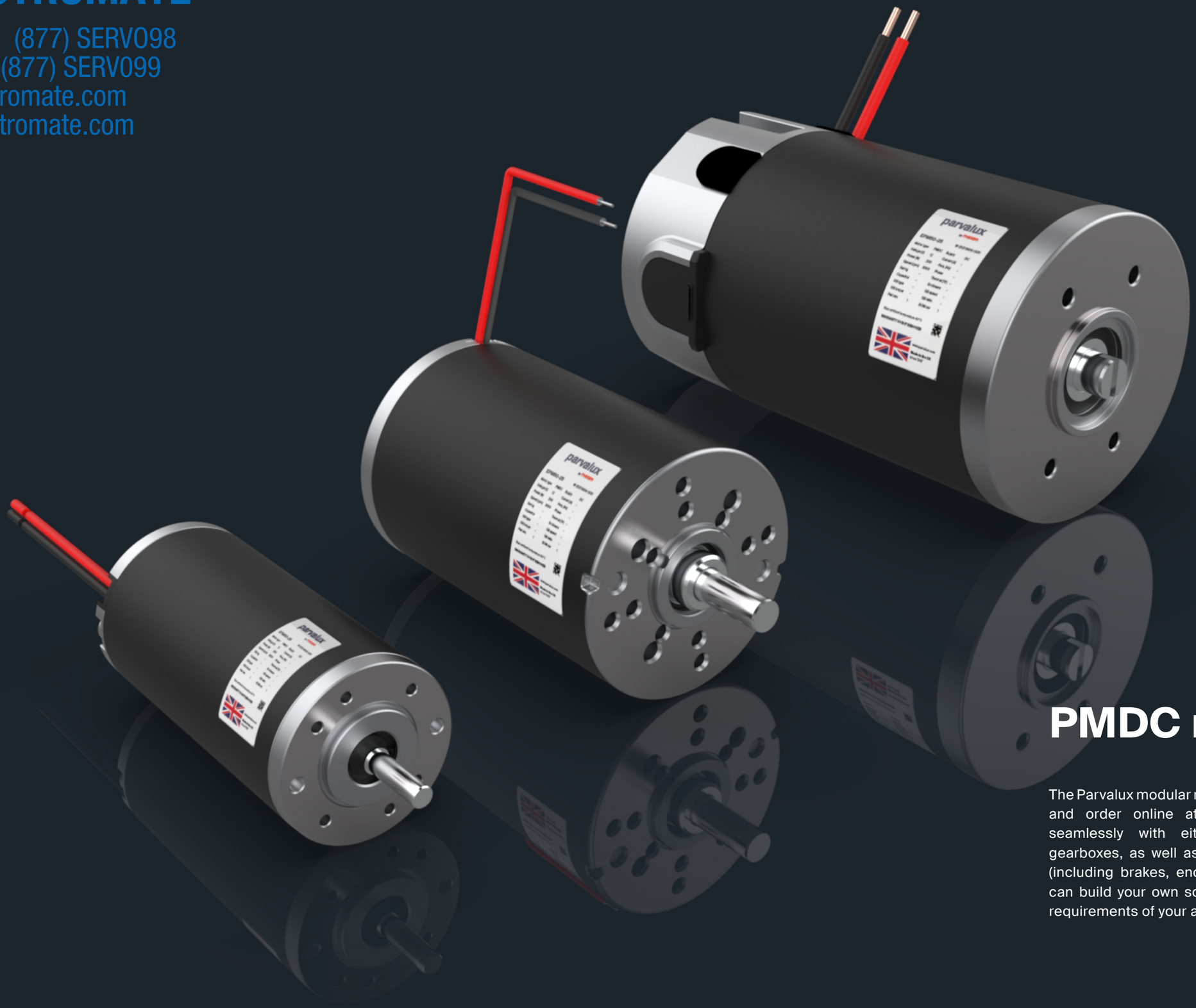


PMDC modular

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

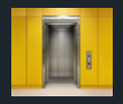
- Delivers up to 0.09 Nm
- Compact envelope size & lightweight
- Selection of voltages up to 48V DC
- Continuously rated at up to 0.057 Nm
- Bi-directional operation
- Supports custom shaft designs and windings

Market sectors

Agriculture

Medical

Industrial



Building automation

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 **(:1)**: 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

