

## Brushless DC (PM) Motor/Inverter Combination Parameters

Motor specifications when combining brushless DC (PM) motors and inverters.  
Set parameters and perform automatic tuning in accordance with the inverter manual.

### Combinations

Rockwell Automation, Inc. Inverter	Brushless DC Motor (PM motor)			
	Frame Size [mm]	Output Power [W]	Degree of Protection	Product Name*2
PowerFlex 520-series PowerFlex 525*1	90	120	IP66	<b>BLM5120</b> □-□
		200		<b>BLM5200</b> □-□
		400		<b>BLM5400</b> □-□
	104	750		<b>BL2M6750C</b> □-□
	110	200	IP67	<b>BLM7200</b> □- <b>GFV</b> *3
		400		<b>BLM7400</b> □- <b>GFV</b> *3

\*1 Three-phase 200 VAC inverter.

The inverter product name varies depending on the output of the motor to be combined.

Refer to the inverter manual for details.

\*2 The characters indicating the motor connection type and degree of protection are specified where the box □ is located in the product name.

A character indicating the shaft type is specified where the box ■ is located in the product name.

\*3 Motor for pinion shaft type. Use in combination with a gearhead (Sold separately).

### Parameter Settings and Motor Specifications

Parameter	Setting	Motor Constant Parameter	
Motor NP Volts	120 W	110	120 W Drive Rated Volts: 110 [V]
	200 W	132	200 W Drive Rated Volts: 132 [V]
	400 W	129	400 W Drive Rated Volts: 129 [V]
	750 W	136	750 W Drive Rated Volts: 136 [V]
Motor NP Hertz	P032	250	Rated Motor Frequency: 250.00 [Hz] (3000 [r/min])
Motor OL Current	120 W	0.8	120 W Drive Rated Amps: 0.8 [A]
	200 W	1	200 W Drive Rated Amps: 1 [A]
	400 W	2	400 W Drive Rated Amps: 2 [A]
	750 W	3.6	750 W Drive Rated Amps: 3.6 [A]
Motor NP FLA	120 W	0.8	120 W Drive Rated Amps: 0.8 [A]
	200 W	1	200 W Drive Rated Amps: 1 [A]
	400 W	2	400 W Drive Rated Amps: 2 [A]
	750 W	3.6	750 W Drive Rated Amps: 3.6 [A]
Motor NP Poles	P035	10	Poles: 10
Motor NP RPM	P036	3000	Rated Motor Speed: 3000 [r/min]
Motor NP power	120 W	0.12	Motor Nameplate Power: 0.12 [kW]
	200 W	0.20	Motor Nameplate Power: 0.20 [kW]
	400 W	0.40	Motor Nameplate Power: 0.40 [kW]
	750 W	0.75	Motor Nameplate Power: 0.75 [kW]
Torque Perf Mode	P039	1	1: SVC
Maximum Freq	P044	333.34	Maximum Motor Frequency: 333.34 [Hz] (4000 [r/min])

Perform automatic tuning after setting parameters (P040: 1)

● Speed: Frequency × 12 [r/min]

### Motor Torque

The motor torque for each output in the continuous duty region.

Output Power [W]	Motor Torque [N·m]	
	~3000 [r/min]	4000 [r/min]
120	0.38	0.29
200	0.64	0.48
400	1.27	0.95
750	2.39	1.79

● The current to the motor should not exceed twice the rated current.