

CONTROL TECHNIQUES



NE200 & NE300

HIGH PERFORMANCE VECTOR CONTROL DRIVE

200/480VAC 0.4~900KW 0~550HZ

DRIVE OBSESSED

NE200 & NE300 FEATURES & ACCESSORIES

Outstanding control performance

- Outstanding software control platform with unique vector control algorithm
- Renesas 32 bit high speed motor control DSP
- Authentic current vector control: torque current and field current decoupling control
- Advanced vector control algorithm: induction motor and PM motor control
- Three control modes: Vector control without PG, Vector control with PG and V/F control
- The real hardware speed tracking function, more stable and reliable than the software tracking function
- Dynamic current torque control, quickly response to load variation
- Accelerating current suppression, unique current algorithm avoid machine trip due to high startup current without impacting startup torque
- Superior torque performance at low frequency, open loop vector control 150% torque output at 0.5Hz, satisfied low frequency high torque applications such as machine tool, crane and hoist industry.
- Superior overload performance: 180% current for 20s
- High precision speed control, enable high accurate synchronous control

Powerful function

- Multiple frequency setup function
- Open-loop / close-loop torque control function, torque control mode/ speed control mode online switching
- PID function provide two groups PI parameters, PID output range is settable, supporting sleep mode
- V/F separate control function in V/F control mode
- Tension control drive enable automatic rolling diameter calculation pre-setup function
- Automatic load balance droop control function
- Fixed length control function
- RS-485 communication port supporting MODBUS-RTU communication protocol for multi drive synchronization.
- Various extension cards are optional for flexible applications.
- Automatic energy saving function, power off automatically restart function, and parameter cloning through keypad.
- Parameter backup function and recovery through terminals.
- Rich protection and supervision functions.

Novel design

- Independent ventilation design for all whole series products, ventilation channel and electrical components are separated, reduce the failure rates for electrical parts.
- Compact design, based on thermal simulation and design to reduce product size, the size of products is around 70% of main stream brands at the same power rating.
- Graphic keypad to satisfy majority operation behavior
- Control panel standard RJ45 port, enhanced communication anti-interference ability, convenient to extension.
- Aluminum zinc plate and painting protection ensure the grounding protection, shielding performance and products' rot resistance.
- DC fan design for whole series products, reduce cooling system failure rate leading by AC fan breakdown

Superior adaptability

- Unique IGBT drive circuit, more reliable operation for power components
- Phase-to-phase Short-circuit protection for all product, grounding protection for >18.5KW products, adaptable for harsh environment
- Wide working voltage range: 200V - 240V & 380V - 480V
- German conformal coating material
- Optimize EMC design, immunity for high interference environment
- 100% incoming inspection
- Automatic PCB and drive tests
- High temperature aging test for PCB and drives.

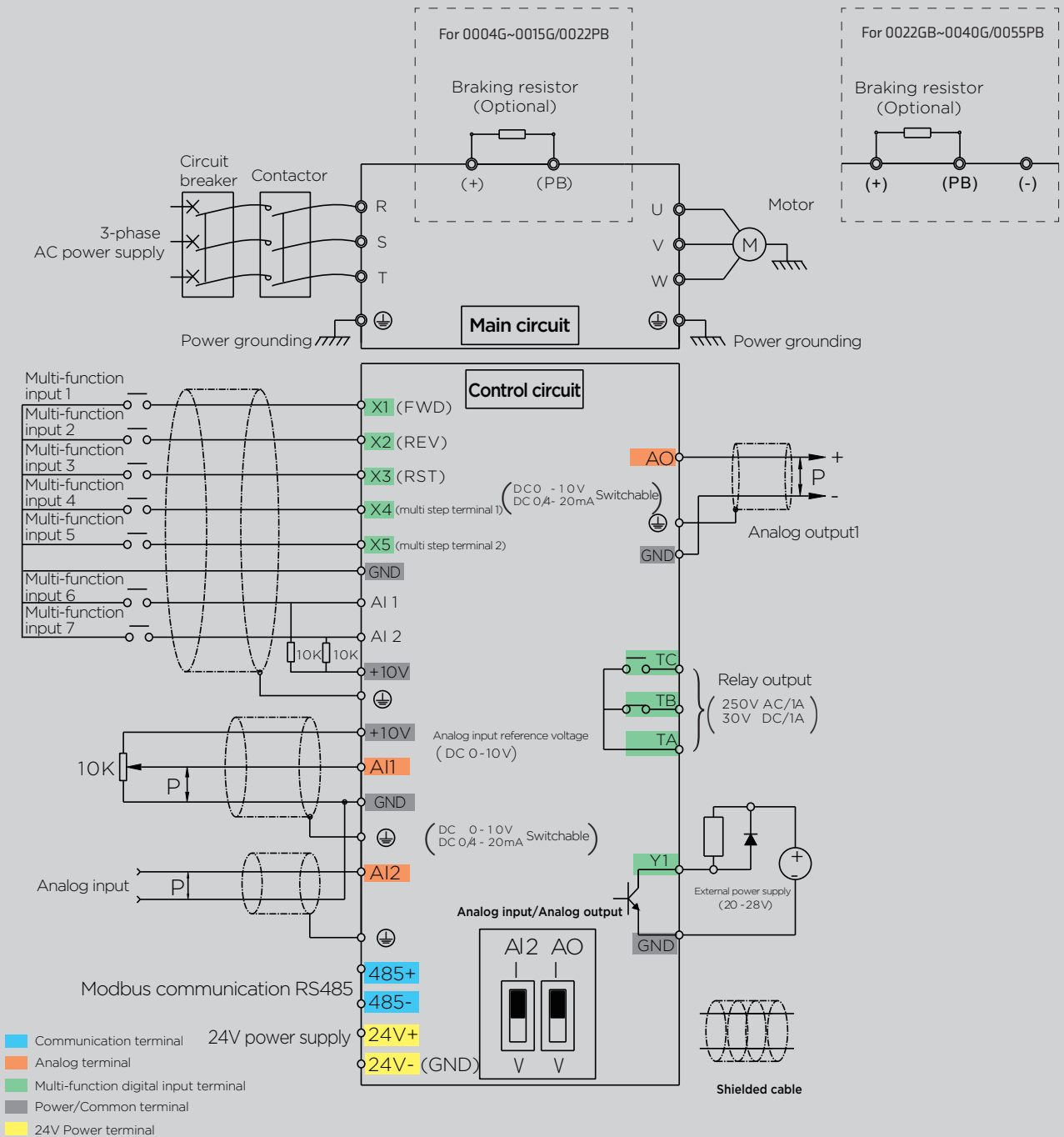


*Please consult our company for customized drive model detail.

