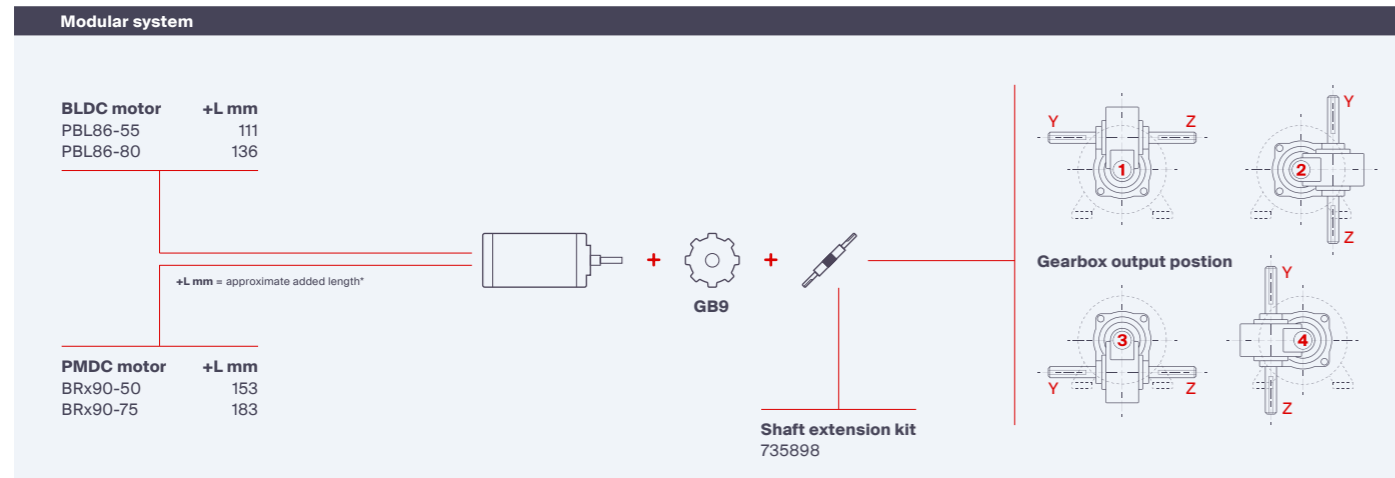
Shaft extension kit 735903

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

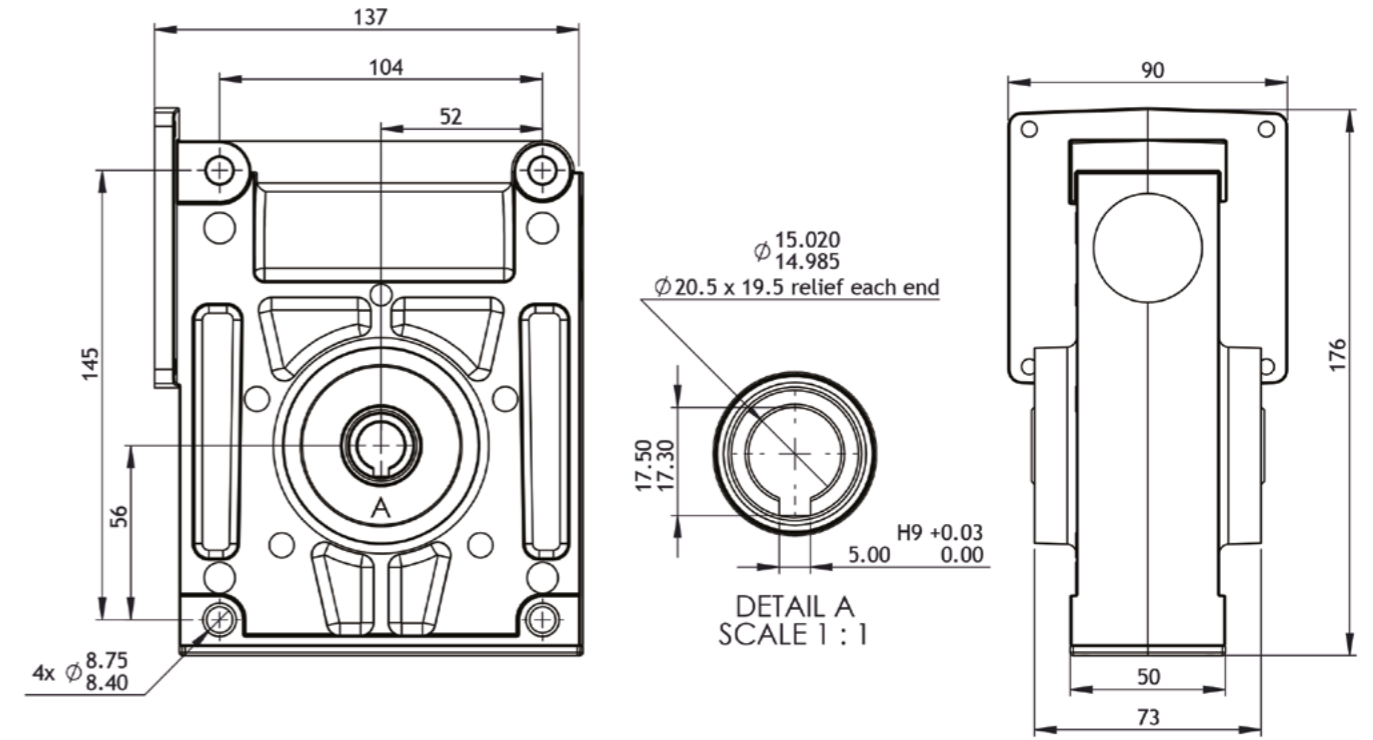


Part number key									
Modular	#####								
Standard	#####								
Calculated data	#####								
Technical data									
1 Part number	-	735894	-	735895	-	735896	-	-	-
2 Gear ratio	:1	12.5	15	25	30	40	60	75	
3 Stages		1	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ¹	Nm	50.0	50.0	50.0	50.0	50.0	50.0	40.0	
5 Max. intermittent torque	Nm	80.0	80.0	80.0	80.0	80.0	80.0	70.0	
6 Efficiency	%	90	85	80	75	70	65	50	
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	
8 Max. axial load (dynamic)	N	600	600	600	600	600	600	600	
9 Max. radial load, 12 mm from flange	N	800	800	800	800	800	800	800	
10 Weight	Kg	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
11 Gear material		Composite	Composite	Composite	Composite	Composite	Composite	Composite	

