

PRODUCT ADVANTAGES

[Easy Maintenance]

The cooling fan can be removed independently without complicated operations.

[Independent Air Duct Design]

The full range of structures have independent air duct design, which increases the protection ability of the product and avoids the problem of circuit board being affected by moisture or dust accumulation.

[Easy to Use]

Standard with removable keyboard, can be equipped with control cabinet installation.

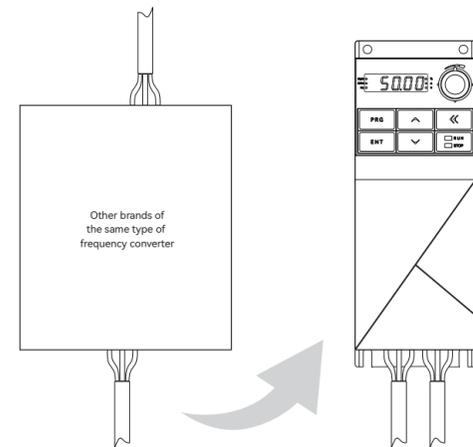
[High Efficiency Heat Dissipation]

Side opening ventilation, radiator special design, can significantly improve the heat dissipation efficiency.
(additional side hole dust cover, flexible use)



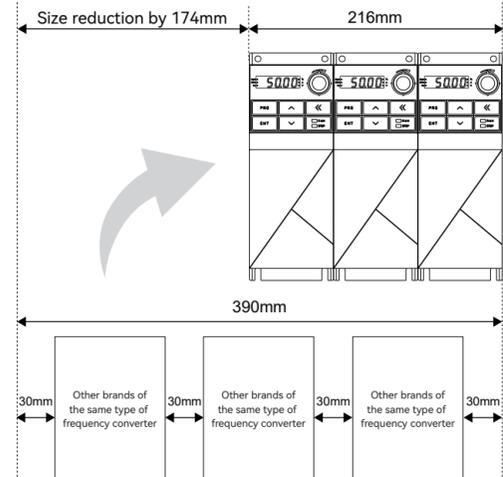
[Single Side Wiring]

Single-sided wiring is beneficial to the layout of internal components of the supporting control cabinet, making the installation location more flexible.



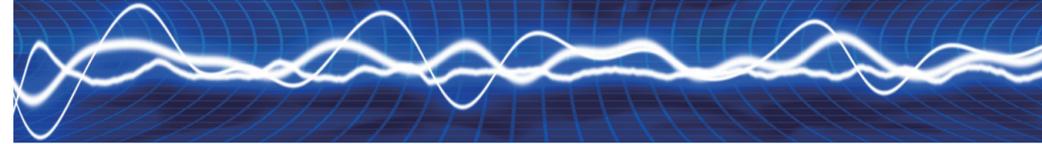
[Narrow-body Structure Appearance]

Realize compact product volume, support seamless side-by-side installation, reduce the volume by about 44% compared to traditional products. (4kW)



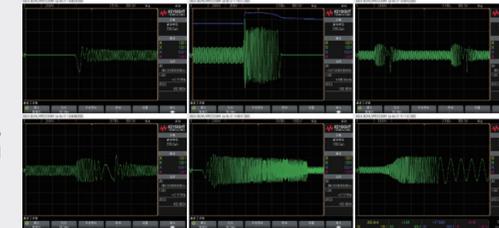
[Wide Input Voltage Design]

Single-phase 200-240V Three-phase 380-440V, Allowed wide input voltage and compatible with the needs of more countries, more flexible application scenarios. Allowable fluctuation: -15% ~ 10%



[Excellent Suppression Effect of Overcurrent and Overvoltage]

MC20 has excellent overcurrent/overvoltage suppression capabilities, ensuring stable operation of equipment in extreme conditions and avoiding abnormal downtime.



[Flexible Options for Expansion]

The full range of expansion interfaces are reserved, and I/O expansion cards, bus communication expansion cards, PG encoder expansion cards can be selected as needed, making the functional configuration more flexible.

[Built-in Industry Application Macro Parameters]

User macro parameter setting, only by adjusting a single parameter can achieve batch parameters corresponding adjustments to reduce the difficulty of debugging in conventional application scenarios.