NE200 series drive technical specifications:

| | | | | |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|
| Input | Rated power/ frequency | NE200-2Sxxxx: 1-phase 200V ~ 240V; 50Hz/60Hz NE200-5Txxxx: 3-phase 380V ~ 480V; 50Hz/60Hz | | |
| | Voltage range | NE200-2Sxxxx: 200V ~ 240V; Voltage unbalance degree: $\leq 3\%$; permissible frequency fluctuation: $\pm 10\%$ NE200-5Txxxx: 380V ~ 480V; Voltage unbalance degree: $\leq 3\%$; permissible frequency fluctuation: $\pm 10\%$ | | |
| Output | Voltage range | NE200-2Sxxxx: 0~240V; NE200-5Txxxx: 0~380V/480V | | |
| | Overload capacity | Type G: 150% rated current 1min, 180% rated current 20s Type P: 120% rated current 1min, 150% rated current 1s | | |
| Control features | Control mode | Vector control with PG (VC) | Vector control without PG (SVC) | V/F control |
| | Startup torque | --- | 0.5Hz 150% | 1.5Hz 150% |
| | Speed adjustable range | --- | 1:100 | 1:50 |
| | Speed Precision | --- | $\pm 0.2\%$ | $\pm 0.5\%$ |
| | Torque control | --- | Yes | N/A |
| | Torque precision | --- | $\pm 10\%$ | --- |
| | Torque response time | --- | <20ms | --- |
| Product functions | Key functions | Torque/speed control mode switching, Multi-function input/output terminals, under voltage regulation, AC operation grounding switching, torque limit, multi step operation, slip compensation, PID regulation, simple PLC, current control, manual/ automatic torque boost, current limit, AVR function | | |
| | Frequency setup | Keypad, terminal Up/Down, Communication, Analog input AI1/AI2 | | |
| | Output frequency | 0.00~550.0Hz | | |
| | Startup frequency | 0.00~60.00Hz | | |
| | Acc/Dec time | 0.01~3600.0s | | |
| | Dynamic braking | 400V drive: braking unit action voltage: 650 ~ 750V; 200V drive: braking unit action voltage: 360 ~ 390V; | | |
| | | DC injection braking | | |
| | DC injection braking | DC braking activation frequency: 0.00 ~ 550.0Hz | | |
| | | DC braking current: G type 0.0 ~ 100.0%; P type 0.0 ~ 80.0% DC braking time: 0.0 ~ 30.0s; Quick DC brake activation without lag time | | |
| | Magnetic flux braking | Fast deceleration through adding motor magnetic flux | | |
| Unique functions | Parameter cloning | Parameter upload, download. User can forbid the overwriting of the uploaded parameters. | | |
| Protection function | Power undervoltage/overvoltage protection, overcurrent protection, IGBT protection, heatsink overheat protection, drive overload protection, motor overload protection, External devices faults protection, output phase-to-phase short-circuit protection, Abnormal power failure in running, power supply trip, output phase loss, EEPROM trip, Analog input trip, communication trip, version compatibility trip, cloning trip, hardware overload protection | | | |
| Environment | Application environment | Vertical installation in well ventilated cabinet. Horizontal or other installation are forbidden. The cooling medium is air. Free from direct sunlight, dust, corrosive gas, combustible gas, oil mist, steam, and water drop. | | |
| | Ambient temperature | -10~+40°C, deration is required from 40 to 50°C, rated output current decreasing 1% per 1°C temperature higher | | |
| | Humidity | 5~95% without condensation | | |
| | Altitude | 0~2000m, deration is required for more than 1000 meters, at rated output current decreasing 1% per 100m higher | | |
| Structure | Vibration | 3.5mm, 2~9Hz; 10 m/s ² , 9~200Hz; 15 m/s ² , 200~500Hz | | |
| | Storage temperature | -40~+70°C | | |
| Structure | Protection level | IP20 | | |
| | Cooling | Fan air cooling | | |

NE200 TERMINAL DIAGRAM



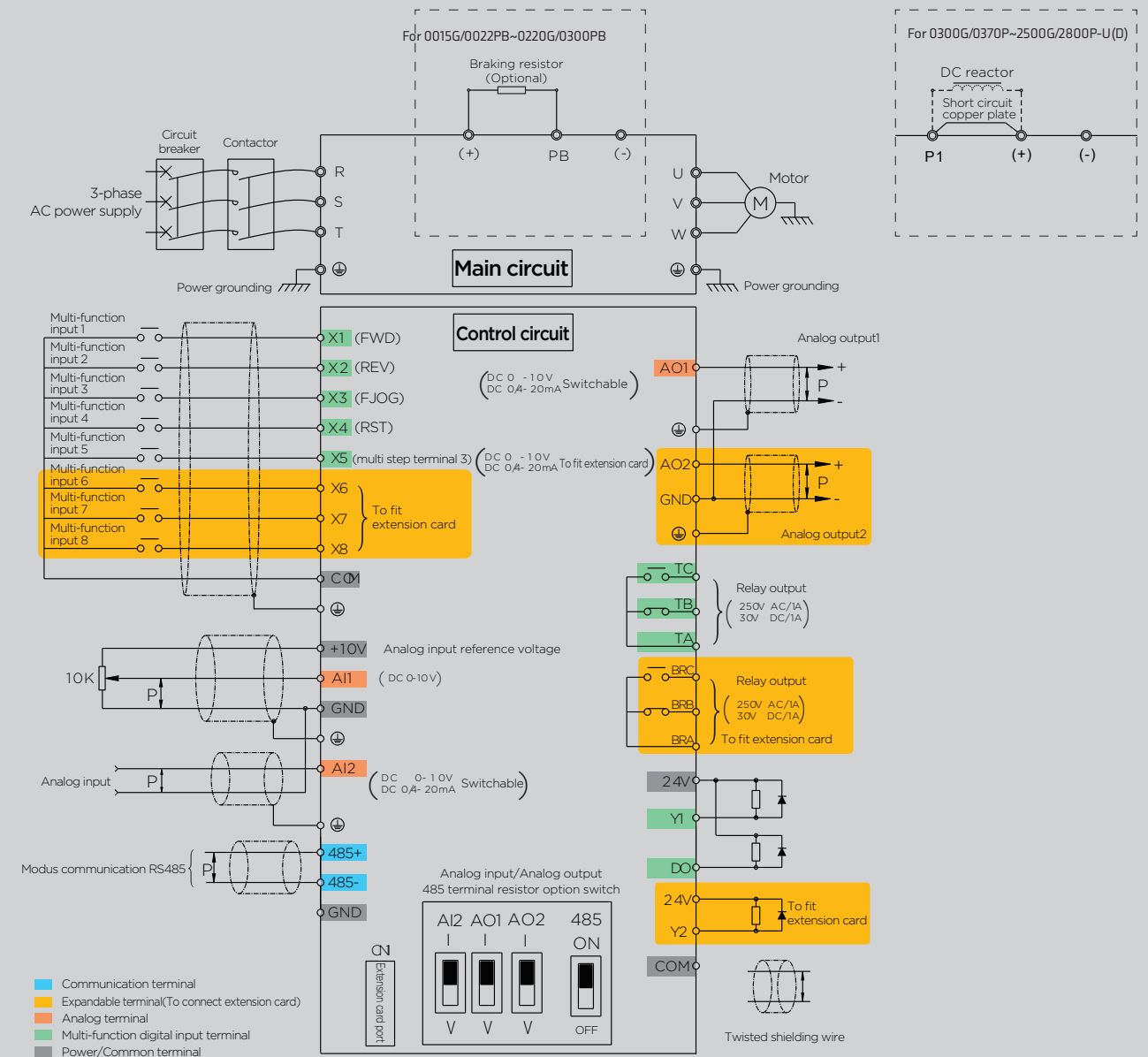
Note 1: NE200 equip braking unit
Note 2: X1~X5 voltage range: 0~12V