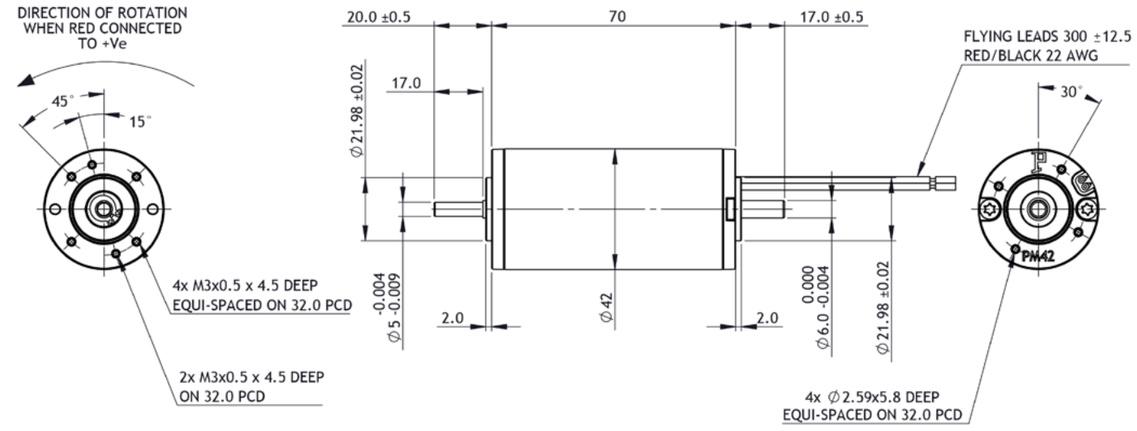
Mounting flange: 781275

Encoder	
Incremental	735912

BRx42-25 PMDC motor

Ø42 mm frame // 19 mm stack

all dimensions in mm



Part number key	
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

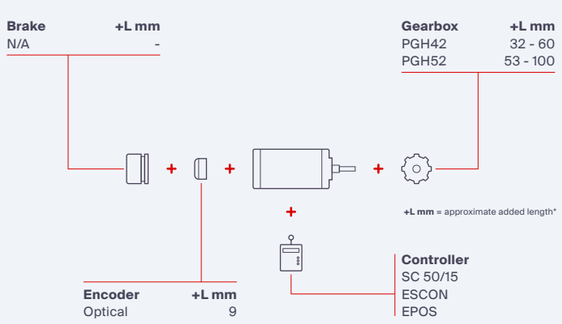
Technical data					
1	Part number		781076	781077	781078
2	Nominal power	W	12	12	12
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	4091	4006	4115
5	No load current	A	0.280	0.150	0.038
6	Nominal speed	rpm	3000	3000	3000
7	Nominal continuous torque (S1)	Nm	0.038	0.038	0.038
8	Nominal continuous current (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	Kgcm²	1.0 x 10^{-5}	1.0 x 10^{-5}	1.0 x 10^{-5}