¹S1 duty cycle based on 3000 RPM input speed

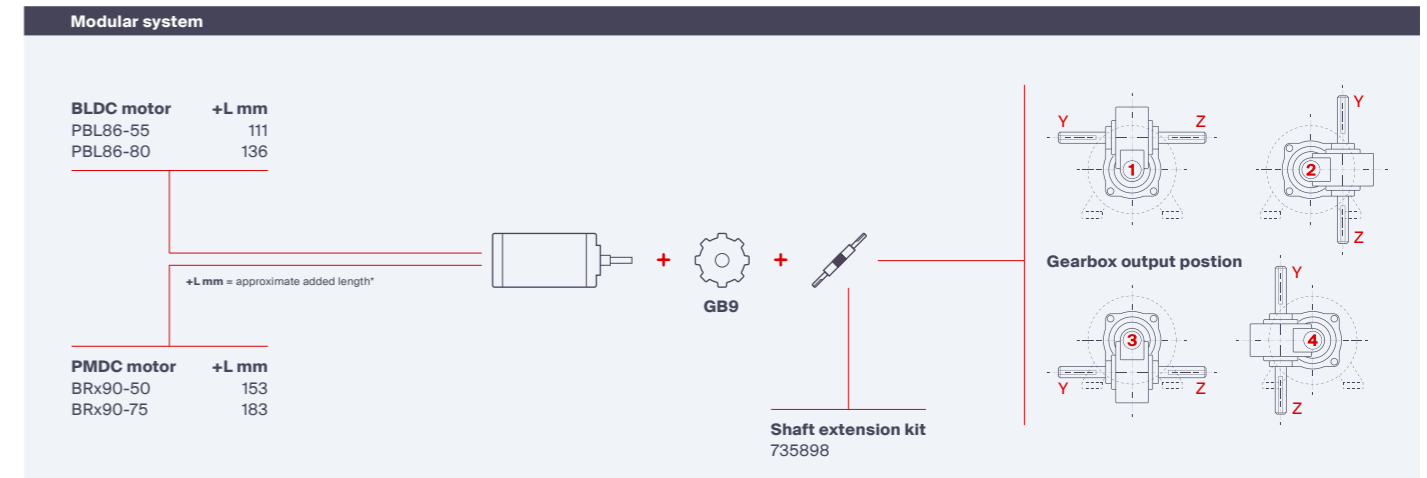


*additional length may also be required for mounting flange between components



Part number key									
Modular	#####								
Standard	#####								
Calculated data	#####								
Technical data									
1 Part number	-	-	-	-	-	-	-	-	-
2 Gear ratio	:1	12.5	15	25	30	40	60	75	
3 Stages		1	1	1	1	1	1	1	1
4 Max. continuous torque (S1) ¹	Nm	75.0	75.0	75.0	75.0	75.0	75.0	60.0	
5 Max. intermittent torque	Nm	120.0	120.0	120.0	120.0	120.0	120.0	96.0	
6 Efficiency	%	85	80	75	70	65	55	45	
7 Backlash	arc.min	10-25	10-25	10-25	10-25	10-25	10-25	10-25	
8 Max. axial load (dynamic)	N	600	600	600	600	600	600	600	
9 Max. radial load, 12 mm from flange	N	800	800	800	800	800	800	800	
10 Weight	Kg	3.4	3.4	3.4	3.4	3.4	3.4	3.4	
11 Gear material		Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	Bronze	