NE300 series drive technical specifications:

| | | | | |
|-----------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------|
| Input | Rated power/ frequency | 3-phase 380V ~ 480V; 50Hz/60Hz | | |
| | Voltage range | 200V ~ 240V; Voltage unbalance degree: ≤ 3% ; permissible frequency fluctuation: ±10% | | |
| | | 380V ~ 480V; Voltage unbalance degree: ≤ 3% ; permissible frequency fluctuation: ±10% | | |
| Output | Voltage range | 0~200V/480V; NE200-5Txxxx: 0~380V/480V | | |
| | Overload capacity | Type G: 150% rated current 1min, 180% rated current 20s | | |
| | | Type P: 120% rated current for 1min, 150% rated current for 1s | | |
| Control features | Control mode | Vector control with PG(VC) | Vector control without PG(SVC) | V/F control |
| | Startup torque | 0.00Hz 180% | 0.5Hz 150% | 1.5Hz 150% |
| | Speed adjust range | 1:1000 | 1:100 | 1:50 |
| | Speed stabilization precision | ± 0.02% | ± 0.2% | ± 0.5% |
| | Torque control | Yes | Yes | N/A |
| | Torque precision | ± 5% | ± 10% | --- |
| | Torque response time | <10ms | <20ms | --- |
| | Key functions | Torque/speed control switching, Multi-function input/ output terminals, under voltage regulation, AC operation grounding switching, flying start, torque limit, multi speed operation, autotune, S curve Acc/Dec, slip compensation, PID regulation, simple PLC, fix length control, droop control, current control, manual/ automatic torque increase, current limit, AVR function | | |
| | Frequency setup | Keypad, terminal Up/Down, communication, Analog input AI1/AI2, Terminal pulse input X4,X5 | | |
| | Output frequency | 0.00~550.0Hz | | |
| Startup frequency | 0.00~60.00Hz | | | |
| Product functions | Acc/Dec time | 0.1~3600s | | |
| | Dynamic braking | 400V drive: braking unit voltage: 650 ~ 750V; | | |
| | | 200V drive: braking unit voltage: 360 ~ 390V; | | |
| DC injection braking | DC braking activation: 0.00 ~ 550.0Hz | | | |
| | DC braking current: G type 0.0 ~ 100.0%; P type 0.0 ~ 80.0% | | | |
| | DC braking time: 0.0 ~ 30.0s; Quick DC brake activation without lag time | | | |
| Magnetic flux braking | Fast deceleration through adding motor magnetic flux | | | |
| Parameter cloning | Parameter upload, download. User can forbid the overwriting of the uploaded parameters. | | | |
| Unique functions | Keypad | LED keypad as standard. | | |
| | Common DC bus | Common DC bus for multiple drives power supply | | |
| | Independent air duct | Independent air duct design for whole series product | | |
| | Extension card | IO extension card, injection molding machine connecting card etc. | | |
| Protection function | Power-up detection | Automatic detection of internal and external circuits when power-up | | |
| | Protection function | Power undervoltage/overvoltage protection, overcurrent protection, autotune trip, IGBT protection, heatsink overheat protection, drive overload protection, motor overload protection, external device false protection, output to ground short-circuit protection, abnormal power failure in running, power supply abnormal, output phase loss, EEPROM trip, relay contact error, temperature sampling abnormal, encoder off-line, analog input trip, communication trip, version compatibility trip, cloning trip, extension card connection trip, hardware overload protection | | |
| Efficiency | Operation at rated power: 7.5kW or below ≥ 93%; 11kW~45kW ≥ 95%; 55kW or above ≥ 98% | | | |
| Environment | Application environment | Vertical installation in well ventilated cabinet. Horizontal or other installation are forbidden. The cooling medium is air. Free from direct sunlight, dust, corrosive gas, combustible gas, oil mist, steam, and water drop. | | |
| | Ambient temperature | -10°C~+40°C, deration is required from 40 to 50°C, rated output current decreasing 1% per 1°C temperature higher | | |
| | Humidity | 5~95% without condensation | | |
| | Altitude | 0~2000m, deration is required for more than 1000 meters, at rated output current decreasing 1% per 100m higher | | |
| | Vibration | 3.5mm, 2~9Hz; 10 m/s ² , 9~200Hz; 15 m/s ² , 200~500Hz | | |
| Structure | Storage temperature | -40~+70°C | | |
| | Protection level | IP20 | | |
| | Cooling | Fan force cooling | | |

*Please consult our company for vector control drive with PG model selection.