Thermal data		
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

Modular system

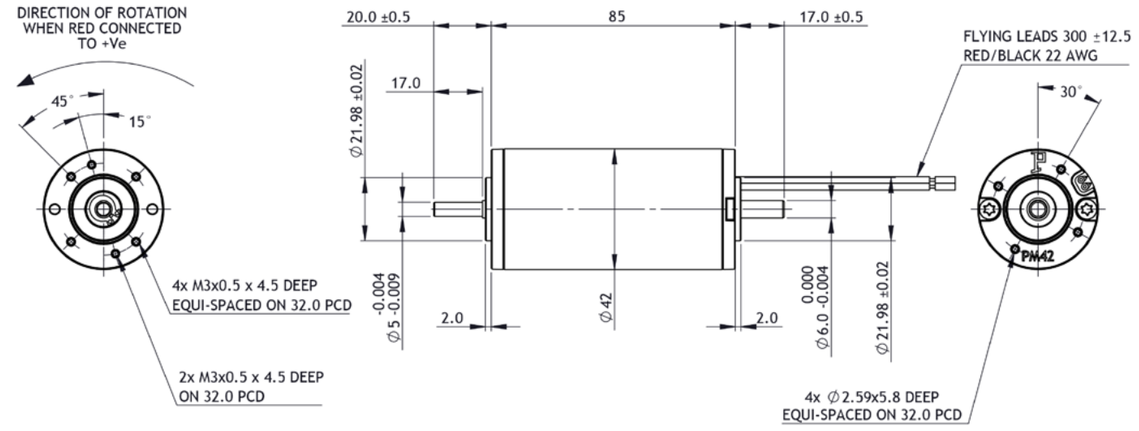


*additional length may also be required for mounting flange between components

BRx42-40 PMDC motor

Ø42 mm frame // 34 mm stack

all dimensions in mm



Part number key	
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

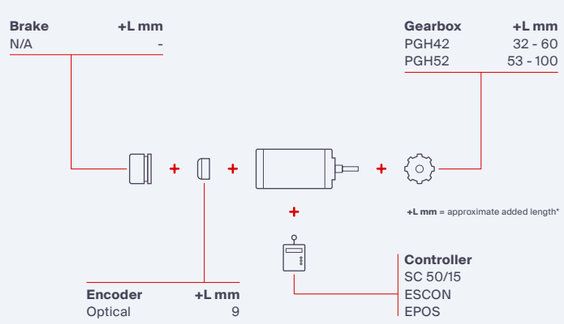
Technical data					
1	Part number		781079	781080	781081
2	Nominal power	W	20	20	20
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	4128	4064	4064
5	No load current	A	0.22	0.11	0.05
6	Nominal speed	rpm	3000	3000	3000
7	Nominal continuous torque (S1)	Nm	0.057	0.057	0.057
8	Nominal continuous current (S1)	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	Kgcm²	1.4 x 10^{-5}	1.4 x 10^{-5}	1.4 x 10^{-5}

Thermal data		
20 Ambient temperature	°C	40

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

Other data		
22 Number of poles		2
23 Weight	Kg	0.52
24 IP rating		IP54
25 Enclosure		Enclosed
26 Insulation Class		F
27 Reversible		Yes

Modular system



*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 **(:1)**: 5, 19, 57, 82, 114, 207, 357, 552

Controllers

Controller	
SC50/15	738590

Encoders

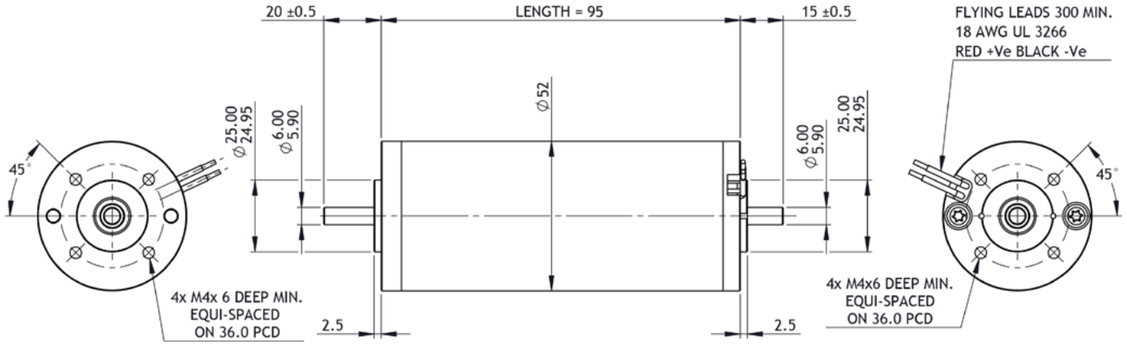
Mounting flange: TBC

Encoder	
Incremental	735912

BRx52-30 PMDC motor

Ø52 mm frame // 30 mm stack

all dimensions in mm



Part number key		
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

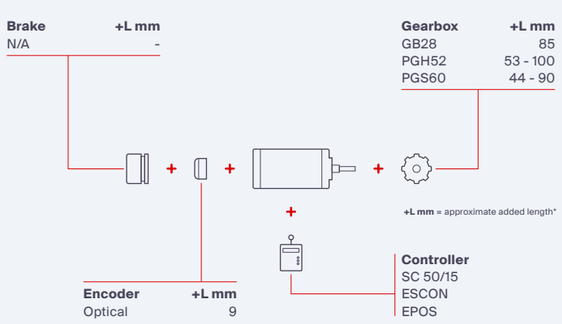
Technical data					
1	Part number		787108	787109	787110
2	Nominal power	W	28	28	28
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	3550	3561	3547
5	No load current	A	0.46	0.51	0.20
6	Nominal speed	rpm	3000	3000	3000
7	Nominal continuous torque (S1)	Nm	0.09	0.09	0.09
8	Nominal continuous current (S1)	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	Kgcm²	2.33 x 10^{-5}	2.33 x 10^{-5}	2.33 x 10^{-5}