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MC20 MULTIFUNCTIONAL VECTOR VFD

MC20

Multifunctional Vector VFD



Single-phase 220V: 0.75-2.2kW

Three-phase 380V: 0.75-37kW

Excellent control algorithm

Support flexible expansion

Wide voltage input

Compatible with synchronous / asynchronous motor

Narrow-body voice structure design

Rich application macro parameters

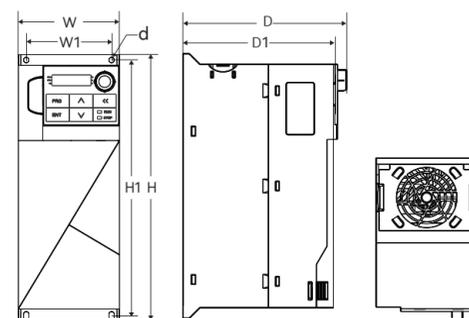
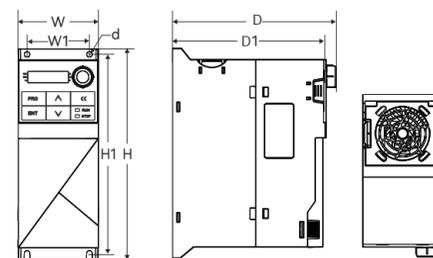
SPECIFICATION

| Item | Pecification | |
|----------------------------|---|--|
| | V/F | SVC |
| Controlled Characteristic | Control Mode | V/F |
| | Starting Torque | 1Hz/100% Rated torque |
| | Range of Speed Regulation | 1:50 |
| | Rotating Speed | ≤1% Rated synchronous speed |
| | Carrier Frequency | 0.6kHz~16kHz |
| | Overload Capacity | 150% Rated current 60s; 180% Rated current 2s |
| | Torque Boost | Automatic torque increase; Manual torque increase 0.1 ~ 30.0% |
| I/O | The Range of Input Voltage | Single-phase 200V-240V; Three-phase 380V-480V Allowable fluctuation range: -15% ~ 10% |
| | The Range of Input Frequency | 50/60Hz Allowable fluctuation range: ±5% |
| | The Range of Output Voltage | 0 ~ Input, Fluctuation range: < 5% |
| | The Range of Output Frequency | SVC:0-500Hz V/F: 0-1000Hz Fluctuation range: ±5% of Maximum frequency |
| Run Control | Run command channel | 3 kinds of channels: Operation panel setting, Control terminal setting, Serial communication port given; Can change by different ways |
| | frequency source | Digital setting, panel pulse potentiometer setting, linear voltage setting, curve voltage setting, analog current setting, serial communication setting, etc. Can be switched in a variety of ways |
| | Auxiliary frequency source | Multiple auxiliary frequency sources. Frequency synthesis and frequency fine-tuning can be performed |
| | Digital input terminal | There are four DI1-DI4, of which DI4 supports high-speed pulse input, up to 20kHz input, and supports NPN PNP switching |
| | Analog input terminal | Two AI1-AI2 (You can change the terminal function to DI input by setting parameters) The AI2 can switch the current/voltage input through the jumper cap |
| Basic Function | DC braking function | DC braking frequency:0.00 Hz ~ 60.00 Hz;Braking time:0.0 s ~ 60.0 s Braking action current value:0.0% ~ 150.0% |
| | V/F curve | Linear, multi-point type, square type, 1.1-1.9 power curve, V/F completely separated type |
| | Acceleration and deceleration curves | Linear or S-curve acceleration and deceleration mode, acceleration and deceleration time range: 0~6500s |
| | Multi-speed operation | Up to 16 segment speeds are achieved through the control terminal |
| | External keyboard | Standard, can upload and downtransfer inverter function code information, to achieve fast parameter replication |
| | Built-in PID | It is convenient to realize the closed-loop control system of process control |
| | Automatic voltage adjustment AVR | Standard, automatic current and voltage limit during operation to prevent frequent overvoltage trip |
| | Over voltage over loss rate control | Automatic current and voltage limit during operation to prevent frequent overvoltage trip |
| | Fast current limiting function | The standard configuration minimizes overcurrent faults and protects the normal operation of the equipment |
| | Torque qualification and control | Automatic torque limit during operation to prevent frequent overcurrent tripping |
| | Power on the safety self-test of peripheral devices | It can realize the safety detection of peripheral devices such as grounding and short circuit |
| | Timing control function | Timing control function: set time range 0h ~ 65000h |
| | Display and Keyboard Operation | LED display |
| Parameter locking function | | Set parameter read-only control to prevent misoperation |
| Service Environment | Place of use | Indoor, free from direct sunlight, no dust, corrosive gas, flammable gas, oil mist, water vapor, dripping or salt |
| | Altitude | Less than 1000m; When the sea level is higher than 1000m, the sea level must be reduced by 1% for every 100m rise. The maximum sea level is 2000m |
| | Environment temperature | -20°C ~ 45°C, Derating is required when the temperature exceeds 45°C. For every 1°C increase in the ambient temperature, the derating is about 1%. The maximum ambient temperature is 50°C |
| | Humidity | ≤95%RH, Avoid condensation |
| | Vibration | Vibration acceleration less than 0.6g |
| | Storage temperature | -25°C ~ 60°C |