NE300 TERMINAL DIAGRAM

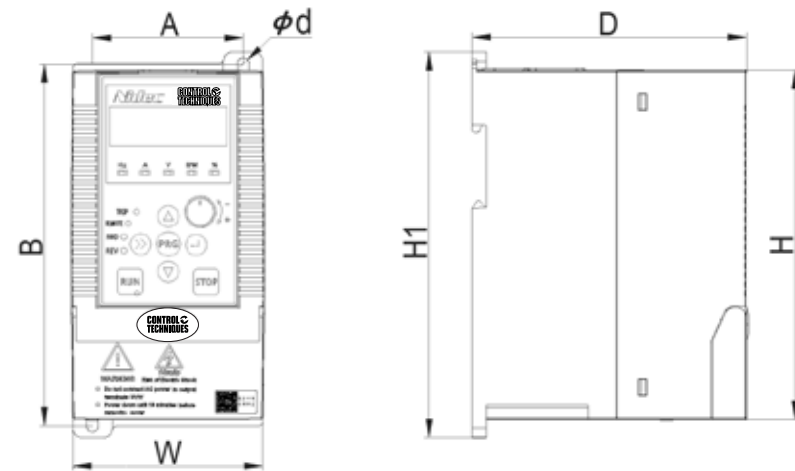


Terminal connection

Note 1: NE300-5T0015G/0022PB ~ NE300-5T0220G/0300PB equip braking unit

Note 2: NE300-5T1600G/1850P-F ~ NE300-5T9000G-F equip DC reactor

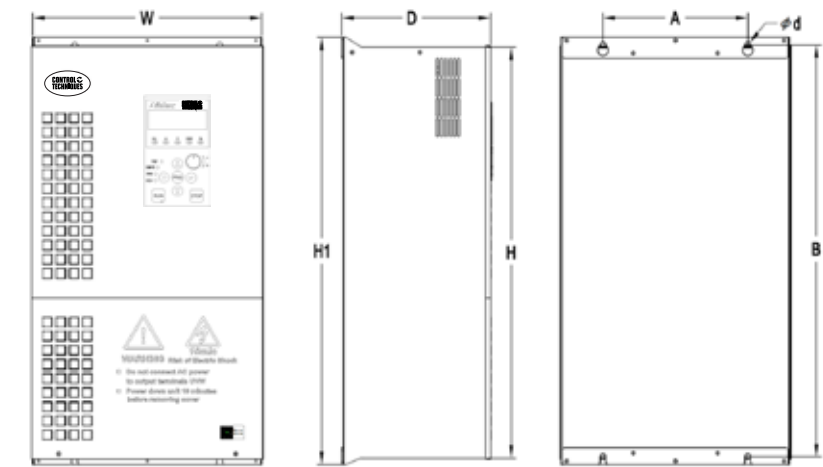
NE200 DIMENSIONS & WEIGHTS



200 / 240 V

| Drive model G: Heavy Duty P: Normal Duty | Rated output current (A) | 3 ph motor power (KW) | 1 ph motor power (KW) | H Height (mm) | W Width (mm) | D Depth (mm) | H1 Height (mm) | A (mm) | B (mm) | d (mm) |
|------------------------------------------------|--------------------------|-----------------------|-----------------------|---------------|--------------|--------------|----------------|--------|--------|--------|
| NE200-2S0004GB | 2.5 | 0.4kW | - | | | | | | | |
| NE200-2S0007GB | 4.5 | 0.75kW | - | 150 | 83 | 120 | 166 | 65 | 153 | 5 |
| NE200-2S0015GB | 7 | 1.5kW | - | | | | | | | |
| NE300-2T0007G | 6 | 0.75kW | 0.75kW | 210 | 133 | 180 | 238 | 108 | 225 | 7 |
| NE300-2T0015G | 13 | 2.2kW | 1.5kW | | | | | | | |
| NE300-2T0022G | 17 | 3kW | 2.2kW | | | | | | | |
| NE300-2T0040G | 25 | 4kW | 3kW | 258 | 155 | 180 | 285 | 120 | 270 | 7 |
| NE300-2T0055G | 32 | 5.5kW | 4kW | | | | | | | |
| NE300-2T0075G | 37 | 7.5kW | 5.5kW | | | | | | | |
| NE300-2T0110G | 60 | 11kW | 7.5kW | 308 | 192 | 186 | 340 | 150 | 323 | 7 |
| NE300-2T0150G | 75 | 15kW | 11kW | | | | | | | |
| NE300-2T0220G | 110 | 22kW | 15kW | 535 | 320 | 248 | 560 | 240 | 540 | 9 |
| NE300-2T0370G | 176 | 37kW | 22kW | | | | | | | |
| NE300-2T0450G | 210 | 45kW | 37kW | 640 | 380 | 248 | 665 | 240 | 640 | 9 |
| NE300-2T0550G | 250 | 55kW | 45kW | | | | | | | |
| NE300-2T0750G-U | 300 | 75kW | 55kW | | | | | | | |
| NE300-2T0750G-D | 300 | 75kW | 55kW | | | | | | | |
| NE300-2T0900G-U | 340 | 90kW | - | 710 | 465 | 355 | 750 | 380 | 719 | 11 |
| NE300-2T0900G-D | 340 | 90kW | - | | | | | | | |
| NE300-2T1100G-U | 420 | 110kW | 75kW | 859 | 550 | 385 | 900 | 440 | 868 | 11 |
| NE300-2T1100G-D | 420 | 110kW | 75kW | | | | | | | |
| NE300-2T1320G-F | 540 | 132kW | 90kW | 1800 | 780 | 580 | 1870 | - | - | - |

NE300 DIMENSIONS & WEIGHTS



380 / 480 V

| Drive model G: Heavy Duty P: Normal Duty | Rated output current (A) | Motor power (KW) | H Height (mm) | W Width (mm) | D Depth (mm) | H1 Height (mm) | A (mm) | B (mm) | d (mm) |
|------------------------------------------------|--------------------------|------------------|---------------|--------------|--------------|----------------|--------|--------|--------|
| NE300-5T0015G/0022PB | 4.0/6.0 | 1.5/2.2 | | | | | | | |
| NE300-5T0022G/0040PB | 6.0/9.0 | 2.2/4.0 | 210 | 133 | 180 | 238 | 108 | 225 | 7 |
| NE300-5T0040G/0055PB | 9.0/13 | 4.0/5.5 | | | | | | | |
| NE300-5T0055G/0075PB | 13/17 | 5.5/7.5 | | | | | | | |
| NE300-5T0075G/0110PB | 17/25 | 7.5/11 | 258 | 155 | 180 | 285 | 120 | 270 | 7 |
| NE300-5T0110G/0150PB | 25/32 | 11/15 | | | | | | | |
| NE300-5T0150G/0185PB | 32/37 | 15/18.5 | | | | | | | |
| NE300-5T0185G/0220PB | 37/45 | 18.5/22 | 308 | 192 | 186 | 340 | 150 | 323 | 7 |
| NE300-5T0220G/0300PB | 45/60 | 22/30 | | | | | | | |
| NE300-5T0300G/0370P | 60/75 | 30/37 | 425 | 270 | 200 | 450 | 200 | 430 | 7 |
| NE300-5T0370G/0450P | 75/90 | 37/45 | | | | | | | |
| NE300-5T0450G/0550P | 90/110 | 45/55 | 535 | 320 | 248 | 560 | 240 | 540 | 9 |
| NE300-5T0550G/0750P | 110/150 | 55/75 | | | | | | | |
| NE300-5T0750G/0900P | 150/176 | 75/90 | | | | | | | |
| NE300-5T0900G/1100P | 176/210 | 90/110 | 640 | 380 | 248 | 665 | 240 | 640 | 9 |
| NE300-5T1100G/1320P | 210/250 | 110/132 | | | | | | | |

* Specialized drive and Vector control with PG card (VC) model selection, please consult our company for detail.

