Standard Specifications

1-phase 200V class

Model NES1-			002SBE	004SBE	007SBE	015SBE	022SBE
Output Ratings	Applicable motor size, 4-pole kW		0.2	0.4	0.75	1.5	2.2
	Rated capacity (kVA)	230V	0.5	1.0	1.5	2.8	3.9
		240V	0.5	1.0	1.6	2.9	4.1
	Rated output current (A)		1.4	2.6	4.0	7.1	10.0
	Overload capacity (output current)		150% for 60 sec.				
	Rated output voltage (V)		3-phase (3-wire) 200 to 240V (corresponding to input voltage)				
Input Rating	Rated input voltage (V)		1-phase 200-15% to 240V+10%, 50/60Hz ±5%				
	Rated input current (A)		3.1	5.8	9.0	16.0	22.5
Enclosure			IP20				
Cooling Method			Self-cooling			Force ventilation	
Weight (kg)			0.7	0.8	1.0	1.2	1.3

3-phase 400V class

Model NES1-			004HBE	007HBE	015HBE	022HBE	040HBE
Output Ratings	Applicable motor size, 4-pole kW		0.4	0.75	1.5	2.2	4.0
	Rated capacity (kVA)	380V	0.9	1.6	2.6	3.6	6.0
		480V	1.2	2.0	3.4	4.5	7.6
	Rated output current (A)		1.5	2.5	4.1	5.5	9.2
	Overload capacity (output current)		150% for 60 sec.				
	Rated output voltage (V)		3-phase (3-wire) 380 to 480V (corresponding to input voltage)				
Input Rating	Rated input voltage (V)		3-phase 380-15% to 480V+10%, 50/60Hz ±5%				
	Rated input current (A)		2.0	3.3	5.2	7.0	11.7
Enclosure			IP20				
Cooling Method			Self-cooling	Force ventilation			
Weight (kg)			0.9	0.9	1.0	1.1	1.2

General Specifications

Item			General Specifications
Control	Control method		Line-to-line sine wave pulse-width modulation (PWM) control
	Output frequency range		0.5 to 400Hz
	Frequency accuracy		Digital command :±0.01%, Analog command ± 0.4% (25 ± 10˚C)
	Frequency setting resolution		Digital: 0.01Hz, Analog: (max frequency)/1000
	Voltage/Frequency Characteristic		V/f control,V/f variable (constant torque, reduced torque)
	Acceleration/deceleration time		0.00 to 3000 sec. (linear, sigmoid), two-stage accel./decel.
	Starting torque		100%/6Hz
	Carrier frequency range		2.0 to 15kHz
Opera-tion	Frequency setting	Operator Key-pad (Option)	Up and Down keys / Value settings or analog setting via potentiometer on operator keypad
		External signal	0 to 10 V DC or 014 to 20 mA
		Serial port	RS485 interface (Modbus RTU)
	Forward/ Reverse Stop/Run	Operator Key-pad (Option)	Run key / Stop key (change FW/RV by function command)
		External signal	FW Run/Stop (NO contact), RV set by terminal assignment (NC/NO), 3-wire input available
		Serial port	RS485 interface (Modbus RTU)
Input terminal	Specification		5 terminals, 10kohm input impedance, sink/source logic selectable
	Functions		36 functions assinable to each terminal
Output signal	Intelligent output terminal	Specification	1 terminal, 27V DC 50mA max open collector output, 1 terminals 1c output 250V AC/30V DC 2.5A relay (AL0, AL1, AL2 terminals)
		Function	22 functions assinable to each terminal
	Moniter output terminal	Function	PWM output; Select analog output frequency monitor, analog output current monitor or digital output frequency monitor
Operator	Operation key		1 unified key for RUN/STOP/RESET
	Status LED Interface		Control power supply LED (Red), LED during operation (yellow-green), Operation button operation LED (yellow-green), LED dur-ing tripping (Red), 4LED in total
Environ-ment	Operating temperature		-10 to 50˚C (carrier derating required for ambient temperature higher than 40°C), no freezing
	Storage temperature		-20 to 60˚C
	Humidity		20 to 90% RH
	Vibration		5.9 mm/s² (0.6G) 10 to 55Hz
	Location		Altitude 1,000 m or less, indoors (no corrosive gasses or dust)
Other functions			AVR (Automatic Voltage Regulation), V/f characteristic selection, accel./decel. curve selection, frequency upper/lower limit, 8 stage multispeed, PID control, frequency jump, external frequency input bias start/end, jogging, trip history etc.
Protective functions			Over-current, Over-voltage, Under-voltage, Overload, Overheat, Ground fault at power-on, Input over-voltage, External trip, Memory error, CPU error, USP error, Driver error, Output phase loss protection
Options			Remote operator with copy function (WOP), Remote operator (OPE-SRmini, OPE-SR), Operator (NES1-OP), input/output reactors, DC reactors, radio noise filters, LCR filter, communication cables (ICS-1, 3)

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