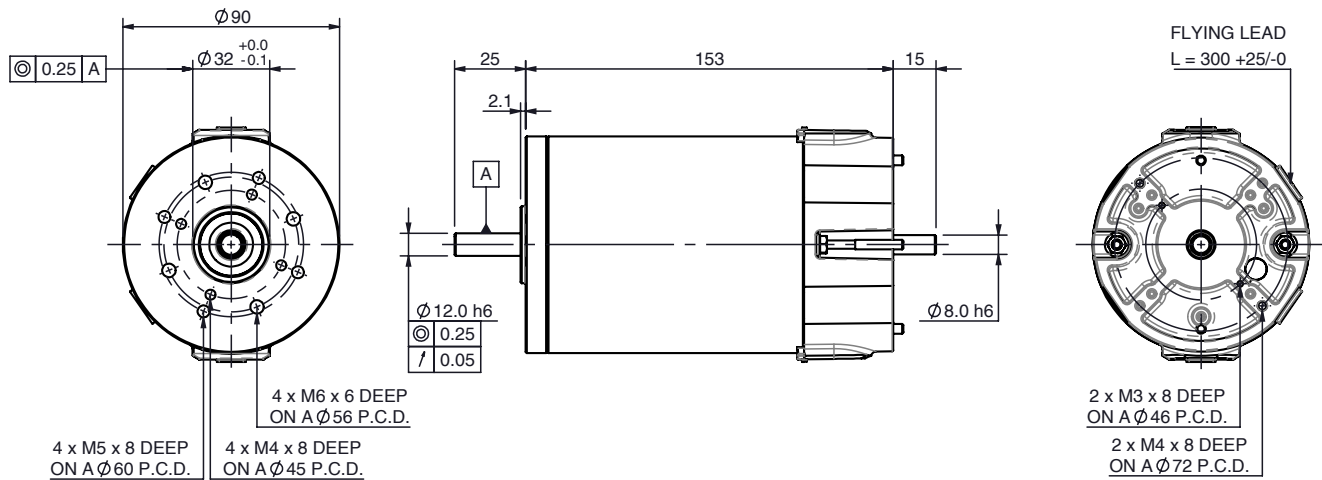


BRx90-50 PMDC motor

Ø90 mm frame // 50 mm stack

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all dimensions in mm

Part number key

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

Please see our customisation options page for details on the modifications available on our products. Advice and guidance on these options are available from your local sales engineer.

Technical data

		781102	781103	781104
1 Part number				
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	Ω	0.112	0.294	0.580
15 Terminal inductance	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	gcm²	6.57 x 10 ⁻⁴	6.57 x 10 ⁻⁴	6.57 x 10 ⁻⁴

Thermal data

20 Ambient temperature	°C	40
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Mechanical data

21 Radial load [distance from flange]	N [mm]	200 [15]
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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

Compatible products

Gearbox	Page #	Brake	Page #	Controller	Page #
GB80	224	1.5 Nm	80	SC 50/15	82
PGx70	250	2.0 Nm	259	EPOS	265
GB12	68	4.0 Nm	260	ESCON	274
GB9	70	Power-On	261		
GB65	71				
		Encoder	Page #		
		Incr. 5-pin	78		
		Incr. 10-pin	78		
		Diff. 10-pin	79		
		Magnetic	256		

Key

Standard combination
Modular combination

BRx90-50 combinations

Quickview - combination drawing and technical data

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Combination drawing		Technical data							
BRx90-50-GB80		Gear material ¹	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio ²	:1	4	30	72	-	-	-
		Speed	rpm	750.0	100.0	41.7	-	-	-
		Nominal torque	Nm	2.3	8.0	5.0	-	-	-
		Intermittent torque	Nm	4.0	13.0	8.0	-	-	-
BRx90-50-PGx70		Gear material ¹	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio [stages] ²	:1	-	-	-	3.9 [1]	21 [2]	44 [2]
		Speed	rpm	-	-	-	769.2	142.9	68.2
		Nominal torque	Nm	-	-	-	2.5	12.9	27.1
		Intermittent torque	Nm	-	-	-	4.3	22.6	37.5
BRx90-50-GB12		Gear material ¹	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio ²	:1	15	30	60	15	30	60
		Speed	rpm	200.0	100.0	50.0	200.0	100.0	50.0
		Nominal torque	Nm	8.3	14.5	20.0	7.5	13.1	20.1
		Intermittent torque	Nm	14.6	25.3	32.0	13.2	22.8	35.1
BRx90-50-GB9		Gear material ¹	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio ²	:1	15	30	60	15	30	60
		Speed	rpm	200.0	100.0	50.0	200.0	100.0	50.0
		Nominal torque	Nm	8.5	15.1	26.1	8.0	14.1	22.1
		Intermittent torque	Nm	14.9	26.3	45.6	14.0	24.6	38.6
BRx90-50-GB65		Gear material ¹	Bronze	Bronze	Bronze	Bronze	Bronze	-	
		Gear ratio ²	:1	20	40	80	120	160	-
		Speed	rpm	150.0	75.0	37.5	25.0	18.8	-
		Nominal torque	Nm	10.9	20.4	37.5	48.2	46.1	-
		Intermittent torque	Nm	19.0	35.6	65.5	84.2	80.5	-

Key

Standard combination / standard gear ratio

Modular combination / modular gear ratio

Notes

¹ Comp. = Composite gears

² Full gear ratio options displayed on individual gearbox datasheets

→ Technical data displayed above calculated based on **BRx90-50 48V 3000 rpm** motor. Intermittent torque displayed based on S2 - 15 minute duty cycle.

→ Simplified drawings displayed above show overall envelope size of the combination. Please see individual motor and gearbox datasheets for detailed technical drawings.