¹S1 duty cycle based on 3000 RPM input speed



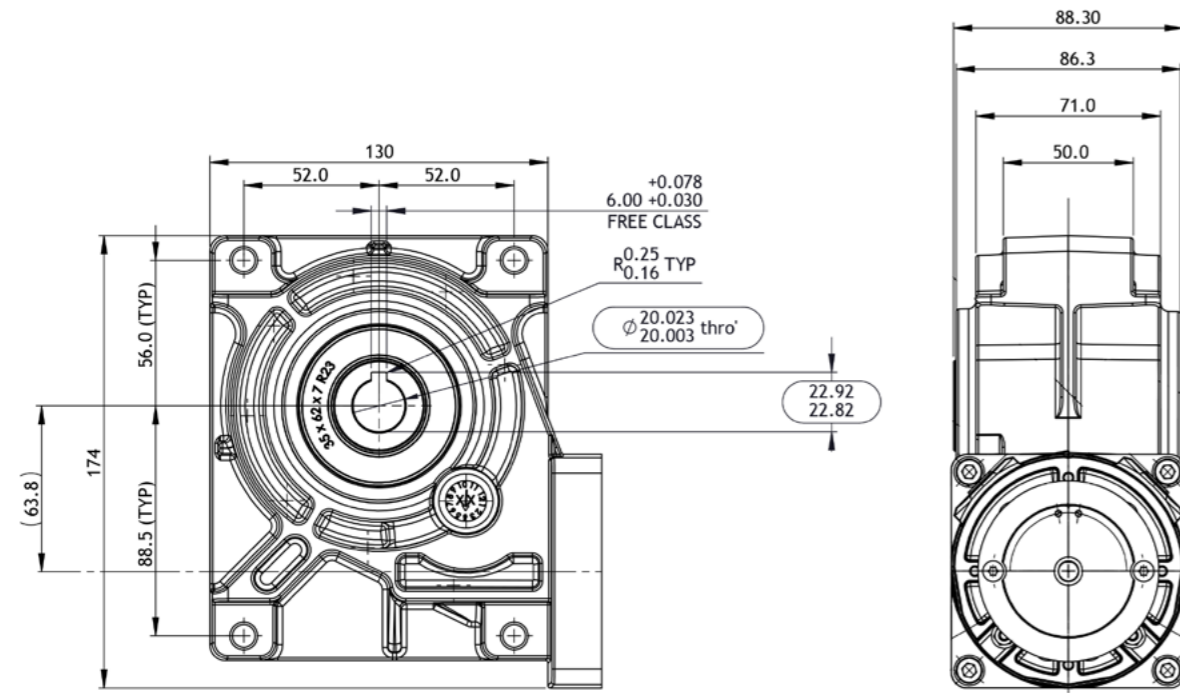
*additional length may also be required for mounting flange between components

GB65

Right-angle gearbox // Steel / bronze gears

60:1 - 160:1 ratio // 300.0 Nm

all dimensions in mm



Part number key

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

Technical data

1 Part number		656002	658002	651002	651202	651602
2 Gear ratio	:1	60	80	100	120	160
3 Stages		2	2	2	2	2
4 Max. continuous torque (S1) ¹	Nm	120.0	120.0	120.0	120.0	120.0
5 Max. intermittent torque	Nm	300.0	300.0	300.0	300.0	300.0
6 Efficiency	%	75	70	65	60	55
7 Backlash	arc.min	35	35	35	35	35
8 Max. axial load (dynamic)	N	-	-	-	-	-
9 Max. radial load, 12 mm from flange	N	2335	2335	2335	2335	2335
10 Weight	Kg	3.5	3.5	3.5	3.5	3.5
11 Gear material ²		S / B	S / B	S / B	S / B	S / B