SELECTION GUIDE

| Model | Rated power | Power capacity | Input current | Output current | Adaptive motor | |
|---|-------------|----------------|---------------|----------------|----------------|-----|
| | kW | kVA | A | A | kW | HP |
| Input: Single-phase 200~240V & Output Three-phase 0~Input | | | | | | |
| MC20-2SR75B-E | 0.75 | 1.5 | 8.2 | 4.5 | 0.75 | 1 |
| MC20-2S1R5B-E | 1.5 | 3 | 14 | 7 | 1.5 | 2 |
| MC20-2S2R2B-E | 2.2 | 4 | 23 | 9.6 | 2.2 | 3 |
| Input: Three-phase 380~480V & Output Three-phase 0~Input | | | | | | |
| MC20-4TR75B-E | 0.75 | 1.5 | 3.4 | 2.5 | 0.75 | 1 |
| MC20-4T1R5B-E | 1.5 | 3 | 5 | 3.8 | 1.5 | 2 |
| MC20-4T2R2B-E | 2.2 | 4 | 5.8 | 5.1 | 2.2 | 3 |
| MC20-4T004B-E | 4 | 5.9 | 10.5 | 9 | 4 | 5.5 |
| MC20-4T5R5B-E | 5.5 | 8.9 | 14.6 | 13 | 5.5 | 7.5 |
| MC20-4T7R5B-E | 7.5 | 11 | 20.5 | 17 | 7.5 | 10 |
| MC20-4T011B-E | 11 | 17 | 26 | 25 | 11 | 15 |
| MC20-4T015B-E | 15 | 21 | 35 | 32 | 15 | 20 |
| MC20-4T018R5B-E | 18.5 | 24 | 38.5 | 37 | 18.5 | 25 |
| MC20-4T022B-E | 22 | 30 | 46.5 | 45 | 22 | 30 |
| MC20-4T030B-E | 30 | 40 | 62 | 60 | 30 | 40 |
| MC20-4T037B-E | 37 | 57 | 76 | 75 | 37 | 50 |

DIMENSION (UNIT: MM)



| Model | External Dimension | | | | Installation Dimension | | Hole Size |
|---------------|--------------------|----|-----|-----|------------------------|----|-----------|
| | H | W | D | D1 | H1 | W1 | d |
| MC20-2SR75B-E | 190 | 72 | 146 | 138 | 180 | 56 | 5 |
| MC20-2S1R5B-E | | | | | | | |
| MC20-2S2R2B-E | | | | | | | |
| MC20-4TR75B-E | 190 | 72 | 146 | 138 | 180 | 56 | 5 |
| MC20-4T1R5B-E | | | | | | | |
| MC20-4T2R2B-E | | | | | | | |
| MC20-4T004B-E | | | | | | | |

| Model | External Dimension | | | | Installation Dimension | | Hole Size |
|-----------------|--------------------|-----|-------|-------|------------------------|-----|-----------|
| | H | W | D | D1 | H1 | W1 | d |
| MC20-4T5R5B-E | 250 | 95 | 153.6 | 145 | 240 | 80 | 5 |
| MC20-4T7R5B-E | | | | | | | |
| MC20-4T011B-E | 334 | 120 | 188.6 | 180 | 322 | 100 | 6 |
| MC20-4T015B | | | | | | | |
| MC20-4T018R5B-E | 388 | 145 | 195.1 | 182.7 | 374 | 116 | 6 |
| MC20-4T022B-E | | | | | | | |
| MC20-4T030B-E | 450 | 180 | 204 | 195 | 430 | 144 | 7 |
| MC20-4T037B-E | | | | | | | |