Thermal data			
20	Ambient temperature	°C	40

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

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

Modular system

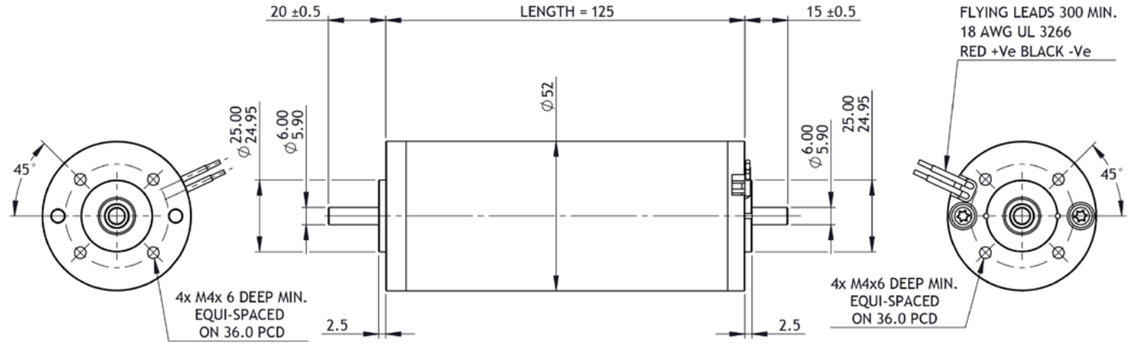


*additional length may also be required for mounting flange between components

BRx52-58 PMDC motor

Ø52 mm frame // 58 mm stack

all dimensions in mm



Part number key		
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

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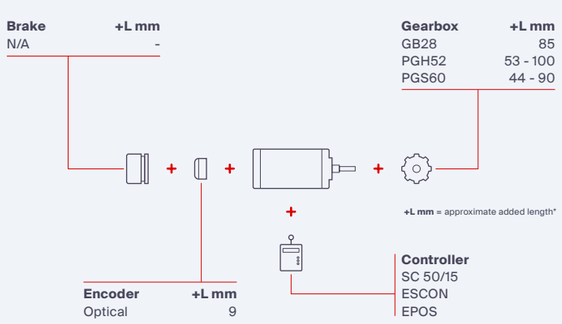
Technical data					
1	Part number		787111	787113	787114
2	Nominal power	W	69	69	69
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	3760	3840	3838
5	No load current	A	0.37	0.40	0.16
6	Nominal speed	rpm	3000	3000	3000
7	Nominal continuous torque (S1)	Nm	0.22	0.22	0.22
8	Nominal continuous current (S1)	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	Kgcm²	5.7 x 10^{-5}	5.7 x 10^{-5}	5.7 x 10^{-5}