NE300 order code and dimension:

| Drive model G: Heavy Duty P: Normal Duty | Rated output current (A) | Motor power (KW) | H Height (mm) | W Width (mm) | D Depth (mm) | H1 Height (mm) | A (mm) | B (mm) | d (mm) |
|------------------------------------------------|-----------------------------|---------------------|---------------------|--------------------|--------------------|----------------------|-----------|-----------|-----------|
| NE300-ST1320G/1600P-U | 250/300 | 132/160 | 710 | 465 | 355 | 750 | 380 | 719 | 11 |
| NE300-ST1320G/1600P-D | 250/300 | 132/160 | | | | | | | |
| NE300-ST1600G/1850P-U | 300/340 | 160/185 | | | | | | | |
| NE300-ST1600G/1850P-D | 300/340 | 160/185 | | | | | | | |
| NE300-ST1850G/2000P-U | 340/380 | 185/200 | | | | | | | |
| NE300-ST1850G/2000P-D | 340/380 | 185/200 | | | | | | | |
| NE300-ST2000G/2200P-U | 380/420 | 200/220 | 859 | 550 | 385 | 900 | 440 | 868 | 11 |
| NE300-ST2000G/2200P-D | 380/420 | 200/220 | | | | | | | |
| NE300-ST2200G/2500P-U | 420/470 | 220/250 | | | | | | | |
| NE300-ST2200G/2500P-D | 420/470 | 220/250 | | | | | | | |
| NE300-ST2500G/2800P-U | 470/540 | 250/280 | | | | | | | |
| NE300-ST2500G/2800P-D | 470/540 | 250/280 | | | | | | | |
| NE300-ST3550G/4000P-F | 660/730 | 355/400 | 1800 | 780 | 500 | 1870 | 840 | 1630 | 13 |
| NE300-ST4000G/4500P-F | 730/840 | 400/450 | | | | | | | |
| NE300-ST4500G/5000P-F | 840/900 | 450/500 | | | | | | | |
| NE300-ST5000G/5600P-F | 900/950 | 500/560 | | | | | | | |
| NE300-ST5600G/6300P-F | 950/1160 | 560/630 | | | | | | | |
| NE300-ST6300G/7100P-F | 1160/1300 | 630/710 | | | | | | | |
| NE300-ST7100G/8000P-F | 1300/1460 | 710/800 | 1800 | 780 | 500 | 1870 | - | - | - |
| NE300-ST8000G/9000P-F | 1460/1640 | 800/900 | | | | | | | |
| NE300-ST9000G-F | 1640 | 900 | 1800 | 1560 | 500 | 1800 | - | - | - |

NE300 series cabinet machine model and dimension:

| Drive model G: Heavy Duty P: Normal Duty | Rated output current (A) | Motor power (KW) | Dimensions |
|------------------------------------------------|-----------------------------|---------------------|------------|
| NE300-ST1600G/1850P-F | 300/340 | 160/185 | |
| NE300-ST1850G/2000P-F | 340/380 | 185/200 | |
| NE300-ST2000G/2200P-F | 380/420 | 200/220 | |
| NE300-ST2200G/2500P-F | 420/470 | 220/250 | |

| Drive model G: Heavy Duty P: Normal Duty | Rated output current (A) | Motor power (KW) | Dimensions |
|------------------------------------------------|-----------------------------|---------------------|------------|
| NE300-ST2500G/2800P-F | 470/540 | 250/280 | |
| NE300-ST2800G/3150P-F | 540/600 | 280/315 | |
| NE300-ST3150G/3550P-F | 600/660 | 315/355 | |

NE300 series cabinet machine model and dimension:

| Drive model G: Heavy Duty P: Normal Duty | Rated output current (A) | Motor power (KW) | Dimensions |
|------------------------------------------------|-----------------------------|---------------------|------------|
| NE300-ST3550G/4000P-F | 660/730 | 355/400 | |
| NE300-ST4000G/4500P-F | 730/840 | 400/450 | |
| NE300-ST4500G/5000P-F | 840/900 | 450/500 | |
| NE300-ST5000G/5600P-F | 900/950 | 500/560 | |

| Drive model G: Heavy Duty P: Normal Duty | Rated output current (A) | Motor power (KW) | Dimensions |
|------------------------------------------------|-----------------------------|---------------------|------------|
| NE300-ST5600G/6300P-F | 950/1160 | 560/630 | |
| NE300-ST6300G/7100P-F | 1160/1300 | 630/710 | |
| NE300-ST7100G/8000P-F | 1300/1460 | 710/800 | |
| NE300-ST8000G/9000P-F | 1460/1640 | 800/900 | |

| Drive model G: Heavy Duty P: Normal Duty | Rated output current (A) | Motor power (KW) | Dimensions |
|------------------------------------------------|-----------------------------|---------------------|------------|
| NE300-ST9000G-F | 1640 | 900 | |

- *-F freestanding drive with DC reactor inbuilt;
- *-U upside input downside output type wall mounting structure;
- *-D downside input upside output type wall mounting structure.

* Specialized drive and Vector control with PG card model selection, please consult our company for detail.

Product Model description

| | | | | | | |
|--------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------|
| NE300 - | 5T | 1320 | G | B | - | U |
| Product series: NE200 NE300 | Voltage rating: 2S/2T -- 200V~240V 5T -- 380V~480V | Power rating: 0004 -- (0.4KW) 0007 -- (0.75KW) 0015 -- (1.5KW) 1320 -- (132KW) 9000 -- (900KW) | Load type: G -- Heavy duty P -- Normal duty | Braking unit: None -- No braking unit B -- With braking unit | | Structure code: None -- Standard M -- Compact U -- top input-bottom output D -- bottom input--top output F -- cubicle |

Note: Some types of NE200 and NE300 products are dual rated e.g. NE300-ST0185G/0220PB

Keypad

| | Order code | Specification | Drive model |
|---------------|------------|---------------|-------------|
| LED Keypad | NEF-LED01 | Standard | NE200/NE300 |
| LCD Keypad | NEF-LCD01 | Optional | NE200/NE300 |
| Keypad holder | NEF-KB01 | Optional | NE200/NE300 |
| Keypad cable | NEF-CB0020 | 2m(Optional) | NE200/NE300 |
| Keypad cable | NEF-CB0030 | 3m(Optional) | NE200/NE300 |



