

Panasonic
ideas for life

Brushless Motor
with internal drive

October
2003

B1
-S

Brushless Motor

Speed Control

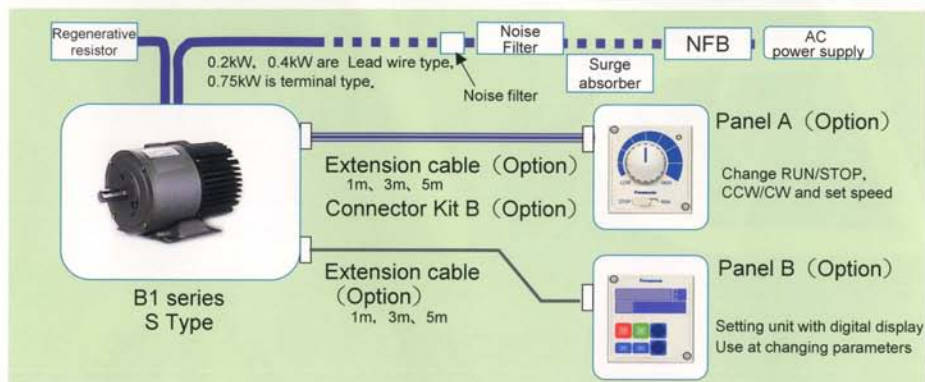
B1S series



Features

1. Space saving with internal drive
2. Wide speed control range keeping stable torque
3. Smooth running with sine wave drive
4. CE/UL rated, Power voltage: single 100-120V, 3 phase 200-230V

System configuration



Model #
of Motor

MBMA 02 3 A B B

Series

Output 02 : 0.2kW
04 : 0.4kW
08 : 0.75kW

Function : Internal regenerative resistor

Structure B : Base type
L : Flange type

Rated speed A : 1800r/min
B : 3600r/min

Input power 1 : Single phase 100~120V
3 : Three phase 200~230V

Model #
of cable,
operation
panel

DV0P

Panel A DV0P3500

Extension Cable 1m DV0P35710
3m DV0P35730
5m DV0P35750
(For Panel A)

Connector kit B
DV0P3610

Panel B DV0P3510

Extension Cable 1m DV0P35810
3m DV0P35830
5m DV0P35850
(For Panel B)

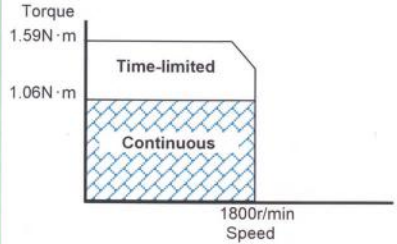
Specification

Model number	Rated Output (kW)	Power supply			Rated torque (N·m)	Starting torque (N·m)	Rated speed (r/min)
		Voltage (V)	Frequency (Hz)	Rated current (A)			
MBMA021ABB	0.2	Single 100~120V	50/60	4.5	1.06	1.59	1800
MBMA023ABB		Three 200~230V	50/60	1.2			
MBMA023BBB		Three 200~230V	50/60	1.2	0.53	0.80	
MBMA043ABB	0.4	Three 200~230V	50/60	2.0	2.12	3.18	1800
MBMA043BBB		Three 200~230V	50/60	2.0	1.06	1.58	3600
MBMA083ABB	0.75	Three 200~230V	50/60	3.5	3.98	5.97	1800
MBMA083BBB		Three 200~230V	50/60	3.5	1.99	2.98	3600

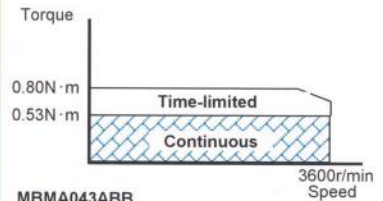
Speed - Torque curve

MBMA021ABB

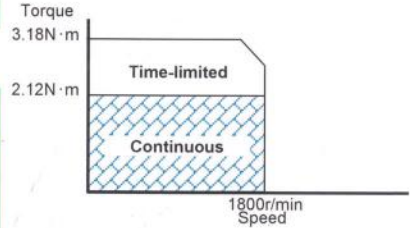
MBMA023ABB



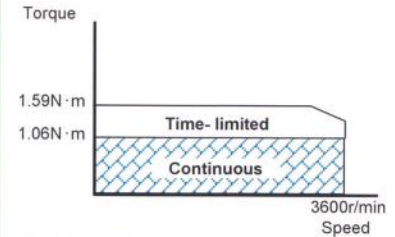
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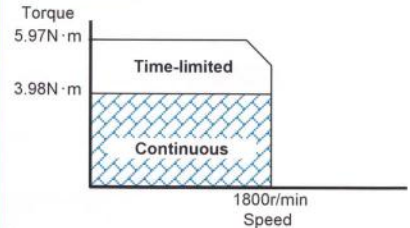
MBMA043ABB



