EPM50-50 PMDC motor

Ø73 mm frame // 50 mm stack

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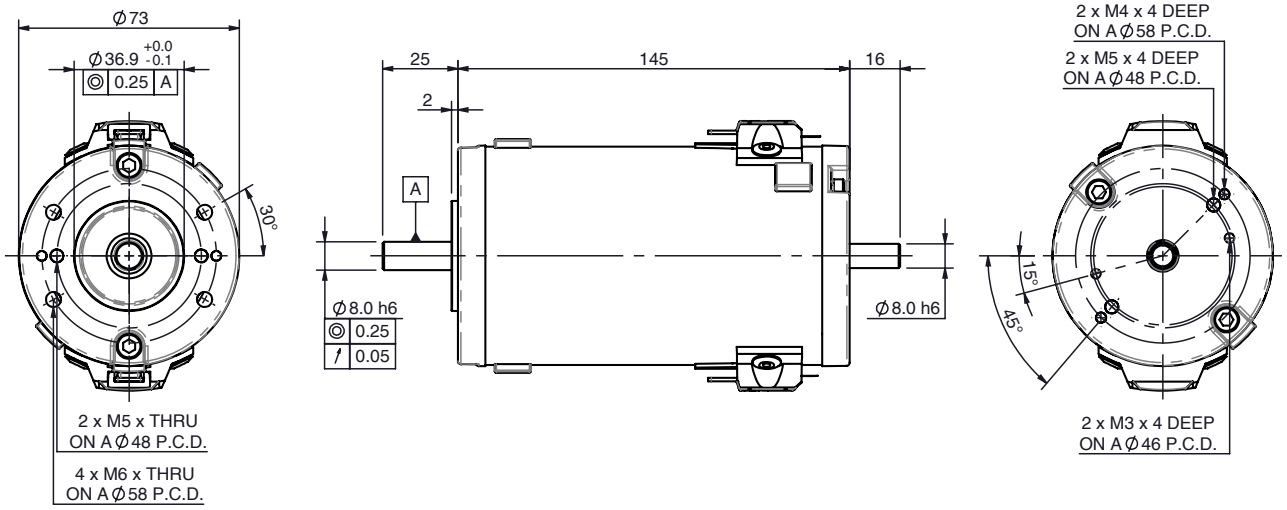

all dimensions in mm

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						
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 (S2 - 15 minutes)	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	Ω	0.16	0.59	1.68	2.36
15	Terminal inductance	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	Kgcm²	2.28×10^{-4}	2.28×10^{-4}	2.28×10^{-4}	2.28×10^{-4}

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	2.05
24	IP rating		IP44
25	Enclosure		Enclosed
26	Insulation Class		F
27	Reversible		Yes

Compatible products

Gearbox	Page #
M Box	222
GB80	224
PGx70	250
GB12	232

Brake	Page #
1.5 Nm	258
2.0 Nm	259
Power-On	261

Encoder	Page #
Incr. 5-pin	254
Incr. 10-pin	254
Diff. 10-pin	255
Magnetic	256

Controller	Page #
SC 50/15	262
EPOS	265
ESCON	274

Key
Standard combination
Modular combination

EPM50-50 combinations

Quickview - combination drawing and technical data

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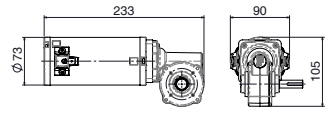
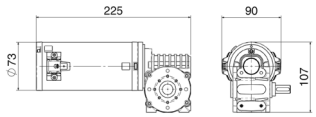
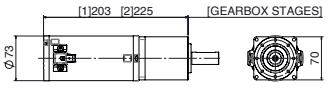
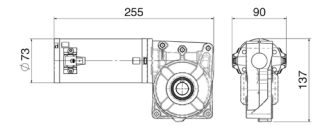
	Combination drawing	Technical data						
EPM50-50-M Box		Gear material [1]		Comp.	Comp.	Comp.	Bronze	Bronze	Bronze
		Gear ratio [2]	:1	4	30	72	4	30	72
		Speed	rpm	750.0	100.0	41.7	750.0	100.0	41.7
		Nominal torque	Nm	1.3	8.0	5.0	1.2	7.1	8.0
		Intermittent torque	Nm	2.2	13.0	8.0	1.9	11.9	12.0
EPM50-50-GB80		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	1.3	8.0	5.0	-	-	-
		Intermittent torque	Nm	2.2	13.0	8.0	-	-	-
EPM50-50-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	-	-	-	1.4	7.5	15.8
		Intermittent torque	Nm	-	-	-	2.4	12.6	26.3
EPM50-50-GB12		Gear material [1]		Comp.	Comp.	Comp.	Bronze	Bronze	Bronze
		Gear ratio [2]	:1	12.5	30	75	12.5	30	75
		Speed	rpm	240.0	100.0	40.0	240.0	100.0	40.0
		Nominal torque	Nm	4.1	8.4	14.6	3.9	7.6	13.2
		Intermittent torque	Nm	6.9	14.0	24.4	6.5	12.7	21.9

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 **EPM50-50 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.