NEF-LED01

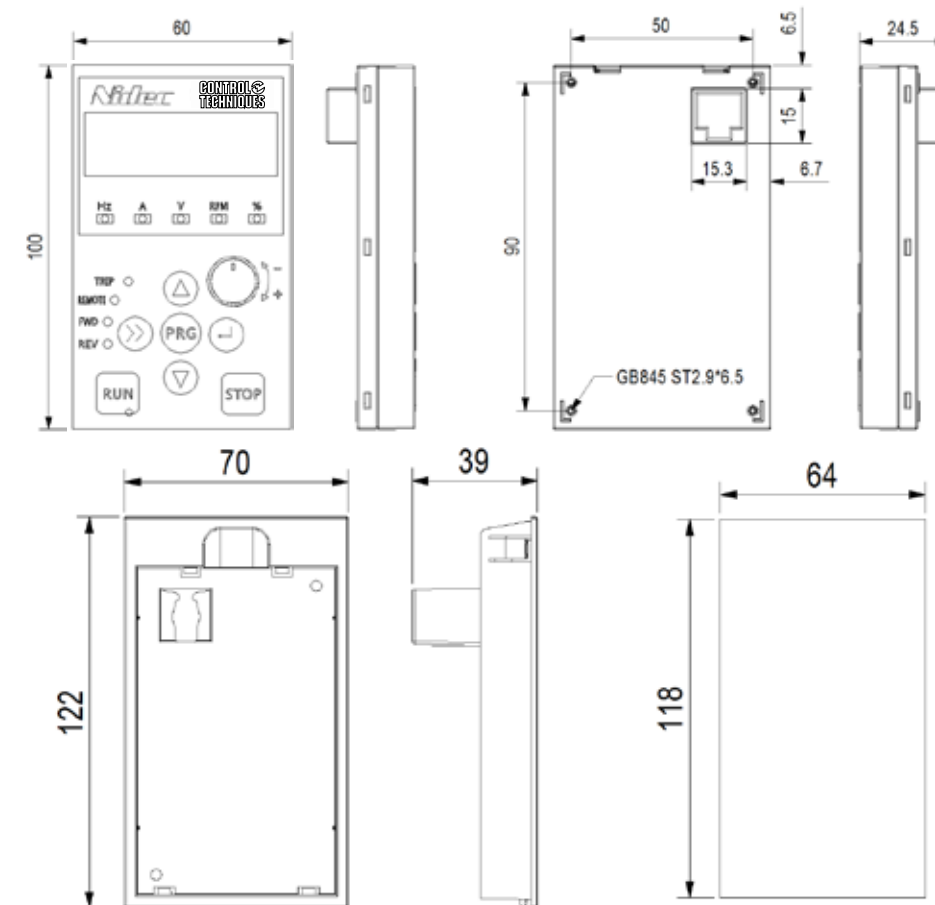


NEF-LCD01



NEF-KB01

LED keypad display and keypad holder dimensions: (mm)



Braking resistor NE200 braking resistor

| Drive model | Braking unit | Braking resistor | | Braking torque % | |
|----------------------|---------------------|------------------|----------|------------------|-----|
| | | Braking resistor | Quantity | | |
| NE200-2S0004GB | Inbuilt as standard | 100W | 200Ω | 1 | 135 |
| NE200-2S0007GB | | 200W | 150Ω | 1 | 135 |
| NE200-2S0015GB | | 400W | 100Ω | 1 | 125 |
| NE200-2S0022GB | | 300W | 70Ω | 1 | 125 |
| NE200-5T0007G/0015PB | | 400W | 300Ω | 1 | 135 |
| NE200-5T0015G/0022PB | | 400W | 300Ω | 1 | 135 |
| NE200-5T0022GB-M | | 500W | 200Ω | 1 | 135 |
| NE200-5T0022G/0040PB | | 500W | 200Ω | 1 | 135 |
| NE200-5T0040G/0055PB | | 500W | 200Ω | 1 | 135 |

NE300 braking resistor

| Drive model | Braking unit | Braking resistor | | Braking torque % | |
|-----------------------|---------------------|------------------|----------|------------------|-----|
| | | Braking resistor | Quantity | | |
| NE300-5T0015G/0022PB | Inbuilt as standard | 400W | 300Ω | 1 | 135 |
| NE300-5T0022G/0040PB | | 500W | 200Ω | 1 | 135 |
| NE300-5T0040G/0055PB | | 500W | 200Ω | 1 | 135 |
| NE300-5T0055G/0075PB | | 500W | 100Ω | 1 | 135 |
| NE300-5T0075G/0110PB | | 800W | 75Ω | 1 | 130 |
| NE300-5T0110G/0150PB | | 1000W | 50Ω | 1 | 135 |
| NE300-5T0150G/0185PB | | 1500W | 40Ω | 1 | 125 |
| NE300-5T0185G/0220PB | | 4000W | 30Ω | 1 | 125 |
| NE300-5T0220G/0300PB | | 4000W | 30Ω | 1 | 125 |
| NE300-5T0300G/0370P | | 6000W | 20Ω | 1 | 125 |
| NE300-5T0370G/0450P | 9000W | 16Ω | 1 | 125 | |
| NE300-5T0450G/0550P | 9000W | 13.6Ω | 1 | 125 | |
| NE300-5T0550G/0750P | Need external | 6000W | 20Ω | 2 | 135 |
| NE300-5T0750G/0900P | | 9000W | 13.6Ω | 2 | 145 |
| NE300-5T0900G/1100P | | 6000W | 20Ω | 3 | 130 |
| NE300-5T1100G/1320P | | 6000W | 20Ω | 3 | 130 |
| NE300-5T1320G/1600P-U | | 6000W | 20Ω | 4 | 130 |
| NE300-5T1320G/1600P-D | | 6000W | 20Ω | 4 | 130 |
| NE300-5T1600G/1850P-U | | 9000W | 13.6Ω | 4 | 130 |
| NE300-5T1600G/1850P-D | | 9000W | 13.6Ω | 4 | 130 |
| NE300-5T1600G/1850P-F | | 9000W | 13.6Ω | 4 | 130 |

* Multi braking resistors parallel connection. E.g. NE300-5T0550G/0750P recommended to select 2 of 6000W, 20Ω resistors parallel connection, compound braking resistor is 12000W, 10Ω.

NE300 braking resistor

| Drive model | Braking unit | Braking resistor | | Braking torque % | |
|-----------------------|--------------|------------------|----------|------------------|-----|
| | | Braking resistor | Quantity | | |
| NE300-5T1850G/2000P-U | | 9000W | 13.6Ω | 4 | 130 |
| NE300-5T1850G/2000P-D | | 9000W | 13.6Ω | 4 | 130 |
| NE300-5T1850G/2000P-F | | 9000W | 13.6Ω | 4 | 130 |
| NE300-5T2000G/2200P-U | | 9000W | 13.6Ω | 5 | 130 |
| NE300-5T2000G/2200P-D | | 9000W | 13.6Ω | 5 | 130 |
| NE300-5T2000G/2200P-F | | 9000W | 13.6Ω | 5 | 130 |
| NE300-5T2200G/2500P-U | | 9000W | 13.6Ω | 5 | 130 |
| NE300-5T2200G/2500P-D | | 9000W | 13.6Ω | 5 | 130 |
| NE300-5T2200G/2500P-F | | 9000W | 13.6Ω | 5 | 130 |
| NE300-5T2500G/2800P-U | | 9000W | 13.6Ω | 5 | 130 |
| NE300-5T2500G/2800P-D | | 9000W | 13.6Ω | 5 | 130 |
| NE300-5T2500G/2800P-F | | 9000W | 13.6Ω | 5 | 130 |
| NE300-5T2800G/3150P-F | | 9000W | 13.6Ω | 6 | 130 |
| NE300-5T3150G/3550P-F | | 9000W | 13.6Ω | 6 | 130 |
| NE300-5T3550G/4000P-F | | 40000W | 3Ω | 2 | 130 |
| NE300-5T4000G/4500P-F | | 40000W | 3Ω | 2 | 130 |
| NE300-5T4500G/5000P-F | | 60000W | 2Ω | 2 | 130 |
| NE300-5T5000G/5600P-F | | 60000W | 2Ω | 2 | 130 |
| NE300-5T5600G/6300P-F | | 60000W | 2Ω | 2 | 130 |
| NE300-5T6300G/7100P-F | | 60000W | 2Ω | 3 | 130 |
| NE300-5T7100G/8000P-F | 60000W | 2Ω | 3 | 130 | |
| NE300-5T8000G/9000P-F | 80000W | 2Ω | 3 | 130 | |
| NE300-5T9000G-F | 80000W | 2Ω | 3 | 130 | |

* Multi braking resistors parallel connection. E.g. NE300-5T0550G/0750P recommended to select 2 of 6000W, 20Ω resistors parallel connection, compound braking resistor is 12000W, 10Ω.