Thermal data			
20	Ambient temperature	°C	40

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

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

Modular system



*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

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

PGS71
Planetary gearbox

Mounting flange: TBC

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

Brakes

Mounting flange: 781276

Brake	
1 Nm	735914

Encoders

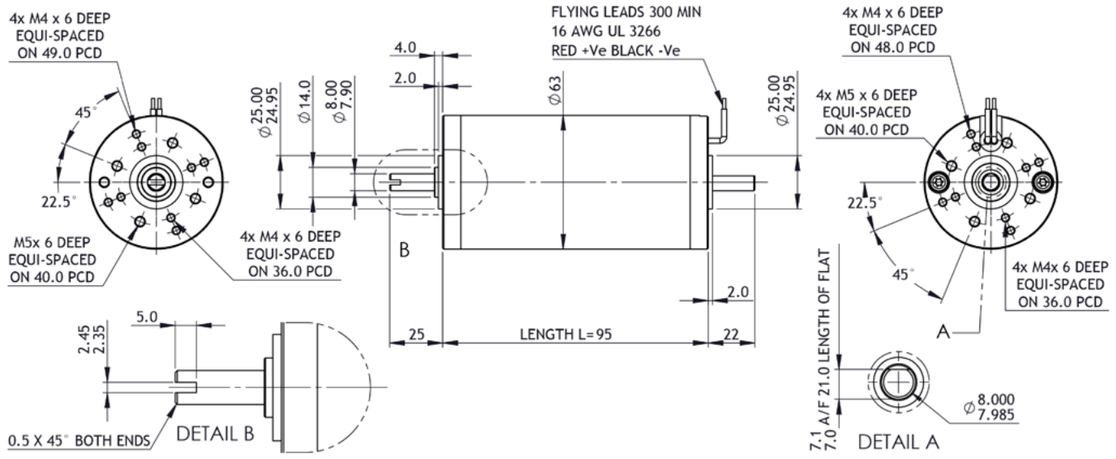
Mounting flange: 781276

Encoder	
Incremental	735912

BRx63-40 PMDC motor

Ø63 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

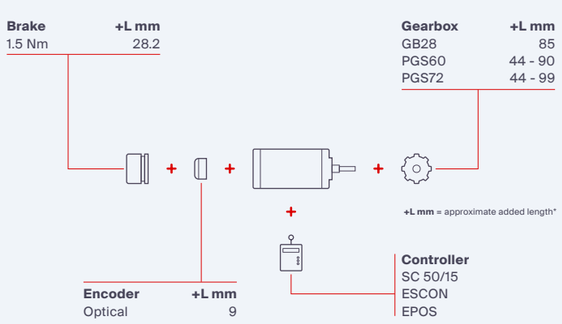
Technical data					
1	Part number		781083	781084	781085
2	Nominal power	W	57	57	57
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	3581	3591	3621
5	No load current	A	0.64	0.30	0.15
6	Nominal speed	rpm	3000	3000	3000
7	Nominal continuous torque (S1)	Nm	0.18	0.18	0.18
8	Nominal continuous current (S1)	A	6.4	3.0	1.6
9	Max. intermittent torque (S2 - 15 minutes)	Nm	0.30	0.30	0.30
10	Stall current	A	64.0	11.8	6.9
11	Stall torque	Nm	1.9	0.7	0.8
12	Stack length	mm	40	40	40
13	Maximum efficiency	%	79	84	84
14	Terminal resistance - phase to phase	Ω	0.190	1.649	5.130
15	Terminal inductance - phase to phase	mH	-	2.204	8.520
16	Speed constant	rpm/V	301.0	151.7	76.5
17	Torque constant	Nm/A	0.03	0.06	0.12
18	Speed torque gradient	rpm/Nm	1892	5656	5037
19	Rotor inertia	Kgcm²	7.4 x 10^{-5}	7.4 x 10^{-5}	7.4 x 10^{-5}

Thermal data		
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	0.85
24 IP rating		IP54
25 Enclosure		Enclosed
26 Insulation Class		F
27 Reversible		Yes

Modular system

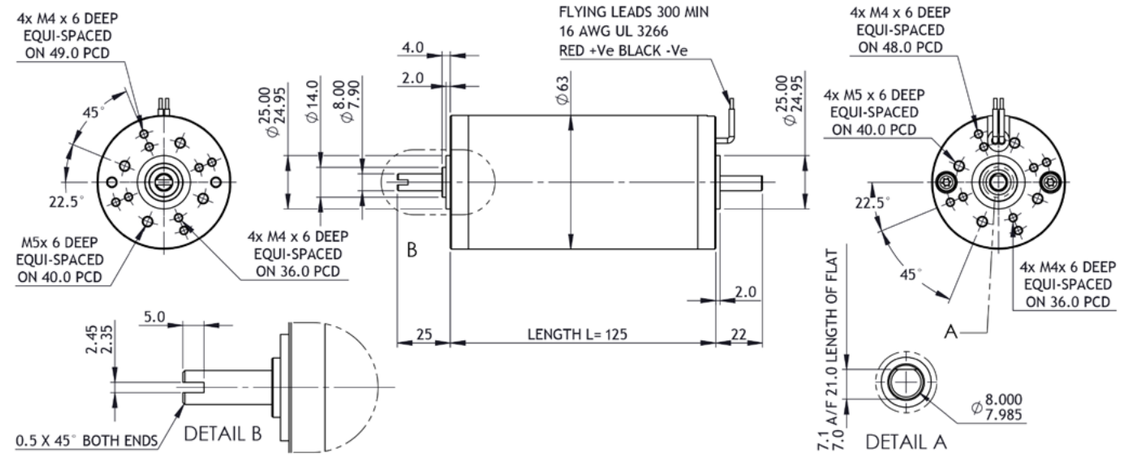


*additional length may also be required for mounting flange between components

BRx63-55 PMDC motor

Ø63 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

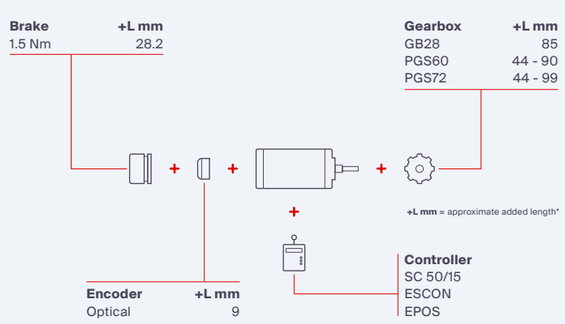
Technical data					
1	Part number		781088	781089	781090
2	Nominal power	W	85	85	85
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	3521	3617	3613
5	No load current	A	0.53	0.31	0.18
6	Nominal speed	rpm	3000	3000	3000
7	Nominal continuous torque (S1)	Nm	0.27	0.27	0.27
8	Nominal continuous current (S1)	A	9.1	4.7	2.4
9	Max. intermittent torque (S2 - 15 minutes)	Nm	0.45	0.45	0.45
10	Stall current	A	75.0	27.9	19.2
11	Stall torque	Nm	2.40	1.65	2.20
12	Stack length	mm	55	55	55
13	Maximum efficiency	%	81	81	85
14	Terminal resistance - phase to phase	Ω	0.160	0.593	2.300
15	Terminal inductance - phase to phase	mH	-	0.92	3.60
16	Speed constant	rpm/V	287.0	150.9	75.4
17	Torque constant	Nm/A	0.03	0.06	0.10
18	Speed torque gradient	rpm/Nm	1491	2336	1741
19	Rotor inertia	Kgcm²	9.3 x 10^{-5}	9.3 x 10^{-5}	9.3 x 10^{-5}

