



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

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

### 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>	2.9
24 IP rating		IP54
25 Enclosure		Enclosed
26 Insulation Class		F
27 Reversible		Yes

### Compatible products

Gearbox	Page #	Brake	Page #	Controller	Page #
M Box	222	1.5 Nm	258	SC 50/15	262
GB80	224	2.0 Nm	259	EPOS	265
L Box	226	Power-On	261	ESCON	274
LIW	242				
PGx70	250				
GB12	232	<b>Encoder</b>	<b>Page #</b>		
GB9	234	Incr. 5-pin	254		
LIS	244	Incr. 10-pin	254		
LWS	236	Diff. 10-pin	255		
GB65	238	Magnetic	256		

### Key

Standard combination

Modular combination

# PM50 combinations

Quickview - combination drawing and technical data

**parvalux**  
by **maxon**

Combination drawing		Technical data							
PM50-M-Box		Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio <sup>2</sup>	:1	4	30	72	4	30	72
		Speed	<b>rpm</b>	750.0	100.0	41.7	750.0	100.0	41.7
		Nominal torque	<b>Nm</b>	2.3	8.0	5.0	2.0	12.0	8.0
		Intermittent torque	<b>Nm</b>	4.0	13.0	8.0	3.5	19.0	12.0
PM50-QB80		Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio <sup>2</sup>	:1	4	30	72	-	-	-
		Speed	<b>rpm</b>	750.0	100.0	41.7	-	-	-
		Nominal torque	<b>Nm</b>	2.3	8.0	5.0	-	-	-
		Intermittent torque	<b>Nm</b>	4.0	13.0	8.0	-	-	-
PM50-L-Box		Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio <sup>2</sup>	:1	-	-	-	-	-	-
		Speed	<b>rpm</b>	-	-	-	-	-	-
		Nominal torque	<b>Nm</b>	-	-	-	-	-	-
		Intermittent torque	<b>Nm</b>	-	-	-	-	-	-
PM50-LIW		Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio <sup>2</sup>	:1	36	400	1200	36	400	1200
		Speed	<b>rpm</b>	83.3	7.5	2.5	83.3	7.5	2.5
		Nominal torque	<b>Nm</b>	17.8	28.0	28.0	17.8	45.0	45.0
		Intermittent torque	<b>Nm</b>	28.0	28.0	28.0	31.2	45.0	45.0
PM50-FGx70		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>	-	-	-	2.5	12.9	27.1
		Intermittent torque	<b>Nm</b>	-	-	-	4.3	22.6	37.5
PM50-QB12		Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio <sup>2</sup>	:1	12.5	30	75	12.5	30	75
		Speed	<b>rpm</b>	240.0	100.0	40.0	240.0	100.0	40.0
		Nominal torque	<b>Nm</b>	7.1	14.5	18.0	6.7	13.1	22.6
		Intermittent torque	<b>Nm</b>	12.4	25.3	29.0	11.7	22.8	39.5
PM50-QB9		Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio <sup>2</sup>	:1	12.5	30	75	12.5	30	75
		Speed	<b>rpm</b>	240.0	100.0	40.0	240.0	100.0	40.0
		Nominal torque	<b>Nm</b>	7.5	15.1	25.1	7.1	14.1	22.6
		Intermittent torque	<b>Nm</b>	13.2	26.3	43.9	12.4	24.6	39.5
PM50-LIS		Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio <sup>2</sup>	:1	6	50	115	-	-	-
		Speed	<b>rpm</b>	500.0	60.0	26.1	-	-	-
		Nominal torque	<b>Nm</b>	3.1	25.8	59.3	-	-	-
		Intermittent torque	<b>Nm</b>	5.4	45.0	100.0	-	-	-
PM50-LWS		Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio <sup>2</sup>	:1	48	672	3450	-	-	-
		Speed	<b>rpm</b>	62.5	4.5	0.9	-	-	-
		Nominal torque	<b>Nm</b>	21.9	100.0	100.0	-	-	-
		Intermittent torque	<b>Nm</b>	38.2	100.0	100.0	-	-	-
PM50-QB65		Gear material <sup>1</sup>	Comp.	Comp.	Comp.	Bronze	Bronze	Bronze	
		Gear ratio <sup>2</sup>	:1	-	-	-	20	80	160
		Speed	<b>rpm</b>	-	-	-	150.0	37.5	18.8
		Nominal torque	<b>Nm</b>	-	-	-	10.9	37.5	46.1
		Intermittent torque	<b>Nm</b>	-	-	-	19.0	65.5	80.5

## 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 **PM50 220V 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.