

MC20

Multifunction Variable Frequency Drive

The MC20 series is the latest new product for the general product line, the appearance design is bold and innovative, while ensuring the strong heat dissipation capacity, optimize the product volume, increase the flexibility of the use of the product, and through the multi-function expansion interface can achieve more powerful control functions.



Delicate structure

- The product is narrow-body design, and multiple products can be seamlessly fitted horizontally, providing more possibilities for distribution cabinet layout
- Flexible protective cover plate is added. You can choose whether to install the cover according to the actual application scenario

Easy to use

- The product meets the wide input voltage conditions, single-phase 200V-240V, three-phase 380V-480V theory allows fluctuation: -15%~10%
- Product standard flexible expansion interface, through the selection of different expansion cards can achieve IO/ bus communication/ closed-loop control and other functions

Excellent performance

- Product patented radiator design, strengthen the heat dissipation capacity of small volume, to cope with more stringent applications
- The product algorithm is greatly optimized, the computing power of the main chip is increased by about 4 times compared with the previous product, the application performance is significantly improved, and the closed-loop control mode can be expanded

Highly compatible controls

- Products are efficient and compatible, compatible with synchronous/asynchronous motors and reluctance motors

1PH 200-240VAC 0.75-2.2kW
3PH 380-480VAC 0.75-37kW

Product model	MC20	
Basic parameter performance		
Input voltage	1PH 200-240VAC, 3PH 380-480VAC, fluctuation range: -15%~+10%	
Input frequency	50/60Hz±5%	
Output voltage	0-Input voltage, Tolerance < 5%	
Output frequency	SVC: 0-500Hz, V/F: 0-1000Hz, Tolerance: Maximum frequency ±5%	
Control characteristic parameter		
Control mode	V/F	SVC
Starting torque	1Hz/100% rated torque	0.5Hz/150% rated torque
Speed range	1:50	1:100
Speed stability accuracy	≤1% Rated synchronous speed	≤0.5% Rated synchronous speed
Carrier frequency	0.6kHz~16kHz	
Overload capacity	150% rated current 60s; 180% rated current 2s	
Torque boost	Automatic torque boost; Manual torque is increased by 0.1% ~ 30.0%	
I/O terminal		
Input terminal	DI*4 AI*2 (Can be converted to DI by parameter)	
Output terminal	AO*1 Relay output *1	
Others	RS485*1 10V*1 24V*1 FM*1	
Basic function of product		
DC braking function	DC braking frequency: 0.00 Hz~60.00 Hz; Braking time: 0.0 s~60.0 s; Braking action current: 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/deceleration curve	Linear or S-curve acceleration and deceleration mode, acceleration and deceleration time range: 0 to 6500s	
Multi-speed operation	Up to 16 segment speeds are achieved through the control terminal	
External keyboard	Standard, you can upload and download the functional parameters of the inverter, to achieve fast parameter replication	
Built-in PID	The closed-loop control system can be easily realized	
AVR function	When the grid voltage changes, it can automatically keep the output voltage constant	
Over pressure over loss rate	Automatic current and voltage limit during operation to prevent frequent over voltage trip	
Fast current limiting function	Minimize over current faults and improve system stability	
Torque qualification and control	Automatic torque limit during operation to prevent frequent overcurrent tripping	
Power-on safety self-check	Realize the safety detection of peripheral devices such as grounding and short circuit	
Protection function	Power-on motor short circuit detection, input and output phase loss protection, over current protection, over voltage protection, under voltage protection, overheat protection, overload protection	
Environment		
Place of use	Indoor and outdoor can be, to prevent rain directly, no corrosive/flammable gas, and etc.	
Altitude	<1000m if >1000m, please derate 1% by every 100m rising	
Ambient temperature	-10°C~40°C (MAX 50°C) if exceeding 40°C, please derate 1% by every 1°C increasing	
Humidity	≤95% RH, to avoid condensation	
Vibration	Vibration acceleration is less than 0.6g	
Storage temperature	-25°C ~ 60°C	

MC20 expansion card description		
Type of expansion card	Model	Description
I/O function terminal expansion card	MC20.EX-I001-STM MC20-EXI001B	1AO+1AI+2DI+1NO-NC 2AI+2DI+1NO-NC
Bus communication expansion card	MC20.EX-EC MC20.EX-PN	EtherCAT Bus communication card Profinet Bus communication card
Control encoder extension card	MC20.EX-PGIP MC20.EX-PGRT	Photoelectric encoder expansion card Rotary encoder expansion card

Note: The I/O expansion card may be unavailable due to the software version. If you need to select the card, please contact technical personnel for selection

Model Description

MC20 - 2 S 1R5 - B - E	
Product series: MC20	E: English standard
Voltage level: 2: 220V; 4: 380V	B: Standard configuration of mobile unit
Phase: S : Single phase; T : Three phase	Suitable motor power: R is the decimal point; For example 1R5 stands for 1.5kW

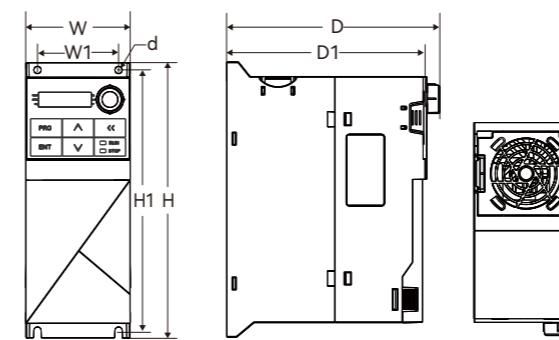


MC20
MULTIFUNCTION VARIABLE
FREQUENCY DRIVE

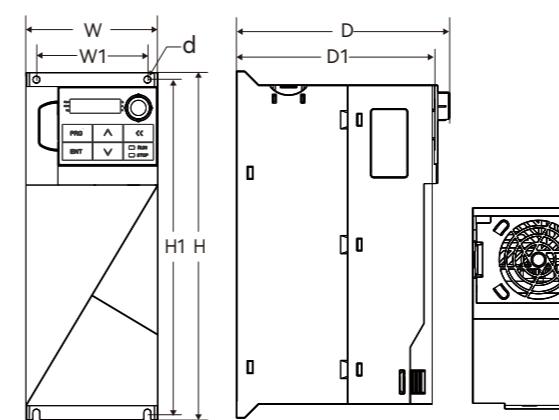
Selection List

Product model	Rated power (kW)	Power capacity (kVA)	Input current (A)	Output current (A)	Suitable motor B/P	
					kW	HP
1PH 200-240VAC Input, 3PH 0-220V Output						
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
3PH 380-480VAC Input, 3PH 0-380V Output						
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

Size Specification (mm)



Product model	Dimensions				Installation		Hole
	H	W	D	D1	H1	W1	d
MC20-2SR75B-E							
MC20-2S1R5B-E	190	72	146	138	180	56	5
MC20-2S2R2B-E							
MC20-4TR75B-E							
MC20-4T1R5B-E	190	72	146	138	180	56	5
MC20-4T2R2B-E							
MC20-4T004B-E							



Product model	Dimensions				Installation		Hole
	H	W	D	D1	H1	W1	d
MC20-4T5R5B-E							
MC20-4T7R5B-E	250	95	153.6	145	240	80	5
MC20-4T011B-E	334	120	188.6	180	322	100	6
MC20-4T015B-E							
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							