Thermal data		
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	1.16
24 IP rating		IP54
25 Enclosure		Enclosed
26 Insulation Class		F
27 Reversible		Yes

Modular system



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

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

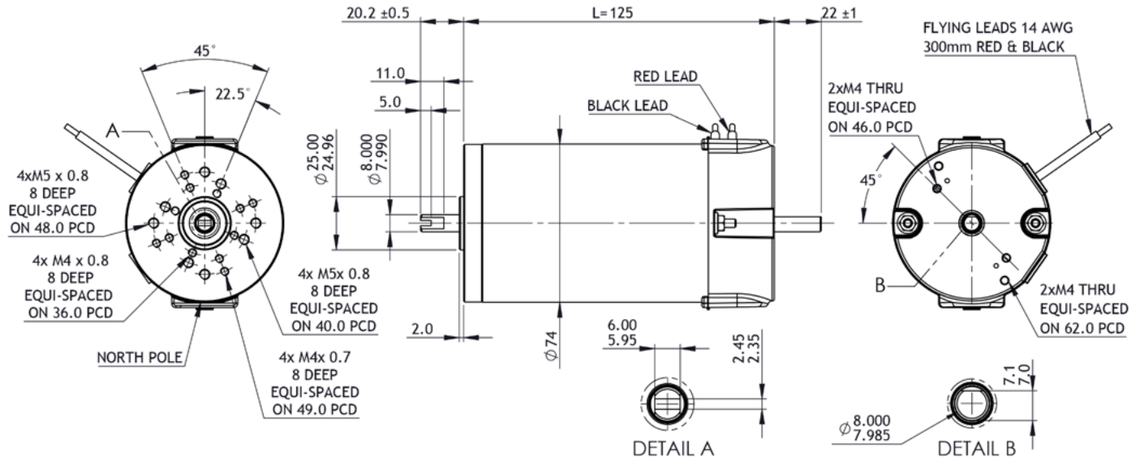
Mounting flange: 781277

Encoder	
Incremental	735912

BRx70-40 PMDC motor

Ø70 mm frame // 40 mm stack

all dimensions in mm



Part number key	
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

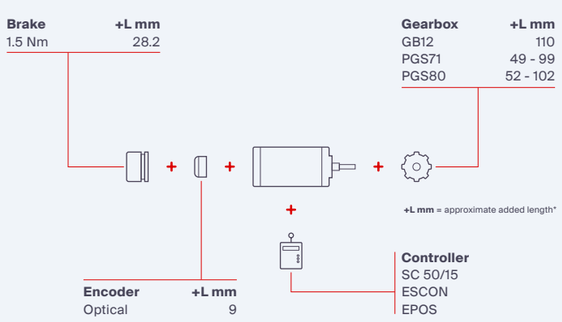
Technical data					
1	Part number		781092	781093	781094
2	Nominal power	W	79	79	79
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	3340	3433	3167
5	No load current	A	1.50	0.80	0.28
6	Nominal speed	rpm	3000	3000	3000
7	Nominal continuous torque (S1)	Nm	0.25	0.25	0.25
8	Nominal continuous current (S1)	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	Kgcm²	1.83 x 10^{-4}	1.83 x 10^{-4}	1.83 x 10^{-4}