¹ S1 duty cycle based on 3000 RPM input speed ² Gear material: C = Composite, S = Steel, B = Bronze

Modular system

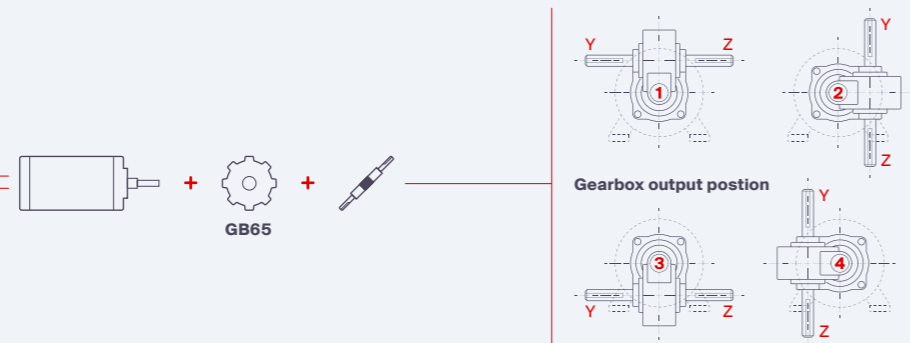
BLDC motor +L mm

PBL86-55	111
PBL86-80	136

PMDC motor +L mm

BRx90-50	153
BRx90-75	183

+L mm = approximate added length*



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

Notes

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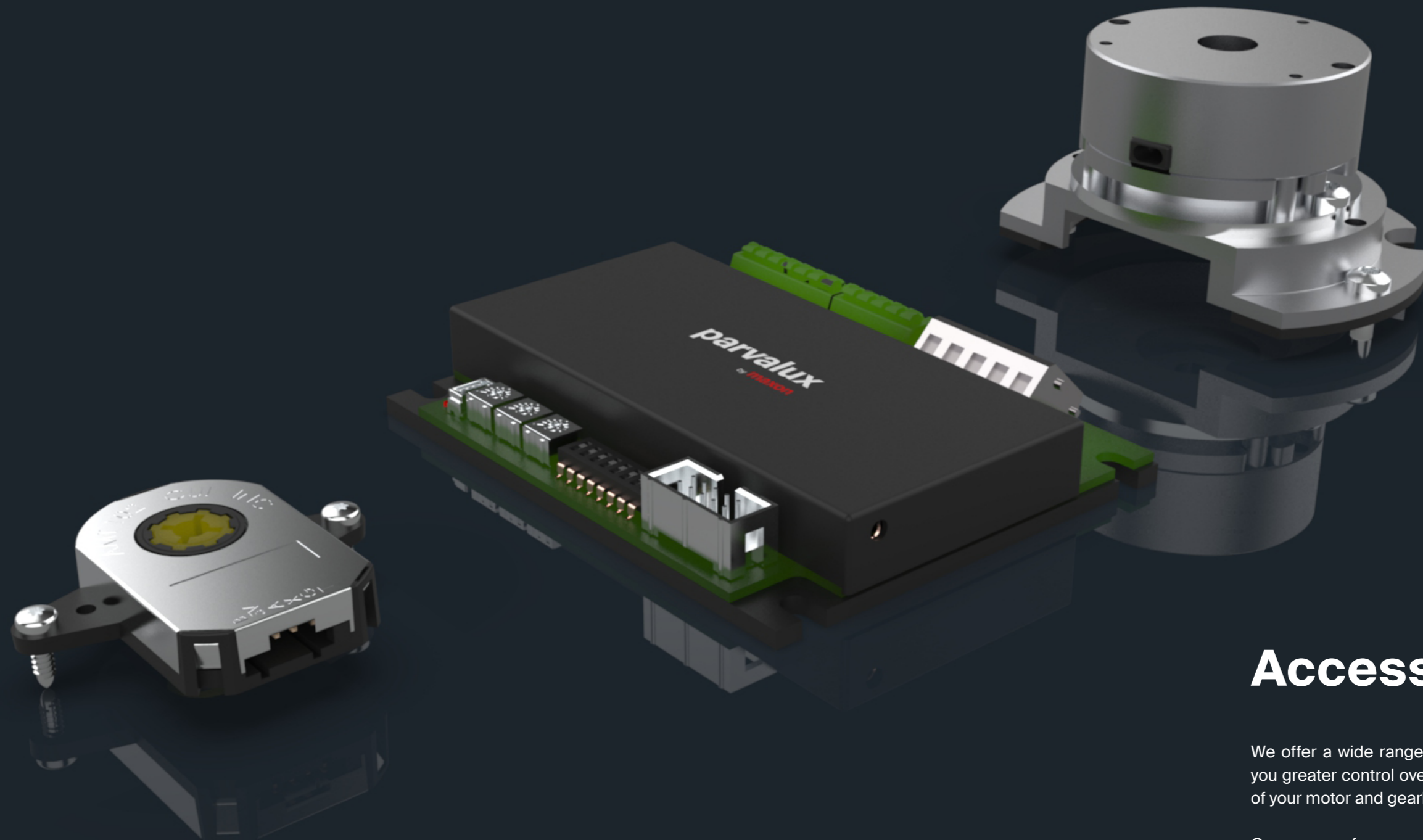


