

## Frequency Inverters NES1 (for 3-phase current Drives)

Frequency Inverters NES1 from brand manufacturer Hitachi, for controlling and speed setting of 3-phase motors. Main features of this series are easy parametrisation, a clearly arranged control panel and easy operation.

The automatic energy saving function adapts voltage and current to the motor's load conditions for minimizing energy consumption. Delivery including mounted operating panel NES1-OP with LED display.



Ordering details: e.g.: Product No. 460 110 25, Frequency Inverter NES1-002 SBE

Prod. No.	Type	Number of Phases	Output Power kW	Output Voltage V	Output Current A	Input Voltage V	Input Current A	Input Fuse protection A	Dimensions H x B x T mm	Weight kg
460 110 25	NES1-002 SBE	1	0,25	3 x 0-240	1,4	1 x 230	2,7	10	128 x 68 x 76	1,6
460 110 37	NES1-004 SBE	1	0,37	3 x 0-240	2,6	1 x 230	5,5	10	128 x 68 x 91	1,8
460 110 75	NES1-007 SBE	1	0,75	3 x 0-240	4,0	1 x 230	9,2	20	128 x 108 x 96	2,0
460 111 50	NES1-015 SBE	1	1,5	3 x 0-240	7,1	1 x 230	15,0	30	128 x 108 x 107	2,7
460 112 20	NES1-022 SBE	1	2,2	3 x 0-240	10,0	1 x 230	20,0	30	128 x 108 x 125	2,9
460 130 75	NES1-007 HBE	3	0,75	3 x 0-400	2,5	3 x 400	2,7	10	128 x 108 x 96	2,0
460 131 50	NES1-015 HBE	3	1,5	3 x 0-400	4,1	3 x 400	4,4	15	128 x 108 x 111	2,2
460 132 20	NES1-022 HBE	3	2,2	3 x 0-400	5,5	3 x 400	6,4	15	128 x 108 x 125	2,4

### Output

- Rotating-field frequency 0.1-400 Hz.
- Voltage boost 20%.
- Overload 150%  $I_n$  / 60s.
- Additional voltage 24 V DC, max. 100 mA, for external components like sensors or relays.

### Input

- Voltage 1 x 230 V +/-10% 50/60 Hz.  
or 3 x 400 V +/-10% 50/60 Hz.

### Control unit

- Cycle rate: 2-15 kHz, adjustable in steps.
- Stop functions: Ramp (0.01-3600), DC braking, coast.
- Protection systems: Surge current (200%  $I_n$ ), overload, IGBT excessive temperature, overvoltage, undervoltage.
- Analog input: 0-10 V, 0-20 mA or 1 kOhm potentiometer.
- PWN output: 0-10 V (with current output frequency).
- 5 Digital inputs: Dry contacts or external 24 V DC industrial logic for start up, free programmable, reversion of rotation, fixed setpoint, reset, external control and some more.
- Digital output: Dry contact, programmable.
- Monitoring: Short circuit phase-phase or phase-earth.
- Relais output: free programmable.

### Displays / Operating elements

- Control keys: Setting of system functions.
- Display: Operating mode and error message.

### Environment

- Ambient temperature: -10...+50°C, depending on the type, mounting and frequency.
- Cooling: 1-phase inverters up to 0.75 kW without fan, other inverters with fan.
- Rel. humidity: 20...90% not condensing.

### Mechanic

- Protection class IP20.

### EMC

- optional upgrading to class B.

### Diagnostic memory

- Retrieval of the last 6 operational faults.

### Certificates

- RoHS, CE, UL<sup>1)</sup>, cUL<sup>1)</sup>, c-Tick<sup>1)</sup>, GOST<sup>1)</sup>.
- <sup>1)</sup> With 4-pole motors and nominal current of motor  $\leq$  nominal output current of the frequency inverter.