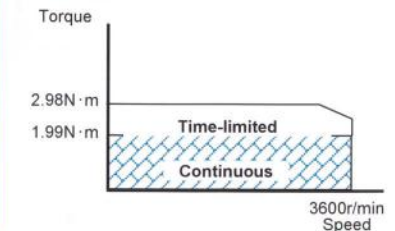
MBMA043BBB



MBMA083ABB



MBMA083BBB

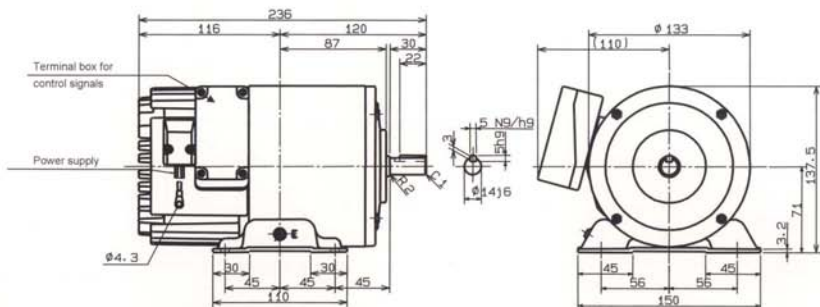


Common specification

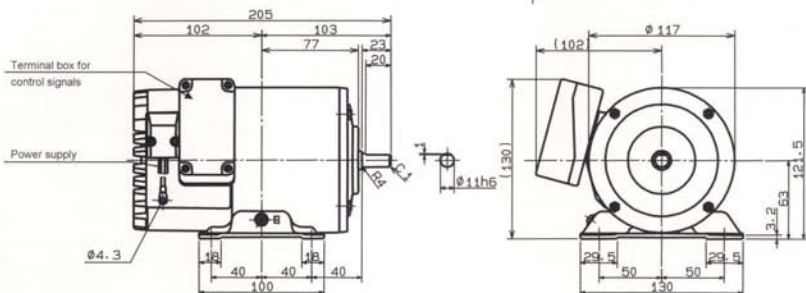
Contents		Specifications
Speed control range		18~1800r/min, 36~3600 r/min (Control range 1 : 100)
Speed fluctuation	Vs load	Less than $\pm 1\%$ (at 0~Rated torque, Rated speed)
	Vs voltage	Less than $\pm 1\%$ (at Supply voltage $\pm 10\%$, Rated speed)
	Vs temp	Less than $\pm 1\%$ (at $-10\sim 40^{\circ}\text{C}$, Rated speed)
Slow start, slow down		0.01~3600 s (Set the time changing within 1000r/min)
Speed setting		Analog voltage (DC0~5V) or Panel A, B
Protections		Over load, Low voltage, Over current, Regenerative over voltage, CPU error, Over speed, Sensor error, Over heat, Parameter set warning
Motor insulation class		130(B) (UL certified 105(A))
Rating		Continuous (Not possible continuous regenerative operations)
Operating temperature		$-10^{\circ}\text{C}\sim 40^{\circ}\text{C}$
Operating humidity		Less than 85%RH (Not dew)
Circumstance		In door use (No corrosion gas and /or dust)
Protection		IP44 (except rotating part, end of cable)
Vibration		Less than 4.9m/s^2 (10~60Hz)

MBMA021ABB Weight 6.1 kg

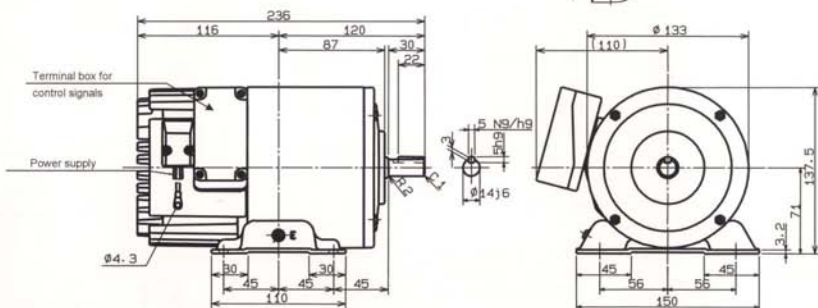
● Dimensions (unit : mm)



MBMA023□BB Weight 4.0 kg



MBMA043□BB weight 6.1 kg



MBMA083□BB weight 9.0 kg