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SC 50/15 Controller

BLDC / PMDC motor controller



Electrical rating			
1	Nominal power supply voltage +V _{cc}	VDC	12 - 50
2	Absolute supply voltage +V _{min} / +V _{max}	VDC	10 / 56
3	Output voltage (max.)	V	0.98 x V _{cc}
4	Output current I _{cont} / I _{max} (< 10 s)	A	15 / 30
5	Pulse width modulation frequency	kHz	53.6
6	Sampling rate PI speed controller	kHz	5.36
7	Max. efficiency	%	98 (→Figure 2-3 on page 05)
8	Max. speed - PMDC motor		Open loop: limited by max. permissible speed (motor) and max. output voltage (controller). Closed loop: 5000 to 15,000 rpm, dependent on configuration (→chapter 3.5.1 on page 13)
9	Max. speed - BLDC motor		2500 ... 30,000 rpm, dependent on configuration (→chapter 3.5.1 on page 13)
10	Built-in filter choke	nH; A	3 x 200; 15

Inputs and outputs			
1	Digital input - «Enable»		Logic +2.1 ... +30 VDC
2	Digital input - «Direction»		Logic +2.1 ... +30 VDC
3	Digital input - «Stop»		Logic +2.1 ... +30 VDC
4	Digital output - «Ready»		Logic signal output, 3.3 VDC, Ri: 2.2 kΩ, Push-Pull
5	Analog input - «Speed set value»		Analog 0 ... 5.0 VDC, PWM signal (fixed amplitude 0 ... 5 VDC, 1 kHz ... 10 kHz)
6	Digital hall sensors H1, H2, H3		+2.0 ... +24 VDC (internal pull-up)
7	Digital incremental encoder signals A, A _l , B, B _l		EIA RS422, max. 1 MHz, max. 100 kHz (single-ended)

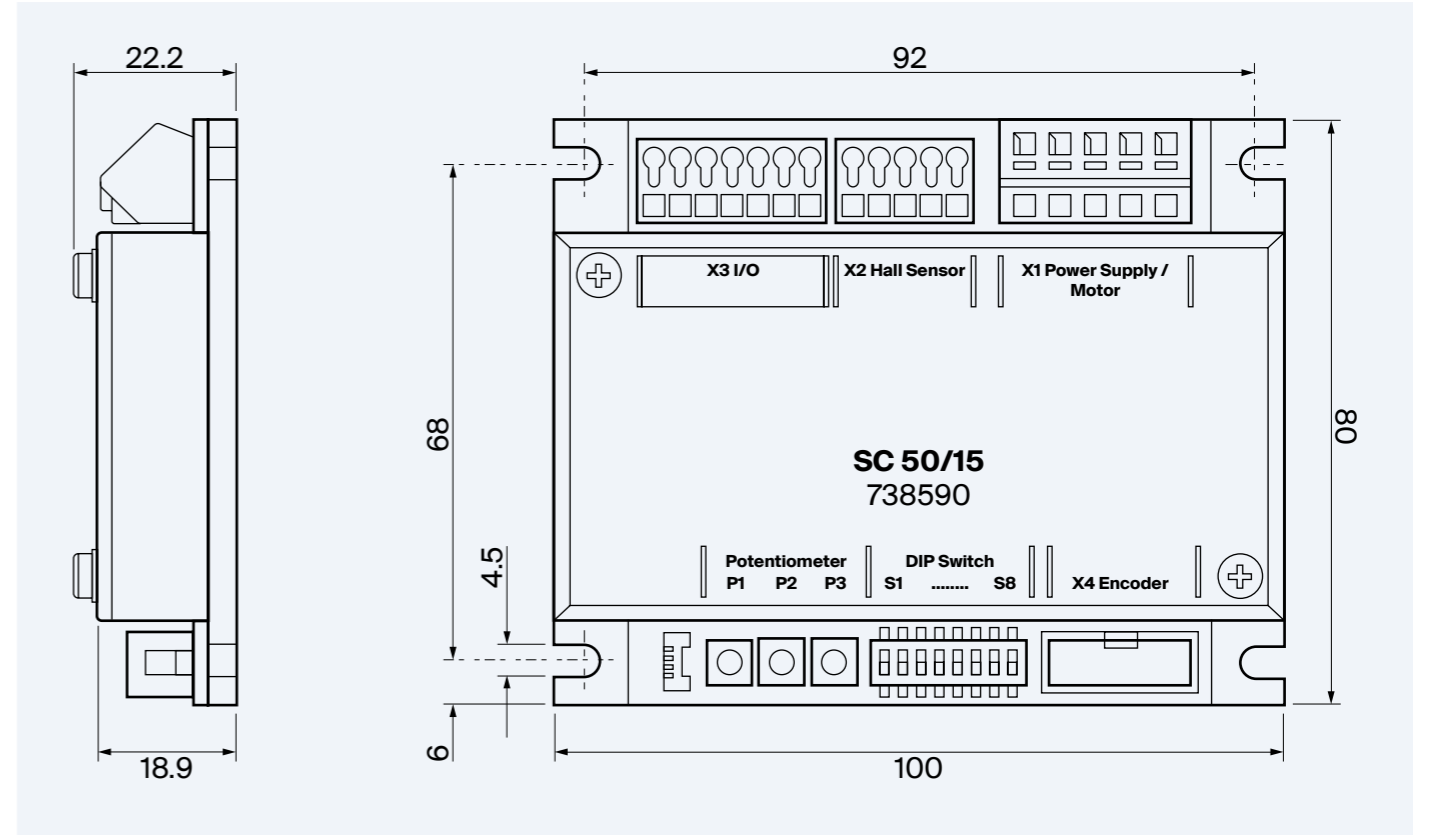
Voltage outputs	
1	Sensor supply voltage V _{sensor}
	+5 VDC / I _L ≤ 100 mA