Input/output reactor

DC input reactor parameters

| Drive model | Drive power(KW) | DC reactor model | Current(A) | Inductance(mH) | Insulation level |
|---------------------|-----------------|------------------|------------|----------------|------------------|
| NE300-5T0300G/0370P | 30 | NE-DCL-0065-AL/4 | 65 | 0.8 | F |
| NE300-5T0370G/0450P | 37 | NE-DCL-0078-AL/4 | 78 | 0.7 | F |
| NE300-5T0450G/0550P | 45 | NE-DCL-0095-AL/4 | 95 | 0.54 | F |
| NE300-5T0550G/0750P | 55 | NE-DCL-0115-AL/4 | 120 | 0.45 | F |
| NE300-5T0750G/0900P | 75 | NE-DCL-0160-AL/4 | 160 | 0.36 | F |
| NE300-5T0900G/1100P | 90 | NE-DCL-0180-AL/4 | 180 | 0.33 | F |
| NE300-5T1100G/1320P | 110 | NE-DCL-0250-AB/4 | 250 | 0.26 | F |
| | 132 | | 340 | 0.26 | F |
| | 160 | | | 0.17 | F |
| | 185 | | | 0.09 | F |
| | 200 | | | 0.06 | F |
| | 220 | | | 0.06 | F |
| | 250 | | | 0.05 | F |

3-phase AC input reactor parameter

| Drive model | Drive power(KW) | Filter model | Reactor model | Current(A) | Voltage drop (%) | Inductance(mH) | Insulation level |
|----------------------|-----------------|-----------------|--------------------|------------|------------------|----------------|------------------|
| | 1.5 | | | 5 | 2 | 2.8 | F |
| NE200-ST0022G/0040PB | 2.2 | NE-EFI-0010/4-T | NE-ACL-0007-CL/4-2 | 7 | 2 | 2 | F |
| NE200-ST0040G/0055PB | 3.7 | NE-EFI-0015/4-T | NE-ACL-0010-CL/4-2 | 10 | 2 | 1.4 | F |
| NE300-ST0055G/0075PB | 5.5 | NE-EFI-0016/4-T | NE-ACL-0015-AL/4-2 | 15 | 2 | 0.94 | F |
| NE300-ST0075G/0110PB | 7.5 | NE-EFI-0020/4-T | NE-ACL-0020-AL/4-2 | 20 | 2 | 0.7 | F |
| NE300-ST0110G/0150PB | 11 | NE-EFI-0030/4-T | NE-ACL-0030-AL/4-2 | 30 | 2 | 0.47 | F |
| NE300-ST0150G/0185PB | 15 | NE-EFI-0045/4-T | NE-ACL-0040-AL/4-2 | 40 | 2 | 0.36 | F |
| NE300-ST0185G/0220PB | 18.5 | NE-EFI-0050/4-T | NE-ACL-0050-AL/4-2 | 50 | 2 | 0.28 | F |
| NE300-ST0220G/0300PB | 22 | NE-EFI-0060/4-T | NE-ACL-0060-AL/4-2 | 60 | 2 | 0.24 | F |
| NE300-ST0300G/0370P | 30 | NE-EFI-0080/4-T | NE-ACL-0080-AL/4-2 | 80 | 2 | 0.18 | F |
| NE300-ST0370G/0450P | 37 | | NE-ACL-0090-AL/4-2 | 90 | 2 | 0.156 | F |
| NE300-ST0450G/0550P | 45 | NE-EFI-0100/4-T | NE-ACL-0120-AL/4-2 | 120 | 2 | 0.117 | F |
| NE300-ST0550G/0750P | 55 | NE-EFI-0120/4-T | NE-ACL-0150-AL/4-2 | 150 | 2 | 0.094 | F |
| NE300-ST0750G/0900P | 75 | NE-EFI-0150/4-T | NE-ACL-0200-AL/4-2 | 200 | 2 | 0.07 | F |
| NE300-ST0900G/1100P | 90 | NE-EFI-0200/4-T | NE-ACL-0240-AB/4-2 | 240 | 2 | 0.058 | F |
| NE300-ST1100G/1320P | 110 | NE-EFI-0300/4-C | NE-ACL-0250-AB/4-2 | 250 | 2 | 0.056 | F |
| | 132 | | | 290 | 2 | 0.048 | F |
| | 160 | | | 330 | 2 | 0.042 | F |
| | 185 | | | 390 | 2 | 0.036 | F |
| | 200 | | | 490 | 2 | 0.028 | F |
| | 220 | | | 490 | 2 | 0.028 | F |
| | 250 | | | 530 | 2 | 0.026 | F |
| | 280 | | | 600 | 2 | 0.024 | F |
| | 315 | | | 660 | 2 | 0.022 | F |
| | 355 | | | 800 | 2 | 0.018 | F |
| | 400 | | | 1000 | 2 | 0.014 | F |
| | 450 | | | 1130 | 2 | 0.012 | F |
| | 500 | | | 1250 | 2 | 0.0117 | F |