Thermal data		
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

Modular system

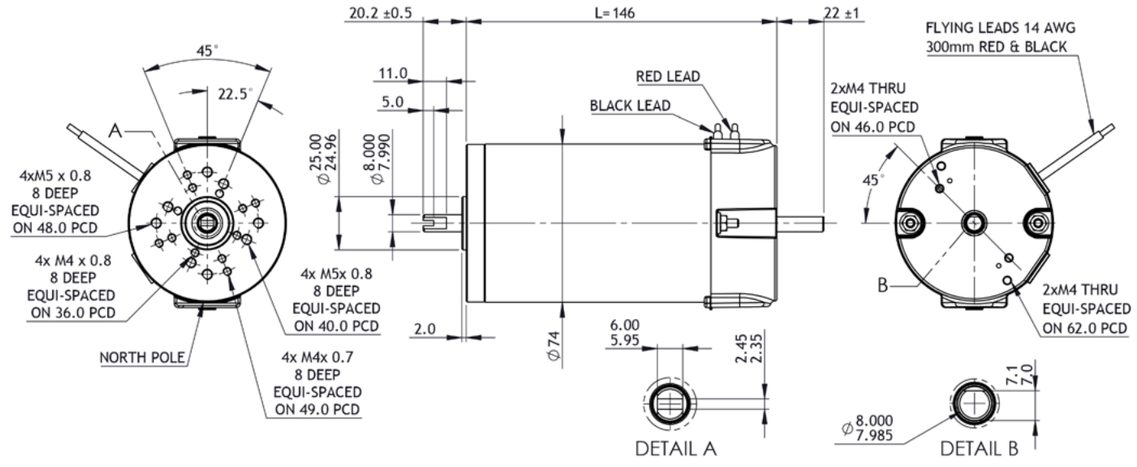


*additional length may also be required for mounting flange between components

BRx70-60 PMDC motor

Ø70 mm frame // 60 mm stack

all dimensions in mm



Part number key	
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

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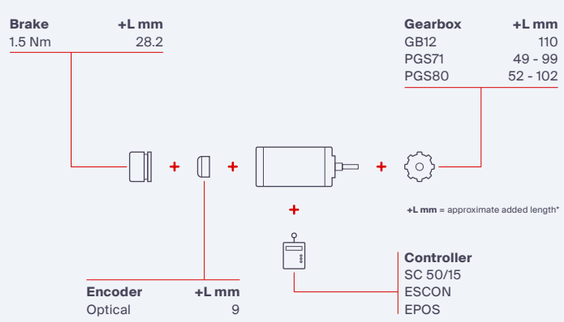
Technical data					
1	Part number		781095	781096	781097
2	Nominal power	W	157	157	157
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	3970	3580	3310
5	No load current	A	1.80	0.80	0.37
6	Nominal speed	rpm	3000	3000	3000
7	Nominal continuous torque (S1)	Nm	0.5	0.5	0.5
8	Nominal continuous current (S1)	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	Kgcm²	2.5 x 10^{-4}	2.5 x 10^{-4}	2.5 x 10^{-4}

