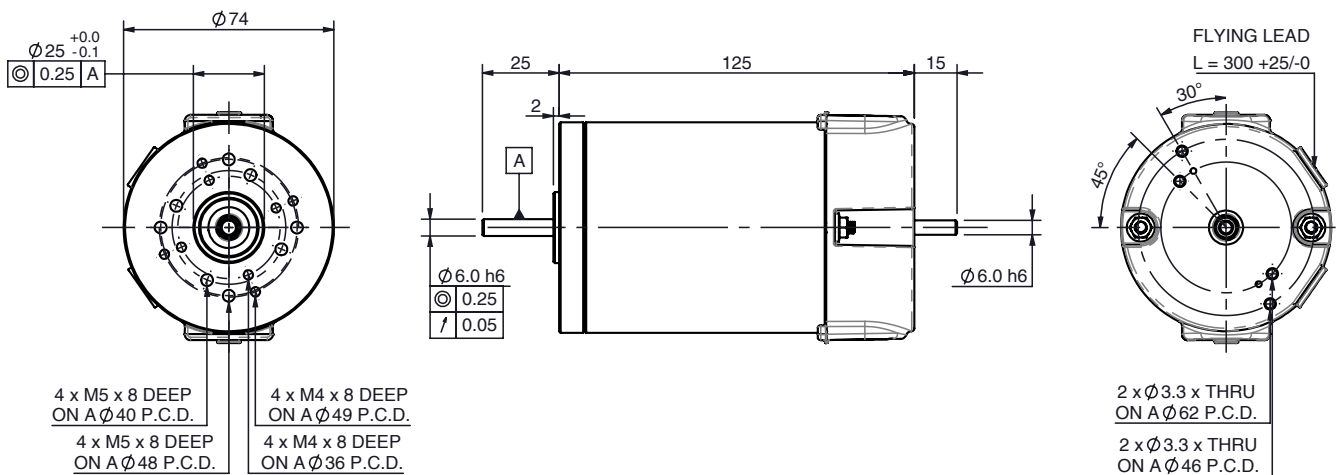


# BRx70-40 PMDC motor

Ø70 mm frame // 40 mm stack

**parvalux**  
by **maxon**



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

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

## Thermal data

20 Ambient temperature	<b>°C</b>	40
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## Mechanical data

21 Radial load [distance from flange]	<b>N [mm]</b>	200 [15]
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## Other data

22 Number of poles		2
23 Weight	<b>Kg</b>	1.85
24 IP rating		IP54
25 Enclosure		Enclosed
26 Insulation Class		F
27 Reversible		Yes

## Compatible products

Gearbox	Page #	Brake	Page #	Controller	Page #
GB80	67	1.5 Nm	80	SC 50/15	82
PGx52	249	2.0 Nm	259	EPOS	265
PGx70	250	Power-On	261	ESCON	274
GB12	68				
		Encoder	Page #		
		Incr. 5-pin	78		
		Incr. 10-pin	78		
		Diff. 10-pin	79		
		Magnetic	256		

## Key

Standard combination  
Modular combination

# BRx70-40 combinations

Quickview - combination drawing and technical data

**parvalux**  
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Combination drawing	Technical data							
<b>BRx70-40-GB80</b> 	Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
	Gear ratio <sup>2</sup>	:1	15	30	60	-	-	-
	Speed	<b>rpm</b>	200.0	100.0	50.0	-	-	-
	Nominal torque	<b>Nm</b>	2.9	5.3	6.0	-	-	-
	Intermittent torque	<b>Nm</b>	4.9	8.8	10.0	-	-	-
<b>BRx70-40-PGx52</b> 	Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
	Gear ratio [stages] <sup>2</sup>	:1	-	-	-	3.9 [1]	44 [2]	172 [3]
	Speed	<b>rpm</b>	-	-	-	769.2	68.2	17.4
	Nominal torque	<b>Nm</b>	-	-	-	0.9	10.1	30.0
	Intermittent torque	<b>Nm</b>	-	-	-	1.6	17.0	45.0
<b>BRx70-40-PGx70</b> 	Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
	Gear ratio [stages] <sup>2</sup>	:1	-	-	-	3.9 [1]	21 [2]	44 [2]
	Speed	<b>rpm</b>	-	-	-	769.2	142.9	68.2
	Nominal torque	<b>Nm</b>	-	-	-	0.9	4.8	10.1
	Intermittent torque	<b>Nm</b>	-	-	-	1.6	8.1	17.0
<b>BRx70-40-GB12</b> 	Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
	Gear ratio <sup>2</sup>	:1	15	30	60	15	30	60
	Speed	<b>rpm</b>	200.0	100.0	50.0	200.0	100.0	50.0
	Nominal torque	<b>Nm</b>	3.1	5.4	8.3	2.8	4.9	7.5
	Intermittent torque	<b>Nm</b>	5.2	9.1	13.9	4.7	8.2	12.6

## Key

Standard combination / standard gear ratio

Modular combination / modular gear ratio

## Notes

<sup>1</sup> Comp. = Composite gears

<sup>2</sup> Full gear ratio options displayed on individual gearbox datasheets

- Technical data displayed above calculated based on **BRx70-40 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.