Motor connections	
1	PMDC motor
	+ motor, - motor
2	BLDC motor
	Motor winding 1, motor winding 2, motor winding 3

Configuration	
1	DIP switch
	SMD type, 8 position for the setting of: <ul style="list-style-type: none"> • Motor Type • Control Mode • Speed Set Value Source • Speed Sensor Selection / Encoder Resolution • Hall Sensor Polarity • Speed Range Selection
2	Potentiometers
	3 x angular type 210° for the setting of: <ul style="list-style-type: none"> • Speed Ramp/Speed Set Value • Continuous/Maximum Current Limit • Controller Gain

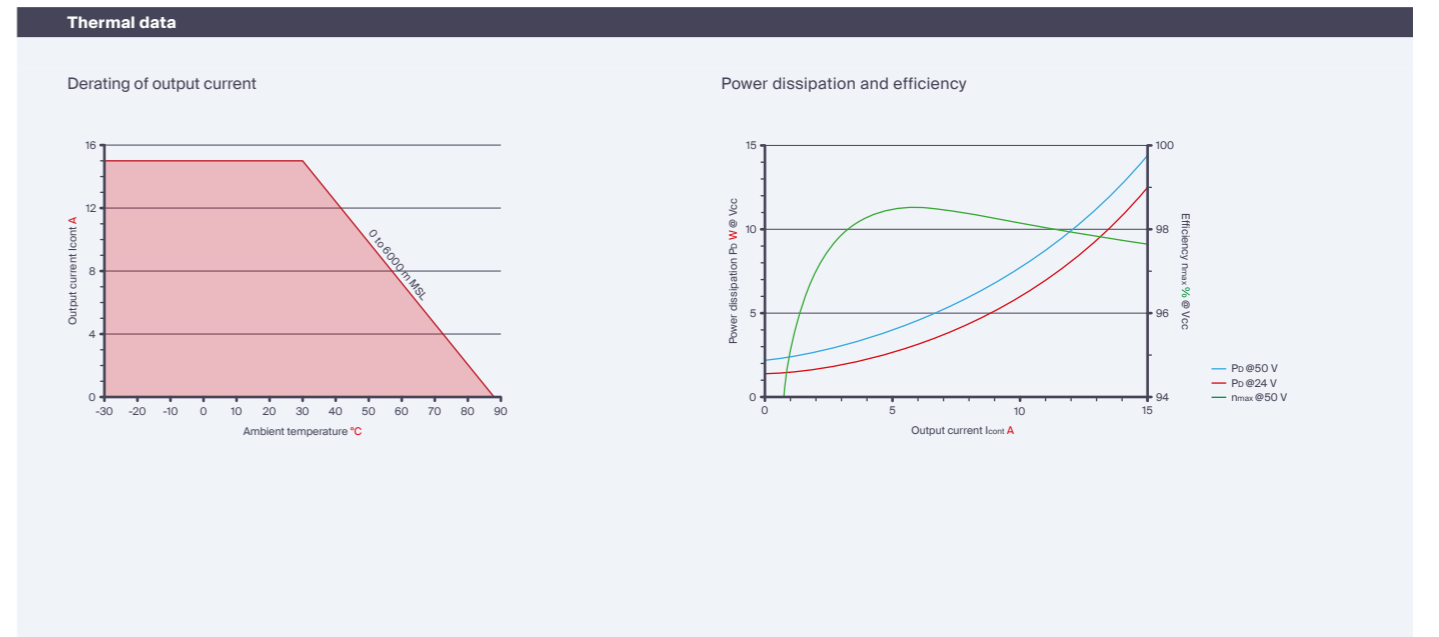
Status indicators	
1	Device status - Operation
	Green LED
2	Device status - Error
	Red LED