Thermal data		
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

Modular system



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

BRx90 Product Overview

PMDC motor // Ø42 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

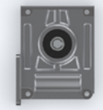
BRx90 Modular System

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

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

PGS90
Planetary gearbox

Mounting flange: 781243

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

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: 781279

Brake	
1 Nm	735914

Encoders

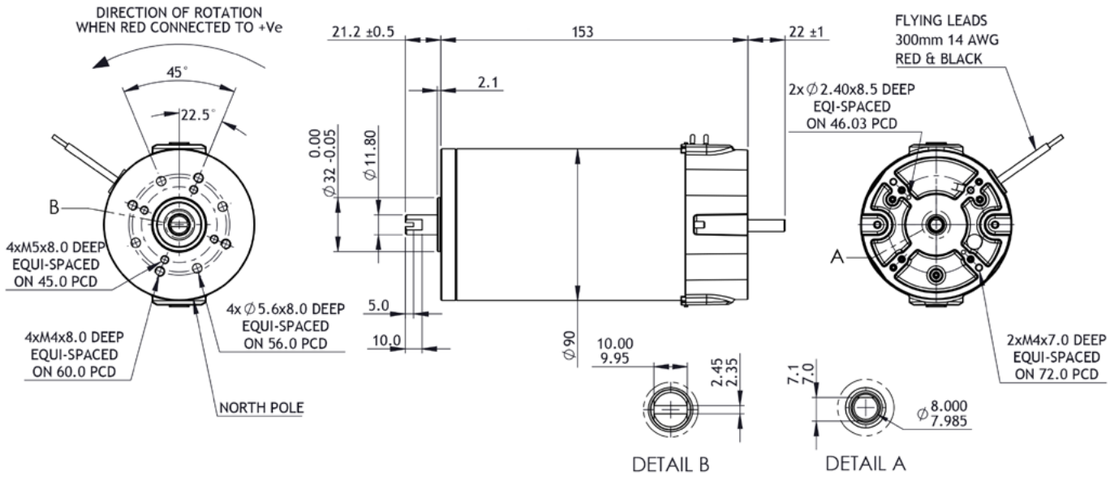
Mounting flange: 781279

Encoder	
Incremental	735912

BRx90-50 PMDC motor

Ø90 mm frame // 50 mm stack

all dimensions in mm



Part number key	
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

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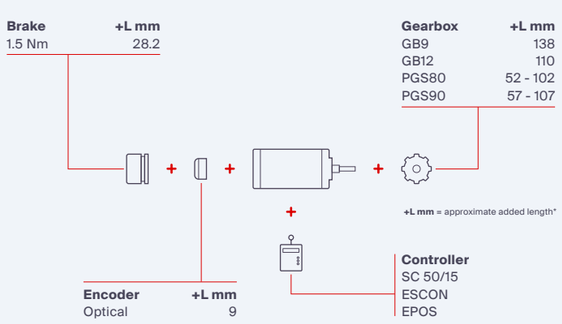
Technical data					
1	Part number		781102	781103	781104
2	Nominal power	W	157	210	210
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	3870	3423	3480
5	No load current	A	2.6	1.1	0.6
6	Nominal speed	rpm	3000	3000	3000
7	Nominal continuous torque (S1)	Nm	0.50	0.67	0.67
8	Nominal continuous current (S1)	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	Kgcm²	6.57 x 10^{-4}	6.57 x 10^{-4}	6.57 x 10^{-4}

Thermal data		
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	3.60
24 IP rating		IP54
25 Enclosure		Enclosed
26 Insulation Class		F
27 Reversible		Yes

Modular system

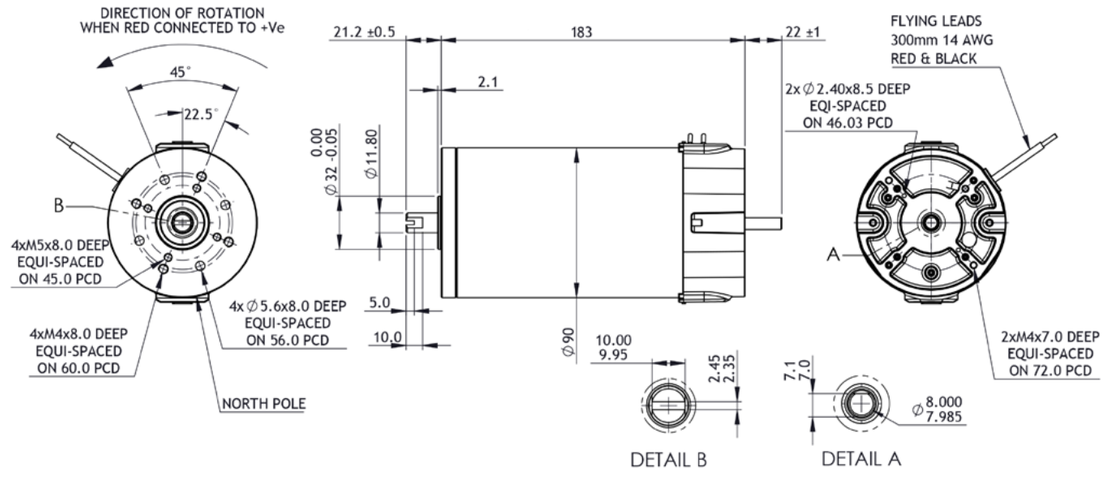


*additional length may also be required for mounting flange between components

BRx90-75 PMDC motor

Ø90 mm frame // 75 mm stack

all dimensions in mm



Part number key	
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

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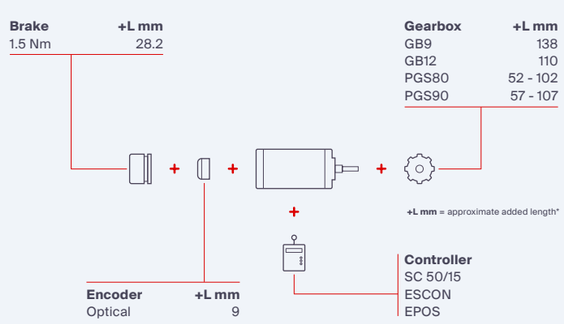
Technical data					
1	Part number		781106	781107	781108
2	Nominal power	W	236	283	283
3	Nominal voltage	V	12	24	48
4	No load speed	rpm	3750	3417	3376
5	No load current	A	3.4	1.2	0.6
6	Nominal speed	rpm	2500	3000	3000
7	Nominal continuous torque (S1)	Nm	0.9	0.9	0.9
8	Nominal continuous current (S1)	A	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	Kgcm²	8.65 x 10^{-4}	8.65 x 10^{-4}	8.65 x 10^{-4}

Thermal data		
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	4.00
24 IP rating		IP54
25 Enclosure		Enclosed
26 Insulation Class		F
27 Reversible		Yes

Modular system



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