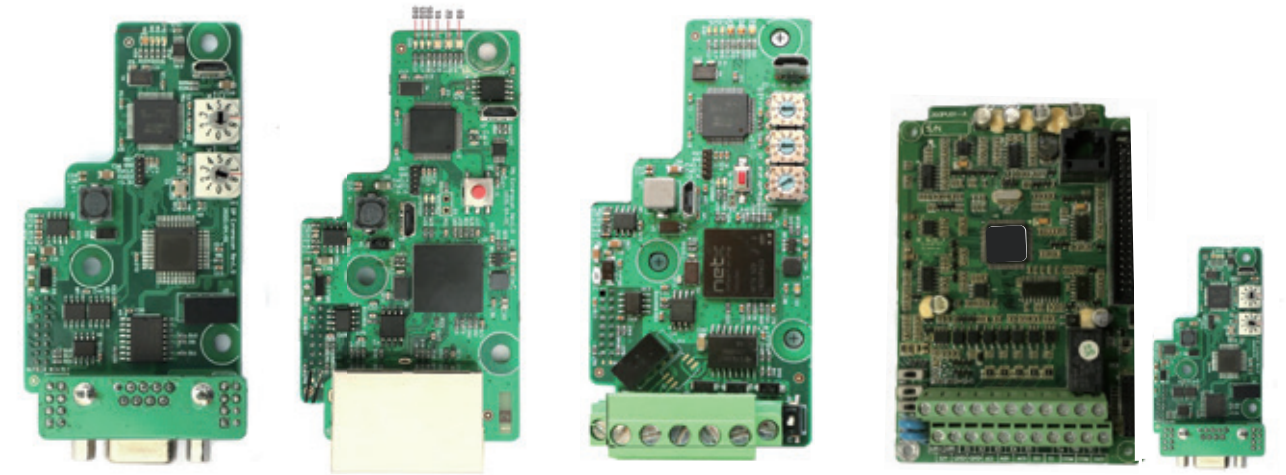
3-phase AC output reactor parameter

| Drive model | Drive power(KW) | Filter model | Reactor model | Current(A) | Voltage drop (%) | Inductance(mH) | Insulation level |
|----------------------|-----------------|-----------------|--------------------|------------|------------------|----------------|------------------|
| | 1.5 | | | 5 | 1 | 1.4 | F |
| NE200-ST0022G/0040PB | 2.2 | NE-EFO-0010/4-T | NE-OCL-0007-CL/4-1 | 7 | 1 | 1 | F |
| NE200-ST0040G/0055PB | 4 | NE-EFO-0015/4-T | NE-OCL-0010-CL/4-1 | 10 | 1 | 0.7 | F |
| NE300-ST0055G/0075PB | 5.5 | NE-EFO-0016/4-T | NE-OCL-0015-AL/4-1 | 15 | 1 | 0.47 | F |
| NE300-ST0075G/0110PB | 7.5 | NE-EFO-0020/4-T | NE-OCL-0020-AL/4-1 | 20 | 1 | 0.35 | F |
| NE300-ST0110G/0150PB | 11 | NE-EFO-0030/4-T | NE-OCL-0030-AL/4-1 | 30 | 1 | 0.23 | F |
| NE300-ST0150G/0185PB | 15 | NE-EFO-0045/4-T | NE-OCL-0040-AL/4-1 | 40 | 1 | 0.18 | F |
| NE300-ST0185G/0220PB | 18.5 | NE-EFO-0050/4-T | NE-OCL-0050-AL/4-1 | 50 | 1 | 0.14 | F |
| NE300-ST0220G/0300PB | 22 | NE-EFO-0060/4-T | NE-OCL-0060-AL/4-1 | 60 | 1 | 0.12 | F |
| NE300-ST0300G/0370P | 30 | NE-EFO-0080/4-T | NE-OCL-0080-AL/4-1 | 80 | 1 | 0.087 | F |
| NE300-ST0300G/0370P | 37 | | NE-OCL-0090-AL/4-1 | 90 | 1 | 0.078 | F |
| NE300-ST0450G/0550P | 45 | NE-EFO-0100/4-T | NE-OCL-0120-AL/4-1 | 120 | 1 | 0.058 | F |
| NE300-ST0550G/0750P | 55 | NE-EFO-0120/4-T | NE-OCL-0150-AL/4-1 | 150 | 1 | 0.047 | F |
| NE300-ST0750G/0900P | 75 | NE-EFO-0150/4-T | NE-OCL-0200-AL/4-1 | 200 | 1 | 0.035 | F |
| NE300-ST0900G/1100P | 90 | NE-EFO-0200/4-T | NE-OCL-0240-AB/4-1 | 240 | 1 | 0.029 | F |
| NE300-ST1100G/1320P | 110 | NE-EFO-0300/4-C | NE-OCL-0250-AB/4-1 | 250 | 1 | 0.028 | F |
| | 132 | | | 290 | 1 | 0.024 | F |
| | 160 | | | 330 | 1 | 0.021 | F |
| | 185 | | | 390 | 1 | 0.018 | F |
| | 200 | | | 490 | 1 | 0.014 | F |
| | 220 | | | 490 | 1 | 0.014 | F |
| | 250 | | | 530 | 1 | 0.013 | F |
| | 280 | | | 600 | 1 | 0.012 | F |
| | 315 | | | 660 | 1 | 0.011 | F |
| | 355 | | | 800 | 1 | 0.009 | F |
| | 400 | | | 1000 | 1 | 0.007 | F |
| | 450 | | | 1130 | 1 | 0.006 | F |
| | 500 | | | 1250 | 1 | 0.0055 | F |

NE300 Options

| Optional card | Order code | Terminal | Description | Drive model |
|------------------------------------------|----------------|-------------|--------------------------------------------------|------------------------------------------------|
| I/O extension card | NE30-I/O Lite | X6 | Multi-function input 6 (to PLC) | NE300 whole series |
| | | X7 | Multi-function input 7 (to PLC) | |
| | | X8 | Multi-function input 8 (to PLC) | |
| | | Y2 | Multi-function output Y2 (to COM) | |
| | | BRA/BRB/BRC | Relay output 2 | |
| | | PLC | PLC common end (to PLC) | |
| | | A02 | Analog output 2 (0 ~ 10V, 0/4 ~ 20mA selectable) | |
| | | GND | Analog output common end | |
| NE30-I/O Relay | NE30-I/O Relay | BRA/BRB/BRC | Relay output 2 | NE300 whole series |
| | | A02 | Analog output 2 (0 ~ 10V, 0/4 ~ 20mA selectable) | |
| | | GND | Analog output common | |
| Injection molding machine extension card | NE30-ZS01 | +A1 | 0-1A current input | NE300-5T0110G/0150PB ~ NE300-5T9000G-F |
| | | -A1 | 0-1A current output | |
| | | +A2 | 0-1A/2A current input | |
| | | -A2 | 0-1A/2A current output | |
| | | X6 | Multi-function input 6 (to COM) | |
| | | COM | Multi-function input common | |
| +/- 10V extension card | NE30-AN01 | 485+ | 485 differential signal positive | NE300 whole series |
| | | 485- | 485 differential signal negative | |
| | | -10V | Provide -10V to external (to GND) | |
| | | A13 | +/- 10V analog input (to GND) | |
| | | GND | Analog output common | |
| Speed tracking extension card | NE30-SP01 | U | Connect to drive U-phase output | NE300-5T0015G/0022PB ~ NE300-5T0150G/0185PB |
| | | W | Connect to drive W-phase output | |
| CC-Link Communication card | NEF - CCLink | DA | DA Signal | NE300 whole series |
| | | DB | DB Signal | |
| | | DG | Signal Ground | |
| | | SD | Shield ground | |
| | | FG | Protected area | |
| Profinet Communication card | NEF - Profinet | RJ45 | Two network interfaces | NE300 whole series |
| | | RxD/TxD-P | Positive Data transfer | |
| Profibus DP | NEF - Profibus | RxD/TxD-N | Negative Data transfer | NE300 whole series |
| | | +5V | Power supply | |
| | | 0V | Ground | |
| | | Shield | Shield | |
| Modbus TCP | NEF - TCP | RJ45 | Two gateways | NE300 whole series |

NE Series Expansion Card



*NE200 does not support any optional cards

NOTES

NOTES

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