Physical		
1	Weight	g
2	Dimensions (L x W x H)	mm
3	Mounting	Slotted flange for M4 screws



Environment			
1	Temperature - Operation	°C	-30 ... +30
2	Temperature - Extended range [a]	°C	+30 ... +84; Derating: -0.278 A/°C (→Figure 2-2)
3	Temperature - Storage	°C	-30 ... +85
4	Altitude [b]	m	0 ... 6000 MSL
5	Humidity	%	5 ... 90 (condensation not permitted)

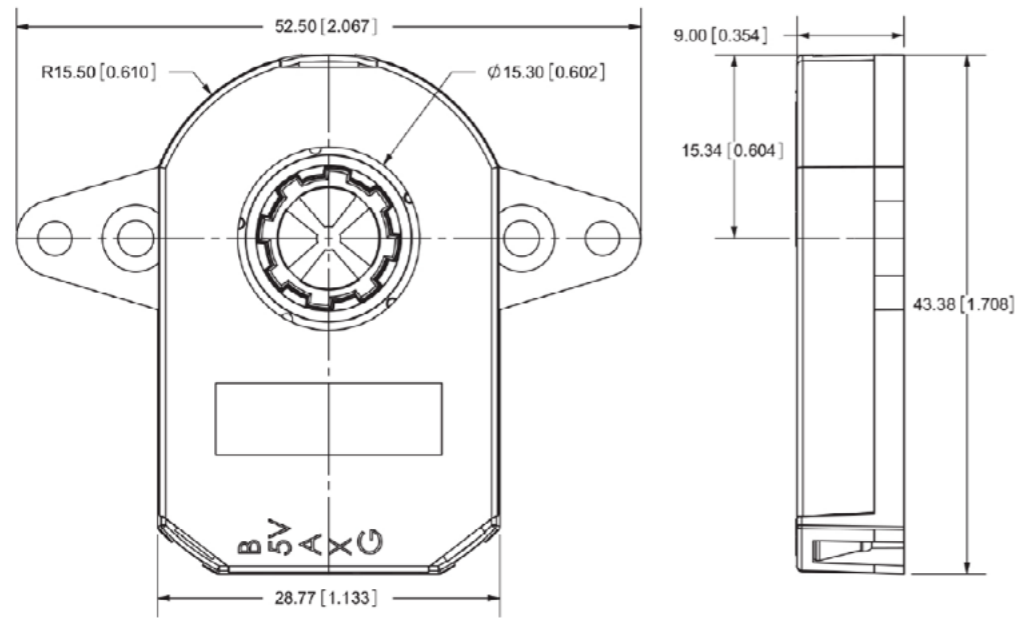
[a] Operation within the extended range is permitted. However, a respective derating (declination of output current I_{cont}) as to the stated values will apply. [b] Operating altitude in meters above Mean Sea Level, MSL.



Incremental encoder

735912

all dimensions in mm [in.]



Electrical data	Conditions / description		min	typ	max
1 Power supply (VDD)	VDD	V	3.6	5.0	5.5
2 Current consumption ¹	with unloaded output	mA		6.0	
3 Output high level		V	0.8		
4 Output low level		V			0.4
5 Output current ²	CMOS sink / source per channel	mA			2.0
6 Rise / fall time		ns		30	

Incremental characteristics	Conditions / description		min	typ	max
1 Channels	quadrature A, B, and X index				
2 Waveform	CMOS voltage square wave				
3 Phase difference	A leads B for CCW rotation (viewed from the front)	°		90	
4 Quadrature resolutions ¹	48, 96, 100, 125, 192, 200, 250, 256, 384, 400, 500, 512, 800, 1000, 1024, 2048	PPR			
5 Index ²	one pulse per 360° rotation				
6 Accuracy		°		0.25	
	256, 512, 1024, 2048	%	49	50	51
7 Quadrature duty cycle (at each resolution)	48, 96, 100, 125, 192, 200, 250, 384, 400, 500	%	47	50	53
	800, 1000	%	43	50	56

¹ Resolution selected via adjustable DIP switch, pre-set to 2048 PPR. All resolutions are listed as pre-quadrature, meaning the final number of counts is PPR x 4

² Some stepper motors may leak a magnetic field causing the index pulse to not function properly (non-magnetic version available with 8 pulses per revolution)

Mechanical data	Conditions / description		min	typ	max
1 Motor shaft length		mm	9		
2 Weight		g		20.5	
3 Axial play		mm			±0.3
4 Rotational speed (at each resolution)	192, 284, 400, 500, 800, 1000, 1024, 2048	rpm			7500
	48, 96, 100, 125, 200, 250, 256, 512	rpm			15000

Environmental	Conditions / description		min	typ	max
1 Operating temperature ¹		°C	-40		100
2 Humidity	non-condensing	%			95
3 Vibration	20~500 Hz, 1 hour each XYZ	G			10
4 Shock	11 ms, ±XYZ direction	G			50
5 RoHS	2011 / 65 / EU				

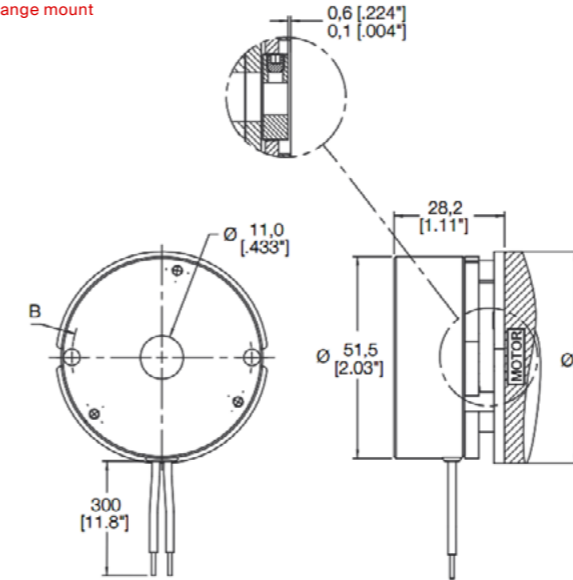
¹ Encoders with operating temperature of -40 - 125°C are available as a custom order

1.5 Nm Brake

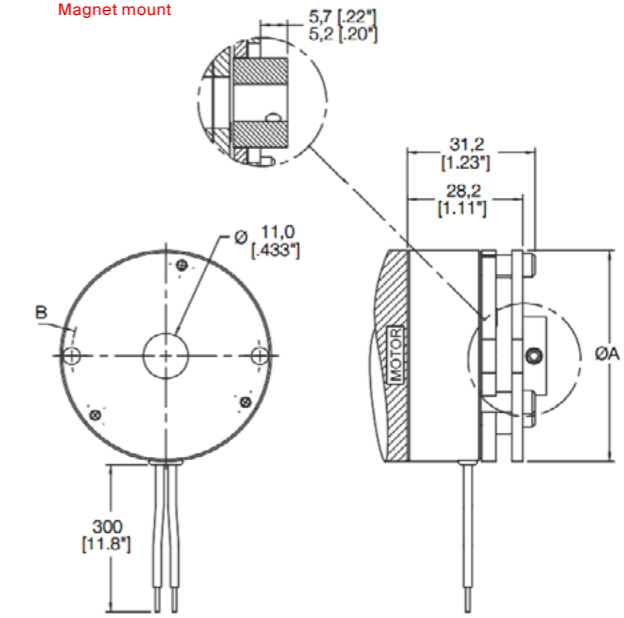
735914

all dimensions in mm [in.]

Flange mount



Magnet mount



Technical data		
1 Static torque	Nm	1.5
2 Ambient temperature	°C	-20 - 40
3 Duty cycle	%	50
4 Voltage	V	12 - 24
5 Power	W	11

Mounting		
Flange mount		
1 End plate outer diameter	mm	75
2 Mounting PCD	mm	68
3 Number of holes		2, 3 or 4
Magnet mount		
1 End plate outer diameter	mm	51.5
2 Mounting PCD	mm	46
3 Number of holes		2


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